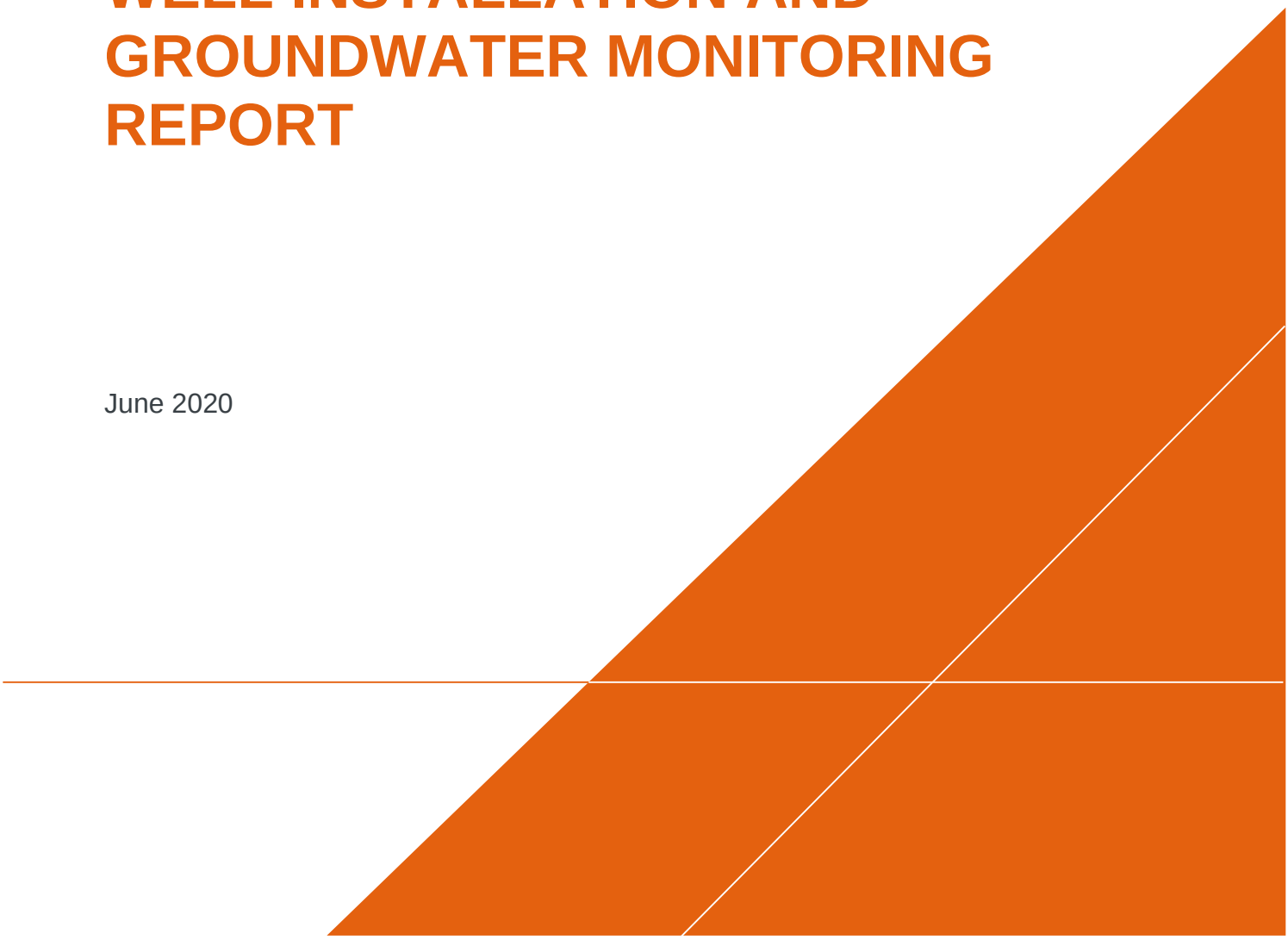
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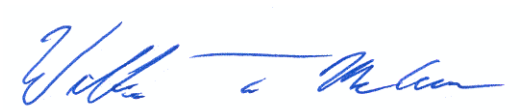
ADDITIONAL BDA MONITORING WELL INSTALLATION AND GROUNDWATER MONITORING REPORT

June 2020



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CONTENTS

Acronyms and Abbreviations iii

1 Introduction 1

2 Objectives 1

3 Additional BDA Well Installation Activities 1

3.1 Site Preparation 1

3.2 Drilling Activities 2

3.3 Soil Sampling 2

3.4 Overburden Monitoring Well Installation 3

3.5 Bedrock Corehole Logging and Analysis 3

3.6 Bedrock Monitoring Well Installation 4

3.7 Community Air Monitoring 5

3.8 Groundwater Sampling and Analytical Testing 5

3.9 Survey 7

3.10 Waste Characterization and Disposal 7

4 Investigation Results 8

4.1 Geology 8

4.2 Hydrogeology 9

4.3 Soil Sampling Results 9

4.4 Groundwater Sampling Results 10

4.4.1 Groundwater Quality at New Wells 10

4.4.2 Groundwater Quality at Existing Wells 11

5 Conclusions 12

6 References 12

TABLES

Table 1 Soil Boring Details and Observations

Table 2 Monitoring Well Construction Details

Table 3 Groundwater Sample Inventory

Table 4 Analytical Soil Sampling Results – VOC, SVOC, Glycols, and Alcohols

Table 5 Groundwater Analytical Results – Organics
Table 6 Groundwater Analytical Results – PFAS
Table 7 Groundwater Analytical Results – Geochemical
Table 8 Groundwater Analytical Results – TIC

FIGURES

Figure 1 Site Location Map
Figure 2 Additional BDA Monitoring Well Locations
Figure 2A Cross Section Location Map
Figure 2B Cross Section B-B'
Figure 2C Cross Section C-C'
Figure 2G Cross Section G-G'
Figure 3 2019 Aldehyde Concentrations
Figure 4 VOC in Groundwater Above Till – 2019
Figure 5 VOC in Till Groundwater – 2019
Figure 6 VOC in Bedrock and Weathered Bedrock Groundwater – 2019
Figure 7 SVOC, Alcohols, and Glycols in Groundwater Above Till – 2019
Figure 8 SVOC, Alcohols, and Glycols in Till Groundwater – 2019
Figure 9 SVOC, Alcohols, and Glycols in Bedrock and Weathered Bedrock Groundwater – 2019
Figure 10 2019 Emerging Contaminant Concentrations

ATTACHMENTS

Attachment 1 Soil Boring and Well Construction Logs
Attachment 2 Soil and Bedrock Core Photologs (provided in electronic file format only)
Attachment 3 Bedrock Geophysical, Packer Testing, and Televiewing Logs
Attachment 4 Bedrock Well Construction Summaries
Attachment 5 Monitoring Well Development Logs
Attachment 6 Daily CAMP Monitoring Reports
Attachment 7 Groundwater Sampling Logs
Attachment 8 Waste Management Documents
Attachment 9 Laboratory Analytical Reports
Attachment 10 Data Usability Summary Report

ACRONYMS AND ABBREVIATIONS

Arcadis	Arcadis of New York, Inc.
ATV	Acoustic televiewer
BDA	Brownfield Development Area
bgs	below ground surface
BMS	Bristol-Myers Squibb Company
CAMP	Community Air Monitoring Plan
DCHA	dicyclohexylamine
DUSR	Data Usability Summary Report
Eurofins	Eurofins Lancaster Environmental Laboratories
eV	electron volt
FSAP	Field Sampling and Analysis Plan
IDW	Investigation Derived Waste
MIBK	methyl isobutyl ketone
mL/min	milliliters per minute
NAD	North American Datum
NAPL	non-aqueous phase liquid
NAVD 88	North American Vertical Datum of 1988
NYSDEC	New York State Department of Environmental Conservation
Parratt-Wolff	Parratt-Wolff Inc. of East Syracuse, New York
PFAS	Poly- and Perfluoroalkyl Substances
Phase 2 Work Plan	*Phase 2 Groundwater Remedial Investigation Work Plan*
PDI Work Plan	*Groundwater Remedy Pre-Design Investigation and Supplemental Sampling Work Plan*
PID	Photoionization Detector
ppm	parts per million
QAPP	Quality Assurance Project Plan
RI	Remedial Investigation
RIWP	*Remedial Investigation Work Plan*
RQD	Rock Quality Designations
RX	bedrock

SCO	Soil Clean-Up Objective
SVOC	semi-volatile organic compound(s)
T	till
TOGS	Technical and Operational Guidance Series
mg/kg	milligrams per kilogram
ug/L	micrograms per liter
VOC	volatile organic compound(s)
WR	weathered bedrock
WT	water table

1 INTRODUCTION

This *Additional BDA Monitoring Well Installation and Groundwater Monitoring Report* has been prepared by Arcadis of New York, Inc. (Arcadis) for the Bristol-Myers Squibb Company (BMS) to document the drilling and installation of monitoring wells in accordance with the *Additional Monitoring Well Installation Work Plan,* dated July 30, 2019 and the subsequent 2019 (approved August 2, 2019) groundwater sampling event at the Syracuse North Campus Restoration Area, also referred to as the Brownfield Development Area (BDA). The BDA is part of the BMS Facility located at 3551 Burnet Avenue in East Syracuse, New York. The layout of the BDA and BMS Facility is shown on **Figure 1**.

2 OBJECTIVES

The objective of this work included augmenting the network of wells along the southern edge of the BDA and implementing an additional round of groundwater monitoring of the newly-installed and a subset of the existing monitoring wells.

To augment the existing BDA monitoring well network, Arcadis drilled and installed an additional cluster of monitoring wells screened across the water table (BDA-17WT), within the till (BDA-17T), the weathered bedrock (BDA-17WR), and the bedrock (BDA-17RX) along the southern edge of the BDA boundary approximately halfway between the existing BDA-14 and BDA-15 well clusters. The weathered bedrock unit in the BDA-17RX borehole was found to extend further than originally expected. Accordingly, Arcadis installed BDA-17WR in order to capture the hydraulic characteristics of this weathered bedrock unit. Additionally, Arcadis installed a new bedrock well (RX) to the existing BDA-14 well cluster. The locations of these new monitoring wells are illustrated on **Figure 2**.

3 ADDITIONAL BDA WELL INSTALLATION ACTIVITIES

Additional BDA well installation activities were implemented using the same methods described in the *Phase 2 Groundwater Remedial Investigation Work Plan* (Phase 2 Work Plan) submitted to NYSDEC on August 31, 2016, as modified by a letter from the NYSDEC dated December 19, 2016, and a letter from BMS dated February 16, 2017 (Arcadis, 2016). The additional BDA monitoring well installation field work was conducted in accordance with the *Additional Monitoring Well Installation Work Plan* submitted as a letter to the New York State Department of Environmental Conservation (NYSDEC) in July 2019 (Arcadis, 2019b).

An Arcadis field geologist supervised all soil sampling tasks. Additionally, a senior geologist experienced with the drilling methods oversaw the entire program in the field. Consistent with previous phases of drilling activities, Arcadis performed utility clearance, provided community air monitoring, conducted downhole geophysics of the boreholes, facilitated proper disposal of all investigation derived waste (IDW), and provided a final well survey in accordance with the Phase 2 Work Plan.

3.1 Site Preparation

Prior to drilling activities, Arcadis completed appropriate utility clearance procedures, including reviewing BMS utility drawings and records and contacting Dig Safely New York to have utilities covered by this

program identified and located. Arcadis also performed geophysical surveys using ground penetrating radar and electromagnetic sensing equipment across the work zone.

3.2 Drilling Activities

Parratt-Wolff Inc. of East Syracuse, New York (Parratt-Wolff) completed all drilling and well installation activities. An Arcadis geologist observed and documented all field activities for the duration of the program.

Parratt-Wolff utilized a track-mounted sonic drill rig to collect soil cores, install overburden monitoring wells, and set outer casings for bedrock monitoring wells. Following the procedures outlined in the Phase 2 Work Plan and as detailed in the Field Sampling and Analysis Plan (FSAP) (OBG, 2013a) (Section 5.2), bedrock monitoring wells were advanced greater than 3 feet into the bedrock, and a permanent 4-inch diameter black steel well casing was installed to the bottom of the rock socket. Continuous 4-inch diameter, 5-foot long soil cores were collected from the overburden of the bedrock well locations within each well cluster (BDA-14RX and BDA-17RX). Recovered soil cores were observed and described by a geologist. Interpretation of geological material types presented in the subsurface logs was based on material characteristics including particle grain size and grain size distribution (Udden-Wentworth Scale); density and consistency; color (Munsell system); moisture content, and stratigraphic position. Soil samples were collected from the cores on approximate 12-inch intervals and screened for volatile organic compounds (VOC) using a photoionization detector (PID) equipped with an 11.7 electron volt (eV) lamp. Boring and well construction logs for the five wells installed during the BDA additional well installation activities can be found in **Attachment 1** and a summary of boring details can be found in **Table 1**. The remaining boreholes in the BDA-17 cluster for the installation of the overburden monitoring wells were blind drilled based on the retrieved core data from the BDA-17RX borehole. Photologs of the soil cores are provided in **Attachment 2**.

3.3 Soil Sampling

One soil sample from each monitoring well cluster was selected for laboratory analysis. Selection of soil sample depth intervals for submittal to a laboratory for analysis was based on field screening (i.e., staining, discoloration, odor, PID screening of discrete samples on approximate 12-inch intervals) and in accordance with the process and criteria identified on Figure 3-3 of the RIWP. At BDA-14RX, the soil sample was selected from the top 2 feet of the of the till (20.5-22.5 feet below ground surface [bgs]). A soil sample was not collected from the water table interval because the water table interval was previously sampled on January 20, 2017 during the installation of BDA-14T (9-11 feet bgs). At BDA-17RX, the soil sample was selected from the water table interval.

No staining, discoloration, odors, or elevated PID readings were observed, except for a very faint petroleum-like odor observed at BDA-14RX from 7 to 11.5 feet bgs accompanied by slightly elevated PID readings from 5 to 13 feet bgs. The highest PID reading from this interval was 2.5 parts per million (ppm) from 10 to 11.5 feet bgs.

The soil samples and corresponding quality assurance/quality control samples were submitted to Eurofins Lancaster Environmental Laboratories (Eurofins) for analysis of VOC, semi-volatile organic compounds (SVOC), glycols, and alcohols in accordance with the Quality Assurance Project Plan (QAPP; OBG,

2013c). Laboratory data deliverables comply with DER-10. A discussion of the soil analytical results is provided in Section 4.3.

3.4 Overburden Monitoring Well Installation

Three overburden monitoring wells installed at the BDA-17 cluster were constructed as follows:

- Two-inch diameter monitoring wells constructed of No. 304 stainless steel riser and 0.010-inch spacing wire-wrap screen were installed using 6-inch sonic casing.
- Morie #0 sand was placed in the annulus surrounding the well screen and typically extended 2 feet above the screen.
- A 2-foot hydrated bentonite seal was placed above the sand pack and the remainder of the annulus to grade was filled with cement-bentonite grout.
- Overburden monitoring wells were finished at the surface with flush-mount well protectors.

Drilling equipment was decontaminated between each borehole. Decontamination consisted of cleaning drilling equipment with a hot water high-pressure washer in accordance with the FSAP. Well locations were identified based on the unit screened as follows: water table (WT), till (T), weathered bedrock (WR), and bedrock (RX). Final well locations were surveyed for position and surface elevation.

3.5 Bedrock Corehole Logging and Analysis

To identify the target depth interval for bedrock well screen placement, a series of evaluations were conducted during and after the bedrock corehole drilling, including the following:

- Core logging, including rock quality designation (RQD).
- PID screening.
- Packer testing.
- Downhole televiewing.
- Downhole geophysical logging.

Packer testing for formation yield was completed every 10 feet as bedrock coring was advanced at each corehole. A falling head test was performed at each packer interval to estimate groundwater yield of the bedrock. The packer testing indicated flow rates ranging from 14 to 248 milliliters per minute (mL/min). Packer test results are provided in **Attachment 3** and in bedrock well installation summaries provided in **Attachment 4**.

Downhole televiewing was completed at each of the bedrock corehole to provide additional information to select a well screen interval. The tele viewing was used to visually identify fractures and openings on the corehole wall. A description of televiewing equipment used is summarized in **Attachment 3**. A copy of the video log files is also included on CD-ROM in **Attachment 3**.

Downhole geophysics was completed at both corehole locations. Geophysical logging included:

- Fluid temperature.
- Fluid resistivity.
- Caliper.
- Natural gamma.
- Single-point resistance.
- Acoustic televiewer (ATV).

Downhole geophysical findings were used to identify fractures and possible hydraulically active zones within the bedrock. Fluid resistivity data were used, in conjunction with the calliper and ATV data, to help identify potentially hydraulically-active fractures by identifying changes in the electrical resistivity of the water column. Variations in electrical resistivity indicate changes in groundwater chemistry often associated with groundwater entering or exiting a corehole. Fractures that were interpreted to be hydraulically active are denoted using red annotation on the geophysical logs. Most of these fractures were near-horizontal in orientation and likely represent bedding-plane fractures.

The geophysical logs are provided in **Attachment 3** and findings are summarized in bedrock well construction summaries provided in **Attachment 4**. Additional detail regarding the geophysical equipment and methodologies used is provided in Appendix C of the *Remedial Investigation (RI) Report* (Arcadis 2019a).

The information gathered from each test described above (core logging, RQD calculations, PID screening, packer testing, downhole televiewing, and downhole geophysics) was used to determine screen placement intervals for each of the bedrock monitoring wells. This information is depicted on the bedrock well construction summaries in **Attachment 4**. Bedrock monitoring well construction details are depicted on the soil boring and well construction logs provided in **Attachment 1** and summarized in **Table 2**. Photologs of the recovered rock cores are presented in **Attachment 2**.

3.6 Bedrock Monitoring Well Installation

Bedrock monitoring wells at the BDA-14 and BDA-17 locations were installed using the following methodology:

- A 6-inch diameter borehole was drilled through the overburden and 3 to 5 feet into the top of competent bedrock using rotary sonic drilling methods.
- A 4-inch diameter steel casing was grouted into the bottom of the rock socket to isolate overburden materials and potential impacts.
- Bedrock was continuously cored by Parratt-Wolff, Inc. of East Syracuse, New York, with a truck-mounted conventional drill rig using 3.8-inch outside diameter HX core barrels. The source of water for drill tool cooling was the municipal supply to the BMS Facility, passed through a reverse osmosis system. A sample of the water was submitted to Eurofins Lancaster for analysis of VOC, SVOC, glycols, and alcohols in accordance with the same methods as the groundwater samples.

- Recovered bedrock cores were observed and described by a geologist and screened for VOC using a PID equipped with an 11.7 eV lamp.
- Packer testing, downhole televiewing, and downhole geophysics was conducted (see discussion below).
- After selecting the depth interval to screen (see discussion below), 2-inch diameter monitoring wells constructed of No. 304 stainless steel riser and 0.010-inch spacing wire-wrap screen were installed within the bedrock core hole.
- Morie #0 sand was placed in the annulus surrounding the well screen and typically extended 2 feet above the screen.
- A 2-foot hydrated bentonite seal was placed above the sand pack and the remainder of the annulus to grade was filled with cement-bentonite grout.
- Bedrock monitoring wells were finished at the surface with flush-mount well protectors.
- Equipment was decontaminated using the same methodology described for overburden wells.
- Final well locations were surveyed for position and surface elevation.

Monitoring wells were allowed to set for more than 2 days following installation to allow the grout to cure before the wells were developed. The new monitoring wells were developed in accordance with Section 6.2 of the FSAP (OBG, 2013a) to remove fine material that may have settled at the bottom of the well, to remove drilling fluids that were used during well installation, and to enhance hydraulic connectivity with the aquifer. The monitoring well development logs are provided in **Attachment 5**.

3.7 Community Air Monitoring

Perimeter air monitoring was conducted as described in the Community Air Monitoring Plan (CAMP) (OBG, 2013b), but was limited to VOC monitoring only. Within the worker breathing zone around the drill rig, both VOC and dust monitoring were conducted. This approach was previously approved by the NYSDEC based on the lack of perimeter dust exceedances during BDA transformation activities and the limited extent of intrusive activities conducted. Daily CAMP monitoring reports from additional well installation activities can be found in **Attachment 6**.

3.8 Groundwater Sampling and Analytical Testing

Following the installation and development of the additional BDA monitoring wells, Arcadis conducted a site-wide groundwater monitoring event. The groundwater sampling event included the newly installed wells and a subset of the existing monitoring well network. The selection of existing monitoring wells was detailed in the October 14, 2019 email to Joshua Cook of the NYSDEC from Anne Locke of BMS, as modified to address comments received in the October 15, 2019 email to Anne Locke of BMS from Joshua Cook of the NYSDEC and agreed to during a telephone conversation between Anne Locke and Joshua Cook on October 16, 2019. The following table summarizes the specific wells selected to be sampled during this event and the reason each well was selected:

Well ID	Zone Covered	Reason for inclusion	Parameters
BDA-14RX	Bedrock	New Well	VOC, SVOC, Glycols & Alcohols, Aldehydes, 1,4-Dioxane, Geochemical indicators, PFAS
BDA-17WT	Above till	New Well	
BDA-17T	Till	New Well	
BDA-17WR	Weathered Rock	New Well	
BDA-17RX	Bedrock	New Well (may eventually serve as BDA perimeter well)	
BDA-1F	Above till	Potential BDA Perimeter well	VOC, SVOC, Glycols & Alcohols, Aldehydes
BDA-6WT	Above till	Potential BDA Perimeter well	
BDA-8WT	Above till	Potential BDA Perimeter well	
BDA-13WT	Above till	Potential BDA Perimeter well	
BDA-1WT	Till	Potential BDA Perimeter well	
BDA-6T	Till	Potential BDA Perimeter well	
BDA-8T	Till	Potential BDA Perimeter well	
BDA-12T	Till	Potential BDA Perimeter well	
BDA-1RX	Bedrock	Potential BDA Perimeter well	
BDA-8RX	Bedrock	Potential BDA Perimeter well	
BDA-12RX	Bedrock	Potential BDA Perimeter well	
BLD-6-1T	Till	Confirmation of Phenol Detections	
BLD -6-1WR	W. Bedrock	Confirmation of Phenol Detections	
BDA-4UT	Till	Monitor concentrations pre pilot tests	VOC, SVOC
CHP-43RX	Bedrock	Monitor concentrations pre pilot tests	
BDA-15RX	Bedrock	Monitor concentrations pre pilot tests	
BDA-11WT	Above till	Monitor concentrations pre pilot tests	
PW-2T	Till	BMS Perimeter Well	VOC, SVOC, Glycols & Alcohols, Aldehydes
PW-3MS	Above till	BMS Perimeter Well	
PW-3MD	Above till	BMS Perimeter Well	
PW-3T	Till	BMS Perimeter Well	
PW-4F	Fill	BMS Perimeter Well	
PW-4LS	Lacustrine	BMS Perimeter Well	
PW-4LD	Lacustrine	BMS Perimeter Well	
PW-4T	Till	BMS Perimeter Well	
PW-5T	Till	BMS Perimeter Well	
PW-5RX	Bedrock	BMS Perimeter Well	
PW-6F	Fill	BMS Perimeter Well	
PW-6L	Lacustrine	BMS Perimeter Well	
PW-6T	Till	BMS Perimeter Well	

Prior to the collection of groundwater samples, all monitoring wells were screened for the presence of non-aqueous phase liquid (NAPL). NAPL was not observed in any of the monitoring wells during the groundwater sampling event.

The monitoring wells were sampled using the low-flow purge and sampling method in accordance with the sampling methods and procedures previously identified in the NYSDEC-approved *Remedial Investigation Work Plan* (RIWP) (March 2013) and the existing site-specific Field Sampling and Analysis Plan (FSAP) and the Quality Assurance Project Plan (QAPP) updated for the NYSDEC-approved *Pre-Design Investigation Work Plan* (PDI Work Plan; Arcadis 2018). The sampling for per- and polyfluoroalkyl substances and 1,4-dioxane was completed in accordance with the Addendum to the Field Sampling and Analysis Plan and Quality Assurance Project Plan incorporated in the PDI Work Plan and are consistent with the Department's emerging contaminant sampling guidance. Monitoring wells were purged and sampled using either a peristaltic or bladder pump (only used in cases where drawdown depths exceeded 20 feet below ground surface). Groundwater samples were collected directly from the pump. Groundwater sampling logs are included as **Attachment 7**.

A groundwater sample inventory (**Table 3**) details parameters analysed for each of the samples collected. The samples from new and existing monitoring wells were submitted to Eurofins for laboratory analysis of VOC, SVOC, alcohols, glycols, and aldehydes. Additionally, groundwater samples from the five newly-installed monitoring wells (BDA-14RX and all wells in the BDA-17 cluster) were submitted for laboratory analysis for poly- and perfluoroalkyl substances (PFAS), 1,4-dioxane, and geochemical indicators in accordance with the PDI Work Plan. PFAS and 1,4-dioxane analysis was performed by Eurofins and the geochemical indicator analyses were performed by Pace Analytical Energy Services. Quality assurance and quality control samples were collected in accordance with the QAPP. A discussion of the soil analytical results is provided in Section 4.

3.9 Survey

The top of inner casings and ground surface at each well was marked and surveyed by C.T. Male Associates to the nearest 0.01 foot. The elevation was determined relative to North American Vertical Datum of 1988 (NAVD 88) and North American Datum (NAD). The measuring point on all wells was marked on the innermost well casing.

3.10 Waste Characterization and Disposal

All soil cuttings, water generated during drilling and well development activities and purge water generated during groundwater sampling activities were containerized in 55-gallon drums. A total of 10 drums of soil cuttings and 86 drums of liquid waste was generated during the field investigation activities. Prior to disposal, waste characterization samples were collected from the IDW for analysis by Eurofins. Waste generated from BDA-14RX and the BDA-17 cluster, including drilling water generated from overburden sonic drilling and bedrock coring, was characterized separately. Soil cuttings from BDA-14RX and the BDA-17 cluster were characterized based on results from the soil samples collected while drilling the bedrock wells. Drilling water was analyzed for metals, VOC, SVOC, alcohols, glycols, pH, and reactivity. Purge water from the groundwater sampling activities was characterized based on the analytical laboratory results. Results of the waste characterization samples showed that all wastes were

non-hazardous. The waste characterization laboratory report can be found in **Attachment 8**. IDW from the additional well investigation was handled separately from the wastewater generated from the high vacuum extraction pilot test (which was characterized as hazardous due to contained-in methylene chloride). Waste disposal documentation is also provided in **Attachment 8**. Recovered rock cores were stored in labeled, wooden core boxes in an onsite location approved by BMS.

4 INVESTIGATION RESULTS

4.1 Geology

Subsurface conditions encountered during the drilling and geophysical testing completed generally support the existing conceptual site model and provide additional information regarding the geology along the southern boundary of the BDA between the existing BDA-15 and BDA-12 monitoring well cluster locations. A series of generalized geologic cross sections were previously generated for inclusion in the RI Report along the lines illustrated in **Figure 2A**. The cross sections that cross the new monitoring well locations (Cross Sections B-B', C-C' and G-G') have been updated to illustrate our revised understanding of the geologic conditions observed and are included as **Figures 2B**, **2C**, and **2G**, respectively. The borings at both additional bedrock well locations encountered the comparable geological units as those encountered throughout the site.

The fill and till overburden units were encountered in the BDA-17RX borehole at elevations consistent with the findings of the RI Report (Arcadis 2019a). The glaciolacustrine sand deposit encountered between the fill and till at the BDA-14RX location was observed at contact elevations consistent with those observed in BDA-14T during the Phase 2 RI. However, the elevated PID readings encountered at the top of the glaciolacustrine unit in BDA-14T were not reproduced in the boring for BDA-14RX indicating that any potential impacts are limited and do not appear to extend to this borehole located south of the previously installed BDA-14 well cluster locations.

Beneath the overburden units, weathered bedrock was encountered in each of the new soil borings. Similar to the findings of the RI, the weathered bedrock consists of intervals of dark green-grey colored, very dense silty clay containing angular pieces of shale and intervals of more competent shale ranging up to several feet in thickness. The weathered bedrock thickness at BDA-17WR is 65.5 feet which is the thickest observed onsite, but consistent with the increase in weathered bedrock thickness previously observed at BDA-7WR (55 feet) and BDA-9RX (55.2 feet thick) located northeast of BDA-17WR. The top of competent bedrock elevation at BDA-17RX is approximately 311.7 feet referenced to the NAVD 88 which is the lowest observed onsite. This observation indicates that monitoring well BDA-17WR is in a depression within the shale formation. Therefore, monitoring well BDA-17WR is appropriately positioned to monitor for potential constituent migration along the top of bedrock as well as within the underlying bedrock formation. As further discussed in Section 4.4, analytical results from the groundwater sample collected from BDA-17WR, BDA-17RX and BDA-14RX do not indicate that impacts are migrating across the southern BDA boundary.

The competent bedrock was hard and sparsely fractured and contained relatively frequent thin beds and veins of selenite (gypsum). The downhole calliper and acoustical televiewer logs identified few open fractures, consistent with the findings of the RI. Planar features identified in the geophysics survey mostly

represent bedding features and healed fractures rather than open fractures. Unfortunately, an unusually high frequency of mechanical breaks occurred regularly during drilling that affected the ability to accurately calculate RQD. Therefore, the RQD values are not a reliable evaluation of the bedrock's competence. The mechanical breaks were likely the results of equipment issues (e.g., a wobble in the drill core) and/or drilling method (e.g., too much downward pressure for the formation). However, the performance of the borehole televiewing and geophysical logging provide sufficient additional information to assess the naturally occurring potentially water bearing fractures within the portion of the bedrock penetrated by these boreholes. The geophysics logs can be found in **Attachment 3**, and bedrock well construction summaries are provided as **Attachment 4**. The bedrock monitoring well installation summaries combine the soil boring observations, downhole camera images, geophysics test results, and packer flows for each boring to provide a weight-of-evidence supporting the selection of depth inverval within the bedrock formation to be screened during bedrock monitoring well construction.

4.2 Hydrogeology

The observations made during the additional well installations support the conclusion of the RI Report that groundwater movement through the competent bedrock likely occurs along widely-spaced, bedding-plane (i.e., near-horizontal) fractures. In addition, significant water loss was not observed during the 2019 drilling activities indicating that it is unlikely there is continuity across the weathered bedrock from the newly installed wells to one another or to any existing wells.

Packer testing conducted over approximate 10-foot intervals during bedrock coring provides some insight about the groundwater yield of the bedrock formation at each new bedrock well. Compared to the RI Phase 2 wells and BDA-17RX, the highest flowrates measured during packer testing were observed at BDA-14RX. The average packer testing flow rate at BDA-14RX was 194.5 mL/min. The interval with the highest flowrate was from 84 to 93 feet bgs where a moderate-to-large size horizontal fracture was observed. The BDA-14RX screened interval was installed from 89 to 99 feet bgs and will capture groundwater flow through from the horizontal fracture. Packer testing measurements recorded during coring at BDA-17RX are consistent with the observations of the RI. Most flowrates measured in this well are below 100 mL/min. The average packer testing flow rate at BDA-17RX was 62.8 mL/min.

4.3 Soil Sampling Results

Analytical soil samples are summarized in **Table 4** and the analytical laboratory report can be found in **Attachment 9** and the data usability summary reports (DUSR) are included in **Attachment 10**. The table also provides a comparison of the results to the NYCRR Part 375 Soil Clean-Up Objectives (SCO) for unrestricted and commercial use. Note that as shown in the tables, the laboratory reporting limit may exceed the SCO due to compound interference effects or dilution in certain samples. Interpretation of SCO compliance is inconclusive in samples where laboratory reporting limits exceed the SCO.

As indicated in the tables, analytes were not detected in either soil sample at concentrations greater than the SCO for unrestricted or commercial use. Site-specific compounds, methyl isobutyl ketone (MIBK), methylene chloride, dicyclohexylamine (DCHA), and triethylamine, were not detected in soil samples at concentrations above their laboratory detection limits. Methanol was the only alcohol or glycol detected in soil samples. In the BDA-17RX soil sample, methanol was detected at a concentration of 1.4 milligram

per kilogram (mg/kg) in the parent sample and 1.1 mg/kg in the duplicate sample. However, both concentrations are considered estimated because of lab dilution and are qualified as potential laboratory artifacts based on the detection of methanol in the associated blank sample. Methanol was not detected in the soil sample collected from BDA-14RX.

4.4 Groundwater Sampling Results

The groundwater analytical results for VOC, SVOC, alcohols, glycols, and aldehydes are summarized on **Table 5** and **Figures 3 through 9**. The analytical results for PFAS are summarized on **Table 6** and **Figure 10**. The analytical results for the geochemical parameters are summarized on **Table 7**. The analytical results for the tentatively identified compounds are summarized on **Table 8**. The groundwater analytical results are compared to the groundwater standards and guidance values provided in NYSDEC Technical and Operational Guidance Series (TOGS) 1.1.1 Part 1 (B) 1 and Part 1 (B) 2, Steps 1 through 3 (NYSDEC 1998 to 2009), and a default screening value (for purposes of this report) of 50 micrograms per liter (ug/L) for DCHA, MIBK, and triethylamine. The laboratory analytical reports are included in **Attachment 9** and the data usability summary reports (DUSR) are included in **Attachment 10**.

Note that as shown in the tables, the laboratory reporting limit may exceed the groundwater standard, guidance value, and/or screening value due to compound interference effects or dilution in certain samples. Interpretation of compliance is inconclusive in samples where laboratory reporting limits exceed the TOGS or screening value.

4.4.1 Groundwater Quality at New Wells

VOC, SVOC, alcohols, and glycols were not detected in any of the five newly installed monitoring wells at concentrations greater than the groundwater standards and guidance values except for chloroform identified in groundwater samples collected from BDA-17T and BDA-17RX. Chloroform is a common drinking water treatment by-product and laboratory artifact. The maximum concentration of chloroform is 21 ug/L which is higher than the 7 ug/L groundwater standard. Site-specific compounds, MIBK, methylene chloride, DCHA, triethylamine, and methanol, were not detected in groundwater samples at concentrations above their laboratory detection limits.

Aldehydes (acetaldehyde and/or formaldehyde) were detected at concentrations above their guidance values in four of the five new monitoring wells. The maximum aldehyde concentration was formaldehyde detected at monitoring well BDA-14RX at a concentration of 75 ug/L which is higher than the 8 ug/L guidance value.

Low level detections of PFAS were identified in each of the new monitoring wells. The maximum total PFAS concentration was detected at monitoring well BDA-17T (0.13J ug/L in parent and 0.039J ug/L in duplicate).

Based on the low concentrations of constituents in groundwater at the new wells, a detailed geochemical evaluation is not needed.

4.4.2 Groundwater Quality at Existing Wells

Groundwater analytical results for samples collected from the existing wells indicate that groundwater quality is improving and/or is consistent with previous sampling events except for the following:

- Acetone was detected at a concentration greater than the 50 ug/L groundwater standard in the 2019 groundwater sample collected from CHP43RX (110J ug/L). The identified concentration is estimated and below the laboratory quantitation limit. This is the first sampling event that acetone has been detected in a groundwater sample collected from this well.
- Chloroform was detected at a concentration greater than the 7 ug/L groundwater standard in the 2019 groundwater sample collected from BDA-1RX (67 ug/L). This is the first sampling event that chloroform has been detected in a groundwater sample collected from this well.
- Cis-1,2-dichloroethene was detected at a concentration greater than the 5 ug/L groundwater standard in the 2019 groundwater sample collected from BDA-11WT (17J ug/L). The identified concentration is estimated and below the laboratory quantitation limit. This is the first time cis-1,2-dichloroethene has been detected in a groundwater sample collected from this well at a concentration above the groundwater standard.
- Multiple VOC were detected at concentrations greater than groundwater standards and guidance values in the 2019 groundwater sample collected from BDA-4UT. The laboratory could analyse the 2019 groundwater at a lower dilution than previous samples from this well. Therefore, the laboratory achieved lower detection limits for VOC.
- Aniline, n,n-dimethylaniline, and phenol were detected at concentrations greater than groundwater standards (5, 1, & 1 ug/L, respectively) in the 2019 groundwater sample collected from BDA-13WT (7.5J, 2.6, & 7.7 ug/L, respectively). This is the first time these compounds have been detected in a groundwater sample collected from this well.
- Bis(2-ethylhexyl) phthalate was detected at a concentration greater than the 5 ug/L groundwater standard in the 2019 groundwater sample collected from PW-6F (15 ug/L). Bis(2-ethylhexyl) phthalate is not site-related, and it has not been identified at concentrations above the laboratory detection limits in groundwater samples from any of the Phase 2 sampling wells (2016-2019 data) or perimeter monitoring wells (2011-2019 data).
- Ethylene glycol was detected at a concentration greater than the 50 ug/L groundwater standard in the 2019 groundwater sample collected from BDA-1F (7,400J ug/L). The identified concentration is estimated and below the laboratory quantitation limit. This is the first time ethylene glycol has been detected in a groundwater sample collected from this well.

Notably, aldehydes were detected at lower concentrations in each of the monitoring wells sampled in 2019, except BDA-8RX where formaldehyde was detected at a higher concentration (45J ug/L).

Additionally, the groundwater analytical results for samples collected from the perimeter wells (included in the summary above) continue to indicate that groundwater quality at the BMS Property boundary is not impacted by VOC, SVOC, alcohols, and glycols, except for bis(2-ethylhexyl) phthalate noted above and consistently low concentrations of 1,2-dichlorobenzene identified in monitoring well PW-2T.

5 CONCLUSIONS

The findings of the Additional BDA Monitoring Well Installation and Supplemental Groundwater Sampling provided additional information supporting the existing conceptual site model. Groundwater analytical results from the additional monitoring wells installed to augment the existing BDA monitoring well network indicate that site-related groundwater impacts observed in associated with the isolated source areas within the site are not migrating across the southern boundary of the BDA.

6 REFERENCES

Arcadis. 2016. Phase 2 Groundwater Remedial Investigation Work Plan. August 2016. As modified by a letter from the NYSDEC dated December 19, 2016, and a letter from BMS dated February 16, 2017.

Arcadis. 2018. Groundwater Remedy Pre-Design Investigation and Supplemental Sampling Work Plan. Site #C734138 BMS Syracuse North Campus Restoration Area Thompson Road, East Syracuse, New York. August.

Arcadis. 2019a. Remedial Investigation Report. July 23, 2019.

Arcadis. 2019b. Additional Monitoring Well Installations Work Plan. July 30, 2019.

O'Brien & Gere Engineers (OBG). 2013a. Field Sampling and Analysis Plan: BMS Syracuse North Campus Restoration Area, Site No. C734138. March 2013.

OBG. 2013b. Community Air Monitoring Plan: BMS Syracuse North Campus Restoration Area, Site No. C734138. March 2013.

OBG. 2013c. Quality Assurance Project Plan: BMS Syracuse North Campus Restoration Area, Site No. C734138. March 2013.

TABLES

Table 1
Soil Boring Details and Observations

Additional BDA Well Installation and Groundwater Monitoring Report
Site #C734138, BMS Syracuse North Campus Restoration Area
East Syracuse, New York

Location ID	Well Installed	Boring Dates	Drilling Method	Ground Elevation	Boring Depth	Fill Interval	Top of Sand		Top of Till		Top of Weathered Bedrock		Top of Competent Bedrock		Max PID Reading	Max PID Reading Interval	Boring Installation Observations/Comments
				NAVD	bgs	bgs	bgs	NAVD	bgs	NAVD	bgs	NAVD	bgs	NAVD	ppm	bgs	
Additional BDA Well Installations																	
BDA-14RX	Yes	8/23/19-8/27/19 (9/9/19-9/10/19)	Sonic/Coring	413.98	124'	0-11.5'	11.5'	NA	20.5'	NA	59.5'	NA	74'	NA	2.5	10-11.5'	Faint petroleum like odor from 7-11.5'
BDA17WT	Yes	8/22/19	Sonic	419.45	16'	--	--	--	--	--	--	--	--	--	--	--	Blind drilled, see BDA-17RX boring details.
BDA-17T	Yes	8/21/19	Sonic	419.36	40'	--	--	--	--	--	--	--	--	--	--	--	Blind drilled, see BDA-17RX boring details.
BDA-17WR	Yes	8/16/19-8/20/19	Sonic	418.95	104.5'	--	--	--	--	--	--	--	--	--	--	--	Blind drilled, see BDA-17RX boring details.
BDA-17RX	Yes	8/12/19-8/15/19 (9/4/19-9/6/19)	Sonic/Coring	419.20	165'	0-7'	--	--	7'	412.20	42.5'	376.70	107.5'	311.70	0.2	10-11'	No impacts.

Notes:

1. Interpretation as to the geological material types were based on material characteristics including grain size distribution, density and consistency, color, moisture content, stratigraphic position, as well as professional judgment.
2. Elevations are in feet referenced to NAVD 88.
3. Depths are from ground surface during monitoring well installation, and may not be representative of current site conditions.
4. Dates in gray and in parentheses indicate when cased soil borings were extended using HX coring to final depth in bedrock.
5. Abbreviations:
   bgs = Feet below ground surface.
   BMS = Bristol-Myers Squibb.
   NA = Not Available
   NAVD = North American Vertical Datum of 1988.
   PID = Photoionization detector, with 11.7 electron volt (eV) lamp.
   ppm = Parts per million.

Table 2
Monitoring Well Construction Details

Additional BDA Well Installation and Groundwater Monitoring Report
Site #C734138, BMS Syracuse North Campus Restoration Area
East Syracuse, New York

Location ID	Bentonite Seal Thickness (feet)	Saturated Screened Unit		Ground Elevation (NAVD)	Top of Inner Casing Elevation (NAVD)	Screen Interval of Well (feet bgs)		Sand Pack Interval (feet bgs)		Screen Interval of Well (NAVD 88)		Sand Pack Interval (NAVD 88)	
		Top	Bottom			Top	Bottom	Top	Bottom	Top	Bottom	Top	Bottom
Phase 1 Subsurface Soil Investigation													
BDA-14RX	2	Bedrock	Bedrock	413.98	413.79	89	99	87	101	324.98	314.98	326.98	312.98
BDA17WT	2	Fill	Till	419.45	419.03	6	16	4	16	413.45	403.45	415.45	403.45
BDA-17T	2	Till	Till	419.36	419.15	30	40	28	40	389.36	379.36	391.36	379.36
BDA-17WR	2	Weathered Bedrock	Weathered Bedrock	418.95	418.51	74.5	104.5	72.5	104.5	344.45	314.45	346.45	314.45
BDA-17RX	2	Bedrock	Bedrock	419.20	418.99	143	153	141	155	276.20	266.20	278.20	264.20

Notes:

1. Interpretation as to the geological material types were based on material characteristics including grain size distribution, density and consistency, color, moisture content, stratigraphic position, as well as professional judgment.
2. Elevations are in feet referenced to NAVD 88.
3. Depths for are from ground surface during monitoring well installation, and may not represent current site conditions.
4. Abbreviations:
   bgs = Feet below ground surface.
   NAVD = North American Vertical Datum of 1988.

Table 3
Groundwater Sample Inventory

Additional BDA Well Installation and Groundwater Monitoring Report
Site #C734138, BMS Syracuse North Campus Restoration Area
East Syracuse, New York

Well ID	Monitoring Interval	Well Screen Interval (feet below ground surface)			Sampling Date	Group 1 Analytes		Group 2 Analytes		Group 3 Geochemical Indicator Parameters											Group 4 Emerging Contaminants	
						Volatile Organic Compounds	Semivolatile Organic Compounds	Glycols and Alcohols	Aldehydes	Nitrogen as Ammonia	Combined Nitrate and Nitrite	Chloride, Fluoride, Sulfate	Target Analyte List Metals (total)	Target Analyte List Metals (dissolved)	Alkalinity	Total Organic Carbon	Phosphorus (total)	Chemical Oxygen Demand	Biological Oxygen Demand	Methane, Ethane, Ethene, Acetylene	NYSDEC List	Low Level 1,4-Dioxane
BDA-1F	Above Till	3.5	-	8.5	10/30/19	X	X	X	X													
BDA-1WT	Till	13.0	-	23.0	10/30/19	X	X	X	X													
BDA-1RX	Bedrock	115.81	-	125.41	10/31/19	X	X	X	X													
BDA-4UT	Till	7.57	-	17.17	10/31/19	X	X															
BDA-6WT	Above Till	4.05	-	13.65	10/30/19	X	X	X	X													
BDA-6T	Till	20.04	-	29.64	10/30/19	X	X	X	X													
BDA-8WT	Above Till	4.31	-	13.91	11/1/19	X	X	X	X													
BDA-8T	Till	27.58	-	32.18	10/31/19	X	X	X	X													
BDA-8RX	Bedrock	76.81	-	86.41	11/1/19	X	X	X	X													
BDA-11WT	Above Till	3.21	-	12.81	10/31/19	X	X															
BDA-12T	Till	49.85	-	54.45	11/1/19	X	X	X	X													
BDA-12RX	Bedrock	83.36	-	92.96	11/1/19	X	X	X	X													
BDA-13WT	Above Till	4.2	-	13.8	10/31/19	X	X	X	X													
BDA-14RX	Bedrock	89.05	-	98.65	10/29/19	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
BDA-15RX	Bedrock	70.50	-	80.10	10/30/19	X	X															
BDA-17WT	Above Till	6	-	16	10/29/19 / 10/30/19	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
BDA-17T	Till	30	-	40	10/29/19	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
BDA-17WR	W. Bedrock	74.55	-	104.15	10/29/19	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
BDA-17RX	Bedrock	143	-	153	10/29/19	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
CHP-43RX	Bedrock	44.5	-	54.2	11/1/19	X	X															
PW-2T	Till	19.0	-	29.0	10/30/19	X	X	X	X													
PW-3MS	Above Till	7.5	-	17.5	10/28/19	X	X	X	X													
PW-3MD	Above Till	15.5	-	25.5	10/28/19	X	X	X	X													
PW-3T	Till	33.0	-	43.0	10/28/19	X	X	X	X													
PW-4F	Above Till	3.0	-	5.5	10/28/19	X	X	X	X													
PW-4LS	Above Till	9.0	-	14.0	10/28/19	X	X	X	X													
PW-4LD	Above Till	17.5	-	21.0	10/28/19	X	X	X	X													
PW-4T	Till	29.0	-	39.0	10/30/19	X	X	X	X													
PW-5T	Till	18.0	-	28.0	10/30/19	X	X	X	X													
PW-5RX	Bedrock	40.32	-	44.92	10/30/19	X	X	X	X													
PW-6F	Above Till	2.5	-	6.5	10/30/19	X	X	X	X													
PW-6L	Above Till	19.5	-	29.5	10/28/19	X	X	X	X													
PW-6T	Till	34.0	-	40.0	10/28/19	X	X	X	X													

See Notes on Page 2.

Table 3
Groundwater Sample Inventory

Additional BDA Well Installation and Groundwater Monitoring Report
Site #C734138, BMS Syracuse North Campus Restoration Area
East Syracuse, New York

Notes:
1. Analytical methods and specific analyte lists are identified in the Quality Assurance Project Plan (O'Brien and Gere Engineers 2013) and Groundwater Remedy Pre-Design Investigation and Supplemental Sampling Work Plan (Arcadis 2018).
2. Well BDA-17WT went dry during sampling on October 29. The well was revisited on October 30 and groundwater samples were collected for analysis for chemical oxygen demand and nitrogen, as ammonia.

Acronyms and Abbreviations:
BMS = Bristol-Myers Squibb Company.
NYSDEC = New York State Department of Environmental Conservation.
PFAS = poly- and perfluoroalkyl substances.
W. Bedrock = weathered bedrock.
X = parameter selected.

References:
Arcadis U.S., Inc. 2018. Groundwater Remedy Pre-Design Investigation and Supplemental Sampling Work Plan. August.
O'Brien and Gere Engineers. 2013. Quality Assurance Project Plan: BMS Syracuse North Campus Restoration Area Site No. C734138. March.

Table 4
Analytical Soil Sampling Results VOC, SVOC, Glycols, and Alcohols

Additional BDA Well Installation and Groundwater Monitoring Report
Site #C734138, BMS Syracuse North Campus Restoration Area
East Syracuse, New York

Location ID: Sample Depth(ft): Date Collected: Sample Name:	CAS Number	Unrestricted Use SCOs	Restricted Use SCOs Commercial	BDA-14RX 20.5 - 22.5 08/23/19 BDA-14RX (20.5-22.5)	BDA-17RX 9 - 11 08/13/19 BDA-17RX(9-11)
Volatile Organics - USEPA SW-486 Method 8260C (ug/kg)					
1,1,1-Trichloroethane	71-55-6	680	500,000	4 U	5 U [5 U]
1,1,2,2-Tetrachloroethane	79-34-5	- -	- -	4 UJ	5 U [5 UJ]
1,1,2-trichloro-1,2,2-trifluoroethane	76-13-1	- -	- -	9 U	9 U [10 U]
1,1,2-Trichloroethane	79-00-5	- -	- -	4 U	5 U [5 U]
1,1-Dichloroethane	75-34-3	270	240,000	*4 U*	5 U [5 U]
1,1-Dichloroethene	75-35-4	330	500,000	*4 U*	5 U [5 U]
1,2,3-Trichlorobenzene	87-61-6	- -	- -	9 UJ	9 U [10 UJ]
1,2,4-Trichlorobenzene	120-82-1	- -	- -	9 UJ	9 U [10 UJ]
1,2,4-Trimethylbenzene	95-63-6	3,600	190,000	4 UJ	5 U [5 UJ]
1,2-Dibromo-3-chloropropane	96-12-8	- -	- -	4 UJ	5 UJ [5 UJ]
1,2-Dibromoethane	106-93-4	- -	- -	4 U	5 U [5 U]
1,2-Dichlorobenzene	95-50-1	1,100	500,000	4 UJ	5 U [5 UJ]
1,2-Dichloroethane	107-06-2	20	30,000	*4 U*	5 U [5 U]
1,2-Dichloropropane	78-87-5	- -	- -	4 U	5 U [5 U]
1,3,5-Trimethylbenzene	108-67-8	8,400	190,000	4 UJ	5 U [5 UJ]
1,3-Dichlorobenzene	541-73-1	2,400	280,000	4 UJ	5 U [5 UJ]
1,4-Dichlorobenzene	106-46-7	1,800	130,000	4 UJ	5 U [5 UJ]
1,4-Dioxane	123-91-1	100	130,000	*210 U*	240 U [250 U]
2-Hexanone	591-78-6	- -	- -	9 U	9 U [10 UJ]
2-Nitropropane	79-46-9	- -	- -	9 U	9 U [10 U]
Acetone	67-64-1	50	500,000	39 J	15 J [19 J]
Acetonitrile	75-05-8	- -	- -	86 U	95 U [100 U]
Benzene	71-43-2	60	44,000	*4 U*	5 U [5 U]
Bromochloromethane	74-97-5	- -	- -	4 U	5 U [5 U]
Bromodichloromethane	75-27-4	- -	- -	4 U	5 U [5 U]
Bromoform	75-25-2	- -	- -	9 U	9 U [10 U]
Bromomethane	74-83-9	- -	- -	4 U	5 U [5 U]
Carbon Disulfide	75-15-0	- -	- -	1 J	1 J [1 J]
Carbon Tetrachloride	56-23-5	760	22,000	4 U	5 U [5 U]
Chlorobenzene	108-90-7	1,100	500,000	4 U	5 U [5 U]
Chlorodifluoromethane	75-45-6	- -	- -	9 U	9 U [10 U]
Chloroethane	75-00-3	- -	- -	4 U	5 U [5 U]
Chloroform	67-66-3	370	350,000	*4 U*	5 U [5 U]
Chloromethane	74-87-3	- -	- -	4 U	5 U [5 U]
cis-1,2-Dichloroethene	156-59-2	250	500,000	*4 U*	5 U [5 U]
cis-1,3-Dichloropropene	10061-01-5	- -	- -	4 U	5 U [5 U]
Cyclohexane	110-82-7	- -	- -	0.7 J	5 U [5 U]
Cyclohexanone	108-94-1	- -	- -	210 U	240 U [250 UJ]
Dibromochloromethane	124-48-1	- -	- -	4 U	5 U [5 U]
Dichlorodifluoromethane	75-71-8	- -	- -	4 U	5 U [5 U]
Ethyl acetate	141-78-6	- -	- -	4 U	5 U [5 U]
Ethyl ether	60-29-7	- -	- -	4 U	5 U [5 U]
Ethylbenzene	100-41-4	1,000	390,000	4 U	5 U [5 U]
Isobutanol	78-83-1	- -	- -	210 U	240 U [250 U]
Isopropylbenzene	98-82-8	- -	- -	4 U	5 U [5 U]
m,p-Xylene	ARC-mpXyl	- -	- -	4 U	5 U [5 U]
Methyl acetate	79-20-9	- -	- -	2 J	5 U [5 U]
Methyl ethyl ketone (MEK, 2-butanone)	78-93-3	120	500,000	*9 U*	9 U [3 J]
Methyl isobutyl ketone (MIBK, 4-methyl-2-pentanone)	108-10-1	- -	- -	9 U	9 U [10 U]
Methyl tert-butyl ether	1634-04-4	930	500,000	4 U	5 U [5 U]
Methylcyclohexane	108-87-2	- -	- -	3 J	5 U [5 U]
Methylene Chloride	75-09-2	50	500,000	*4 U*	5 U [5 U]
Naphthalene	91-20-3	12,000	500,000	4 UJ	5 U [5 UJ]
n-Butanol	71-36-3	- -	- -	210 U	240 U [250 U]
n-Butylbenzene	104-51-8	12,000	500,000	7 UJ	8 U [8 UJ]
N-Heptane	142-82-5	- -	- -	4 J	8 U [8 U]
n-Hexane	110-54-3	- -	- -	1 J	5 U [5 U]
o-Xylene	95-47-6	- -	- -	4 U	5 U [5 U]
p-Isopropyltoluene	99-87-6	- -	- -	4 UJ	5 U [5 UJ]
sec-Butylbenzene	135-98-8	11,000	500,000	4 UJ	5 U [5 UJ]
Styrene	100-42-5	- -	- -	4 U	5 U [5 U]
tert-Butylbenzene	98-06-6	5,900	500,000	4 UJ	5 U [5 UJ]

See Notes on Page 3.

Table 4
Analytical Soil Sampling Results VOC, SVOC, Glycols, and Alcohols

Additional BDA Well Installation and Groundwater Monitoring Report
Site #C734138, BMS Syracuse North Campus Restoration Area
East Syracuse, New York

Location ID: Sample Depth(ft): Date Collected: Sample Name:	CAS Number	Unrestricted Use SCOs	Restricted Use SCOs Commercial	BDA-14RX 20.5 - 22.5 08/23/19 BDA-14RX (20.5-22.5)	BDA-17RX 9 - 11 08/13/19 BDA-17RX(9-11)
Volatile Organics - USEPA SW-486 Method 8260C (ug/kg) (cont'd)					
Tertiary butyl alcohol	75-65-0	- -	- -	86 U	95 U [100 U]
Tetrachloroethene	127-18-4	1,300	150,000	4 U	5 U [5 U]
Tetrahydrofuran	109-99-9	- -	- -	7 U	8 U [8 U]
Toluene	108-88-3	700	500,000	4 U	5 U [5 U]
trans-1,2-Dichloroethene	156-60-5	190	500,000	*4 U*	5 U [5 U]
trans-1,3-Dichloropropene	10061-02-6	- -	- -	4 U	5 U [5 U]
Trichloroethene	79-01-6	470	200,000	4 U	5 U [5 U]
Trichlorofluoromethane	75-69-4	- -	- -	4 U	5 U [5 U]
Vinyl Chloride	75-01-4	20	13,000	*4 U*	5 U [5 U]
Xylenes (total)	1330-20-7	260	500,000	*9 U*	9 U [10 U]
Semivolatile Organics - USEPA SW-846 Method 8270D (ug/kg)					
1,1'-Biphenyl	92-52-4	- -	- -	39 U	39 U [200 U]
1,2,4,5-Tetrachlorobenzene	95-94-3	- -	- -	39 U	39 U [200 U]
2,3,4,6-Tetrachlorophenol	58-90-2	- -	- -	180 U	180 U [890 U]
2,4,5-Trichlorophenol	95-95-4	- -	- -	71 U	71 U [360 U]
2,4,6-Trichlorophenol	88-06-2	- -	- -	60 U	60 U [300 U]
2,4-Dichlorophenol	120-83-2	- -	- -	46 U	46 U [230 U]
2,4-Dimethylphenol	105-67-9	- -	- -	71 U	71 U [360 U]
2,4-Dinitrophenol	51-28-5	- -	- -	1,100 U	1,100 U [5,400 U]
2,4-Dinitrotoluene	121-14-2	- -	- -	180 U	180 U [890 U]
2,6-Dinitrotoluene	606-20-2	- -	- -	53 U	53 U [270 U]
2-Chloronaphthalene	91-58-7	- -	- -	36 U	35 U [180 U]
2-Chlorophenol	95-57-8	- -	- -	39 U	39 U [200 U]
2-Methylnaphthalene	91-57-6	- -	- -	4 J	8 J [180 U]
2-Nitroaniline	88-74-4	- -	- -	53 U	53 U [270 U]
2-Nitrophenol	88-75-5	- -	- -	60 U	60 U [300 U]
3&4-Methylphenol	65794-96-9	- -	- -	53 U	53 U [270 U]
3,3'-Dichlorobenzidine	91-94-1	- -	- -	360 U	350 U [1,800 U]
3-Nitroaniline	99-09-2	- -	- -	180 U	180 U [890 U]
4,6-Dinitro-2-methylphenol	534-52-1	- -	- -	530 UJ	530 U [2,700 U]
4-Bromophenyl-phenylether	101-55-3	- -	- -	53 U	53 U [270 U]
4-Chloro-3-Methylphenol	59-50-7	- -	- -	53 U	53 U [270 U]
4-Chloroaniline	106-47-8	- -	- -	180 U	180 U [890 U]
4-Chlorophenyl-phenylether	7005-72-3	- -	- -	46 U	46 U [230 U]
4-Nitroaniline	100-01-6	- -	- -	180 U	180 U [890 U]
4-Nitrophenol	100-02-7	- -	- -	530 U	530 U [2,700 U]
Acenaphthene	83-32-9	20,000	500,000	18 U	9 J [89 U]
Acenaphthylene	208-96-8	100,000	500,000	18 U	10 J [19 J]
Acetophenone	98-86-2	- -	- -	53 U	53 U [270 U]
Aniline	62-53-3	- -	- -	530 U	530 U [2,700 U]
Anthracene	120-12-7	100,000	500,000	6 J	8 J [89 U]
Atrazine	1912-24-9	- -	- -	460 U	460 U [2,300 U]
Benzaldehyde	100-52-7	- -	- -	180 U	180 U [890 U]
Benzo(a)anthracene	56-55-3	1,000	5,600	*18 U*	11 J [42 J]
Benzo(a)pyrene	50-32-8	1,000	1,000	*18 U*	10 J [89 U]
Benzo(b)fluoranthene	205-99-2	1,000	5,600	7 J	12 J [89 U]
Benzo(g,h,i)perylene	191-24-2	100,000	500,000	18 U	12 J [89 U]
Benzo(k)fluoranthene	207-08-9	800	56,000	*18 U*	12 J [89 U]
Benzyl Alcohol	100-51-6	- -	- -	530 U	530 U [2,700 U]
bis(2-Chloroethoxy)methane	111-91-1	- -	- -	39 U	39 U [200 U]
bis(2-Chloroethyl)ether	111-44-4	- -	- -	53 U	53 U [270 U]
bis(2-Chloroisopropyl)ether	39638-32-9	- -	- -	46 U	46 U [230 U]
bis(2-Ethylhexyl)phthalate	117-81-7	- -	- -	180 U	110 J [1,100 J]
Butylbenzylphthalate	85-68-7	- -	- -	180 U	180 U [890 U]
Caprolactam	105-60-2	- -	- -	180 U	180 U [890 U]
Carbazole	86-74-8	- -	- -	39 U	39 U [200 U]
Chrysene	218-01-9	1,000	56,000	7 J	12 J [74 J]
Dibenzo(a,h)anthracene	53-70-3	330	560	*18 U*	8 J [89 U]
Dibenzofuran	132-64-9	7,000	350,000	*39 U*	*39 U [200 U]*
Dicyclohexylamine	101-83-7	- -	- -	2,100 U	2,100 U [11,000 U]
Diethylphthalate	84-66-2	- -	- -	180 U	180 U [890 U]
Dimethylphthalate	131-11-3	- -	- -	180 U	180 U [890 U]

See Notes on Page 3.

Table 4
Analytical Soil Sampling Results VOC, SVOC, Glycols, and Alcohols

Additional BDA Well Installation and Groundwater Monitoring Report
Site #C734138, BMS Syracuse North Campus Restoration Area
East Syracuse, New York

Location ID: Sample Depth(ft): Date Collected: Sample Name:	CAS Number	Unrestricted Use SCOs	Restricted Use SCOs Commercial	BDA-14RX 20.5 - 22.5 08/23/19 BDA-14RX (20.5-22.5)	BDA-17RX 9 - 11 08/13/19 BDA-17RX(9-11)
Semivolatile Organics - USEPA SW-846 Method 8270D (ug/kg) (cont'd)					
Di-n-Butylphthalate	84-74-2	- -	- -	180 U	180 U [890 U]
Di-n-Octylphthalate	117-84-0	- -	- -	180 U	180 U [890 U]
Fluoranthene	206-44-0	100,000	500,000	6 J	11 J [55 J]
Fluorene	86-73-7	30,000	500,000	5 J	10 J [89 U]
Hexachlorobenzene	118-74-1	330	6,000	*18 U*	12 J [89 U]
Hexachlorobutadiene	87-68-3	- -	- -	82 U	81 U [410 U]
Hexachlorocyclopentadiene	77-47-4	- -	- -	R	530 U [2,700 U]
Hexachloroethane	67-72-1	- -	- -	180 U	180 U [890 U]
Indeno(1,2,3-cd)pyrene	193-39-5	500	5,600	*18 U*	10 J [89 U]
Isophorone	78-59-1	- -	- -	39 U	39 U [200 U]
n,n-dimethylaniline	121-69-7	- -	- -	180 U	180 UJ [890 UJ]
Naphthalene	91-20-3	12,000	500,000	18 U	9 J [89 U]
Nitrobenzene	98-95-3	- -	- -	71 U	71 U [360 U]
N-Nitroso-di-n-propylamine	621-64-7	- -	- -	53 U	53 U [270 U]
N-Nitrosodiphenylamine	86-30-6	- -	- -	39 U	39 U [200 U]
o-Cresol (2-Methylphenol)	95-48-7	330	500,000	*71 U*	*71 U [360 U]*
Pentachlorophenol	87-86-5	800	6,700	*180 U*	*180 U [890 U]*
Phenanthrene	85-01-8	100,000	500,000	8 J	12 J [20 J]
Phenol	108-95-2	330	500,000	*39 U*	*39 U [200 U]*
Pyrene	129-00-0	100,000	500,000	9 J	14 J [58 J]
Pyridine	110-86-1	- -	- -	180 U	180 U [890 U]
Triethylamine	121-44-8	- -	- -	5,300 UJ	5,300 UJ [27,000 UJ]
Inorganics					
Percent Moisture	ARC-Moist	- -	- -	7.20	6.40 [8.00]
Glycols and Alcohols - USEPA SW-486 Method 8015 C/D (ug/kg)					
Ethanol	64-17-5	- -	- -	1,100 U	1,100 U [1,100 U]
Ethylene glycol	107-21-1	- -	- -	11,000 U	11,000 U [11,000 U]
Isopropyl alcohol	67-63-0	- -	- -	1,100 U	1,100 U [1,100 U]
Methanol	67-56-1	- -	- -	1,100 U	1,100 UB [1,100 UB]
Propylene Glycol	57-55-6	- -	- -	11,000 U	11,000 U [11,000 U]

Notes:

1. Restricted use SCO for commercial use and protection of groundwater are from 6 NYCRR Part 375-6.8.
2. Samples were collected by Arcadis and analyzed by Eurofins Lancaster Laboratories Environmental, LLC, Lancaster, Pennsylvania.
3. Field duplicate sample results are presented in brackets, [ ].
4. Analytes detected in sample are shown in black font and analytes that are not detected are shown in gray font.
5. The compounds 3-methylphenol and 4-methylphenol cannot be chromatographically separated, and therefore are reported as 3&4-methylphenol.
6. Data have been validated.
7. Italics font indicates sample MDL exceeds unrestricted use SCO. Note that, for some analytes the MDL was at or below the SCO, while the RL was above the SCO. For undetected compounds (U), the RL is reported. Some compounds with an RL greater than SCO are NOT shown in italics, since their associated MDL is at or below SCO.
8. Abbreviations:
   - - = 6 NYCRR SCO not available.
   6 NYCRR = Title 6 of the Official Compilation of Codes, Rules, and Regulations of the State of New York.
   CAS = Chemical Abstracts Service.
   ft = Feet.
   MDL = Method detection limit.
   mg/kg = Milligrams per kilogram or part per million.
   RL = Reporting limit.
   SCO = Soil Cleanup Objectives.
   USEPA = United States Environmental Protection Agency.
   VOC = Volatile organic compounds.
   SVOC = Semi-volatile organic compounds.
9. Qualifier Definitions:
   B = Analyte was detected in the blank and sample.
   J = Estimated value. Result is greater than the MDL but less than the RL.
   R = Rejected results.
   U = Analyte not detected at listed reporting detection limit.

Table 5
Groundwater Analytical Results - Organics

Additional BDA Well Installation and Groundwater Monitoring Report
Site #C734138, BMS Syracuse North Campus Restoration Area
East Syracuse, New York

Location ID: Date Collected: Sample Name:	CAS Number	Groundwater Standard/ Guidance Value	BDA-1F 10/30/19 BDA-1F 10302019	BDA-1WT 10/30/19 BDA-1WT 10302019	BDA-1RX 10/31/19 BDA-1RX 10312019	BDA-4UT 10/31/19 BDA-4UT 10312019	BDA-6WT 10/30/19 BDA-6WT 10302019	BDA-6T 10/30/19 BDA-6T 10302019	BDA-8WT 11/01/19 BDA-8WT 11012019	BDA-8T 10/31/19 BDA-8T 10312019
Volatile Organics - USEPA SW-846 Method 8260C (µg/L)										
1,1,1-Trichloroethane	71-55-6	5	1 U	1 U	1 U	10 U	1 U	1 U	1 U	1 U
1,1,2,2-Tetrachloroethane	79-34-5	5	1 U	1 U	1 U	10 U	1 U	1 U	1 U	1 U
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	5	10 U	10 U	10 U	100 U	10 U	10 U	10 U	10 U
1,1,2-Trichloroethane	79-00-5	1	1 U	1 U	1 U	*10 U*	1 U	1 U	1 U	1 U
1,1-Dichloroethane	75-34-3	5	1 U	1 U	1 U	**12**	1 U	1 U	1 U	1 U
1,1-Dichloroethene	75-35-4	5	1 U	1 U	1 U	**33**	1 U	1 U	1 U	1 U
1,2,3-Trichlorobenzene	87-61-6	5	5 U	5 U	5 U	50 U	5 U	5 U	5 U	5 U
1,2,4-Trichlorobenzene	120-82-1	5	5 U	5 U	5 U	50 U	5 U	5 U	5 U	5 U
1,2,4-Trimethylbenzene	95-63-6	5	5 U	5 U	5 U	*50 U*	5 U	5 U	5 U	5 U
1,2-Dibromo-3-chloropropane	96-12-8	0.04	*5 U*	*5 U*	*5 U*	*50 U*	*5 U*	*5 U*	*5 U*	*5 U*
1,2-Dibromoethane	106-93-4	0.0006	*1 U*	*1 U*	*1 U*	*10 U*	*1 U*	*1 U*	*1 U*	*1 U*
1,2-Dichlorobenzene	95-50-1	3	5 U	5 U	5 U	50 U	5 U	5 U	5 U	5 U
1,2-Dichloroethane	107-06-2	0.6	1 U	1 U	1 U	*10 U*	1 U	1 U	1 U	1 U
1,2-Dichloropropane	78-87-5	1	1 U	1 U	1 U	*10 U*	1 U	1 U	1 U	1 U
1,3,5-Trimethylbenzene	108-67-8	5	5 U	5 U	5 U	**8 J**	5 U	5 U	5 U	5 U
1,3-Dichlorobenzene	541-73-1	3	5 U	5 U	5 U	50 U	0.7 J	5 U	5 U	5 U
1,4-Dichlorobenzene	106-46-7	3	5 U	5 U	5 U	50 UJ	1 J	5 U	5 U	5 U
1,4-Dioxane	123-91-1	1	250 U	250 U	250 U	2,500 U	250 U	250 U	250 U	250 U
2-Hexanone	591-78-6	50	10 U	10 U	10 U	100 U	10 U	10 U	10 U	10 U
2-Nitropropane	79-46-9	- -	10 U	10 U	10 U	100 U	10 U	10 U	10 U	10 U
Acetone	67-64-1	50	20 U	20 U	0.9 J	**100,000 EJ {170,000 J}**	20 U	20 U	20 U	20 U
Acetonitrile	75-05-8	- -	100 U	100 U	100 U	1,000 U	100 U	100 U	100 U	100 U
Benzene	71-43-2	1	1 U	1 U	1 U	**9 J**	1 U	1 U	1 U	1 U
Bromochloromethane	74-97-5	5	5 U	5 U	5 U	50 U	5 U	5 U	5 U	5 U
Bromodichloromethane	75-27-4	50	1 U	1 U	8	10 U	1 U	1 U	1 U	1 U
Bromoform	75-25-2	50	4 U	4 U	4 U	40 U	4 U	4 U	4 U	4 U
Bromomethane	74-83-9	5	1 U	1 U	1 UJ	10 UJ	1 U	1 U	1 UJ	1 UJ
Carbon disulfide	75-15-0	60	5 U	5 U	5 U	26 J	5 U	5 U	5 U	5 U
Carbon tetrachloride	56-23-5	5	1 U	1 U	1 U	10 U	1 U	1 U	1 U	1 U
Chlorobenzene	108-90-7	5	1 U	1 U	1 U	10 U	1 U	1 U	1 U	1 U
Chlorodifluoromethane	75-45-6	5	5 UJ	5 UJ	5 UJ	*50 UJ*	5 UJ	5 UJ	5 U	5 UJ
Chloroethane	75-00-3	5	1 UJ	1 UJ	1 UJ	10 UJ	1 UJ	1 UJ	1 UJ	1 UJ
Chloroform	67-66-3	7	0.2 J	1 U	**67**	10 U	1 U	1 U	1	1 U
Chloromethane	74-87-3	5	1 UJ	1 UJ	1 UJ	**35 J**	1 UJ	1 UJ	1 UJ	1 UJ
cis-1,2-Dichloroethene	156-59-2	5	1 U	1 U	1 U	**170**	0.5 J	1 U	1 U	1 U
cis-1,3-Dichloropropene	10061-01-5	0.4	1 U	1 U	1 U	*10 U*	1 U	1 U	1 U	1 U
Cyclohexane	110-82-7	- -	5 U	5 U	5 U	37 J	5 U	5 U	5 U	5 U
Cyclohexanone	108-94-1	- -	100 U	100 U	100 U	470 J	100 U	100 U	100 U	100 U
Dibromochloromethane	124-48-1	50	1 U	1 U	2	10 U	1 U	1 U	1 U	1 U
Dichlorodifluoromethane	75-71-8	5	1 UJ	1 UJ	1 UJ	10 U	1 UJ	1 UJ	1 UJ	1 UJ

See Notes on Page 17.

Table 5
Groundwater Analytical Results - Organics

Additional BDA Well Installation and Groundwater Monitoring Report
Site #C734138, BMS Syracuse North Campus Restoration Area
East Syracuse, New York

Location ID: Date Collected: Sample Name:	CAS Number	Groundwater Standard/ Guidance Value	BDA-1F 10/30/19 BDA-1F 10302019	BDA-1WT 10/30/19 BDA-1WT 10302019	BDA-1RX 10/31/19 BDA-1RX 10312019	BDA-4UT 10/31/19 BDA-4UT 10312019	BDA-6WT 10/30/19 BDA-6WT 10302019	BDA-6T 10/30/19 BDA-6T 10302019	BDA-8WT 11/01/19 BDA-8WT 11012019	BDA-8T 10/31/19 BDA-8T 10312019
Volatile Organics - USEPA SW-846 Method 8260C (µg/L) (cont'd)										
Ethyl acetate	141-78-6	- -	5 U	5 U	5 U	50 U	5 U	5 U	5 U	5 U
Ethyl ether	60-29-7	- -	5 U	5 UJ	5 U	50 U	5 U	5 U	5 U	5 U
Ethylbenzene	100-41-4	5	1 U	1 U	1 U	**16**	1 U	1 U	1 U	1 U
Isobutanol	78-83-1	- -	250 U	250 U	250 U	1,300 J	250 U	250 U	250 U	250 U
Isopropylbenzene	98-82-8	5	5 U	5 U	5 U	50 U	5 U	5 U	5 U	5 U
m,p-Xylene	ARC-mpXyl	5	5 U	5 U	5 U	**26 J**	5 U	5 U	5 U	5 U
Methyl acetate	79-20-9	- -	5 U	5 U	5 U	50 U	5 U	5 U	5 U	5 U
Methyl ethyl ketone (MEK, 2-butanone)	78-93-3	50	10 U	10 U	10 U	**690**	10 U	10 U	10 U	10 U
Methyl isobutyl ketone (MIBK, 4-methyl-2-pentanone)	108-10-1	† (50)	10 U	10 U	10 U	**33,000 EJ {210,000 J}**	10 U	10 U	10 U	10 U
Methyl tert-butyl ether	1634-04-4	10	1 U	1 U	1 U	10 U	1 U	1 U	1 U	1 U
Methylcyclohexane	108-87-2	†	5 U	5 U	5 U	50 U	5 U	5 U	5 U	5 U
Methylene chloride	75-09-2	5	0.7 J	1 U	0.8 J	**93,000 EJ {390,000 J}**	1 U	1 U	1 U	1 U
Naphthalene	91-20-3	10	5 U	5 U	5 U	**400**	5 U	5 U	5 U	5 U
n-Butanol	71-36-3	50	*250 U*	*250 U*	*250 U*	*2,500 U*	*250 U*	*250 U*	*250 U*	*250 U*
n-Butylbenzene	104-51-8	5	5 U	5 U	5 U	50 U	5 U	5 U	5 U	5 U
n-Heptane	142-82-5	- -	5 U	5 U	5 U	50 U	5 U	5 U	5 U	5 U
n-Hexane	110-54-3	- -	5 U	5 U	5 U	50 U	5 U	5 U	5 U	5 U
o-Xylene	95-47-6	5	1 U	1 U	1 U	**10**	1 U	1 U	1 U	1 U
p-Isopropyltoluene	99-87-6	5	5 U	5 U	5 U	3 J	5 U	5 U	5 U	5 U
sec-Butylbenzene	135-98-8	5	5 U	5 U	5 U	50 U	5 U	5 U	5 U	5 U
Styrene	100-42-5	5	5 U	5 U	5 U	50 U	5 U	5 U	5 U	5 U
tert-Butylbenzene	98-06-6	5	5 U	5 U	5 U	50 U	5 U	5 U	5 U	5 U
Tertiary butyl alcohol	75-65-0	- -	50 U	50 U	50 U	500 U	50 U	50 U	50 U	50 U
Tetrachloroethene	127-18-4	5	1 U	1 U	1 U	**23**	1 U	1 U	1 U	1 U
Tetrahydrofuran	109-99-9	50	10 U	10 U	10 U	**150**	10 U	10 U	10 U	10 U
Toluene	108-88-3	5	1 U	1 U	1 U	**400**	1 U	1 U	1 U	1 U
Total chlorinated VOCs	ARC-TCVOC	- -	2.2 J	0 U	67	357 J	2.2 J	0 U	2	0 U
trans-1,2-Dichloroethene	156-60-5	5	1 U	1 U	1 U	**58**	1 U	1 U	1 U	1 U
trans-1,3-Dichloropropene	10061-02-6	0.4	1 U	1 U	1 U	*10 U*	1 U	1 U	1 U	1 U
Trichloroethene	79-01-6	5	2	1 U	1 U	**18**	1 U	1 U	1	1 U
Trichlorofluoromethane	75-69-4	5	1 UJ	1 UJ	1 UJ	10 UJ	1 UJ	1 UJ	1 U	1 UJ
Vinyl chloride	75-01-4	2	1 UJ	1 UJ	1 UJ	**8 J**	1 UJ	1 UJ	1 UJ	1 UJ
Xylenes (total)	1330-20-7	5	6 U	6 U	6 U	**36 J**	6 U	6 U	6 U	6 U
Semivolatile Organics - USEPA SW-846 Method 8270D (µg/L)										
1,1'-Biphenyl	92-52-4	5	10 U	10 U	10 U	*100 U*	10 U	11 U	10 U	10 U
1,2,4,5-Tetrachlorobenzene	95-94-3	5	2.0 U	2.0 U	2.0 U	*21 U*	2.0 U	2.2 U	2.0 U	2.1 U
2,3,4,6-Tetrachlorophenol	58-90-2	1	*10 U*	*10 U*	*10 U*	*100 U*	*10 U*	*11 U*	*10 U*	*10 U*
2,4,5-Trichlorophenol	95-95-4	1	2.0 U	2.0 U	2.0 U	*21 U*	2.0 U	2.2 U	2.0 U	2.1 U
2,4,6-Trichlorophenol	88-06-2	1	2.0 U	2.0 U	2.0 U	*21 U*	2.0 U	2.2 U	2.0 U	2.1 U
2,4-Dichlorophenol	120-83-2	1	2.0 U	2.0 U	2.0 U	*21 U*	2.0 U	2.2 U	2.0 U	2.1 U
2,4-Dimethylphenol	105-67-9	1	*10 U*	*10 U*	*10 U*	*100 U*	*10 U*	*11 U*	*10 U*	*10 U*

See Notes on Page 17.

Table 5
Groundwater Analytical Results - Organics

Additional BDA Well Installation and Groundwater Monitoring Report
Site #C734138, BMS Syracuse North Campus Restoration Area
East Syracuse, New York

Location ID: Date Collected: Sample Name:	CAS Number	Groundwater Standard/ Guidance Value	BDA-1F 10/30/19 BDA-1F 10302019	BDA-1WT 10/30/19 BDA-1WT 10302019	BDA-1RX 10/31/19 BDA-1RX 10312019	BDA-4UT 10/31/19 BDA-4UT 10312019	BDA-6WT 10/30/19 BDA-6WT 10302019	BDA-6T 10/30/19 BDA-6T 10302019	BDA-8WT 11/01/19 BDA-8WT 11012019	BDA-8T 10/31/19 BDA-8T 10312019
Semivolatile Organics - USEPA SW-846 Method 8270D (µg/L) (cont'd)										
2,4-Dinitrophenol	51-28-5	1	*30 U*	*31 U*	*30 U*	*310 U*	*30 U*	*33 U*	*31 U*	*31 U*
2,4-Dinitrotoluene	121-14-2	5	5.1 U	5.1 U	5.1 U	*52 U*	5.1 U	5.4 U	5.1 U	5.2 U
2,6-Dinitrotoluene	606-20-2	5	2.0 U	2.0 U	2.0 U	*21 U*	2.0 U	2.2 U	2.0 U	2.1 U
2-Chloronaphthalene	91-58-7	10	1.0 U	1.0 U	1.0 U	10 U	1.0 U	1.1 U	1.0 U	1.0 U
2-Chlorophenol	95-57-8	1	2.0 U	2.0 U	2.0 U	*21 U*	2.0 U	2.2 U	2.0 U	2.1 U
2-Methylnaphthalene	91-57-6	- -	0.51 U	0.51 U	0.51 U	16	0.51 U	0.54 U	0.51 U	0.52 U
2-Nitroaniline	88-74-4	5	7.1 U	7.1 U	7.1 U	*73 U*	7.1 U	7.6 U	7.1 U	7.2 U
2-Nitrophenol	88-75-5	1	*10 U*	*10 U*	*10 U*	*100 U*	*10 U*	*11 U*	*10 U*	*10 U*
3&4-Methylphenol (cresol)	65794-96-9	1	2.0 U	2.0 U	2.0 U	**560**	2.0 U	2.2 U	2.0 U	2.1 U
3,3'-Dichlorobenzidine	91-94-1	5	10 U	10 U	10 U	*100 U*	10 U	11 U	10 U	10 U
3-Nitroaniline	99-09-2	5	7.1 U	7.1 U	7.1 U	*73 U*	7.1 U	7.6 U	7.1 U	7.2 U
4,6-Dinitro-2-methylphenol	534-52-1	1	*21 U*	*21 U*	*21 U*	*220 U*	*21 U*	*23 U*	*21 U*	*22 U*
4-Bromophenyl-phenyl ether	101-55-3	- -	2.0 U	2.0 U	2.0 U	21 U	2.0 U	2.2 U	2.0 U	2.1 U
4-Chloro-3-Methylphenol	59-50-7	1	2.0 U	2.0 U	2.0 U	*21 U*	2.0 U	2.2 U	2.0 U	2.1 U
4-Chloroaniline	106-47-8	5	10 U	10 U	10 U	*100 U*	10 U	11 U	10 U	10 U
4-Chlorophenyl-phenyl ether	7005-72-3	- -	2.0 U	2.0 U	2.0 U	21 U	2.0 U	2.2 U	2.0 U	2.1 U
4-Nitroaniline	100-01-6	5	3.0 U	3.1 U	3.0 U	*31 U*	3.0 U	3.3 U	3.1 U	3.1 U
4-Nitrophenol	100-02-7	1	*30 U*	*31 U*	*30 U*	*310 U*	*30 U*	*33 U*	*31 U*	*31 U*
Acenaphthene	83-32-9	20	0.51 U	0.51 U	0.51 U	5.2 U	0.51 U	0.54 U	0.51 U	0.52 U
Acenaphthylene	208-96-8	- -	0.51 U	0.51 U	0.51 U	5.2 U	0.51 U	0.54 U	0.51 U	0.52 U
Acetophenone	98-86-2	- -	10 U	10 U	10 U	64 J	10 U	11 U	10 U	10 U
Aniline	62-53-3	5	10 U	10 U	10 U	*100 U*	10 U	11 U	10 U	10 U
Anthracene	120-12-7	50	0.51 U	0.51 U	0.51 U	5.2 U	0.51 U	0.54 U	0.51 U	0.52 U
Atrazine	1912-24-9	7.5	5.1 U	5.1 U	5.1 U	*52 U*	5.1 U	5.4 U	5.1 U	5.2 U
Benzaldehyde	100-52-7	- -	10 U	10 U	10 U	100 U	10 U	11 U	10 U	10 U
Benzo(a)anthracene	56-55-3	0.002	*0.51 U*	*0.51 U*	*0.51 U*	*5.2 U*	*0.51 U*	*0.54 U*	*0.51 U*	*0.52 U*
Benzo(a)pyrene	50-32-8	ND	0.51 U	0.51 U	0.51 U	5.2 U	0.51 U	0.54 U	0.51 U	0.52 U
Benzo(b)fluoranthene	205-99-2	0.002	*0.51 U*	*0.51 U*	*0.51 U*	*5.2 U*	*0.51 U*	*0.54 U*	*0.51 U*	*0.52 U*
Benzo(g,h,i)perylene	191-24-2	- -	0.51 U	0.51 U	0.51 U	5.2 U	0.51 U	0.54 U	0.51 U	0.52 U
Benzo(k)fluoranthene	207-08-9	0.002	*0.51 U*	*0.51 U*	*0.51 U*	*5.2 U*	*0.51 U*	*0.54 U*	*0.51 U*	*0.52 U*
Benzyl alcohol	100-51-6	- -	30 U	31 U	30 U	310 U	30 U	33 U	31 U	31 U
bis(2-Chloroethoxy)methane	111-91-1	5	2.0 U	2.0 U	2.0 U	*21 U*	2.0 U	2.2 U	2.0 U	2.1 U
bis(2-Chloroethyl)ether	111-44-4	1	2.0 U	2.0 U	2.0 U	*21 U*	2.0 U	2.2 U	2.0 U	2.1 U
bis(2-Chloroisopropyl)ether	39638-32-9	- -	2.0 U	2.0 U	2.0 U	21 U	2.0 U	2.2 U	2.0 U	2.1 U
bis(2-Ethylhexyl) phthalate	117-81-7	5	*11 U*	*11 U*	*11 U*	*110 U*	*11 U*	*12 U*	*11 U*	*11 U*
Butylbenzyl phthalate	85-68-7	50	5.1 U	5.1 U	5.1 U	52 U	5.1 U	5.4 U	5.1 U	5.2 U
Caprolactam	105-60-2	- -	11 U	11 U	11 U	110 U	11 U	12 U	11 U	11 U
Carbazole	86-74-8	- -	2.0 U	2.0 U	2.0 U	7.5 J	2.0 U	2.2 U	2.0 U	2.1 U
Chrysene	218-01-9	0.002	*0.51 U*	*0.51 U*	*0.51 U*	*5.2 U*	*0.51 U*	*0.54 U*	*0.51 U*	*0.52 U*
Dibenzo(a,h)anthracene	53-70-3	- -	0.51 U	0.51 U	0.51 U	5.2 U	0.51 U	0.54 U	0.51 U	0.52 U
Dibenzofuran	132-64-9	- -	2.0 U	2.0 U	2.0 U	21 U	2.0 U	2.2 U	2.0 U	2.1 U
Dicyclohexylamine	101-83-7	† (50)	10 U	10 U	10 U	100 U	**200 D**	11 U	10 U	10 U
Diethylphthalate	84-66-2	50	5.1 U	5.1 U	5.1 U	52 U	5.1 U	5.4 U	5.1 U	5.2 U

See Notes on Page 17.

Table 5
Groundwater Analytical Results - Organics

Additional BDA Well Installation and Groundwater Monitoring Report
Site #C734138, BMS Syracuse North Campus Restoration Area
East Syracuse, New York

Location ID: Date Collected: Sample Name:	CAS Number	Groundwater Standard/ Guidance Value	BDA-1F 10/30/19 BDA-1F 10302019	BDA-1WT 10/30/19 BDA-1WT 10302019	BDA-1RX 10/31/19 BDA-1RX 10312019	BDA-4UT 10/31/19 BDA-4UT 10312019	BDA-6WT 10/30/19 BDA-6WT 10302019	BDA-6T 10/30/19 BDA-6T 10302019	BDA-8WT 11/01/19 BDA-8WT 11012019	BDA-8T 10/31/19 BDA-8T 10312019
Semivolatile Organics - USEPA SW-846 Method 8270D (µg/L) (cont'd)										
Dimethylphthalate	131-11-3	50	5.1 U	5.1 U	5.1 U	52 U	5.1 U	5.4 U	5.1 U	5.2 U
Di-n-butylphthalate	84-74-2	50	5.1 U	5.1 U	5.1 U	52 U	5.1 U	5.4 U	5.1 U	5.2 U
Di-n-octylphthalate	117-84-0	50	11 U	11 U	11 U	*110 U*	11 U	12 U	11 U	11 U
Fluoranthene	206-44-0	50	0.51 U	0.51 U	0.51 U	5.2 U	0.51 U	0.54 U	0.51 U	0.52 U
Fluorene	86-73-7	50	0.51 U	0.51 U	0.51 U	5.2 U	0.51 U	0.54 U	0.51 U	0.52 U
Hexachlorobenzene	118-74-1	0.04	*0.51 U*	*0.51 U*	*0.51 U*	*5.2 U*	*0.51 U*	*0.54 U*	*0.51 U*	*0.52 U*
Hexachlorobutadiene	87-68-3	0.5	*2.0 U*	*2.0 U*	*2.0 U*	*21 U*	*2.0 U*	*2.2 U*	*2.0 U*	*2.1 U*
Hexachlorocyclopentadiene	77-47-4	5	*11 U*	*11 U*	*11 U*	*110 U*	*11 U*	*12 U*	*11 U*	*11 U*
Hexachloroethane	67-72-1	5	5.1 U	5.1 U	5.1 U	*52 U*	5.1 U	5.4 U	5.1 U	5.2 U
Indeno(1,2,3-cd)pyrene	193-39-5	0.002	*0.51 U*	*0.51 U*	*0.51 U*	*5.2 U*	*0.51 U*	*0.54 U*	*0.51 U*	*0.52 U*
Isophorone	78-59-1	50	2.0 U	2.0 U	2.0 U	21 U	2.0 U	2.2 U	2.0 U	2.1 U
n,n-dimethylaniline	121-69-7	1	1.0 U	1.0 U	0.53 J	*10 U*	1.0 U	1.1 U	1.0 U	1.0 U
Naphthalene	91-20-3	10	0.51 U	0.51 U	0.51 U	**240**	0.51 U	0.54 U	0.51 U	0.52 U
Nitrobenzene	98-95-3	0.4	*2.0 U*	*2.0 U*	*2.0 U*	*21 U*	*2.0 U*	*2.2 U*	*2.0 U*	*2.1 U*
N-Nitroso-di-n-propylamine	621-64-7	- -	3.0 U	3.1 U	3.0 U	31 U	3.0 U	3.3 U	3.1 U	3.1 U
N-Nitrosodiphenylamine	86-30-6	50	3.0 U	3.1 U	3.0 U	31 U	3.0 U	3.3 U	3.1 U	3.1 U
o-Cresol (2-Methylphenol)	95-48-7	1	2.0 U	2.0 U	2.0 U	**130**	2.0 U	2.2 U	2.0 U	2.1 U
Pentachlorophenol	87-86-5	1	5.1 U	5.1 U	5.1 U	*52 U*	5.1 U	*5.4 U*	5.1 U	5.2 U
Phenanthrene	85-01-8	50	0.51 U	0.51 U	0.51 U	5.2 U	0.51 U	0.54 U	0.51 U	0.52 U
Phenol	108-95-2	1	2.0 U	2.0 U	**1.5 J**	**3,300 D**	2.0 U	2.2 U	2.0 U	2.1 U
Pyrene	129-00-0	50	0.51 U	0.51 U	0.51 U	5.2 U	0.51 U	0.54 U	0.51 U	0.52 U
Pyridine	110-86-1	50	5.1 U	5.1 U	5.1 U	52 U	5.1 U	5.4 U	5.1 U	5.2 U
Total aniline compounds	ARC-TAniline	- -	10 U	10 U	0.53 J	100 U	10 U	11 U	10 U	10 U
Triethylamine	121-44-8	† (50)	10 U	10 U	10 U	**210**	10 U	11 U	10 U	10 U
Semivolatile Organics - USEPA SW-846 Method 8270D - SIM (µg/L)										
1,4-Dioxane	123-91-1	1	NA	NA	NA	NA	NA	NA	NA	NA
Alcohols and Glycols - USEPA SW-846 Method 8015D (µg/L)										
Ethanol	64-17-5	†	1,000 U	1,000 U	1,000 U	NA	1,000 U	1,000 U	1,000 U	1,000 U
Ethylene glycol	107-21-1	50	**7,400 J**	*10,000 UJ*	*10,000 U*	NA	R	*10,000 U*	*10,000 U*	*10,000 U*
Isopropyl alcohol	67-63-0	- -	1,000 U	1,000 U	1,000 U	NA	1,000 U	1,000 U	1,000 U	1,000 U
Methanol	67-56-1	- -	1,000 U	1,000 U	1,000 U	NA	1,000 U	1,000 U	1,000 U	1,000 U
Propylene glycol	57-55-6	1,000	*10,000 U*	*10,000 UJ*	*10,000 U*	NA	R	*10,000 U*	*10,000 U*	*10,000 U*
Aldehydes - USEPA SW-846 Method 8315A (µg/L)										
Acetaldehyde	75-07-0	8	*60 UJ*	*60 UJ*	*60 UJ*	NA	*60 UJ*	*60 UJ*	*60 U*	*60 UJ*
Formaldehyde	50-00-0	8	*50 U*	*50 U*	*50 U*	NA	**26 J**	*50 U*	*50 U*	*50 U*

See Notes on Page 17.

Table 5
Groundwater Analytical Results - Organics

Additional BDA Well Installation and Groundwater Monitoring Report
Site #C734138, BMS Syracuse North Campus Restoration Area
East Syracuse, New York

Location ID: Date Collected: Sample Name:	CAS Number	Groundwater Standard/ Guidance Value	BDA-8RX 11/01/19 BDA-8RX 11012019	BDA-11WT 10/31/19 BDA-11WT 10312019	BDA-12T 11/01/19 BDA-12T 11012019	BDA-12RX 11/01/19 BDA-12RX 11012019	BDA-13WT 10/31/19 BDA-13WT 10312019	BDA-14RX 10/29/19 BDA-14RX 10292019	BDA-15RX 10/30/19 BDA15RX 10302019	BDA-17WT 10/29/19 BDA-17WT 10292019	BDA-17T 10/29/19 BDA-17T 10292019
Volatile Organics - USEPA SW-846 Method 8260C (µg/L)											
1,1,1-Trichloroethane	71-55-6	5	1 U	*20 U*	1 U	1 U	1 U	1 U	1 U	1 U	1 U [1 U]
1,1,2,2-Tetrachloroethane	79-34-5	5	1 U	20 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U [1 U]
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	5	10 U	200 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U [10 U]
1,1,2-Trichloroethane	79-00-5	1	1 U	*20 U*	1 U	1 U	1 U	1 U	1 U	1 U	1 U [1 U]
1,1-Dichloroethane	75-34-3	5	1 U	20 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U [1 U]
1,1-Dichloroethene	75-35-4	5	1 U	20 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U [1 U]
1,2,3-Trichlorobenzene	87-61-6	5	5 U	*100 U*	5 U	5 U	5 U	5 U	5 U	5 U	5 U [5 U]
1,2,4-Trichlorobenzene	120-82-1	5	5 U	*100 U*	5 U	5 U	5 U	5 U	5 U	5 U	5 U [5 U]
1,2,4-Trimethylbenzene	95-63-6	5	5 U	*100 U*	5 U	5 U	5 U	5 U	5 U	5 U	5 U [5 U]
1,2-Dibromo-3-chloropropane	96-12-8	0.04	*5 U*	*100 U*	*5 U*	*5 U*	*5 U*	*5 U*	*5 U*	*5 U*	*5 U [5 U]*
1,2-Dibromoethane	106-93-4	0.0006	*1 U*	*20 U*	*1 U*	*1 U*	*1 U*	*1 U*	*1 U*	*1 U*	*1 U [1 U]*
1,2-Dichlorobenzene	95-50-1	3	5 U	**4 J**	5 U	5 U	5 U	5 U	5 U	5 U	5 U [5 U]
1,2-Dichloroethane	107-06-2	0.6	1 U	*20 U*	1 U	1 U	1 U	1 U	1 U	1 U	1 U [1 U]
1,2-Dichloropropane	78-87-5	1	1 U	*20 U*	1 U	1 U	1 U	1 U	1 U	1 U	1 U [1 U]
1,3,5-Trimethylbenzene	108-67-8	5	5 U	*100 U*	5 U	5 U	0.4 J	5 U	5 U	5 U	5 U [5 U]
1,3-Dichlorobenzene	541-73-1	3	5 U	*100 U*	5 U	5 U	5 U	5 U	5 U	5 U	5 U [5 U]
1,4-Dichlorobenzene	106-46-7	3	5 U	*100 U*	5 U	5 U	5 U	5 U	5 U	5 U	5 U [5 U]
1,4-Dioxane	123-91-1	1	250 U	5,000 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U [250 U]
2-Hexanone	591-78-6	50	10 U	200 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U [10 U]
2-Nitropropane	79-46-9	- -	10 U	200 U	10 U	10 U	4 J	10 U	10 U	10 U	10 U [10 U]
Acetone	67-64-1	50	20 U	**660 J**	20 U	20 U	4 J	20 U	28 J	2 J	20 U [20 U]
Acetonitrile	75-05-8	- -	100 U	2,000 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U [100 U]
Benzene	71-43-2	1	1 U	**9 J**	1 U	1 U	1 U	1 U	0.4 J	1 U	1 U [1 U]
Bromochloromethane	74-97-5	5	5 U	100 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U [5 U]
Bromodichloromethane	75-27-4	50	1 U	20 U	1 U	1 U	1 U	1 U	1 U	1 U	1 [3]
Bromoform	75-25-2	50	4 U	80 U	4 U	4 U	4 U	4 U	4 U	4 U	4 U [4 U]
Bromomethane	74-83-9	5	1 UJ	*20 UJ*	1 UJ	1 UJ	1 UJ	1 UJ	1 U	1 UJ	1 UJ [1 UJ]
Carbon disulfide	75-15-0	60	5 U	100 U	5 U	0.3 J	5 U	5 U	5 U	5 U	5 U [5 U]
Carbon tetrachloride	56-23-5	5	1 U	20 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U [1 U]
Chlorobenzene	108-90-7	5	1 U	20 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U [1 U]
Chlorodifluoromethane	75-45-6	5	5 U	*100 UJ*	5 U	5 U	5 UJ	5 U	5 UJ	5 U	5 U [5 U]
Chloroethane	75-00-3	5	1 UJ	20 UJ	1 UJ	1 UJ	1 UJ	1 U	1 UJ	1 U	1 U [1 U]
Chloroform	67-66-3	7	1 U	20 U	1 U	1 U	2	1 U	1 U	0.4 J	**7 J [14 J]**
Chloromethane	74-87-3	5	1 UJ	20 UJ	1 UJ	1 UJ	1 UJ	1 U	1 UJ	1 U	1 U [1 U]
cis-1,2-Dichloroethene	156-59-2	5	1 U	**17 J**	1 U	1 U	1 U	1 U	1 U	1 U	1 U [1 U]
cis-1,3-Dichloropropene	10061-01-5	0.4	1 U	*20 U*	1 U	1 U	1 U	1 U	1 U	1 U	1 U [1 U]
Cyclohexane	110-82-7	- -	5 U	100 U	5 U	5 U	27	5 U	5 U	5 U	5 U [5 U]
Cyclohexanone	108-94-1	- -	100 U	2,000 U	100 U	100 U	80 J	100 U	100 U	100 U	100 U [100 U]
Dibromochloromethane	124-48-1	50	1 U	20 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U [0.5 J]
Dichlorodifluoromethane	75-71-8	5	1 UJ	20 UJ	1 UJ	1 UJ	1 UJ	1 UJ	1 UJ	1 UJ	1 UJ [1 UJ]

See Notes on Page 17.

Table 5
Groundwater Analytical Results - Organics

Additional BDA Well Installation and Groundwater Monitoring Report
Site #C734138, BMS Syracuse North Campus Restoration Area
East Syracuse, New York

Location ID: Date Collected: Sample Name:	CAS Number	Groundwater Standard/ Guidance Value	BDA-8RX 11/01/19 BDA-8RX 11012019	BDA-11WT 10/31/19 BDA-11WT 10312019	BDA-12T 11/01/19 BDA-12T 11012019	BDA-12RX 11/01/19 BDA-12RX 11012019	BDA-13WT 10/31/19 BDA-13WT 10312019	BDA-14RX 10/29/19 BDA-14RX 10292019	BDA-15RX 10/30/19 BDA15RX 10302019	BDA-17WT 10/29/19 BDA-17WT 10292019	BDA-17T 10/29/19 BDA-17T 10292019
Volatile Organics - USEPA SW-846 Method 8260C (µg/L) (cont'd)											
Ethyl acetate	141-78-6	- -	5 U	100 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U [5 U]
Ethyl ether	60-29-7	- -	5 U	100 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U [5 U]
Ethylbenzene	100-41-4	5	1 U	*20 U*	1 U	1 U	2	1 U	1 U	1 U	1 U [1 U]
Isobutanol	78-83-1	- -	250 U	1,400 J	250 U	250 U	250 U	250 U	250 U	250 U	250 U [250 U]
Isopropylbenzene	98-82-8	5	5 U	100 U	5 U	5 U	2 J	5 U	5 U	5 U	5 U [5 U]
m,p-Xylene	ARC-mpXyl	5	5 U	*100 U*	5 U	5 U	5 U	5 U	5 U	5 U	5 U [5 U]
Methyl acetate	79-20-9	- -	5 U	25 J	5 U	5 U	5 U	5 U	5 U	5 U	5 U [5 U]
Methyl ethyl ketone (MEK, 2-butanone)	78-93-3	50	10 U	**51 J**	10 U	10 U	2 J	10 U	2 J	10 U	10 U [10 U]
Methyl isobutyl ketone (MIBK, 4-methyl-2-pentanone)	108-10-1	† (50)	10 U	**650**	10 U	10 U	10 U	10 U	1 J	10 U	10 U [10 U]
Methyl tert-butyl ether	1634-04-4	10	1 U	20 U	1 U	0.3 J	1 U	1 U	0.4 J	1 U	1 U [1 U]
Methylcyclohexane	108-87-2	†	5 U	100 U	5 U	5 U	3 J	5 U	5 U	5 U	5 U [5 U]
Methylene chloride	75-09-2	5	1 U	**21,000 D**	1 U	1 U	2	1 U	1 J	1 U	1 U [1 U]
Naphthalene	91-20-3	10	5 U	*100 U*	5 U	5 U	5 U	5 U	5 U	5 U	5 U [5 U]
n-Butanol	71-36-3	50	*250 U*	*5,000 U*	*250 U*	*250 U*	*250 U*	*250 U*	*250 U*	*250 U*	*250 U [250 U]*
n-Butylbenzene	104-51-8	5	5 U	100 U	5 U	5 U	0.5 J	5 U	5 U	5 U	5 U [5 U]
n-Heptane	142-82-5	- -	5 U	100 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U [5 U]
n-Hexane	110-54-3	- -	5 U	100 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U [5 U]
o-Xylene	95-47-6	5	1 U	*20 U*	1 U	1 U	1 U	1 U	1 U	1 U	1 U [1 U]
p-Isopropyltoluene	99-87-6	5	5 U	100 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U [5 U]
sec-Butylbenzene	135-98-8	5	5 U	100 U	5 U	5 U	2 J	5 U	5 U	5 U	5 U [5 U]
Styrene	100-42-5	5	5 U	100 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U [5 U]
tert-Butylbenzene	98-06-6	5	5 U	*100 U*	5 U	5 U	5 U	5 U	5 U	5 U	5 U [5 U]
Tertiary butyl alcohol	75-65-0	- -	50 U	1,000 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U [50 U]
Tetrachloroethene	127-18-4	5	1 U	20 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U [1 U]
Tetrahydrofuran	109-99-9	50	10 U	200 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U [10 U]
Toluene	108-88-3	5	1 U	**48**	1 U	1 U	1 U	0.7 J	0.2 J	1 U	1 U [1 U]
Total chlorinated VOCs	ARC-TCVOC	- -	0 U	21 J	0 U	0 U	2	0 U	0 U	0.4 J	7 [14]
trans-1,2-Dichloroethene	156-60-5	5	1 U	20 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U [1 U]
trans-1,3-Dichloropropene	10061-02-6	0.4	1 U	*20 U*	1 U	1 U	1 U	1 U	1 U	1 U	1 U [1 U]
Trichloroethene	79-01-6	5	1 U	20 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U [1 U]
Trichlorofluoromethane	75-69-4	5	1 U	20 UJ	1 U	1 U	1 UJ	1 U	1 UJ	1 U	1 U [1 U]
Vinyl chloride	75-01-4	2	1 UJ	*20 UJ*	1 UJ	1 UJ	1 UJ	1 U	1 UJ	1 U	1 U [1 U]
Xylenes (total)	1330-20-7	5	6 U	*120 U*	6 U	6 U	6 U	6 U	6 U	6 U	6 U [6 U]
Semivolatile Organics - USEPA SW-846 Method 8270D (µg/L)											
1,1'-Biphenyl	92-52-4	5	10 U	*110 U*	9.4 U	9.3 U	10 U	10 UJ	10 U	10 U	11 U
1,2,4,5-Tetrachlorobenzene	95-94-3	5	2.0 U	*21 U*	1.9 U	1.9 U	2.0 U	2.0 UJ	2.0 U	2.0 U	2.1 U
2,3,4,6-Tetrachlorophenol	58-90-2	1	*10 U*	*110 U*	*9.4 U*	*9.3 U*	*10 U*	*10 UJ*	*10 U*	R	*11 U*
2,4,5-Trichlorophenol	95-95-4	1	2.0 U	*21 U*	1.9 U	1.9 U	2.0 U	2.0 UJ	2.0 U	R	2.1 U
2,4,6-Trichlorophenol	88-06-2	1	2.0 U	*21 U*	1.9 U	1.9 U	2.0 U	2.0 UJ	2.0 U	R	2.1 U
2,4-Dichlorophenol	120-83-2	1	2.0 U	*21 U*	1.9 U	1.9 U	2.0 U	2.0 UJ	2.0 U	R	2.1 U
2,4-Dimethylphenol	105-67-9	1	*10 U*	*110 U*	*9.4 U*	*9.3 U*	*10 U*	*10 UJ*	*10 U*	R	*11 U*

See Notes on Page 17.

Table 5
Groundwater Analytical Results - Organics

Additional BDA Well Installation and Groundwater Monitoring Report
Site #C734138, BMS Syracuse North Campus Restoration Area
East Syracuse, New York

Location ID: Date Collected: Sample Name:	CAS Number	Groundwater Standard/ Guidance Value	BDA-8RX 11/01/19 BDA-8RX 11012019	BDA-11WT 10/31/19 BDA-11WT 10312019	BDA-12T 11/01/19 BDA-12T 11012019	BDA-12RX 11/01/19 BDA-12RX 11012019	BDA-13WT 10/31/19 BDA-13WT 10312019	BDA-14RX 10/29/19 BDA-14RX 10292019	BDA-15RX 10/30/19 BDA15RX 10302019	BDA-17WT 10/29/19 BDA-17WT 10292019	BDA-17T 10/29/19 BDA-17T 10292019
Semivolatile Organics - USEPA SW-846 Method 8270D (µg/L) (cont'd)											
2,4-Dinitrophenol	51-28-5	1	*31 U*	*320 U*	*28 U*	*28 U*	*30 U*	*30 UJ*	*30 U*	R	*32 U*
2,4-Dinitrotoluene	121-14-2	5	5.1 U	*53 U*	4.7 U	4.6 U	5.1 U	5.1 UJ	5.1 U	5.1 U	5.3 U
2,6-Dinitrotoluene	606-20-2	5	2.0 U	*21 U*	1.9 U	1.9 U	2.0 U	2.0 UJ	2.0 U	2.0 U	2.1 U
2-Chloronaphthalene	91-58-7	10	1.0 U	11 U	0.94 U	0.93 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.1 U
2-Chlorophenol	95-57-8	1	2.0 U	*21 U*	1.9 U	1.9 U	2.0 U	2.0 UJ	2.0 U	R	2.1 U
2-Methylnaphthalene	91-57-6	- -	0.51 U	5.3 U	0.47 U	0.46 U	0.51 U	0.51 UJ	0.51 U	0.51 U	0.53 U
2-Nitroaniline	88-74-4	5	7.1 U	*74 U*	6.6 U	6.5 U	7.1 U	7.1 UJ	7.1 U	7.1 U	7.5 U
2-Nitrophenol	88-75-5	1	*10 U*	*110 U*	*9.4 U*	*9.3 U*	*10 U*	*10 UJ*	*10 U*	R	*11 U*
3&4-Methylphenol (cresol)	65794-96-9	1	2.0 U	*21 U*	1.9 U	1.9 U	2.0 U	2.0 UJ	2.0 U	R	2.1 U
3,3'-Dichlorobenzidine	91-94-1	5	10 U	*110 U*	9.4 U	9.3 U	10 U	10 UJ	10 U	10 U	11 U
3-Nitroaniline	99-09-2	5	7.1 U	*74 U*	6.6 U	6.5 U	7.1 U	7.1 UJ	7.1 U	7.1 U	7.5 U
4,6-Dinitro-2-methylphenol	534-52-1	1	*21 U*	*220 U*	*20 U*	*20 U*	*21 U*	*21 UJ*	*21 U*	R	*22 U*
4-Bromophenyl-phenyl ether	101-55-3	- -	2.0 U	21 U	1.9 U	1.9 U	2.0 U	2.0 UJ	2.0 U	2.0 U	2.1 U
4-Chloro-3-Methylphenol	59-50-7	1	2.0 U	*21 U*	1.9 U	1.9 U	2.0 U	2.0 UJ	2.0 U	R	2.1 U
4-Chloroaniline	106-47-8	5	10 U	*110 U*	9.4 U	9.3 U	10 U	10 UJ	10 U	10 U	11 U
4-Chlorophenyl-phenyl ether	7005-72-3	- -	2.0 U	21 U	1.9 U	1.9 U	2.0 U	2.0 UJ	2.0 U	2.0 U	2.1 U
4-Nitroaniline	100-01-6	5	3.1 U	*32 U*	2.8 U	2.8 U	3.0 U	3.0 UJ	3.0 U	3.1 U	3.2 U
4-Nitrophenol	100-02-7	1	*31 U*	*320 U*	*28 U*	*28 U*	*30 U*	*30 UJ*	*30 U*	R	*32 U*
Acenaphthene	83-32-9	20	0.51 U	5.3 U	0.47 U	0.46 U	0.51 U	0.51 UJ	0.51 U	0.51 U	0.53 U
Acenaphthylene	208-96-8	- -	0.51 U	5.3 U	0.47 U	0.46 U	0.51 U	0.51 UJ	0.51 U	0.51 U	0.53 U
Acetophenone	98-86-2	- -	10 U	110 U	9.4 U	9.3 U	10 U	10 UJ	10 U	10 U	11 U
Aniline	62-53-3	5	10 U	**14,000 D**	9.4 U	9.3 U	**7.5 J**	10 UJ	10 U	10 U	11 U
Anthracene	120-12-7	50	0.51 U	5.3 U	0.47 U	0.46 U	0.51 U	0.51 UJ	0.51 U	0.51 U	0.53 U
Atrazine	1912-24-9	7.5	5.1 U	*53 U*	4.7 U	4.6 U	5.1 U	5.1 UJ	5.1 U	5.1 U	5.3 U
Benzaldehyde	100-52-7	- -	10 U	110 U	9.4 U	9.3 U	10 U	10 UJ	10 U	10 U	11 U
Benzo(a)anthracene	56-55-3	0.002	*0.51 U*	*5.3 U*	*0.47 U*	*0.46 U*	*0.51 U*	*0.51 UJ*	*0.51 U*	*0.51 U*	*0.53 U*
Benzo(a)pyrene	50-32-8	ND	0.51 U	5.3 U	0.47 U	0.46 U	0.51 U	0.51 UJ	0.51 U	0.51 UJ	0.53 U
Benzo(b)fluoranthene	205-99-2	0.002	*0.51 U*	*5.3 U*	*0.47 U*	*0.46 U*	*0.51 U*	*0.51 UJ*	*0.51 U*	*0.51 UJ*	*0.53 U*
Benzo(g,h,i)perylene	191-24-2	- -	0.51 U	5.3 U	0.47 U	0.46 U	0.51 U	0.51 UJ	0.51 U	0.51 U	0.53 U
Benzo(k)fluoranthene	207-08-9	0.002	*0.51 U*	*5.3 U*	*0.47 U*	*0.46 U*	*0.51 U*	*0.51 UJ*	*0.51 U*	*0.51 UJ*	*0.53 U*
Benzyl alcohol	100-51-6	- -	31 U	320 U	28 U	28 U	30 U	30 UJ	30 U	31 U	32 U
bis(2-Chloroethoxy)methane	111-91-1	5	2.0 U	*21 U*	1.9 U	1.9 U	2.0 U	2.0 UJ	2.0 U	2.0 U	2.1 U
bis(2-Chloroethyl)ether	111-44-4	1	2.0 U	*21 U*	1.9 U	1.9 U	2.0 U	2.0 UJ	2.0 U	2.0 U	2.1 U
bis(2-Chloroisopropyl)ether	39638-32-9	- -	2.0 U	21 U	1.9 U	1.9 U	2.0 U	2.0 UJ	2.0 U	2.0 U	2.1 U
bis(2-Ethylhexyl) phthalate	117-81-7	5	*11 U*	*120 U*	10 U	10 U	*11 U*	*11 UJ*	*11 U*	*11 U*	*12 U*
Butylbenzyl phthalate	85-68-7	50	5.1 U	53 U	4.7 U	4.6 U	5.1 U	5.1 UJ	5.1 U	5.1 U	5.3 U
Caprolactam	105-60-2	- -	11 U	120 U	10 U	350 D	11 U	11 UJ	13	11 U	12 U
Carbazole	86-74-8	- -	2.0 U	21 U	1.9 U	1.9 U	2.0 U	2.0 UJ	2.0 U	2.0 U	2.1 U
Chrysene	218-01-9	0.002	*0.51 U*	*5.3 U*	*0.47 U*	*0.46 U*	*0.51 U*	*0.51 UJ*	*0.51 U*	*0.51 U*	*0.53 U*
Dibenzo(a,h)anthracene	53-70-3	- -	0.51 U	5.3 U	0.47 U	0.46 U	0.51 U	0.51 UJ	0.51 U	0.51 U	0.53 U
Dibenzofuran	132-64-9	- -	2.0 U	21 U	1.9 U	1.9 U	2.0 U	2.0 UJ	2.0 U	2.0 U	2.1 U
Dicyclohexylamine	101-83-7	† (50)	10 U	**5,500 D**	9.4 U	9.3 U	**290 D**	10 UJ	10 U	10 U	11 U
Diethylphthalate	84-66-2	50	5.1 U	53 U	4.7 U	4.6 U	5.1 U	5.1 UJ	5.1 U	5.1 U	5.3 U

See Notes on Page 17.

Table 5
Groundwater Analytical Results - Organics

Additional BDA Well Installation and Groundwater Monitoring Report
Site #C734138, BMS Syracuse North Campus Restoration Area
East Syracuse, New York

Location ID: Date Collected: Sample Name:	CAS Number	Groundwater Standard/ Guidance Value	BDA-8RX 11/01/19 BDA-8RX 11012019	BDA-11WT 10/31/19 BDA-11WT 10312019	BDA-12T 11/01/19 BDA-12T 11012019	BDA-12RX 11/01/19 BDA-12RX 11012019	BDA-13WT 10/31/19 BDA-13WT 10312019	BDA-14RX 10/29/19 BDA-14RX 10292019	BDA-15RX 10/30/19 BDA15RX 10302019	BDA-17WT 10/29/19 BDA-17WT 10292019	BDA-17T 10/29/19 BDA-17T 10292019
Semivolatile Organics - USEPA SW-846 Method 8270D (µg/L) (cont'd)											
Dimethylphthalate	131-11-3	50	5.1 U	53 U	4.7 U	4.6 U	5.1 U	5.1 UJ	5.1 U	5.1 U	5.3 U
Di-n-butylphthalate	84-74-2	50	5.1 U	53 U	4.7 U	4.6 U	5.1 U	5.1 UJ	5.1 U	5.1 U	5.3 U
Di-n-octylphthalate	117-84-0	50	11 U	*120 U*	10 U	10 U	11 U	11 UJ	11 U	11 U	12 U
Fluoranthene	206-44-0	50	0.51 U	5.3 U	0.47 U	0.46 U	0.51 U	0.51 UJ	0.51 U	0.51 U	0.53 U
Fluorene	86-73-7	50	0.51 U	5.3 U	0.47 U	0.46 U	0.51 U	0.51 UJ	0.51 U	0.51 U	0.53 U
Hexachlorobenzene	118-74-1	0.04	*0.51 U*	*5.3 U*	*0.47 U*	*0.46 U*	*0.51 U*	*0.51 UJ*	*0.51 U*	*0.51 U*	*0.53 U*
Hexachlorobutadiene	87-68-3	0.5	*2.0 U*	*21 U*	1.9 U	1.9 U	*2.0 U*	*2.0 UJ*	*2.0 U*	*2.0 U*	*2.1 U*
Hexachlorocyclopentadiene	77-47-4	5	*11 U*	*120 U*	10 U	10 U	*11 U*	*11 UJ*	*11 U*	*11 U*	*12 U*
Hexachloroethane	67-72-1	5	5.1 U	*53 U*	4.7 U	4.6 U	5.1 U	5.1 UJ	5.1 U	5.1 U	5.3 U
Indeno(1,2,3-cd)pyrene	193-39-5	0.002	*0.51 U*	*5.3 U*	*0.47 U*	*0.46 U*	*0.51 U*	*0.51 UJ*	*0.51 U*	*0.51 U*	*0.53 U*
Isophorone	78-59-1	50	2.0 U	21 U	1.9 U	1.9 U	2.0 U	2.0 UJ	2.0 U	2.0 U	2.1 U
n,n-dimethylaniline	121-69-7	1	1.0 U	**6,600 D**	0.94 U	0.93 U	**2.6**	1.0 UJ	1.0 U	1.0 U	1.1 U
Naphthalene	91-20-3	10	0.51 U	*5.3 U*	0.47 U	0.14 J	0.51 U	0.51 UJ	0.51 U	0.51 U	0.53 U
Nitrobenzene	98-95-3	0.4	*2.0 U*	*21 U*	*1.9 U*	*1.9 U*	*2.0 U*	*2.0 UJ*	*2.0 U*	*2.0 U*	*2.1 U*
N-Nitroso-di-n-propylamine	621-64-7	- -	3.1 U	32 U	2.8 U	2.8 U	3.0 U	3.0 UJ	3.0 U	3.1 U	3.2 U
N-Nitrosodiphenylamine	86-30-6	50	3.1 U	32 U	2.8 U	2.8 U	3.0 U	3.0 UJ	3.0 U	3.1 U	3.2 U
o-Cresol (2-Methylphenol)	95-48-7	1	2.0 U	*21 U*	1.9 U	1.9 U	2.0 U	2.0 UJ	2.0 U	R	2.1 U
Pentachlorophenol	87-86-5	1	5.1 U	*53 U*	4.7 U	4.6 U	5.1 U	5.1 UJ	5.1 U	R	*5.3 U*
Phenanthrene	85-01-8	50	0.51 U	5.3 U	0.47 U	0.46 U	0.51 U	0.51 UJ	0.51 U	0.51 U	0.53 U
Phenol	108-95-2	1	2.0 U	**13,000 D**	1.9 U	1.9 U	**7.7**	2.0 UJ	**1.2 J**	R	2.1 U
Pyrene	129-00-0	50	0.51 U	5.3 U	0.47 U	0.46 U	0.51 U	0.51 UJ	0.51 U	0.51 U	0.53 U
Pyridine	110-86-1	50	5.1 U	53 U	4.7 U	4.6 U	5.1 U	5.1 UJ	5.1 U	5.1 U	5.3 U
Total aniline compounds	ARC-TAniline	- -	10 U	20,600	9.4 U	9.3 U	10.1 J	10 U	10 U	10 U	11 U
Triethylamine	121-44-8	† (50)	10 U	110 U	9.4 U	9.3 U	10 U	10 UJ	10 U	10 UJ	11 UJ
Semivolatile Organics - USEPA SW-846 Method 8270D - SIM (µg/L)											
1,4-Dioxane	123-91-1	1	NA	NA	NA	NA	NA	0.3 U	NA	0.3 UJ	0.3 U
Alcohols and Glycols - USEPA SW-846 Method 8015D (µg/L)											
Ethanol	64-17-5	†	1,000 U	NA	1,000 U	1,000 U	1,000 U	1,000 U	NA	1,000 U	1,000 U [1,000 U]
Ethylene glycol	107-21-1	50	*10,000 U*	NA	*10,000 U*	*10,000 U*	*10,000 U*	*10,000 U*	NA	R	R [R]
Isopropyl alcohol	67-63-0	- -	1,000 U	NA	1,000 U	1,000 U	1,000 U	1,000 U	NA	1,000 U	1,000 U [1,000 U]
Methanol	67-56-1	- -	1,000 U	NA	1,000 U	1,000 U	1,000 U	1,000 U	NA	1,000 U	1,000 U [1,000 U]
Propylene glycol	57-55-6	1,000	*10,000 U*	NA	*10,000 U*	*10,000 U*	*10,000 U*	*10,000 U*	NA	R	R [R]
Aldehydes - USEPA SW-846 Method 8315A (µg/L)											
Acetaldehyde	75-07-0	8	*60 U*	NA	*60 U*	*60 U*	*60 UJ*	**36 J**	NA	*60 U*	*60 U [60 U]*
Formaldehyde	50-00-0	8	**45 J**	NA	*50 U*	**22 J**	**35 J**	**75**	NA	**42 J**	**20 J [29 J]**

See Notes on Page 17.

Table 5
Groundwater Analytical Results - Organics

Additional BDA Well Installation and Groundwater Monitoring Report
Site #C734138, BMS Syracuse North Campus Restoration Area
East Syracuse, New York

Location ID: Date Collected: Sample Name:	CAS Number	Groundwater Standard/ Guidance Value	BDA-17WR 10/29/19 BDA-17WR 10292019	BDA-17RX 10/29/19 BDA-17RX 10292019	CHP-43RX 11/01/19 CHP-43RX 11012019	PW-2T 10/30/19 PW-2T 10302019	PW-3MS 10/28/19 PW-3 10282019	PW-3MD 10/28/19 PW-3MD 10282019	PW-3T 10/28/19 PW-3T 10282019	PW-4F 10/28/19 PW-4F 10282019
Volatile Organics - USEPA SW-846 Method 8260C (µg/L)										
1,1,1-Trichloroethane	71-55-6	5	1 U	1 U	*100 U*	1 U	1 U	1 U	1 U	1 U
1,1,2,2-Tetrachloroethane	79-34-5	5	1 U	1 U	*100 U*	1 U	1 U	1 U	1 U	1 U
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	5	10 U	10 U	*1,000 U*	10 U	10 U	10 U	10 U	10 U
1,1,2-Trichloroethane	79-00-5	1	1 U	1 U	*100 U*	1 U	1 U	1 U	1 U	1 U
1,1-Dichloroethane	75-34-3	5	1 U	1 U	*100 U*	0.5 J	1 U	1 U	1 U	1 U
1,1-Dichloroethene	75-35-4	5	1 U	1 U	*100 U*	1 U	1 U	1 U	1 U	1 U
1,2,3-Trichlorobenzene	87-61-6	5	5 U	5 U	*500 U*	5 U	5 U	5 U	5 U	5 U
1,2,4-Trichlorobenzene	120-82-1	5	5 U	5 U	*500 U*	5 U	5 U	5 U	5 U	5 U
1,2,4-Trimethylbenzene	95-63-6	5	5 U	5 U	*500 U*	5 U	5 U	5 U	5 U	5 U
1,2-Dibromo-3-chloropropane	96-12-8	0.04	*5 U*	*5 U*	*500 U*	*5 U*	*5 U*	*5 U*	*5 U*	*5 U*
1,2-Dibromoethane	106-93-4	0.0006	*1 U*	*1 U*	*100 U*	*1 U*	*1 U*	*1 U*	*1 U*	*1 U*
1,2-Dichlorobenzene	95-50-1	3	5 U	5 U	*500 U*	**9**	5 U	5 U	5 U	5 U
1,2-Dichloroethane	107-06-2	0.6	1 U	1 U	*100 U*	1 U	1 U	1 U	1 U	1 U
1,2-Dichloropropane	78-87-5	1	1 U	1 U	*100 U*	1 U	1 U	1 U	1 U	1 U
1,3,5-Trimethylbenzene	108-67-8	5	5 U	5 U	*500 U*	5 U	5 U	5 U	5 U	5 U
1,3-Dichlorobenzene	541-73-1	3	5 U	5 U	*500 U*	5 U	5 U	5 U	5 U	5 U
1,4-Dichlorobenzene	106-46-7	3	5 U	5 U	*500 U*	5 U	5 U	5 U	5 U	5 U
1,4-Dioxane	123-91-1	1	250 U	250 U	25,000 U	250 U	250 U	250 U	250 U	250 U
2-Hexanone	591-78-6	50	10 U	10 U	1,000 U	10 U	10 U	10 U	10 U	10 U
2-Nitropropane	79-46-9	- -	10 U	10 U	1,000 U	10 U	10 U	10 U	10 U	10 U
Acetone	67-64-1	50	4 J	14 J	**110 J**	20 U	20 U	20 U	20 U	0.7 J
Acetonitrile	75-05-8	- -	100 U	100 U	10,000 U	100 U	100 U	100 U	100 U	100 U
Benzene	71-43-2	1	1 U	1 U	*100 U*	1 U	1 U	1 U	1 U	1 U
Bromochloromethane	74-97-5	5	5 U	5 U	*500 U*	5 U	5 U	5 U	5 U	5 U
Bromodichloromethane	75-27-4	50	1 U	4	100 U	1 UJ	1 U	1 U	1 U	1 U
Bromoform	75-25-2	50	4 U	4 U	*400 U*	4 U	4 U	4 U	4 U	4 U
Bromomethane	74-83-9	5	1 UJ	1 UJ	*100 UJ*	1 U	1 U	1 U	1 U	1 U
Carbon disulfide	75-15-0	60	5 U	5 U	500 U	5 U	5 U	5 U	5 U	5 U
Carbon tetrachloride	56-23-5	5	1 U	1 U	*100 U*	1 U	1 U	1 U	1 U	1 U
Chlorobenzene	108-90-7	5	1 U	1 U	*100 U*	0.3 J	1 U	1 U	1 U	1 U
Chlorodifluoromethane	75-45-6	5	5 U	5 U	*500 U*	5 UJ	5 U	5 U	5 U	5 U
Chloroethane	75-00-3	5	1 U	1 U	*100 UJ*	1 UJ	1 U	1 U	1 U	1 U
Chloroform	67-66-3	7	0.3 J	**21**	*100 U*	1 U	1 U	1 U	1 U	1 U
Chloromethane	74-87-3	5	1 U	1 U	*100 UJ*	1 UJ	1 U	1 U	1 U	1 U
cis-1,2-Dichloroethene	156-59-2	5	1 U	1 U	*100 U*	1 U	1 U	1 U	1 U	1 U
cis-1,3-Dichloropropene	10061-01-5	0.4	1 U	1 U	*100 U*	1 U	1 U	1 U	1 U	1 U
Cyclohexane	110-82-7	- -	5 U	5 U	500 U	5 U	5 U	5 U	5 U	5 U
Cyclohexanone	108-94-1	- -	100 U	100 U	10,000 U	100 U	100 U	100 U	100 U	100 U
Dibromochloromethane	124-48-1	50	1 U	0.9 J	100 U	1 U	1 U	1 U	1 U	1 U
Dichlorodifluoromethane	75-71-8	5	1 UJ	1 UJ	*100 UJ*	1 UJ	1 U	1 U	1 U	1 U

See Notes on Page 17.

Table 5
Groundwater Analytical Results - Organics

Additional BDA Well Installation and Groundwater Monitoring Report
Site #C734138, BMS Syracuse North Campus Restoration Area
East Syracuse, New York

Location ID: Date Collected: Sample Name:	CAS Number	Groundwater Standard/ Guidance Value	BDA-17WR 10/29/19 BDA-17WR 10292019	BDA-17RX 10/29/19 BDA-17RX 10292019	CHP-43RX 11/01/19 CHP-43RX 11012019	PW-2T 10/30/19 PW-2T 10302019	PW-3MS 10/28/19 PW-3 10282019	PW-3MD 10/28/19 PW-3MD 10282019	PW-3T 10/28/19 PW-3T 10282019	PW-4F 10/28/19 PW-4F 10282019
Volatile Organics - USEPA SW-846 Method 8260C (µg/L) (cont'd)										
Ethyl acetate	141-78-6	- -	5 U	5 U	500 U	5 U	5 U	5 U	5 U	5 U
Ethyl ether	60-29-7	- -	5 U	5 U	500 U	5 U	5 U	5 U	5 U	1 J
Ethylbenzene	100-41-4	5	1 U	1 U	*100 U*	1 U	1 U	1 U	1 U	1 U
Isobutanol	78-83-1	- -	250 U	250 U	25,000 U	250 U	250 U	250 U	250 U	250 U
Isopropylbenzene	98-82-8	5	5 U	5 U	*500 U*	5 U	5 U	5 U	5 U	5 U
m,p-Xylene	ARC-mpXyl	5	5 U	5 U	*500 U*	5 U	5 U	5 U	5 U	5 U
Methyl acetate	79-20-9	- -	5 U	5 U	500 U	5 U	5 U	5 U	5 U	5 U
Methyl ethyl ketone (MEK, 2-butanone)	78-93-3	50	0.7 J	0.8 J	1,000 U	10 U	10 U	10 U	10 U	10 U
Methyl isobutyl ketone (MIBK, 4-methyl-2-pentanone)	108-10-1	† (50)	10 U	10 U	1,000 U	10 U	10 U	10 U	10 U	10 U
Methyl tert-butyl ether	1634-04-4	10	1 U	1 U	*100 U*	1 U	1 U	1 U	1 U	1 U
Methylcyclohexane	108-87-2	†	5 U	5 U	500 U	5 U	5 U	5 U	5 U	5 U
Methylene chloride	75-09-2	5	1 U	1 U	**370,000 EJ {430,000 J}**	1 U	1 U	1 U	1 U	1 U
Naphthalene	91-20-3	10	5 U	5 U	*500 U*	5 U	5 U	5 U	5 U	5 U
n-Butanol	71-36-3	50	*250 U*	*250 U*	*25,000 U*	*250 U*	*250 U*	*250 U*	*250 U*	*250 U*
n-Butylbenzene	104-51-8	5	5 U	5 U	*500 U*	5 U	5 U	5 U	5 U	5 U
n-Heptane	142-82-5	- -	5 U	5 U	500 U	5 U	5 U	5 U	5 U	5 U
n-Hexane	110-54-3	- -	5 U	5 U	500 U	5 U	5 U	5 U	5 U	5 U
o-Xylene	95-47-6	5	1 U	1 U	*100 U*	1 U	1 U	1 U	1 U	1 U
p-Isopropyltoluene	99-87-6	5	5 U	5 U	*500 U*	5 U	5 U	5 U	5 U	5 U
sec-Butylbenzene	135-98-8	5	5 U	5 U	*500 U*	5 U	5 U	5 U	5 U	5 U
Styrene	100-42-5	5	5 U	5 U	*500 U*	5 U	5 U	5 U	5 U	5 U
tert-Butylbenzene	98-06-6	5	5 U	5 U	*500 U*	5 U	5 U	5 U	5 U	5 U
Tertiary butyl alcohol	75-65-0	- -	50 U	50 U	5,000 U	50 U	50 U	50 U	50 U	50 U
Tetrachloroethene	127-18-4	5	1 U	1 U	*100 U*	1 U	1 U	1 U	1 U	1 U
Tetrahydrofuran	109-99-9	50	10 U	10 U	*1,000 U*	10 U	10 U	10 U	10 U	10 U
Toluene	108-88-3	5	1 U	0.4 J	*100 U*	1 U	1 U	1 U	1 U	1 U
Total chlorinated VOCs	ARC-TCVOC	- -	0.3 J	21	0 U	9.8 J	0 U	0 U	0 U	0 U
trans-1,2-Dichloroethene	156-60-5	5	1 U	1 U	*100 U*	1 U	1 U	1 U	1 U	1 U
trans-1,3-Dichloropropene	10061-02-6	0.4	1 U	1 U	*100 U*	1 U	1 U	1 U	1 U	1 U
Trichloroethene	79-01-6	5	1 U	1 U	*100 U*	1 U	1 U	1 U	1 U	1 U
Trichlorofluoromethane	75-69-4	5	1 U	1 U	*100 U*	1 UJ	1 U	1 U	1 U	1 U
Vinyl chloride	75-01-4	2	1 U	1 U	*100 UJ*	1 UJ	1 U	1 U	1 U	1 U
Xylenes (total)	1330-20-7	5	6 U	6 U	*600 U*	6 U	6 U	6 U	6 U	6 U
Semivolatile Organics - USEPA SW-846 Method 8270D (µg/L)										
1,1'-Biphenyl	92-52-4	5	10 U [11 U]	10 U	10 U	10 UJ	10 U	10 U	10 U	10 U
1,2,4,5-Tetrachlorobenzene	95-94-3	5	2.0 U [2.2 U]	2.0 U	2.0 U	2.0 UJ	2.0 U	2.0 U	2.0 U	2.0 U
2,3,4,6-Tetrachlorophenol	58-90-2	1	*10 U [11 U]*	*10 U*	*10 U*	*10 UJ*	*10 U*	*10 U*	*10 U*	*10 U*
2,4,5-Trichlorophenol	95-95-4	1	2.0 U [2.2 U]	2.0 U	2.0 U	2.0 UJ	2.0 U	2.0 U	2.0 U	2.0 U
2,4,6-Trichlorophenol	88-06-2	1	2.0 U [2.2 U]	2.0 U	2.0 U	2.0 UJ	2.0 U	2.0 U	2.0 U	2.0 U
2,4-Dichlorophenol	120-83-2	1	2.0 U [2.2 U]	2.0 U	2.0 U	2.0 UJ	2.0 U	2.0 U	2.0 U	2.0 U
2,4-Dimethylphenol	105-67-9	1	*10 U [11 U]*	*10 U*	*10 U*	*10 UJ*	*10 U*	*10 U*	*10 U*	*10 U*

See Notes on Page 17.

Table 5
Groundwater Analytical Results - Organics

Additional BDA Well Installation and Groundwater Monitoring Report
Site #C734138, BMS Syracuse North Campus Restoration Area
East Syracuse, New York

Location ID: Date Collected: Sample Name:	CAS Number	Groundwater Standard/ Guidance Value	BDA-17WR 10/29/19 BDA-17WR 10292019	BDA-17RX 10/29/19 BDA-17RX 10292019	CHP-43RX 11/01/19 CHP-43RX 11012019	PW-2T 10/30/19 PW-2T 10302019	PW-3MS 10/28/19 PW-3 10282019	PW-3MD 10/28/19 PW-3MD 10282019	PW-3T 10/28/19 PW-3T 10282019	PW-4F 10/28/19 PW-4F 10282019
Semivolatile Organics - USEPA SW-846 Method 8270D (µg/L) (cont'd)										
2,4-Dinitrophenol	51-28-5	1	*30 U [33 U]*	*30 U*	*30 U*	*30 UJ*	*30 U*	*30 U*	*30 U*	*30 U*
2,4-Dinitrotoluene	121-14-2	5	5.0 U [5.5 U]	5.0 U	5.1 U	5.1 UJ	5.0 U	5.1 U	5.0 U	5.0 U
2,6-Dinitrotoluene	606-20-2	5	2.0 U [2.2 U]	2.0 U	2.0 U	2.0 UJ	2.0 U	2.0 U	2.0 U	2.0 U
2-Chloronaphthalene	91-58-7	10	1.0 U [1.1 U]	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U
2-Chlorophenol	95-57-8	1	2.0 U [2.2 U]	2.0 U	2.0 U	2.0 UJ	2.0 U	2.0 U	2.0 U	2.0 U
2-Methylnaphthalene	91-57-6	- -	0.50 U [0.55 U]	0.50 U	0.51 U	0.51 UJ	0.50 U	0.51 U	0.50 U	0.50 U
2-Nitroaniline	88-74-4	5	7.0 U [7.7 U]	7.1 U	7.1 U	7.1 UJ	7.1 U	7.1 U	7.0 U	7.0 U
2-Nitrophenol	88-75-5	1	*10 U [11 U]*	*10 U*	*10 U*	*10 UJ*	*10 U*	*10 U*	*10 U*	*10 U*
3&4-Methylphenol (cresol)	65794-96-9	1	2.0 U [2.2 U]	2.0 U	2.0 U	2.0 UJ	2.0 U	2.0 U	2.0 U	2.0 U
3,3'-Dichlorobenzidine	91-94-1	5	10 U [11 U]	10 U	10 U	10 UJ	10 U	10 U	10 U	10 U
3-Nitroaniline	99-09-2	5	7.0 U [7.7 U]	7.1 U	7.1 U	7.1 UJ	7.1 U	7.1 U	7.0 U	7.0 U
4,6-Dinitro-2-methylphenol	534-52-1	1	*21 U [23 U]*	*21 U*	*21 U*	*21 UJ*	*21 U*	*21 U*	*21 U*	*21 U*
4-Bromophenyl-phenyl ether	101-55-3	- -	2.0 U [2.2 U]	2.0 U	2.0 U	2.0 UJ	2.0 U	2.0 U	2.0 U	2.0 U
4-Chloro-3-Methylphenol	59-50-7	1	2.0 U [2.2 U]	2.0 U	2.0 U	2.0 UJ	2.0 U	2.0 U	2.0 U	2.0 U
4-Chloroaniline	106-47-8	5	10 U [11 U]	10 U	10 U	10 UJ	10 U	10 U	10 U	10 U
4-Chlorophenyl-phenyl ether	7005-72-3	- -	2.0 U [2.2 U]	2.0 U	2.0 U	2.0 UJ	2.0 U	2.0 U	2.0 U	2.0 U
4-Nitroaniline	100-01-6	5	3.0 U [3.3 U]	3.0 U	3.0 U	3.0 UJ	3.0 U	3.0 U	3.0 U	3.0 U
4-Nitrophenol	100-02-7	1	*30 U [33 U]*	*30 U*	*30 U*	*30 UJ*	*30 U*	*30 U*	*30 U*	*30 U*
Acenaphthene	83-32-9	20	0.50 U [0.55 U]	0.50 U	0.51 U	0.51 UJ	0.50 U	0.51 U	0.50 U	0.50 U
Acenaphthylene	208-96-8	- -	0.50 U [0.55 U]	0.50 U	0.51 U	0.51 UJ	0.50 U	0.51 U	0.50 U	0.50 U
Acetophenone	98-86-2	- -	10 U [11 U]	10 U	10 U	10 UJ	10 U	10 U	10 U	10 U
Aniline	62-53-3	5	10 U [11 U]	10 U	**12**	10 UJ	10 U	10 U	10 U	10 U
Anthracene	120-12-7	50	0.50 U [0.55 U]	0.50 U	0.51 U	0.51 UJ	0.50 U	0.51 U	0.50 U	0.50 U
Atrazine	1912-24-9	7.5	5.0 U [5.5 U]	5.0 U	5.1 U	5.1 UJ	5.0 U	5.1 U	5.0 U	5.0 U
Benzaldehyde	100-52-7	- -	10 U [11 U]	10 U	10 U	10 UJ	10 UJ	10 UJ	10 UJ	10 UJ
Benzo(a)anthracene	56-55-3	0.002	*0.50 U [0.55 U]*	*0.50 U*	*0.51 U*	*0.51 UJ*	*0.50 U*	*0.51 U*	*0.50 U*	*0.50 U*
Benzo(a)pyrene	50-32-8	ND	0.50 U [0.55 U]	0.50 U	0.51 U	0.51 UJ	0.50 U	0.51 U	0.50 U	0.50 U
Benzo(b)fluoranthene	205-99-2	0.002	*0.50 U [0.55 U]*	*0.50 U*	*0.51 U*	*0.51 UJ*	*0.50 U*	*0.51 U*	*0.50 U*	*0.50 U*
Benzo(g,h,i)perylene	191-24-2	- -	0.50 U [0.55 U]	0.50 U	0.51 U	0.51 UJ	0.50 U	0.51 U	0.50 U	0.50 U
Benzo(k)fluoranthene	207-08-9	0.002	*0.50 U [0.55 U]*	*0.50 U*	*0.51 U*	*0.51 UJ*	*0.50 UJ*	*0.51 UJ*	*0.50 UJ*	*0.50 UJ*
Benzyl alcohol	100-51-6	- -	30 U [33 U]	30 U	30 U	30 UJ	30 U	30 U	30 U	30 U
bis(2-Chloroethoxy)methane	111-91-1	5	2.0 U [2.2 U]	2.0 U	2.0 U	2.0 UJ	2.0 U	2.0 U	2.0 U	2.0 U
bis(2-Chloroethyl)ether	111-44-4	1	2.0 U [2.2 U]	2.0 U	2.0 U	2.0 UJ	2.0 U	2.0 U	2.0 U	2.0 U
bis(2-Chloroisopropyl)ether	39638-32-9	- -	2.0 U [2.2 U]	2.0 U	2.0 U	2.0 UJ	2.0 U	2.0 U	2.0 U	2.0 U
bis(2-Ethylhexyl) phthalate	117-81-7	5	11 U [12 U]	11 U	*11 U*	*11 UJ*	11 U	*11 U*	11 U	11 U
Butylbenzyl phthalate	85-68-7	50	5.0 U [5.5 U]	5.0 U	5.1 U	5.1 UJ	5.0 U	5.1 U	5.0 U	5.0 U
Caprolactam	105-60-2	- -	11 U [12 U]	11 U	11 U	11 UJ	11 U	11 U	11 U	11 U
Carbazole	86-74-8	- -	2.0 U [2.2 U]	2.0 U	2.0 U	2.0 UJ	2.0 U	2.0 U	2.0 U	2.0 U
Chrysene	218-01-9	0.002	*0.50 U [0.55 U]*	*0.50 U*	*0.51 U*	*0.51 UJ*	*0.50 U*	*0.51 U*	*0.50 U*	*0.50 U*
Dibenzo(a,h)anthracene	53-70-3	- -	0.50 U [0.55 U]	0.50 U	0.51 U	0.51 UJ	0.50 U	0.51 U	0.50 U	0.50 U
Dibenzofuran	132-64-9	- -	2.0 U [2.2 U]	2.0 U	2.0 U	2.0 UJ	2.0 U	2.0 U	2.0 U	2.0 U
Dicyclohexylamine	101-83-7	† (50)	10 U [11 U]	10 U	10 U	10 UJ	10 U	10 U	10 U	10 U
Diethylphthalate	84-66-2	50	5.0 U [5.5 U]	5.0 U	5.1 U	5.1 UJ	5.0 U	5.1 U	5.0 U	5.0 U

See Notes on Page 17.

Table 5
Groundwater Analytical Results - Organics

Additional BDA Well Installation and Groundwater Monitoring Report
Site #C734138, BMS Syracuse North Campus Restoration Area
East Syracuse, New York

Location ID: Date Collected: Sample Name:	CAS Number	Groundwater Standard/ Guidance Value	BDA-17WR 10/29/19 BDA-17WR 10292019	BDA-17RX 10/29/19 BDA-17RX 10292019	CHP-43RX 11/01/19 CHP-43RX 11012019	PW-2T 10/30/19 PW-2T 10302019	PW-3MS 10/28/19 PW-3 10282019	PW-3MD 10/28/19 PW-3MD 10282019	PW-3T 10/28/19 PW-3T 10282019	PW-4F 10/28/19 PW-4F 10282019
Semivolatile Organics - USEPA SW-846 Method 8270D (µg/L) (cont'd)										
Dimethylphthalate	131-11-3	50	5.0 U [5.5 U]	5.0 U	5.1 U	5.1 UJ	5.0 U	5.1 U	5.0 U	5.0 U
Di-n-butylphthalate	84-74-2	50	5.0 U [5.5 U]	5.0 U	5.1 U	5.1 UJ	5.0 U	5.1 U	5.0 U	5.0 U
Di-n-octylphthalate	117-84-0	50	11 U [12 U]	11 U	11 U	11 UJ	11 U	11 U	11 U	11 U
Fluoranthene	206-44-0	50	0.50 U [0.55 U]	0.50 U	0.51 U	0.51 UJ	0.50 U	0.51 U	0.50 U	0.50 U
Fluorene	86-73-7	50	0.50 U [0.55 U]	0.50 U	0.51 U	0.51 UJ	0.50 U	0.51 U	0.50 U	0.50 U
Hexachlorobenzene	118-74-1	0.04	*0.50 U [0.55 U]*	*0.50 U*	*0.51 U*	*0.51 UJ*	*0.50 U*	*0.51 U*	*0.50 U*	*0.50 U*
Hexachlorobutadiene	87-68-3	0.5	2.0 U [2.2 U]	2.0 U	*2.0 U*	*2.0 UJ*	2.0 U	*2.0 U*	2.0 U	2.0 U
Hexachlorocyclopentadiene	77-47-4	5	11 U [12 U]	11 U	*11 U*	*11 UJ*	11 U	*11 U*	11 U	11 U
Hexachloroethane	67-72-1	5	5.0 U [5.5 U]	5.0 U	5.1 U	5.1 UJ	5.0 U	5.1 U	5.0 U	5.0 U
Indeno(1,2,3-cd)pyrene	193-39-5	0.002	*0.50 U [0.55 U]*	*0.50 U*	*0.51 U*	*0.51 UJ*	*0.50 U*	*0.51 U*	*0.50 U*	*0.50 U*
Isophorone	78-59-1	50	2.0 U [2.2 U]	2.0 U	2.0 U	2.0 UJ	2.0 U	2.0 U	2.0 U	2.0 U
n,n-dimethylaniline	121-69-7	1	1.0 U [1.1 U]	1.0 U	0.68 J	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U
Naphthalene	91-20-3	10	0.50 U [0.55 U]	0.50 U	*0.51 U*	0.51 UJ	0.50 U	0.51 U	0.50 U	0.50 U
Nitrobenzene	98-95-3	0.4	*2.0 U [2.2 U]*	*2.0 U*	**3.1**	*2.0 UJ*	*2.0 U*	*2.0 U*	*2.0 U*	*2.0 U*
N-Nitroso-di-n-propylamine	621-64-7	- -	3.0 U [3.3 U]	3.0 U	3.0 U	3.0 UJ	3.0 U	3.0 U	3.0 U	3.0 U
N-Nitrosodiphenylamine	86-30-6	50	3.0 U [3.3 U]	3.0 U	3.0 U	3.0 UJ	3.0 U	3.0 U	3.0 U	3.0 U
o-Cresol (2-Methylphenol)	95-48-7	1	2.0 U [2.2 U]	2.0 U	2.0 U	2.0 UJ	2.0 U	2.0 U	2.0 U	2.0 U
Pentachlorophenol	87-86-5	1	5.0 U [5.5 U]	5.0 U	5.1 U	5.1 UJ	5.0 U	5.1 U	5.0 U	5.0 U
Phenanthrene	85-01-8	50	0.50 U [0.55 U]	0.50 U	0.51 U	0.51 UJ	0.50 U	0.51 U	0.50 U	0.50 U
Phenol	108-95-2	1	2.0 U [2.2 U]	2.0 U	**15**	2.0 UJ	2.0 U	2.0 U	2.0 U	2.0 U
Pyrene	129-00-0	50	0.50 U [0.55 U]	0.50 U	0.51 U	0.51 UJ	0.50 U	0.51 U	0.50 U	0.50 U
Pyridine	110-86-1	50	5.0 U [5.5 U]	5.0 U	5.1 U	5.1 UJ	5.0 U	5.1 U	5.0 U	5.0 U
Total aniline compounds	ARC-TAniline	- -	10 U [11 U]	10 U	12.7 J	10 U	10 U	10 U	10 U	10 U
Triethylamine	121-44-8	† (50)	10 UJ [11 UJ]	10 UJ	10 U	10 UJ	10 U	10 U	10 U	10 U
Semivolatile Organics - USEPA SW-846 Method 8270D - SIM (µg/L)										
1,4-Dioxane	123-91-1	1	0.3 U [0.3 U]	0.3 U	NA	NA	NA	NA	NA	NA
Alcohols and Glycols - USEPA SW-846 Method 8015D (µg/L)										
Ethanol	64-17-5	†	1,000 U	1,000 U	NA	1,000 U	1,000 U	1,000 U	1,000 U	1,000 U
Ethylene glycol	107-21-1	50	*10,000 UJ*	R	NA	R	10,000 UJ	10,000 UJ	10,000 UJ	10,000 UJ
Isopropyl alcohol	67-63-0	- -	1,000 U	140 J	NA	1,000 U	1,000 U	1,000 U	1,000 U	1,000 U
Methanol	67-56-1	- -	1,000 U	1,000 U	NA	1,000 U	1,000 U	1,000 U	1,000 U	1,000 U
Propylene glycol	57-55-6	1,000	*10,000 UJ*	R	NA	R	10,000 UJ	10,000 UJ	10,000 UJ	10,000 UJ
Aldehydes - USEPA SW-846 Method 8315A (µg/L)										
Acetaldehyde	75-07-0	8	*60 U*	*60 U*	NA	*60 UJ*	*60 U*	*60 U*	*60 U*	*60 U*
Formaldehyde	50-00-0	8	*50 U*	**32 J**	NA	*50 U*	**23 J**	**23 J**	*50 U*	**24 J**

See Notes on Page 17.

Table 5
Groundwater Analytical Results - Organics

Additional BDA Well Installation and Groundwater Monitoring Report
Site #C734138, BMS Syracuse North Campus Restoration Area
East Syracuse, New York

Location ID: Date Collected: Sample Name:	CAS Number	Groundwater Standard/ Guidance Value	PW-4LS 10/28/19 PW-4LS 10282019	PW-4LD 10/28/19 PW-4LD 10282019	PW-4T 10/30/19 PW-4T 10302019	PW-5T 10/30/19 PW-5T 10302019	PW-5RX 10/30/19 PW-5RX 10302019	PW-6F 10/30/19 PW-6F 10302019	PW-6L 10/28/19 PW-6L 10282019	PW-6T 10/28/19 PW-6T 10282019
Volatile Organics - USEPA SW-846 Method 8260C (µg/L)										
1,1,1-Trichloroethane	71-55-6	5	1 U	1 U	1 U	1 U [1 U]	1 U	10 U	1 U	1 U
1,1,2,2-Tetrachloroethane	79-34-5	5	1 U	1 U	1 U	1 U [1 U]	1 U	10 U	1 U	1 U
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	5	10 U	10 U	10 U	10 U [10 U]	10 U	100 U	10 U	10 U
1,1,2-Trichloroethane	79-00-5	1	1 U	1 U	1 U	1 U [1 U]	1 U	*10 U*	1 U	1 U
1,1-Dichloroethane	75-34-3	5	1 U	1 U	1 U	1 U [1 U]	1 U	10 U	1 U	1 U
1,1-Dichloroethene	75-35-4	5	1 U	1 U	1 U	1 U [1 U]	1 U	10 U	1 U	1 U
1,2,3-Trichlorobenzene	87-61-6	5	5 U	5 U	5 U	5 U [5 U]	5 U	50 U	5 U	5 U
1,2,4-Trichlorobenzene	120-82-1	5	5 U	5 U	5 U	5 U [5 U]	5 U	50 U	5 U	5 U
1,2,4-Trimethylbenzene	95-63-6	5	5 U	5 U	5 U	5 U [5 U]	5 U	*50 U*	5 U	5 U
1,2-Dibromo-3-chloropropane	96-12-8	0.04	*5 U*	*5 U*	*5 U*	*5 U [5 U]*	*5 U*	*50 U*	*5 U*	*5 U*
1,2-Dibromoethane	106-93-4	0.0006	*1 U*	*1 U*	*1 U*	*1 U [1 U]*	*1 U*	*10 U*	*1 U*	*1 U*
1,2-Dichlorobenzene	95-50-1	3	5 U	5 U	5 U	5 U [5 U]	5 U	50 U	5 U	5 U
1,2-Dichloroethane	107-06-2	0.6	1 U	1 U	1 U	1 U [1 U]	1 U	*10 U*	1 U	1 U
1,2-Dichloropropane	78-87-5	1	1 U	1 U	1 U	1 U [1 U]	1 U	*10 U*	1 U	1 U
1,3,5-Trimethylbenzene	108-67-8	5	5 U	5 U	5 U	5 U [5 U]	5 U	50 U	5 U	5 U
1,3-Dichlorobenzene	541-73-1	3	5 U	5 U	5 U	5 U [5 U]	5 U	50 U	5 U	5 U
1,4-Dichlorobenzene	106-46-7	3	5 U	5 U	5 U	5 U [5 U]	5 U	50 U	5 U	5 U
1,4-Dioxane	123-91-1	1	250 U	250 U	250 U	250 U [250 U]	250 U	2,500 U	250 U	250 U
2-Hexanone	591-78-6	50	10 U	10 U	10 U	10 U [10 U]	10 U	100 U	10 U	10 U
2-Nitropropane	79-46-9	- -	10 U	10 U	10 U	10 U [10 U]	10 U	100 U	10 U	10 U
Acetone	67-64-1	50	2 J	20 U	20 U	20 U [20 U]	20 U	200 U	20 U	20 U
Acetonitrile	75-05-8	- -	100 U	100 U	100 U	100 U [100 U]	100 U	1,000 U	100 U	100 U
Benzene	71-43-2	1	1 U	1 U	1 U	1 U [1 U]	1 U	*10 U*	1 U	1 U
Bromochloromethane	74-97-5	5	5 U	5 U	5 U	5 U [5 U]	5 U	50 U	5 U	5 U
Bromodichloromethane	75-27-4	50	1 U	1 U	1 U	1 U [1 U]	1 U	10 U	1 U	1 U
Bromoform	75-25-2	50	4 U	4 U	4 U	4 U [4 U]	4 U	40 U	4 U	4 U
Bromomethane	74-83-9	5	1 U	1 U	1 U	1 UJ [1 UJ]	1 UJ	10 U	1 U	1 U
Carbon disulfide	75-15-0	60	5 U	5 U	5 U	5 U [5 U]	5 U	50 U	5 U	5 U
Carbon tetrachloride	56-23-5	5	1 U	1 U	1 U	1 U [1 U]	1 U	10 U	1 U	1 U
Chlorobenzene	108-90-7	5	1 U	1 U	1 U	1 U [1 U]	1 U	10 U	1 U	1 U
Chlorodifluoromethane	75-45-6	5	5 U	5 U	5 UJ	5 UJ [5 UJ]	5 UJ	*50 UJ*	5 U	5 U
Chloroethane	75-00-3	5	1 U	1 U	1 UJ	1 UJ [1 UJ]	1 UJ	10 UJ	1 U	1 U
Chloroform	67-66-3	7	1 U	1 U	1 U	1 U [1 U]	1 U	10 U	1 U	0.3 J
Chloromethane	74-87-3	5	1 U	1 U	1 UJ	1 UJ [1 UJ]	1 UJ	10 UJ	1 U	1 U
cis-1,2-Dichloroethene	156-59-2	5	1 U	1 U	1 U	1 U [1 U]	1 U	10 U	1 U	1 U
cis-1,3-Dichloropropene	10061-01-5	0.4	1 U	1 U	1 U	1 U [1 U]	1 U	*10 U*	1 U	1 U
Cyclohexane	110-82-7	- -	5 U	5 U	5 U	5 U [5 U]	5 U	50 U	5 U	5 U
Cyclohexanone	108-94-1	- -	100 U	100 U	100 U	100 U [100 U]	100 U	1,000 U	100 U	100 U
Dibromochloromethane	124-48-1	50	1 U	1 U	1 U	1 U [1 U]	1 U	10 U	1 U	1 U
Dichlorodifluoromethane	75-71-8	5	1 U	1 U	1 UJ	1 UJ [1 UJ]	1 UJ	10 UJ	1 U	1 U

See Notes on Page 17.

Table 5
Groundwater Analytical Results - Organics

Additional BDA Well Installation and Groundwater Monitoring Report
Site #C734138, BMS Syracuse North Campus Restoration Area
East Syracuse, New York

Location ID: Date Collected: Sample Name:	CAS Number	Groundwater Standard/ Guidance Value	PW-4LS 10/28/19 PW-4LS 10282019	PW-4LD 10/28/19 PW-4LD 10282019	PW-4T 10/30/19 PW-4T 10302019	PW-5T 10/30/19 PW-5T 10302019	PW-5RX 10/30/19 PW-5RX 10302019	PW-6F 10/30/19 PW-6F 10302019	PW-6L 10/28/19 PW-6L 10282019	PW-6T 10/28/19 PW-6T 10282019
Volatile Organics - USEPA SW-846 Method 8260C (µg/L) (cont'd)										
Ethyl acetate	141-78-6	- -	5 U	5 U	5 U	5 U [5 U]	5 U	50 U	5 U	5 U
Ethyl ether	60-29-7	- -	0.8 J	3 J	5 U	5 U [5 U]	5 U	50 U	0.3 J	5 U
Ethylbenzene	100-41-4	5	1 U	1 U	1 U	1 U [1 U]	1 U	10 U	1 U	1 U
Isobutanol	78-83-1	- -	250 U	250 U	250 U	250 U [250 U]	250 U	2,500 U	250 U	250 U
Isopropylbenzene	98-82-8	5	5 U	5 U	5 U	5 U [5 U]	5 U	50 U	5 U	5 U
m,p-Xylene	ARC-mpXyl	5	5 U	5 U	5 U	5 U [5 U]	5 U	*50 U*	5 U	5 U
Methyl acetate	79-20-9	- -	5 U	5 U	5 U	5 U [5 U]	5 U	50 U	5 U	5 U
Methyl ethyl ketone (MEK, 2-butanone)	78-93-3	50	10 U	10 U	10 U	10 U [10 U]	10 U	100 U	10 U	10 U
Methyl isobutyl ketone (MIBK, 4-methyl-2-pentanone)	108-10-1	† (50)	10 U	10 U	10 U	10 U [10 U]	10 U	100 U	10 U	10 U
Methyl tert-butyl ether	1634-04-4	10	1 U	1 U	1 U	1 U [1 U]	1 U	10 U	1 U	1 U
Methylcyclohexane	108-87-2	†	5 U	5 U	5 U	5 U [5 U]	5 U	50 U	5 U	5 U
Methylene chloride	75-09-2	5	1 U	1 U	1 U	1 U [1 U]	1 U	10 U	1 U	1 U
Naphthalene	91-20-3	10	5 U	5 U	5 U	5 U [5 U]	5 U	50 U	5 U	5 U
n-Butanol	71-36-3	50	*250 U*	*250 U*	*250 U*	*250 U [250 U]*	*250 U*	*2,500 U*	*250 U*	*250 U*
n-Butylbenzene	104-51-8	5	5 U	5 U	5 U	5 U [5 U]	5 U	50 U	5 U	5 U
n-Heptane	142-82-5	- -	5 U	5 U	5 U	5 U [5 U]	5 U	50 U	5 U	5 U
n-Hexane	110-54-3	- -	5 U	5 U	5 U	5 U [5 U]	5 U	50 U	5 U	5 U
o-Xylene	95-47-6	5	1 U	1 U	1 U	1 U [1 U]	1 U	10 U	1 U	1 U
p-Isopropyltoluene	99-87-6	5	5 U	5 U	5 U	5 U [5 U]	5 U	50 U	5 U	5 U
sec-Butylbenzene	135-98-8	5	5 U	5 U	5 U	5 U [5 U]	5 U	50 U	5 U	5 U
Styrene	100-42-5	5	5 U	5 U	5 U	5 U [5 U]	5 U	50 U	5 U	5 U
tert-Butylbenzene	98-06-6	5	5 U	5 U	5 U	5 U [5 U]	5 U	50 U	5 U	5 U
Tertiary butyl alcohol	75-65-0	- -	50 U	50 U	50 U	50 U [50 U]	50 U	500 U	50 U	50 U
Tetrachloroethene	127-18-4	5	1 U	1 U	1 U	1 U [1 U]	1 U	10 U	1 U	1 U
Tetrahydrofuran	109-99-9	50	10 U	10 U	10 U	10 U [10 U]	10 U	100 U	10 U	10 U
Toluene	108-88-3	5	1 U	1 U	1 U	1 U [1 U]	1 U	10 U	1 U	1 U
Total chlorinated VOCs	ARC-TCVOC	- -	0 U	0 U	0 U	0 U	0 U	0 U	0 U	0.3 J
trans-1,2-Dichloroethene	156-60-5	5	1 U	1 U	1 U	1 U [1 U]	1 U	10 U	1 U	1 U
trans-1,3-Dichloropropene	10061-02-6	0.4	1 U	1 U	1 U	1 U [1 U]	1 U	*10 U*	1 U	1 U
Trichloroethene	79-01-6	5	1 U	1 U	1 U	1 U [1 U]	1 U	10 U	1 U	1 U
Trichlorofluoromethane	75-69-4	5	1 U	1 U	1 UJ	1 UJ [1 UJ]	1 UJ	10 UJ	1 U	1 U
Vinyl chloride	75-01-4	2	1 U	1 U	1 UJ	1 UJ [1 UJ]	1 UJ	10 UJ	1 U	1 U
Xylenes (total)	1330-20-7	5	6 U	6 U	6 U	6 U [6 U]	6 U	*60 U*	6 U	6 U
Semivolatile Organics - USEPA SW-846 Method 8270D (µg/L)										
1,1'-Biphenyl	92-52-4	5	10 U	10 U	11 U	10 U [10 U]	10 U	11 U	10 U	10 U
1,2,4,5-Tetrachlorobenzene	95-94-3	5	2.0 U	2.0 U	2.1 U	2.0 U [2 U]	2.0 U	2.2 U	2.0 U	2.0 U
2,3,4,6-Tetrachlorophenol	58-90-2	1	*10 U*	*10 U*	*11 U*	*10 U [10 U]*	*10 U*	*11 U*	*10 U*	*10 U*
2,4,5-Trichlorophenol	95-95-4	1	2.0 U	2.0 U	2.1 U	2.0 U [2 U]	2.0 U	2.2 U	2.0 U	2.0 U
2,4,6-Trichlorophenol	88-06-2	1	2.0 U	2.0 U	2.1 U	2.0 U [2 U]	2.0 U	2.2 U	2.0 U	2.0 U
2,4-Dichlorophenol	120-83-2	1	2.0 U	2.0 U	2.1 U	2.0 U [2 U]	2.0 U	2.2 U	2.0 U	2.0 U
2,4-Dimethylphenol	105-67-9	1	*10 U*	*10 U*	*11 U*	*10 U [10 U]*	*10 U*	*11 U*	*10 U*	*10 U*

See Notes on Page 17.

Table 5
Groundwater Analytical Results - Organics

Additional BDA Well Installation and Groundwater Monitoring Report
Site #C734138, BMS Syracuse North Campus Restoration Area
East Syracuse, New York

Location ID: Date Collected: Sample Name:	CAS Number	Groundwater Standard/ Guidance Value	PW-4LS 10/28/19 PW-4LS 10282019	PW-4LD 10/28/19 PW-4LD 10282019	PW-4T 10/30/19 PW-4T 10302019	PW-5T 10/30/19 PW-5T 10302019	PW-5RX 10/30/19 PW-5RX 10302019	PW-6F 10/30/19 PW-6F 10302019	PW-6L 10/28/19 PW-6L 10282019	PW-6T 10/28/19 PW-6T 10282019
Semivolatile Organics - USEPA SW-846 Method 8270D (µg/L) (cont'd)										
2,4-Dinitrophenol	51-28-5	1	*30 U*	*30 U*	*32 U*	*31 U [30 U]*	*31 U*	*33 U*	*30 U*	*31 U*
2,4-Dinitrotoluene	121-14-2	5	5.1 U	5.1 U	5.3 U	5.1 U [5.1 U]	5.1 U	5.4 U	5.0 U	5.1 U
2,6-Dinitrotoluene	606-20-2	5	2.0 U	2.0 U	2.1 U	2.0 U [2 U]	2.0 U	2.2 U	2.0 U	2.0 U
2-Chloronaphthalene	91-58-7	10	1.0 U	1.0 U	1.1 U	1.0 U [1 U]	1.0 U	1.1 U	1.0 U	1.0 U
2-Chlorophenol	95-57-8	1	2.0 U	2.0 U	2.1 U	2.0 U [2 U]	2.0 U	2.2 U	2.0 U	2.0 U
2-Methylnaphthalene	91-57-6	- -	0.51 U	0.51 U	0.53 U	0.43 J [0.51 U]	0.51 U	0.54 U	0.50 U	0.51 U
2-Nitroaniline	88-74-4	5	7.1 U	7.1 U	7.4 U	7.2 U [7.1 U]	7.1 U	7.6 U	7.0 U	7.2 U
2-Nitrophenol	88-75-5	1	*10 U*	*10 U*	*11 U*	*10 U [10 U]*	*10 U*	*11 U*	*10 U*	*10 U*
3&4-Methylphenol (cresol)	65794-96-9	1	2.0 U	2.0 U	2.1 U	2.0 U [2 U]	2.0 U	2.2 U	2.0 U	2.0 U
3,3'-Dichlorobenzidine	91-94-1	5	10 U	10 U	11 U	10 U [10 U]	10 U	11 U	10 U	10 U
3-Nitroaniline	99-09-2	5	7.1 U	7.1 U	7.4 U	7.2 U [7.1 U]	7.1 U	7.6 U	7.0 U	7.2 U
4,6-Dinitro-2-methylphenol	534-52-1	1	*21 U*	*21 U*	*22 U*	*22 U [21 U]*	*21 U*	*23 U*	*21 U*	*22 U*
4-Bromophenyl-phenyl ether	101-55-3	- -	2.0 U	2.0 U	2.1 U	2.0 U [2 U]	2.0 U	2.2 U	2.0 U	2.0 U
4-Chloro-3-Methylphenol	59-50-7	1	2.0 U	2.0 U	2.1 U	2.0 U [2 U]	2.0 U	2.2 U	2.0 U	2.0 U
4-Chloroaniline	106-47-8	5	10 U	10 U	11 U	10 U [10 U]	10 U	11 U	10 U	10 U
4-Chlorophenyl-phenyl ether	7005-72-3	- -	2.0 U	2.0 U	2.1 U	2.0 U [2 U]	2.0 U	2.2 U	2.0 U	2.0 U
4-Nitroaniline	100-01-6	5	3.0 U	3.0 U	3.2 U	3.1 U [3 U]	3.1 U	3.3 U	3.0 U	3.1 U
4-Nitrophenol	100-02-7	1	*30 U*	*30 U*	*32 U*	*31 U [30 U]*	*31 U*	*33 U*	*30 U*	*31 U*
Acenaphthene	83-32-9	20	0.51 U	0.51 U	0.53 U	0.51 U [0.51 U]	0.51 U	0.54 U	0.50 U	0.51 U
Acenaphthylene	208-96-8	- -	0.51 U	0.51 U	0.53 U	0.51 U [0.51 U]	0.51 U	0.54 U	0.50 U	0.51 U
Acetophenone	98-86-2	- -	10 U	10 U	11 U	10 U [10 U]	10 U	11 U	10 U	10 U
Aniline	62-53-3	5	10 U	10 U	11 U	10 U [10 U]	10 U	11 U	10 U	10 U
Anthracene	120-12-7	50	0.51 U	0.51 U	0.53 U	0.51 U [0.51 U]	0.51 U	0.54 U	0.50 U	0.51 U
Atrazine	1912-24-9	7.5	5.1 U	5.1 U	5.3 U	5.1 U [5.1 U]	5.1 U	5.4 U	5.0 U	5.1 U
Benzaldehyde	100-52-7	- -	10 UJ	10 UJ	11 U	10 U [10 U]	10 U	11 U	10 UJ	10 UJ
Benzo(a)anthracene	56-55-3	0.002	*0.51 U*	*0.51 U*	*0.53 U*	*0.51 U [0.51 U]*	*0.51 U*	*0.54 U*	*0.50 U*	*0.51 U*
Benzo(a)pyrene	50-32-8	ND	0.51 U	0.51 U	0.53 U	0.51 U [0.51 U]	0.51 U	0.54 U	0.50 U	0.51 U
Benzo(b)fluoranthene	205-99-2	0.002	*0.51 U*	*0.51 U*	*0.53 U*	*0.51 U [0.51 U]*	*0.51 U*	*0.54 U*	*0.50 U*	*0.51 U*
Benzo(g,h,i)perylene	191-24-2	- -	0.51 U	0.51 U	0.53 U	0.51 U [0.51 U]	0.51 U	0.54 U	0.50 U	0.51 U
Benzo(k)fluoranthene	207-08-9	0.002	*0.51 UJ*	*0.51 UJ*	*0.53 U*	*0.51 U [0.51 U]*	*0.51 U*	*0.54 U*	*0.50 UJ*	*0.51 UJ*
Benzyl alcohol	100-51-6	- -	30 U	30 U	32 U	31 U [30 U]	31 U	33 U	30 U	31 U
bis(2-Chloroethoxy)methane	111-91-1	5	2.0 U	2.0 U	2.1 U	2.0 U [2 U]	2.0 U	2.2 U	2.0 U	2.0 U
bis(2-Chloroethyl)ether	111-44-4	1	2.0 U	2.0 U	2.1 U	2.0 U [2 U]	2.0 U	2.2 U	2.0 U	2.0 U
bis(2-Chloroisopropyl)ether	39638-32-9	- -	2.0 U	2.0 U	2.1 U	2.0 U [2 U]	2.0 U	2.2 U	2.0 U	2.0 U
bis(2-Ethylhexyl) phthalate	117-81-7	5	*11 U*	*11 U*	*12 U*	*11 U [11 U]*	*11 U*	**15**	11 U	*11 U*
Butylbenzyl phthalate	85-68-7	50	5.1 U	5.1 U	5.3 U	5.1 U [5.1 U]	5.1 U	5.4 U	5.0 U	5.1 U
Caprolactam	105-60-2	- -	11 U	11 U	12 U	11 U [11 U]	11 U	12 U	11 U	11 U
Carbazole	86-74-8	- -	2.0 U	2.0 U	2.1 U	2.0 U [2 U]	2.0 U	2.2 U	2.0 U	2.0 U
Chrysene	218-01-9	0.002	*0.51 U*	*0.51 U*	*0.53 U*	*0.51 U [0.51 U]*	*0.51 U*	*0.54 U*	*0.50 U*	*0.51 U*
Dibenzo(a,h)anthracene	53-70-3	- -	0.51 U	0.51 U	0.53 U	0.51 U [0.51 U]	0.51 U	0.54 U	0.50 U	0.51 U
Dibenzofuran	132-64-9	- -	2.0 U	2.0 U	2.1 U	2.0 U [2 U]	2.0 U	2.2 U	2.0 U	2.0 U
Dicyclohexylamine	101-83-7	† (50)	10 U	10 U	11 U	10 U [10 U]	10 U	11 U	10 U	10 U
Diethylphthalate	84-66-2	50	5.1 U	5.1 U	5.3 U	5.1 U [5.1 U]	5.1 U	5.4 U	5.0 U	5.1 U

See Notes on Page 17.

Table 5
Groundwater Analytical Results - Organics

Additional BDA Well Installation and Groundwater Monitoring Report
Site #C734138, BMS Syracuse North Campus Restoration Area
East Syracuse, New York

Location ID: Date Collected: Sample Name:	CAS Number	Groundwater Standard/ Guidance Value	PW-4LS 10/28/19 PW-4LS 10282019	PW-4LD 10/28/19 PW-4LD 10282019	PW-4T 10/30/19 PW-4T 10302019	PW-5T 10/30/19 PW-5T 10302019	PW-5RX 10/30/19 PW-5RX 10302019	PW-6F 10/30/19 PW-6F 10302019	PW-6L 10/28/19 PW-6L 10282019	PW-6T 10/28/19 PW-6T 10282019
Semivolatile Organics - USEPA SW-846 Method 8270D (µg/L) (cont'd)										
Dimethylphthalate	131-11-3	50	5.1 U	5.1 U	5.3 U	5.1 U [5.1 U]	5.1 U	5.4 U	5.0 U	5.1 U
Di-n-butylphthalate	84-74-2	50	5.1 U	5.1 U	5.3 U	5.1 U [5.1 U]	5.1 U	5.4 U	5.0 U	5.1 U
Di-n-octylphthalate	117-84-0	50	11 U	11 U	12 U	11 U [11 U]	11 U	12 U	11 U	11 U
Fluoranthene	206-44-0	50	0.51 U	0.51 U	0.53 U	0.51 U [0.51 U]	0.51 U	0.21 J	0.50 U	0.51 U
Fluorene	86-73-7	50	0.51 U	0.51 U	0.53 U	0.51 U [0.51 U]	0.51 U	0.54 U	0.50 U	0.51 U
Hexachlorobenzene	118-74-1	0.04	*0.51 U*	*0.51 U*	*0.53 U*	*0.51 U [0.51 U]*	*0.51 U*	*0.54 U*	*0.50 U*	*0.51 U*
Hexachlorobutadiene	87-68-3	0.5	*2.0 U*	*2.0 U*	*2.1 U*	*2.0 U [2 U]*	*2.0 U*	*2.2 U*	2.0 U	*2.0 U*
Hexachlorocyclopentadiene	77-47-4	5	*11 U*	*11 U*	*12 U*	*11 U [11 U]*	*11 U*	*12 U*	11 U	*11 U*
Hexachloroethane	67-72-1	5	5.1 U	5.1 U	5.3 U	5.1 U [5.1 U]	5.1 U	5.4 U	5.0 U	5.1 U
Indeno(1,2,3-cd)pyrene	193-39-5	0.002	*0.51 U*	*0.51 U*	*0.53 U*	*0.51 U [0.51 U]*	*0.51 U*	*0.54 U*	*0.50 U*	*0.51 U*
Isophorone	78-59-1	50	2.0 U	2.0 U	2.1 U	2.0 U [2 U]	2.0 U	2.2 U	2.0 U	2.0 U
n,n-dimethylaniline	121-69-7	1	1.0 U	1.0 U	1.1 U	1.0 U [1 U]	1.0 U	1.1 U	1.0 U	1.0 U
Naphthalene	91-20-3	10	0.51 U	0.51 U	0.53 U	0.51 U [0.51 U]	0.51 U	0.54 U	0.50 U	0.51 U
Nitrobenzene	98-95-3	0.4	*2.0 U*	*2.0 U*	*2.1 U*	*2.0 U [2 U]*	*2.0 U*	*2.2 U*	*2.0 U*	*2.0 U*
N-Nitroso-di-n-propylamine	621-64-7	- -	3.0 U	3.0 U	3.2 U	3.1 U [3 U]	3.1 U	3.3 U	3.0 U	3.1 U
N-Nitrosodiphenylamine	86-30-6	50	3.0 U	3.0 U	3.2 U	3.1 U [3 U]	3.1 U	3.3 U	3.0 U	3.1 U
o-Cresol (2-Methylphenol)	95-48-7	1	2.0 U	2.0 U	2.1 U	2.0 U [2 U]	2.0 U	2.2 U	2.0 U	2.0 U
Pentachlorophenol	87-86-5	1	5.1 U	5.1 U	*5.3 U*	5.1 U [5.1 U]	5.1 U	*5.4 U*	5.0 U	5.1 U
Phenanthrene	85-01-8	50	0.51 U	0.51 U	0.53 U	0.51 U [0.51 U]	0.51 U	0.54 U	0.50 U	0.51 U
Phenol	108-95-2	1	2.0 U	2.0 U	2.1 U	2.0 U [2 U]	2.0 U	2.2 U	2.0 U	2.0 U
Pyrene	129-00-0	50	0.51 U	0.51 U	0.53 U	0.51 U [0.51 U]	0.51 U	0.19 J	0.50 U	0.51 U
Pyridine	110-86-1	50	5.1 U	5.1 U	5.3 U	5.1 U [5.1 U]	5.1 U	5.4 U	5.0 U	5.1 U
Total aniline compounds	ARC-TAniline	- -	10 U	10 U	11 U	10 U	10 U	11 U	10 U	10 U
Triethylamine	121-44-8	† (50)	10 U	10 U	11 U	10 U [10 U]	10 U	11 U	10 U	10 U
Semivolatile Organics - USEPA SW-846 Method 8270D - SIM (µg/L)										
1,4-Dioxane	123-91-1	1	NA	NA	NA	NA	NA	NA	NA	NA
Alcohols and Glycols - USEPA SW-846 Method 8015D (µg/L)										
Ethanol	64-17-5	†	1,000 U	1,000 U	1,000 U	1,000 U [1,000 U]	1,000 U	1,000 U	1,000 U	1,000 U
Ethylene glycol	107-21-1	50	10,000 UJ	R	R	R [R]	R	*10,000 UJ*	10,000 U	R
Isopropyl alcohol	67-63-0	- -	1,000 U	1,000 U	1,000 U	1,000 U [1,000 U]	1,000 U	1,000 U	1,000 U	1,000 U
Methanol	67-56-1	- -	1,000 U	1,000 U	1,000 U	1,000 U [1,000 U]	1,000 U	1,000 U	1,000 U	1,000 U
Propylene glycol	57-55-6	1,000	10,000 UJ	R	R	R [R]	R	*10,000 UJ*	10,000 U	R
Aldehydes - USEPA SW-846 Method 8315A (µg/L)										
Acetaldehyde	75-07-0	8	*60 U*	*60 U*	*60 UJ*	*60 UJ [60 UJ]*	*60 UJ*	*60 UJ*	*60 U*	*60 U*
Formaldehyde	50-00-0	8	**62**	*50 U*	*50 U*	**22 J [37 J]**	**36 J**	**51**	**34 J**	**33 J**

See Notes on Page 17.

Table 5
Groundwater Analytical Results - Organics

Additional BDA Well Installation and Groundwater Monitoring Report
Site #C734138, BMS Syracuse North Campus Restoration Area
East Syracuse, New York

Notes:
1. Results compared to NYSDEC Division of Water Technical and Operational Guidance Series (TOGS) 1.1.1, Ambient Water Quality Standards and Guidance Values.
2. Samples were collected by Arcadis and analyzed by Eurofins Lancaster Laboratories Environmental, LLC, Lancaster, Pennsylvania.
3. Analytes detected in sample are shown in black font and analytes that are not detected are shown in gray font.
4. Field duplicate sample results are presented in brackets, [ ].
5. The compounds 3-methylphenol and 4-methylphenol cannot be chromatographically separated, and therefore are reported as 3&4-methylphenol.
6. Data have been validated.
7. Several VOC results were qualified with a E as the compounds were quantitated above the calibration range. Results of the dilution runs perfromed were not able to be validated.
8. Designations:
   a) Bold font with gray shading = Result detected greater than NYSDEC TOGS 1.1.1. or a default screening value for purposes of the PDI Report.
   b) Italic font = Sample MDL exceeds NYSDEC TOGS 1.1.1 value. Note that, for some analytes the MDL was at or less than the TOGS 1.1.1 value, while the quantitation limit was greater than the TOGS 1.1.1 value.
   c) † = Not determined to be a POC at this time based on review of TOGS Part 1(B)(2) Steps 1 through 3.
   d) () = Value in parenthesis and gray font indicate a default screening value being used for purposes of this report.
   e) {} = Value in brackets represents the results of a further diluted analysis. The further diluted analysis was performed from a previously opened container with headspace and/or outside of the method holding time. The bracketed value is not validated because the laboratory didn't provide enough data (e.g., no raw data or other results reported) to perfom validation.

Acronyms and Abbreviations:
BMS = Bristol-Myers Squibb Company.
CAS = Chemical Abstracts Service.
MDL = method detection limit.
NA = not analyzed.
ND = nondetect.
NYSDEC = New York State Department of Environmental Conservation.
PDI = pre-design investigation.
POC = principal organic contaminant.
SIM = select ion monitoring.
SVOC = semivolatile organic compound.
TPH = total petroleum hydrocarbons.
USEPA = United States Environmental Protection Agency.
VOC = volatile organic compound.
- - = Substance not regulated by the POC Groundwater Standard (TOGS 1.1.1, Table 3).
µg/L = micrograms per liter.

Qualifiers:
D = Compound quantitated using a secondary dilution.
EJ = The compound was quantitated above the calibration range. The associated numerical value is an estimated concentration only.
J = Estimated value. Result is greater than the MDL but less than the quantitation limit.
R = Data was rejected as part of validation.
U = Analyte not detected at associated quantitation limit.
UJ = The compound was not detected above the reported sample quantitation limit. However, the reported limit is approximate and may or may not represent the actual limit of quantitation.

Table 6
Groundwater Analytical Results - PFAS

Additional BDA Well Installation and Groundwater Monitoring Report
Site #C734138, BMS Syracuse North Campus Restoration Area
East Syracuse, New York

Location ID: Date Collected: Sample Name:	CAS Number	BDA-14RX 10/29/19 BDA-14RX 10292019	BDA-17WT 10/29/19 BDA-17WT 10292019	BDA-17T 10/29/19 BDA-17T 10292019	BDA-17WR 10/29/19 BDA-17WR 10292019	BDA-17RX 10/29/19 BDA-17RX 10292019
Perfluoralkyl Substances - USEPA Methods 537 Modified for Groundwater (ng/L)						
6:2 Fluorotelomer sulfonate (6:2 FTS)	27619-97-2	7.8	4.2 U	110 J [34 J]	4.4 U	20
8:2 Fluorotelomer sulfonate (8:2 FTS)	39108-34-4	2.6 U	2.5 U	2.6 U [2.7 U]	2.7 U	2.7 U
N-ethyl perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	2991-50-6	2.6 U	2.5 U	2.6 U [2.7 U]	2.7 U	2.7 U
N-methyl perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	2355-31-9	1.7 U	1.7 U	1.8 U [1.8 U]	1.8 U	1.8 U
Perfluorobutanesulfonic acid (PFBS)	375-73-5	1.7 U	1.7 U	1.8 U [1.8 U]	1.8 U	1.8 U
Perfluorobutanoic acid (PFBA)	375-22-4	4.3 U	9.5	2.3 J [2 J]	6.3 J	3.6 J
Perfluorodecanesulfonic acid (PFDS)	335-77-3	1.7 U	1.7 U	1.8 U [1.8 U]	1.8 U	1.8 U
Perfluorodecanoic acid (PFDA)	335-76-2	1.7 U	1.7 U	1.8 U [1.8 U]	1.8 U	1.8 U
Perfluorododecanoic acid (PFDoA)	307-55-1	1.7 U	1.7 U	1.8 U [1.8 U]	1.8 U	1.8 U
Perfluoroheptanesulfonic acid (PFHpS)	375-92-8	1.7 U	1.7 U	1.8 U [1.8 U]	1.8 U	1.8 U
Perfluoroheptanoic acid (PFHpA)	375-85-9	1.7 U	0.57 J	1.6 J [0.55 J]	1.8 U	1.8 U
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	1.7 U	1.7 U	1.8 U [1.8 U]	1.8 U	1.8 U
Perfluorohexanoic acid (PFHxA)	307-24-4	1.7 U	1.5 J	8.5 J [1.6 J]	1.8 U	1.8 U
Perfluorononanoic acid (PFNA)	375-95-1	1.7 U	1.7 U	1.8 U [1.8 U]	1.8 U	1.8 U
Perfluorooctanesulfonamide (FOSA)	754-91-6	1.7 U	1.7 U	1.8 U [1.8 U]	1.8 U	1.8 UJ
Perfluorooctanoic acid (PFOA)	335-67-1	1.7 U	1.7 U	0.62 J [0.49 J]	1.8 U	0.49 J
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	1.7 U	1.7 U	0.63 J [1.8 U]	1.8 U	0.54 J
Perfluoropentanoic acid (PFPeA)	2706-90-3	1.7 U	2.3	1.4 J [0.6 J]	1.8 U	0.55 J
Perfluorotetradecanoic acid (PFTA/PFTeDA)	376-06-7	1.7 U	1.7 U	1.8 U [1.8 U]	1.8 U	1.8 U
Perfluorotridecanoic acid (PFTriA/PFTrDA)	72629-94-8	1.7 U	1.7 U	1.8 U [1.8 U]	1.8 U	1.8 U
Perfluoroundecanoic acid (PFUA/PFUdA)	2058-94-8	1.7 U	1.7 U	1.8 U [1.8 U]	1.8 U	1.8 U
Total PFAS	TPFAAs	7.8	14 J	130 J [39 J]	6.3 J	25 J

Notes:
1. Samples were collected by Arcadis and analyzed by Eurofins Lancaster Laboratories Environmental, LLC, Lancaster, Pennsylvania.
2. Analytes detected in sample are shown in black font and analytes that are not detected are shown in gray font.
3. Field duplicate sample results are presented in brackets, [ ].
4. Total PFAS was rounded to two significant digits.
5. Data have been validated.

Acronyms and Abbreviations:
BMS = Bristol-Myers Squibb Company.
CAS = Chemical Abstracts Service.
ng/L = nanograms per liter.
PFAS = perfluoroalkyl substances.
TPFAA = Non-numerical value surrogate identification for total PFAS because no actual CAS number is available.
USEPA = United States Environmental Protection Agency.

Qualifiers:
J = Estimated value. Result is greater than the method detection limit but less than the quantitation limit.
U = Analyte not detected at associated quantitation limit.

Table 7
Groundwater Analytical Results - Geochemical

Additional BDA Well Installation and Groundwater Monitoring Report
Site #C734138, BMS Syracuse North Campus Restoration Area
East Syracuse, New York

Location ID: Date Collected: Sample Name:	CAS Number	TOGS 1.1.1 Groundwater Standard/ Guidance Value	BDA-14RX 10/29/19 BDA-14RX 10292019	BDA-17WT 10/29/19 / 10/30/19 BDA-17WT 10292019	BDA-17T 10/29/19 BDA-17T 10292019	BDA-17WR 10/29/19 BDA-17WR 10292019	BDA-17RX 10/29/19 BDA-17RX 10292019
Inorganics - USEPA SW-846 Methods 6010B/C and 7471A/B (mercury) (mg/L)							
Aluminum	7429-90-5	- -	1.31 J	52.3 J	R [8.76 J]	1.40 J	0.332 J
Antimony	7440-36-0	0.003	0.0500 U	0.0500 U	0.0500 U [0.0500 U]	0.0500 U	0.0500 U
Arsenic	7440-38-2	0.025	0.0300 U	0.0300 U	0.0300 U [0.0300 U]	0.0300 U	0.0300 U
Barium	7440-39-3	1	0.0198	0.245	0.0359 J [0.0538 J]	0.0686	0.622
Beryllium	7440-41-7	0.003	0.00500 U	0.00500 U	0.00500 U [0.00500 U]	0.00500 U	0.00500 U
Cadmium	7440-43-9	0.005	0.00500 U	0.00500 U	0.00500 U [0.00500 U]	0.00500 U	0.00500 U
Calcium	7440-70-2	- -	695 J	280 J	R [482 J]	830 J	481 J
Chromium	7440-47-3	0.05	0.00520 J	0.0258 J	0.00230 J [0.00510 J]	0.00320 J	0.00780 J
Cobalt	7440-48-4	- -	0.00270 J	0.0159 J	0.00500 UJ [0.00300 J]	0.00500 UJ	0.00150 J
Copper	7440-50-8	0.2	0.100 UJ	0.0513 J	0.0200 UJ [0.100 UJ]	0.100 UJ	0.100 UJ
Iron	7439-89-6	0.3	**3.96 J**	**9.06 J**	**0.0727 J [2.35 J]**	**0.480 J**	0.0888 J
Lead	7439-92-1	0.025	0.0150 UJ	0.0126 J	0.0150 UJ [0.0150 UJ]	0.0150 UJ	0.0150 UJ
Magnesium	7439-95-4	35	**116 J**	**158 J**	**R [89.2 J]**	**46.4 J**	**49.1 J**
Manganese	7439-96-5	0.3	**0.549 J**	**2.76 J**	**R [0.372 J]**	0.0345 J	0.0581 J
Mercury	7439-97-6	0.0007	0.000200 UJ	0.000200 UJ	0.000200 UJ [0.000200 UJ]	0.000200 UJ	0.000200 UJ
Nickel	7440-02-0	0.1	0.0901 J	0.0526 J	0.00600 J [0.0538 J]	0.0100 UJ	0.00270 J
Potassium	7440-09-7	- -	178	6.09 J	7.18 J [10.1]	195	216
Selenium	7782-49-2	0.01	0.0500 U	0.0500 U	0.0500 U [0.0500 U]	0.0500 U	0.0500 U
Silver	7440-22-4	0.05	0.0100 U	0.0100 U	0.0100 U [0.0100 U]	0.0100 U	0.0100 U
Sodium	7440-23-5	20	**1,550 J**	**175 J**	**R [193 J]**	**1,890 J**	**1,170 J**
Thallium	7440-28-0	0.0005	**0.00900 J**	0.0300 U	0.0300 U [0.0300 U]	0.0300 U	0.0300 U
Vanadium	7440-62-2	- -	0.0100 UJ	0.00950 J	0.0100 UJ [0.0100 UJ]	0.0100 UJ	0.0100 UJ
Zinc	7440-66-6	2	0.00630 J	0.0355	0.00390 J [0.0115 J]	0.00440 J	0.0104 J
Inorganics-Filtered - USEPA SW-846 Methods 6010B/C and 7471A/B (mercury) (mg/L)							
Aluminum	7429-90-5	- -	0.0270	0.906	R [0.466]	0.0250 U	0.0250 U
Antimony	7440-36-0	0.003	0.0500 U	0.0500 U	0.0500 U [0.0500 U]	0.0500 U	0.0500 U
Arsenic	7440-38-2	0.025	0.0172 J	0.0300 U	0.0300 U [0.0300 U]	0.0300 U	0.0300 U
Barium	7440-39-3	1	0.0203	0.198	0.0531 J [0.0538]	0.0605	0.743
Beryllium	7440-41-7	0.003	0.00500 U	0.00500 U	0.00500 U [0.00500 U]	0.00500 U	0.00500 U
Cadmium	7440-43-9	0.005	0.00500 U	0.00500 U	0.00500 U [0.00500 U]	0.00500 U	0.00500 U
Calcium	7440-70-2	- -	672	158	R [474]	847	440
Chromium	7440-47-3	0.05	0.00310 J	0.00320 J	0.00340 J [0.00340 J]	0.00230 J	0.00880 J
Cobalt	7440-48-4	- -	0.00480 J	0.00440 J	0.00410 J [0.00310 J]	0.00500 U	0.00500 U
Copper	7440-50-8	0.2	0.100 U	0.0200 U	0.100 U [0.100 U]	0.100 U	0.100 U
Iron	7439-89-6	0.3	**3.34 J**	**1.07 J**	**0.317 J [0.318 J]**	0.200 UJ	0.200 UJ
Lead	7439-92-1	0.025	0.0150 U	0.0150 U	0.0150 U [0.0150 U]	0.0150 U	0.0150 U
Magnesium	7439-95-4	35	**118**	**122**	**R [80.8]**	**58.7 J**	1.30
Manganese	7439-96-5	0.3	**0.553**	**1.45**	R [0.264]	0.0152	0.0100 U
Mercury	7439-97-6	0.0007	0.000200 U	0.000200 U	0.000200 U [0.000200 U]	0.000200 U	0.000200 U
Nickel	7440-02-0	0.1	**0.110**	0.0227	0.0419 J [0.0337]	0.0100 U	0.0100 U
Potassium	7440-09-7	- -	181	5.74	10.3 J [9.78]	199	233
Selenium	7782-49-2	0.01	0.0500 U	0.0500 U	0.0500 U [0.0500 U]	0.0500 U	0.0500 U
Silver	7440-22-4	0.05	0.0100 U	0.0100 U	0.0100 U [0.0100 U]	0.0100 U	0.0100 U
Sodium	7440-23-5	20	**1,430**	**176**	**R [205]**	**1,850**	**994**
Thallium	7440-28-0	0.0005	0.0300 U	0.0300 U	0.0300 U [0.0300 U]	0.0300 U	0.0300 U
Vanadium	7440-62-2	- -	0.0100 U	0.0100 U	0.0100 U [0.0100 U]	0.0100 U	0.0100 U
Zinc	7440-66-6	2	0.00580 J	0.00540 J	0.00560 J [0.00490 J]	0.0200 U	0.00380 J
Dissolved Gases - USEPA Method AM20GAX (µg/L)							
Acetylene	74-86-2	- -	0.50 U	0.50 U	0.50 U [0.50 U]	0.50 U	0.50 U
Ethane	74-84-0	- -	0.12	0.48	0.65 [0.64]	1.5	1.7
Ethene	74-85-1	- -	0.068 J	0.23	0.24 [0.24]	1.0	0.029 J
Methane	74-82-8	- -	38	29	5.1 [5.2]	9.3	180
Phosphorous - NEMI Method SM4500-P-F (µg/L)							
Phosphorous	7723-14-0	- -	100 U	100 U	120 [160]	100 U	50 J
General Chemistry - NEMI Methods SM2320B (alkalinity), SM5210B (BOD), and SM5310C (TOC) (µg/L) - USEPA Methods E410.4 (COD), E300.0 (Cl, F-, NO2, NO3,SO2), and E350.1 (NH3) (µg/L)							
Alkalinity	ARC-Alk	- -	68,400	297,000 J	99,100 [111,000]	74,800	38,400
Biological Oxygen Demand	ARC-BOD	- -	2,000 U	6,210 J	2,000 U [2,200]	2,000 U	2,000 U
Chemical Oxygen Demand	COD	- -	114,000	40,300 J	50,000 U [145,000]	35,500 J	137,000
Chloride	ARC-Cl-	- -	2,830,000	556,000	77,500 [91,400]	4,290,000	3,680,000
Fluoride (F-, Anion)	16984-48-8	- -	500 U	500 U	340 J [520]	500 U	500 U
Nitrate	ARC-NO3-	10,000	100 UJ	100 UJ	440 J [440 J]	100 U	350
Nitrite	ARC-NO2	1,000	50 U	38 J	50 U [50 U]	50 U	61
Nitrogen, as Ammonia	ARC-NH3	2,000	**7,800**	300 J	75 J	**14,900 [11,500]**	**9,200**
Sulfate	14808-79-8	250,000	**2,190,000**	243,000	**354,000 J [675,000 J]**	**3,040,000**	**1,140,000**
Total Organic Carbon	ARC-TOC	- -	1,000 U	15,000	1,500 [1,600]	1,600	3,100

See Notes on Page 2.

Table 7
Groundwater Analytical Results - Geochemical

Additional BDA Well Installation and Groundwater Monitoring Report
Site #C734138, BMS Syracuse North Campus Restoration Area
East Syracuse, New York

Notes:
1. Results compared to NYSDEC Division of Water Technical and Operational Guidance Series (TOGS) 1.1.1, Ambient Water Quality Standards and Guidance Values.
2. Samples were collected by Arcadis and analyzed by Eurofins Lancaster Laboratories Environmental, LLC, Lancaster, Pennsylvania, except dissolved gas analysis which was performed by Pace Analytical Energy Services LLC of Pittsburgh, Pennsylvania.
3. Pace Analytical does not hold NELAP/TNI accreditation for dissolved gas analysis.
4. Analytes detected in sample are shown in black font and analytes that are not detected are shown in gray font.
5. Well BDA-17WT went dry during sampling on October 29. The well was revisited on October 30 and groundwater samples were collected for analysis for chemical oxygen demand and nitrogen, as ammonia.
6. Field duplicate sample results are presented in brackets, [ ].
7. Dissolved gas results for monitoring well BDA-9RX are for a sample collected on 10/12/2018 because the original 10/9/2018 sample contained an air bubble.
8. Data have been validated.
9. Designations:
   a) Bold font with gray shading = Result detected above NYSDEC TOGS 1.1.1.
   b) Italic font = Sample MDL exceeds NYSDEC TOGS 1.1.1 value. Note that, for some analytes the MDL was at or less than the TOGS 1.1.1 value, while the quantitation limit was greater than the TOGS 1.1.1 value.

Acronyms and Abbreviations:
BMS = Bristol-Myers Squibb Company.
BOD = biological oxygen demand.
CAS = Chemical Abstracts Service.
Cl = chloride.
COD = chemical oxygen demand.
F- = fluoride.
MDL = method detection limit.
mg/L = milligrams per liter.
NELAP/TNI = National Environmental Laboratory Accreditation Program/The NELAC Institute.
NEMI = National Environmental Methods Index.
NH_3 = nitrogen as ammonia.
NO_2 = nitrite.
NO_3 = nitrate.
NYSDEC = New York State Department of Environmental Conservation.
PDI = pre-design investigation.
SO_2 = sulfate.
TOC = total organic carbon.
USEPA = United States Environmental Protection Agency.
- - = NYSDEC TOGS 1.1.1 not available.
µg/L = micrograms per liter.

Qualifiers:
J = Estimated value. Result is greater than the MDL but less than the quantitation limit.
R = Data were rejected as part of validation.
U = Analyte not detected at associated quantitation limit.
UJ = The compound was not detected above the reported sample quantitation limit. However, the reported limit is approximate and may or may not represent the actual limit of quantitation.

Table 8
Groundwater Analytical Results - TIC

Additional BDA Well Installation and Groundwater Monitoring Report
Site #C734138, BMS Syracuse Campus Restoration Area
East Syracuse, New York

Location ID: Date Collected: Sample Name:	CAS Number	BDA-1F 10/30/19 BDA-1F 10302019	BDA-1WT 10/30/19 BDA-1WT 10302019	BDA-1RX 10/31/19 BDA-1RX 10312019	BDA-4UT 10/31/19 BDA-4UT 10312019	BDA-6WT 10/30/19 BDA-6WT 10302019	BDA-6T 10/30/19 BDA-6T 10302019	BDA-8WT 11/01/19 BDA-8WT 11012019	BDA-8T 10/31/19 BDA-8T 10312019	BDA-8RX 11/01/19 BDA-8RX 11012019	BDA-11WT 10/31/19 BDA-11WT 10312019
Volatile Organics - TIC USEPA SW-846 Method 8260C (µg/L)											
1,3-Cyclopentadiene, 1,2,3,4-tetra	76089-59-3										
1H-Indene, 1-ethyl-2,3-dihyd	4830-99-3										
2,3-dihydro-1,2-dimethyl-1H-Indene	17057-82-8										
2,4-Dimethylpentane	108-08-7										
Bis(methylthio)methane	1618-26-4				620 JN						
Diisopropyl ether	108-20-3										
Isopropylcyclobutane	872-56-0										
n-Propylbenzene	103-65-1										
Silane, fluorotrimethyl-	420-56-4					15 JN					
Silanol, trimethyl-	1066-40-6					150 JN					
Unknown1	UNKVOA1				590 JN						
Unknown2	UNKVOA2				230 JN						
Unknown3	UNKVOA3				220 JN						
Unknown4	UNKVOA4				180 JN						
Unknown5	UNKVOA5				180 JN						
Unknown6	UNKVOA6				140 JN						
Unknown7	UNKVOA7				140 JN						
Unknown8	UNKVOA8				130 JN						
Total VOC TICs	ARC-TVOCTICs	0 U	0 U	0 U	2,400 JN	170 JN	0 U	0 U	0 U	0 U	0 U
Semivolatile Organics - TIC USEPA SW-846 Method 8270D (µg/L)											
(1-Ethyl-2-methylpropyl)meth	1000195-05-6					35 JN					
(S)-(+)-1-(2-Pyrrolidinylmet	51207-66-0					56 JN					
1,2,3,4-Tetramethylbenzene	488-23-3										
1,2,3,5-Tetramethylbenzene	527-53-7										
1,2,4,5-Tetramethylbenzene	95-93-2										
1,2,4-Trimethylbenzene	95-63-6										
1,2-Dimethyl-4-ethylbenzene	934-80-5										
1,3,5-Trithiane	291-21-4				1,200 JN						
1-Ethyl-2-methylbenzene	611-14-3										
1-Methyl-2-isopropylbenzene	527-84-4										
1-Methyl-2-propylbenzene	1074-17-5										
1-Methyl-3-ethylbenzene	620-14-4										
1-Methylnaphthalene	90-12-0										
2,5-Diisopropylpiperazine	154559-11-2					77 JN					
2,6-Di-Tert-Butyl-P-Cresol	128-37-0										
2-Chloro-N,N-dimethylanaline	698-01-1										150 JN
2-Ethyl-1-Hexanol	104-76-7										
2-Ethylhexanoic acid	149-57-5				16,000 JN						
3,5-Dimethoxyamphetamine	15402-82-1					280 JN					
3-Amino-4,5-dimethyl-2(5H)-f	1000314-35-9										
4,4'-Butylidenebis[6-tert-butyl-m-cresol]	85-60-9			14 JN							
4,4-Methylene Dianiline	101-77-9										3,000 JN

See Notes on Page 9.

Table 8
Groundwater Analytical Results - TIC

Additional BDA Well Installation and Groundwater Monitoring Report
Site #C734138, BMS Syracuse Campus Restoration Area
East Syracuse, New York

Location ID: Date Collected: Sample Name:	CAS Number	BDA-1F 10/30/19 BDA-1F 10302019	BDA-1WT 10/30/19 BDA-1WT 10302019	BDA-1RX 10/31/19 BDA-1RX 10312019	BDA-4UT 10/31/19 BDA-4UT 10312019	BDA-6WT 10/30/19 BDA-6WT 10302019	BDA-6T 10/30/19 BDA-6T 10302019	BDA-8WT 11/01/19 BDA-8WT 11012019	BDA-8T 10/31/19 BDA-8T 10312019	BDA-8RX 11/01/19 BDA-8RX 11012019	BDA-11WT 10/31/19 BDA-11WT 10312019
Semivolatile Organics - TIC USEPA SW-846 Method 8270D (µg/L) (cont'd)											
4-Ethyltoluene	622-96-8										
5-Chlorovaleramide, N,N-dime	1000339-95-2					44 JN					
Benzene, (1-ethylnonyl)-	4536-87-2										
Benzene, 2-ethenyl-1,4-dimethyl-	2039-89-6										
Benzoic Acid	65-85-0				1,500 JN						
Bis(methylthio)methane	1618-26-4				1,100 JN						
Caprylic Acid	124-07-2										
Catechol	120-80-9										
Cyclic octaatomic sulfur	10544-50-0									36 JN	
Dimepheptanol	545-90-4					24 JN					
Dodecanoic Acid	143-07-7										
Hexadecanoic Acid	57-10-3										
Hexamethylcyclotrisiloxane	541-05-9										270 JN
Indane	496-11-7										
Isovaleric Acid	503-74-2				1,000 JN						
Methyl Isobutyl Carbinol	108-11-2				75,000 JN						
N-Methylaniline	100-61-8										5,400 JN
Triphenylphosphine oxide	791-28-6			4 JN							
Unknown1	UNKSEMIVOA1			6 JN	97,000 JN	89 JN		4 JN	49 JN	48 JN	580 JN
Unknown2	UNKSEMIVOA2				3,500 JN	33 JN			47 JN	7 JN	510 JN
Unknown3	UNKSEMIVOA3				2,600 JN	30 JN				6 JN	390 JN
Unknown4	UNKSEMIVOA4				1,900 JN	29 JN				5 JN	300 JN
Unknown5	UNKSEMIVOA5				1,800 JN	28 JN				4 JN	290 JN
Unknown6	UNKSEMIVOA6				1,700 JN	26 JN					260 JN
Unknown7	UNKSEMIVOA7				1,700 JN	25 JN					190 JN
Unknown8	UNKSEMIVOA8				1,300 JN	20 JN					190 JN
Unknown9	UNKSEMIVOA9				1,200 JN	17 JN					180 JN
Unknown10	UNKSEMIVOA10				790 JN						160 JN
Unknown11	UNKSEMIVOA11				780 JN						150 JN
Unknown12	UNKSEMIVOA12				750 JN						130 JN
Unknown13	UNKSEMIVOA13				750 JN						95 JN
Unknown14	UNKSEMIVOA14				720 JN						94 JN
Unknown15	UNKSEMIVOA15										86 JN
Unknown16	UNKSEMIVOA16										68 JN
Total SVOC TICs	ARC-TSVOCTICs	0 U	0 U	24 JN	210,000 JN	810 JN	0 U	4 JN	96 JN	110 JN	12,000 JN
Semivolatile Organics - TIC USEPA SW-846 Method 8270D - SIM (µg/L)											
2-Fluoro-6-nitrophenol	1526-17-6										
Octamethylcyclotetrasiloxane	556-67-2										

See Notes on Page 9.

Table 8
Groundwater Analytical Results - TIC

Additional BDA Well Installation and Groundwater Monitoring Report
Site #C734138, BMS Syracuse Campus Restoration Area
East Syracuse, New York

Location ID: Date Collected: Sample Name:	CAS Number	BDA-12T 11/01/19 BDA-12T 11012019	BDA-12RX 11/01/19 BDA-12RX 11012019	BDA-13WT 10/31/19 BDA-13WT 10312019	BDA-14RX 10/29/19 BDA-14RX 10292019	BDA-15RX 10/30/19 BDA15RX 10302019	BDA-17WT 10/29/19 BDA-17WT 10292019	BDA-17T 10/29/19 BDA-17T 10292019	BDA-17WR 10/29/19 BDA-17WR 10292019	BDA-17RX 10/29/19 BDA-17RX 10292019	CHP-43RX 11/01/19 CHP-43RX 11012019
Volatile Organics - TIC USEPA SW-846 Method 8260C (µg/L)											
1,3-Cyclopentadiene, 1,2,3,4-tetra	76089-59-3			6 JN							
1H-Indene, 1-ethyl-2,3-dihyd	4830-99-3			7 JN							
2,3-dihydro-1,2-dimethyl-1H-Indene	17057-82-8			7 JN							
2,4-Dimethylpentane	108-08-7			10 JN							
Bis(methylthio)methane	1618-26-4										
Diisopropyl ether	108-20-3										
Isopropylcyclobutane	872-56-0			10 JN							
n-Propylbenzene	103-65-1			6 JN							
Silane, fluorotrimethyl-	420-56-4										
Silanol, trimethyl-	1066-40-6										
Unknown1	UNKVOA1			10 JN		210 JN			15 JN		
Unknown2	UNKVOA2			9 JN		5 JN					
Unknown3	UNKVOA3			8 JN							
Unknown4	UNKVOA4			7 JN							
Unknown5	UNKVOA5										
Unknown6	UNKVOA6										
Unknown7	UNKVOA7										
Unknown8	UNKVOA8										
Total VOC TICs	ARC-TVOCTICs	0 U	0 U	80 JN	0 U	220 JN	0 U	0 U [0 U]	15 JN	0 U	0 U
Semivolatile Organics - TIC USEPA SW-846 Method 8270D (µg/L)											
(1-Ethyl-2-methylpropyl)meth	1000195-05-6										
(S)-(+)-1-(2-Pyrrolidinylmet	51207-66-0										
1,2,3,4-Tetramethylbenzene	488-23-3										
1,2,3,5-Tetramethylbenzene	527-53-7										
1,2,4,5-Tetramethylbenzene	95-93-2										
1,2,4-Trimethylbenzene	95-63-6										
1,2-Dimethyl-4-ethylbenzene	934-80-5										
1,3,5-Trithiane	291-21-4										
1-Ethyl-2-methylbenzene	611-14-3										
1-Methyl-2-isopropylbenzene	527-84-4										
1-Methyl-2-propylbenzene	1074-17-5										
1-Methyl-3-ethylbenzene	620-14-4										
1-Methylnaphthalene	90-12-0										
2,5-Diisopropylpiperazine	154559-11-2										
2,6-Di-Tert-Butyl-P-Cresol	128-37-0	75 JN									
2-Chloro-N,N-dimethylanaline	698-01-1										
2-Ethyl-1-Hexanol	104-76-7										
2-Ethylhexanoic acid	149-57-5										10 JN
3,5-Dimethoxyamphetamine	15402-82-1										
3-Amino-4,5-dimethyl-2(5H)-f	1000314-35-9										
4,4'-Butylidenebis[6-tert-butyl-m-cresol]	85-60-9					7 JN					
4,4-Methylene Dianiline	101-77-9										

See Notes on Page 9.

Table 8
Groundwater Analytical Results - TIC

Additional BDA Well Installation and Groundwater Monitoring Report
Site #C734138, BMS Syracuse Campus Restoration Area
East Syracuse, New York

Location ID: Date Collected: Sample Name:	CAS Number	BDA-12T 11/01/19 BDA-12T 11012019	BDA-12RX 11/01/19 BDA-12RX 11012019	BDA-13WT 10/31/19 BDA-13WT 10312019	BDA-14RX 10/29/19 BDA-14RX 10292019	BDA-15RX 10/30/19 BDA15RX 10302019	BDA-17WT 10/29/19 BDA-17WT 10292019	BDA-17T 10/29/19 BDA-17T 10292019	BDA-17WR 10/29/19 BDA-17WR 10292019	BDA-17RX 10/29/19 BDA-17RX 10292019	CHP-43RX 11/01/19 CHP-43RX 11012019
Semivolatile Organics - TIC USEPA SW-846 Method 8270D (µg/L) (cont'd)											
4-Ethyltoluene	622-96-8										
5-Chlorovaleramide, N,N-dime	1000339-95-2										
Benzene, (1-ethylnonyl)-	4536-87-2										
Benzene, 2-ethenyl-1,4-dimethyl-	2039-89-6										
Benzoic Acid	65-85-0					190 JN					7 JN
Bis(methylthio)methane	1618-26-4										52 JN
Caprylic Acid	124-07-2										14 JN
Catechol	120-80-9										
Cyclic octaatomic sulfur	10544-50-0		13 JN								
Dimepheptanol	545-90-4										
Dodecanoic Acid	143-07-7										7 JN
Hexadecanoic Acid	57-10-3		4 JN								8 JN
Hexamethylcyclotrisiloxane	541-05-9										
Indane	496-11-7										
Isovaleric Acid	503-74-2										
Methyl Isobutyl Carbinol	108-11-2										
N-Methylaniline	100-61-8			6 JN							
Triphenylphosphine oxide	791-28-6										
Unknown1	UNKSEMIVOA1	9 JN	6 JN	390 JN	50 JN	290 JN	48 JN		19 JN [19 JN]		52 JN
Unknown2	UNKSEMIVOA2	4 JN	5 JN	27 JN	10 JN	99 JN	24 JN				22 JN
Unknown3	UNKSEMIVOA3		5 JN	12 JN		85 JN	17 JN				21 JN
Unknown4	UNKSEMIVOA4		4 JN	9 JN		81 JN	10 JN				18 JN
Unknown5	UNKSEMIVOA5		4 JN	8 JN		70 JN	7 JN				15 JN
Unknown6	UNKSEMIVOA6			6 JN		51 JN	6 JN				13 JN
Unknown7	UNKSEMIVOA7			6 JN		50 JN	5 JN				13 JN
Unknown8	UNKSEMIVOA8			6 JN		10 JN	5 JN				12 JN
Unknown9	UNKSEMIVOA9			5 JN		8 JN	4 JN				11 JN
Unknown10	UNKSEMIVOA10			4 JN		8 JN					10 JN
Unknown11	UNKSEMIVOA11					6 JN					7 JN
Unknown12	UNKSEMIVOA12					5 JN					7 JN
Unknown13	UNKSEMIVOA13					5 JN					6 JN
Unknown14	UNKSEMIVOA14										6 JN
Unknown15	UNKSEMIVOA15										
Unknown16	UNKSEMIVOA16										
Total SVOC TICs	ARC-TSVOCTICs	88 JN	41 JN	480 JN	60 JN	970 JN	130 JN	0 U	19 JN [19 JN]	0 U	310 JN
Semivolatile Organics - TIC USEPA SW-846 Method 8270D - SIM (µg/L)											
2-Fluoro-6-nitrophenol	1526-17-6						4 JN				
Octamethylcyclotetrasiloxane	556-67-2						9 JN				

See Notes on Page 9.

Table 8
Groundwater Analytical Results - TIC

Additional BDA Well Installation and Groundwater Monitoring Report
Site #C734138, BMS Syracuse Campus Restoration Area
East Syracuse, New York

Location ID: Date Collected: Sample Name:	CAS Number	PW-2T 10/30/19 PW-2T 10302019	PW-3MS 10/28/19 PW-3 10282019	PW-3MD 10/28/19 PW-3MD 10282019	PW-3T 10/28/19 PW-3T 10282019	PW-4F 10/28/19 PW-4F 10282019	PW-4LS 10/28/19 PW-4LS 10282019	PW-4LD 10/28/19 PW-4LD 10282019	PW-4T 10/30/19 PW-4T 10302019	PW-5T 10/30/19 PW-5T 10302019	PW-5RX 10/30/19 PW-5RX 10302019
Volatile Organics - TIC USEPA SW-846 Method 8260C (µg/L)											
1,3-Cyclopentadiene, 1,2,3,4-tetra	76089-59-3										
1H-Indene, 1-ethyl-2,3-dihyd	4830-99-3										
2,3-dihydro-1,2-dimethyl-1H-Indene	17057-82-8										
2,4-Dimethylpentane	108-08-7										
Bis(methylthio)methane	1618-26-4										
Diisopropyl ether	108-20-3						7 JN				
Isopropylcyclobutane	872-56-0										
n-Propylbenzene	103-65-1										
Silane, fluorotrimethyl-	420-56-4		7 JN	8 JN							
Silanol, trimethyl-	1066-40-6										
Unknown1	UNKVOA1					10 JN					
Unknown2	UNKVOA2										
Unknown3	UNKVOA3										
Unknown4	UNKVOA4										
Unknown5	UNKVOA5										
Unknown6	UNKVOA6										
Unknown7	UNKVOA7										
Unknown8	UNKVOA8										
Total VOC TICs	ARC-TVOCTICs	0 U	7 JN	8 JN	0 U	10 JN	7 JN	0 U	0 U	0 U [0 U]	0 U
Semivolatile Organics - TIC USEPA SW-846 Method 8270D (µg/L)											
(1-Ethyl-2-methylpropyl)meth	1000195-05-6										
(S)-(+)-1-(2-Pyrrolidinylmet	51207-66-0										
1,2,3,4-Tetramethylbenzene	488-23-3										
1,2,3,5-Tetramethylbenzene	527-53-7										
1,2,4,5-Tetramethylbenzene	95-93-2										
1,2,4-Trimethylbenzene	95-63-6										
1,2-Dimethyl-4-ethylbenzene	934-80-5										
1,3,5-Trithiane	291-21-4										
1-Ethyl-2-methylbenzene	611-14-3										
1-Methyl-2-isopropylbenzene	527-84-4										
1-Methyl-2-propylbenzene	1074-17-5										
1-Methyl-3-ethylbenzene	620-14-4										
1-Methylnaphthalene	90-12-0										
2,5-Diisopropylpiperazine	154559-11-2										
2,6-Di-Tert-Butyl-P-Cresol	128-37-0										
2-Chloro-N,N-dimethylanaline	698-01-1										
2-Ethyl-1-Hexanol	104-76-7										
2-Ethylhexanoic acid	149-57-5										
3,5-Dimethoxyamphetamine	15402-82-1										
3-Amino-4,5-dimethyl-2(5H)-f	1000314-35-9										9 JN
4,4'-Butylidenebis[6-tert-butyl-m-cresol]	85-60-9										
4,4-Methylene Dianiline	101-77-9										

See Notes on Page 9.

Table 8
Groundwater Analytical Results - TIC

Additional BDA Well Installation and Groundwater Monitoring Report
Site #C734138, BMS Syracuse Campus Restoration Area
East Syracuse, New York

Location ID: Date Collected: Sample Name:	CAS Number	PW-2T 10/30/19 PW-2T 10302019	PW-3MS 10/28/19 PW-3 10282019	PW-3MD 10/28/19 PW-3MD 10282019	PW-3T 10/28/19 PW-3T 10282019	PW-4F 10/28/19 PW-4F 10282019	PW-4LS 10/28/19 PW-4LS 10282019	PW-4LD 10/28/19 PW-4LD 10282019	PW-4T 10/30/19 PW-4T 10302019	PW-5T 10/30/19 PW-5T 10302019	PW-5RX 10/30/19 PW-5RX 10302019
Semivolatile Organics - TIC USEPA SW-846 Method 8270D (µg/L) (cont'd)											
4-Ethyltoluene	622-96-8										
5-Chlorovaleramide, N,N-dime	1000339-95-2										
Benzene, (1-ethylnonyl)-	4536-87-2										
Benzene, 2-ethenyl-1,4-dimethyl-	2039-89-6										
Benzoic Acid	65-85-0										
Bis(methylthio)methane	1618-26-4										
Caprylic Acid	124-07-2										
Catechol	120-80-9	5 JN									
Cyclic octaatomic sulfur	10544-50-0										
Dimepheptanol	545-90-4										
Dodecanoic Acid	143-07-7										
Hexadecanoic Acid	57-10-3										
Hexamethylcyclotrisiloxane	541-05-9										
Indane	496-11-7										
Isovaleric Acid	503-74-2										
Methyl Isobutyl Carbinol	108-11-2										
N-Methylaniline	100-61-8										
Triphenylphosphine oxide	791-28-6										
Unknown1	UNKSEMIVOA1	54 JN	17 JN	4 JN				5 JN		33 JN [4 JN]	
Unknown2	UNKSEMIVOA2	16 JN	8 JN								
Unknown3	UNKSEMIVOA3										
Unknown4	UNKSEMIVOA4										
Unknown5	UNKSEMIVOA5										
Unknown6	UNKSEMIVOA6										
Unknown7	UNKSEMIVOA7										
Unknown8	UNKSEMIVOA8										
Unknown9	UNKSEMIVOA9										
Unknown10	UNKSEMIVOA10										
Unknown11	UNKSEMIVOA11										
Unknown12	UNKSEMIVOA12										
Unknown13	UNKSEMIVOA13										
Unknown14	UNKSEMIVOA14										
Unknown15	UNKSEMIVOA15										
Unknown16	UNKSEMIVOA16										
Total SVOC TICs	ARC-TSVOCTICs	75 JN	25 JN	4 JN	0 U	0 U	0 U	5 JN	0 U	33 JN [4 JN]	9 JN
Semivolatile Organics - TIC USEPA SW-846 Method 8270D - SIM (µg/L)											
2-Fluoro-6-nitrophenol	1526-17-6										
Octamethylcyclotetrasiloxane	556-67-2										

See Notes on Page 9.

Table 8
Groundwater Analytical Results - TIC

Additional BDA Well Installation and Groundwater Monitoring Report
Site #C734138, BMS Syracuse Campus Restoration Area
East Syracuse, New York

Location ID: Date Collected: Sample Name:	CAS Number	PW-6F 10/30/19 PW-6F 10302019	PW-6L 10/28/19 PW-6L 10282019	PW-6T 10/28/19 PW-6T 10282019
Volatile Organics - TIC USEPA SW-846 Method 8260C (µg/L)				
1,3-Cyclopentadiene, 1,2,3,4-tetra	76089-59-3			
1H-Indene, 1-ethyl-2,3-dihyd	4830-99-3			
2,3-dihydro-1,2-dimethyl-1H-Indene	17057-82-8			
2,4-Dimethylpentane	108-08-7			
Bis(methylthio)methane	1618-26-4			
Diisopropyl ether	108-20-3			
Isopropylcyclobutane	872-56-0			
n-Propylbenzene	103-65-1			
Silane, fluorotrimethyl-	420-56-4			
Silanol, trimethyl-	1066-40-6			
Unknown1	UNKVOA1			
Unknown2	UNKVOA2			
Unknown3	UNKVOA3			
Unknown4	UNKVOA4			
Unknown5	UNKVOA5			
Unknown6	UNKVOA6			
Unknown7	UNKVOA7			
Unknown8	UNKVOA8			
Total VOC TICs	ARC-TVOCTICs	0 U	0 U	0 U
Semivolatile Organics - TIC USEPA SW-846 Method 8270D (µg/L)				
(1-Ethyl-2-methylpropyl)meth	1000195-05-6			
(S)-(+)-1-(2-Pyrrolidinylmet	51207-66-0			
1,2,3,4-Tetramethylbenzene	488-23-3			
1,2,3,5-Tetramethylbenzene	527-53-7			
1,2,4,5-Tetramethylbenzene	95-93-2			
1,2,4-Trimethylbenzene	95-63-6			
1,2-Dimethyl-4-ethylbenzene	934-80-5			
1,3,5-Trithiane	291-21-4			
1-Ethyl-2-methylbenzene	611-14-3			
1-Methyl-2-isopropylbenzene	527-84-4			
1-Methyl-2-propylbenzene	1074-17-5			
1-Methyl-3-ethylbenzene	620-14-4			
1-Methylnaphthalene	90-12-0			
2,5-Diisopropylpiperazine	154559-11-2			
2,6-Di-Tert-Butyl-P-Cresol	128-37-0			
2-Chloro-N,N-dimethylanaline	698-01-1			
2-Ethyl-1-Hexanol	104-76-7			
2-Ethylhexanoic acid	149-57-5			
3,5-Dimethoxyamphetamine	15402-82-1			
3-Amino-4,5-dimethyl-2(5H)-f	1000314-35-9			
4,4'-Butylidenebis[6-tert-butyl-m-cresol]	85-60-9			
4,4-Methylene Dianiline	101-77-9			

See Notes on Page 9.

Table 8
Groundwater Analytical Results - TIC

Additional BDA Well Installation and Groundwater Monitoring Report
Site #C734138, BMS Syracuse Campus Restoration Area
East Syracuse, New York

Location ID: Date Collected: Sample Name:	CAS Number	PW-6F 10/30/19 PW-6F 10302019	PW-6L 10/28/19 PW-6L 10282019	PW-6T 10/28/19 PW-6T 10282019
Semivolatile Organics - TIC USEPA SW-846 Method 8270D (µg/L) (cont'd)				
4-Ethyltoluene	622-96-8			
5-Chlorovaleramide, N,N-dime	1000339-95-2			
Benzene, (1-ethylnonyl)-	4536-87-2			
Benzene, 2-ethenyl-1,4-dimethyl-	2039-89-6			
Benzoic Acid	65-85-0			
Bis(methylthio)methane	1618-26-4			
Caprylic Acid	124-07-2			
Catechol	120-80-9			
Cyclic octaatomic sulfur	10544-50-0			
Dimepheptanol	545-90-4			
Dodecanoic Acid	143-07-7			
Hexadecanoic Acid	57-10-3			
Hexamethylcyclotrisiloxane	541-05-9			
Indane	496-11-7			
Isovaleric Acid	503-74-2			
Methyl Isobutyl Carbinol	108-11-2			
N-Methylaniline	100-61-8			
Triphenylphosphine oxide	791-28-6			
Unknown1	UNKSEMIVOA1	6 JN	6 JN	8 JN
Unknown2	UNKSEMIVOA2	6 JN		
Unknown3	UNKSEMIVOA3			
Unknown4	UNKSEMIVOA4			
Unknown5	UNKSEMIVOA5			
Unknown6	UNKSEMIVOA6			
Unknown7	UNKSEMIVOA7			
Unknown8	UNKSEMIVOA8			
Unknown9	UNKSEMIVOA9			
Unknown10	UNKSEMIVOA10			
Unknown11	UNKSEMIVOA11			
Unknown12	UNKSEMIVOA12			
Unknown13	UNKSEMIVOA13			
Unknown14	UNKSEMIVOA14			
Unknown15	UNKSEMIVOA15			
Unknown16	UNKSEMIVOA16			
Total SVOC TICs	ARC-TSVOCTICs	12 JN	6 JN	8 JN
Semivolatile Organics - TIC USEPA SW-846 Method 8270D - SIM (µg/L)				
2-Fluoro-6-nitrophenol	1526-17-6			
Octamethylcyclotetrasiloxane	556-67-2			

See Notes on Page 9.

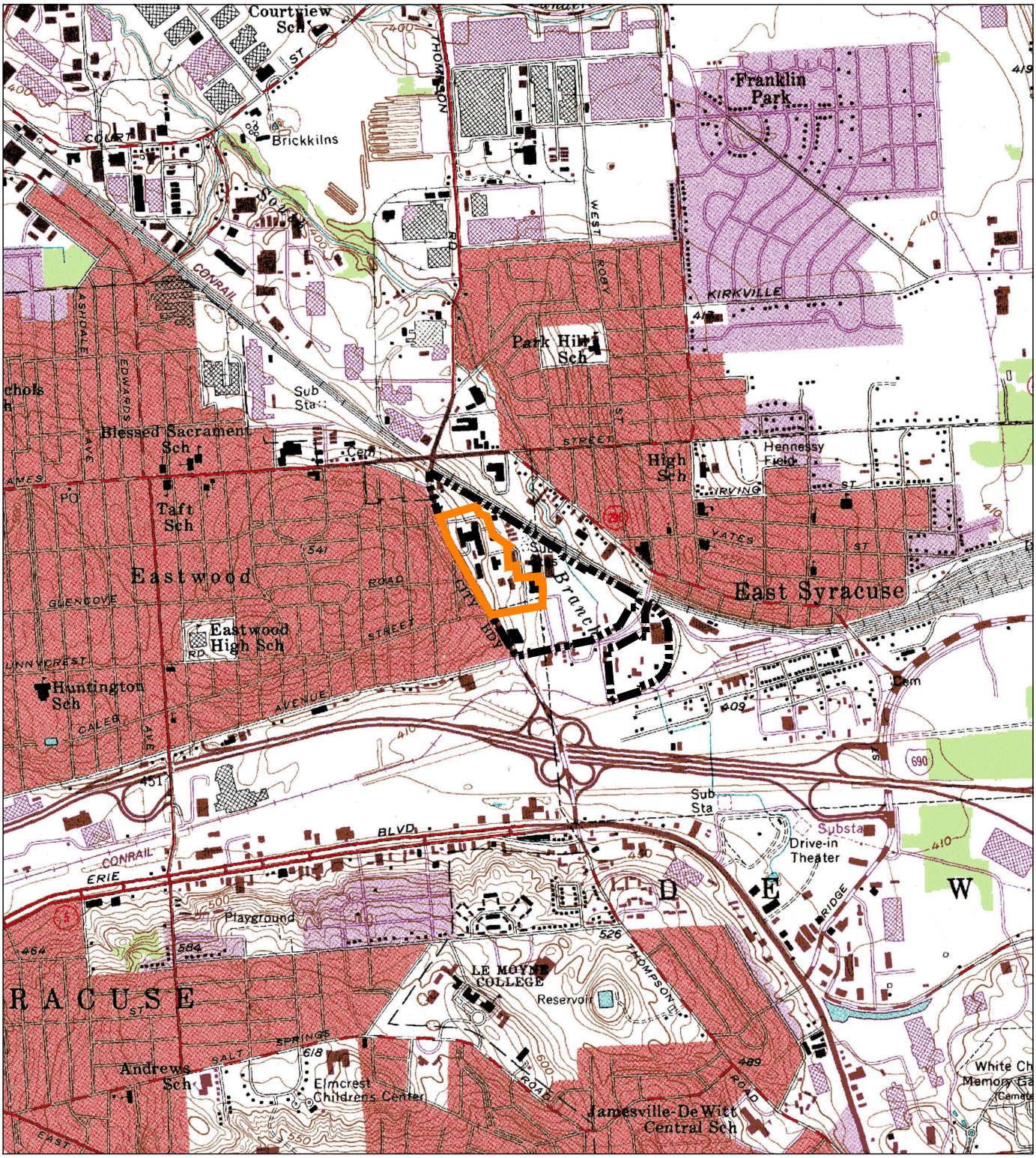
Table 8
Groundwater Analytical Results - TIC

Additional BDA Well Installation and Groundwater Monitoring Report
Site #C734138, BMS Syracuse Campus Restoration Area
East Syracuse, New York

Notes:

1. Samples were collected by Arcadis and analyzed by Eurofins Lancaster Laboratories Environmental, LLC, Lancaster, PA.
2. Blank cells indicate that analyte was not tentatively identified in that sample.
3. Analytes detected in sample are shown in black font and analytes that are not detected are shown in gray font.
4. Field duplicate sample results are presented in brackets, [ ].
5. Data have been validated.
6. Abbreviations:
   - µg/L = Micrograms per liter.
   - CAS = Chemical Abstracts Service.
   - TIC = Tentatively identified compound.
   - USEPA = United States Environmental Protection Agency.
7. Qualifier Definitions:
   - J = Estimated value. Result is greater than the method detection limit but less than the reporting limit.
   - N = Presumptive evidence of material.
   - U = Analyte not detected at listed reporting limit.

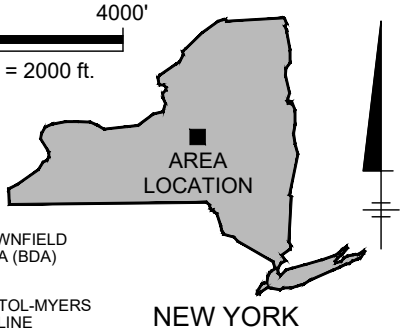
FIGURES



REFERENCE: BASE MAP USGS 7.5. MIN. TOPO. QUAD., SYRACUSE EAST, NEW YORK, 1957, PHOTOREVISED 1978.

0 2000' 4000'

Approximate Scale: 1 in. = 2000 ft.



LEGEND:

- APPROXIMATE BROWNFIELD DEVELOPMENT AREA (BDA) BOUNDARY
- APPROXIMATE BRISTOL-MYERS SQUIBB PROPERTY LINE

SITE #C734138: BMS SYRACUSE
NORTH CAMPUS RESTORATION AREA
EAST SYRACUSE, NY

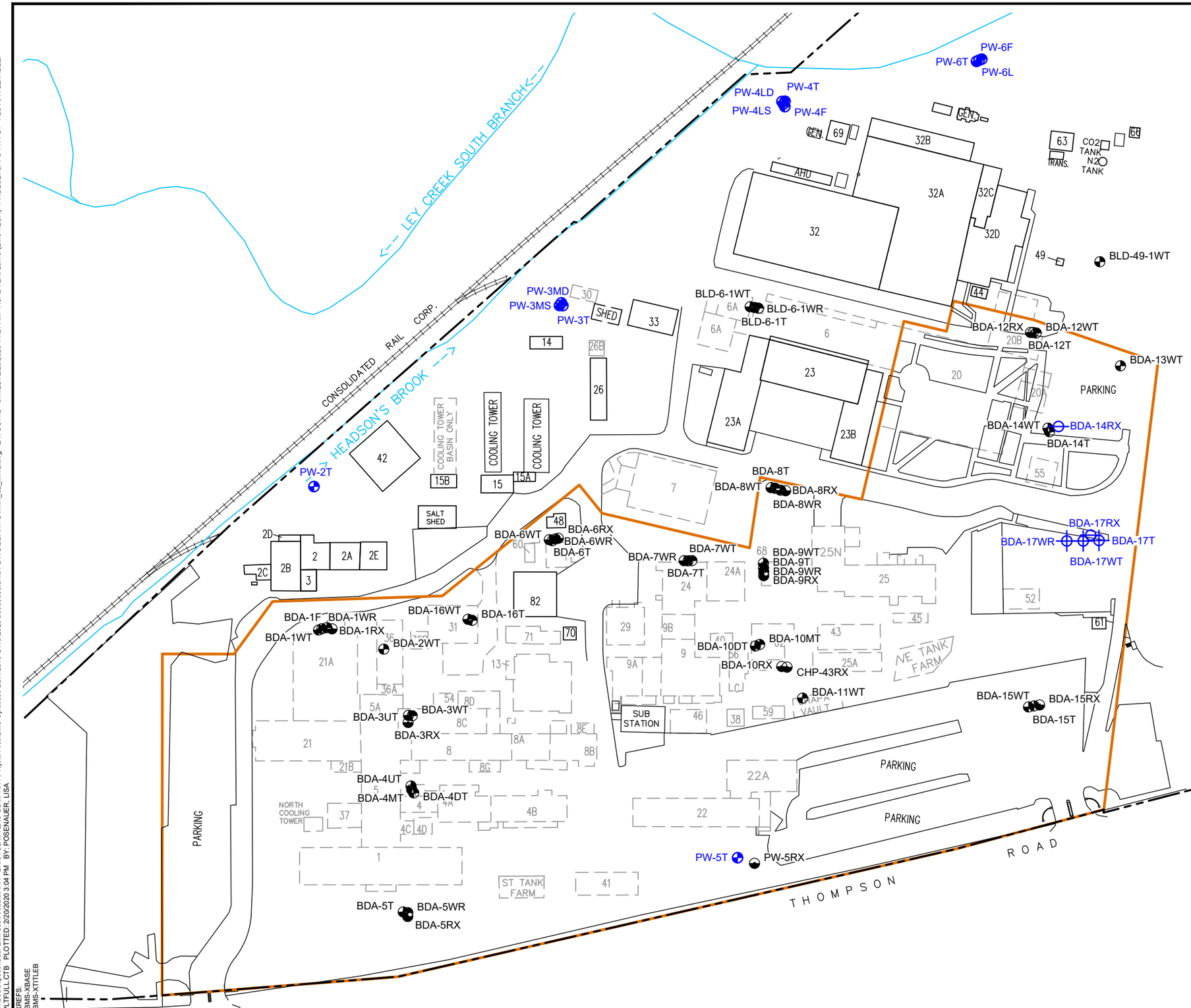
ADDITIONAL BDA WELL INSTALLATION AND GROUNDWATER MONITORING REPORT

SITE LOCATION MAP

ARCADIS Design & Consultancy for natural and built assets

FIGURE 1

CITY: SYRACUSE, NY DIV/GROUP: EBC-IM/DV DB/LD: L.POSENAUER PM/TM: W.MCCUNE LYR:(Opt)ON=*;OFF=*REF*
C:\Users\lposenauer\BIM 360\Acad\s\ANA - BRISTOL-MYERS COMPANY\Project Files\BMS Syracuse BDA 2019 GWS\2020\30039365.3A\01-DWG\BDA\WI-GWMR_01_SLM.dwg LAYOUT: 1 SAVED: 2/19/2020 10:56 AM ACADVER: 23.1S (LMS TECH) PAGESETUP: C-PA-PDF PLOTSTYLETABLE: PLTFULL.CTB PLOTTED: 2/20/2020 3:04 PM BY: POSENAUER, LISA
IMAGES:
NY_Syracuse East.tif



LEGEND:

- ADDITIONAL OVERBURDEN BDA WELL
- ADDITIONAL BEDROCK BDA WELL
- APPROXIMATE BROWNFIELD DEVELOPMENT AREA (BDA) BOUNDARY
- APPROXIMATE BRISTOL-MYERS SQUIBB PROPERTY LINE
- DEMOLISHED BUILDINGS (AS OF JUNE 2019)
- EXISTING RAILROAD
- SITE PERIMETER WELL
- OVERBURDEN MONITORING WELL
- BEDROCK MONITORING WELL

NOTES:

1. BASEMAP SOURCE: MAP TITLED "BRISTOL-MYERS SQUIBB PART OF LOT 41 - TOWN OF DEWITT AND PART OF THE VILLAGE OF EAST SYRACUSE ONONDAGA COUNTY NEW YORK", DATED MARCH 25, 2010 PREPARED BY COTTRELL LAND SURVEYORS, P.C.. UPDATED BASED ON SUBSEQUENT AERIAL IMAGERY AND SITE VISITS AND SURVEY WITHIN THE BDA BY CT MALE ASSOCIATES, SYRACUSE, NY.
2. EXISTING MONITORING WELL LOCATIONS AND SURFACE TOPOGRAPHY IN THE BDA SURVEYED BY CT MALE ASSOCIATES.
3. ABBREVIATIONS:
   BMS = BRISTOL-MYERS SQUIBB COMPANY

0 160' 320'

GRAPHIC SCALE

SITE #C734138: BMS SYRACUSE
NORTH CAMPUS RESTORATION AREA
EAST SYRACUSE, NY

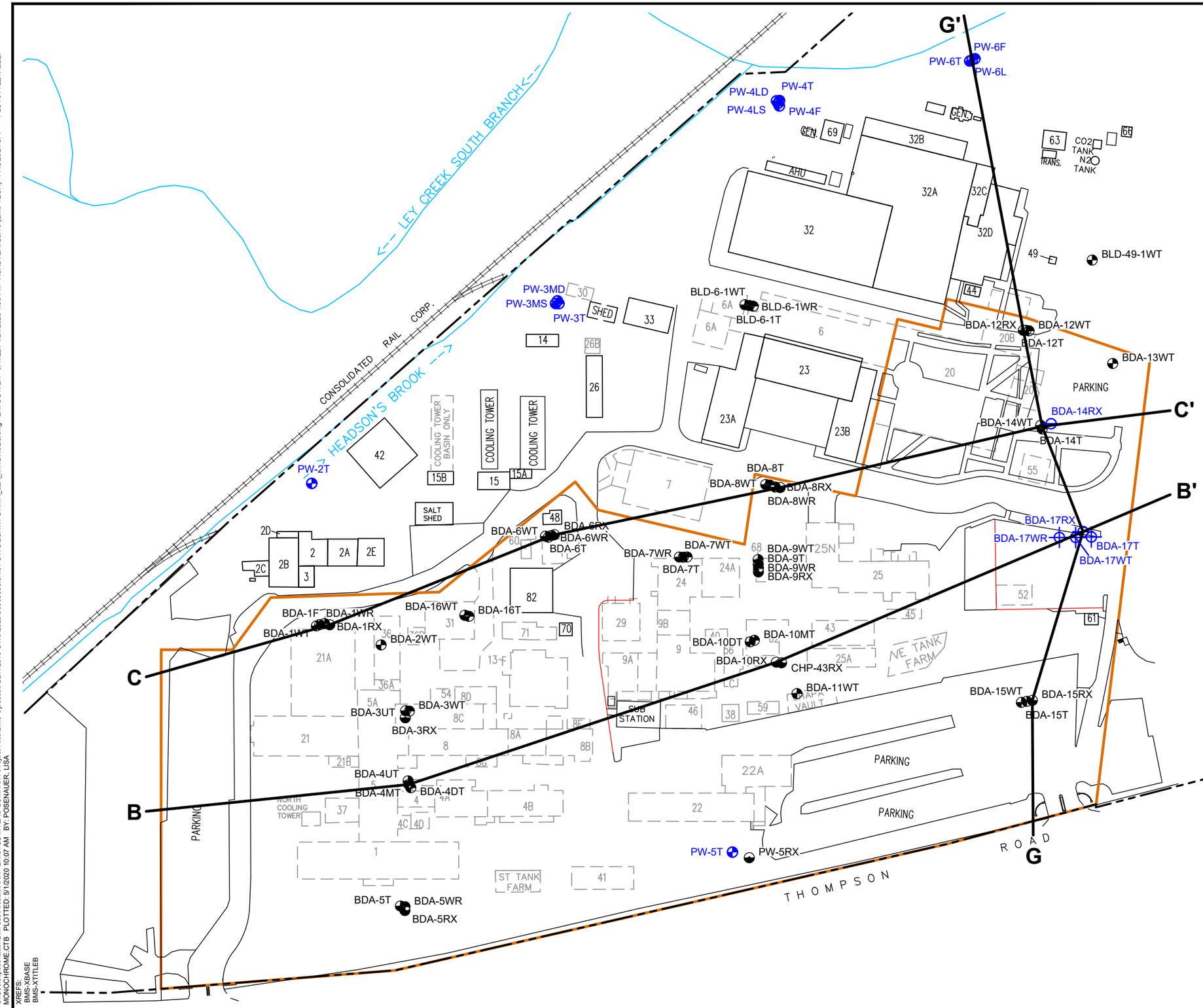
ADDITIONAL BDA WELL INSTALLATION AND GROUNDWATER MONITORING REPORT

ADDITIONAL BDA MONITORING WELL LOCATIONS

ARCADIS Design & Consultancy for natural and built assets

FIGURE 2

CITY: SYRACUSE, NY DIV/GROUP: EBC-IM/DV DB/LD: L.POSENAUER PM/TM: W.MCCUNE LYR: ON=*;OFF=REF;(FRZ)
C:\Users\lposenauer\BIM 360\Arcadis\ANA - BRISTOL-MYERS COMPANY\Project Files\BMS Syracuse BDA 2019 GWS\2020\30039365.3A\01-DWG\BDA\WI-GWMR_02_MWL.dwg LAYOUT: 2 SAVED: 2/20/2020 11:21 AM ACADVER: 23.1S (LMS TECH) PAGESETUP: C-PA-PDF PLOTSTYLETABLE:
PLTFULL.CTB PLOTTED: 2/20/2020 3:04 PM BY: POSENAUER, LISA
XREFS:
BMS-XBASE
BMS-XTITLEB



LEGEND:

- ADDITIONAL OVERBURDEN BDA WELL
- ADDITIONAL BEDROCK BDA WELL
- APPROXIMATE BROWNFIELD DEVELOPMENT AREA (BDA) BOUNDARY
- APPROXIMATE BRISTOL-MYERS SQUIBB PROPERTY LINE
- DEMOLISHED BUILDINGS (AS OF JUNE 2019)
- EXISTING RAILROAD
- SITE PERIMETER WELL
- OVERBURDEN MONITORING WELL
- BEDROCK MONITORING WELL
- B — B' CROSS SECTION

NOTES:

1. BASEMAP SOURCE: MAP TITLED "BRISTOL-MYERS SQUIBB PART OF LOT 41 - TOWN OF DEWITT AND PART OF THE VILLAGE OF EAST SYRACUSE ONONDAGA COUNTY NEW YORK", DATED MARCH 25, 2010 PREPARED BY COTTRELL LAND SURVEYORS, P.C.. UPDATED BASED ON SUBSEQUENT AERIAL IMAGERY AND SITE VISITS AND SURVEY WITHIN THE BDA BY CT MALE ASSOCIATES, SYRACUSE, NY.
2. EXISTING MONITORING WELL LOCATIONS AND SURFACE TOPOGRAPHY IN THE BDA SURVEYED BY CT MALE ASSOCIATES.
3. ABBREVIATIONS:
   BMS = BRISTOL-MYERS SQUIBB COMPANY

0 160' 320'

GRAPHIC SCALE

SITE #C734138: BMS SYRACUSE
NORTH CAMPUS RESTORATION AREA
EAST SYRACUSE, NY

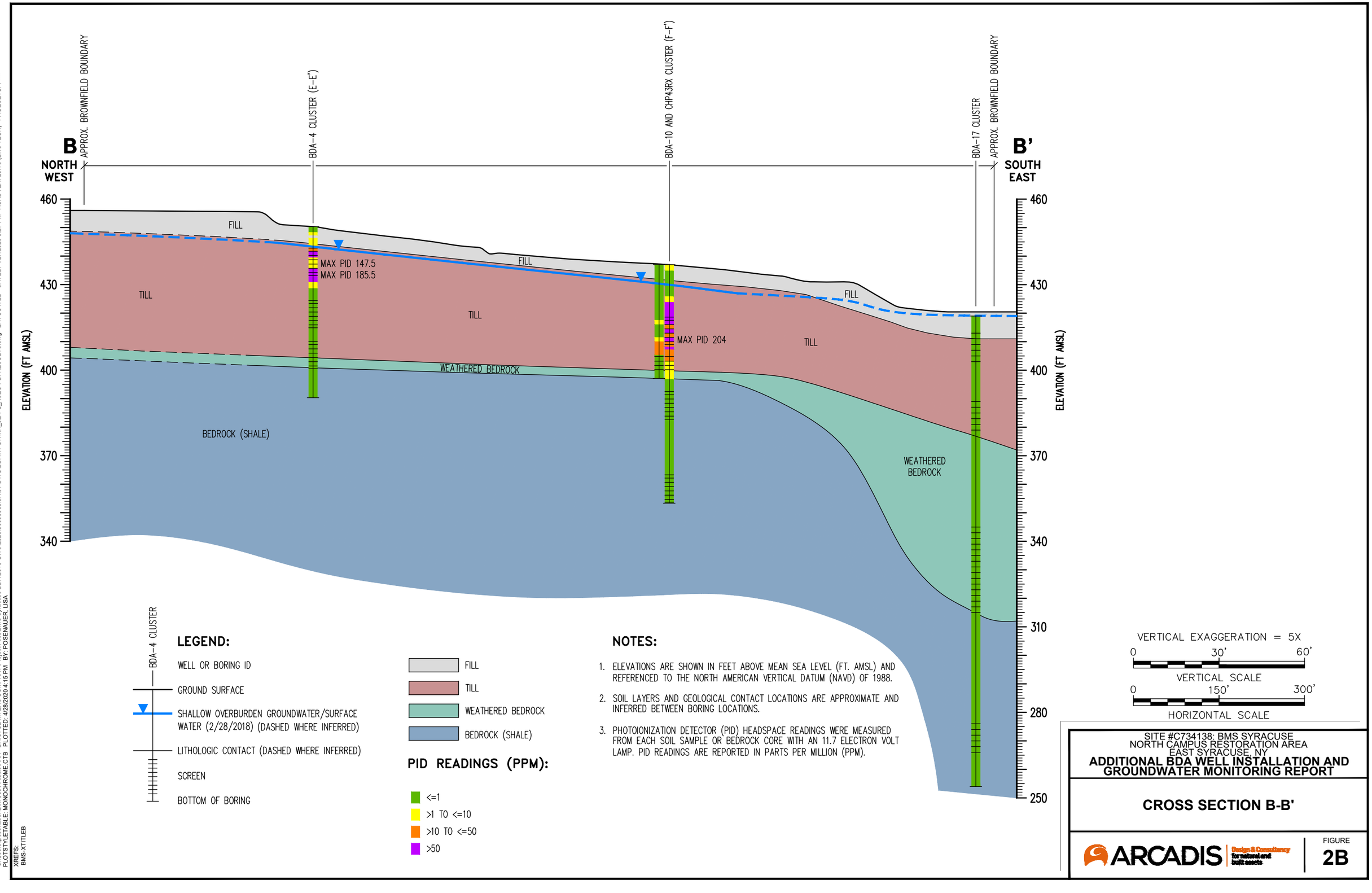
ADDITIONAL BDA WELL INSTALLATION AND GROUNDWATER MONITORING REPORT

CROSS SECTION LOCATION MAP

ARCADIS Design & Consultancy for natural and built assets

FIGURE **2A**

CITY: SYRACUSE, NY DIV/GROUP: EBC-IM/DV DB/LD: L.POSENAUER PM/TM: W.MCCUNE LYR: ON=*;OFF=REF; (FRZ)
C:\Users\lposenauer\BIM 360\Arcadis\ANA - BRISTOL-MYERS COMPANY\Project Files\BMS Syracuse BDA 2019 GWS\2020\30039365.3A\01-DWG\BDAWI-GWMR_02A_MWL XSEC.dwg LAYOUT: 2A SAVED: 4/24/2020 1:58 PM ACADVER: 23.1S (LMS TECH) PAGESETUP: --- PLOTSTYLETABLE: MONOCHROME.CTB PLOTTED: 5/1/2020 10:07 AM BY: POSENAUER, LISA
XREFS:
BMS-XBASE
BMS-XTITLEB



BDA-4 CLUSTER

LEGEND:

- WELL OR BORING ID
- GROUND SURFACE
- SHALLOW OVERBURDEN GROUNDWATER/SURFACE WATER (2/28/2018) (DASHED WHERE INFERRED)
- LITHOLOGIC CONTACT (DASHED WHERE INFERRED)
- SCREEN
- BOTTOM OF BORING

- FILL
- TILL
- WEATHERED BEDROCK
- BEDROCK (SHALE)

PID READINGS (PPM):

- <=1
- >1 TO <=10
- >10 TO <=50
- >50

NOTES:

1. ELEVATIONS ARE SHOWN IN FEET ABOVE MEAN SEA LEVEL (FT. AMSL) AND REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM (NAVD) OF 1988.
2. SOIL LAYERS AND GEOLOGICAL CONTACT LOCATIONS ARE APPROXIMATE AND INFERRED BETWEEN BORING LOCATIONS.
3. PHOTOIONIZATION DETECTOR (PID) HEADSPACE READINGS WERE MEASURED FROM EACH SOIL SAMPLE OR BEDROCK CORE WITH AN 11.7 ELECTRON VOLT LAMP. PID READINGS ARE REPORTED IN PARTS PER MILLION (PPM).

VERTICAL EXAGGERATION = 5X

0 30' 60'

VERTICAL SCALE

0 150' 300'

HORIZONTAL SCALE

SITE #C734138: BMS SYRACUSE
NORTH CAMPUS RESTORATION AREA
EAST SYRACUSE, NY

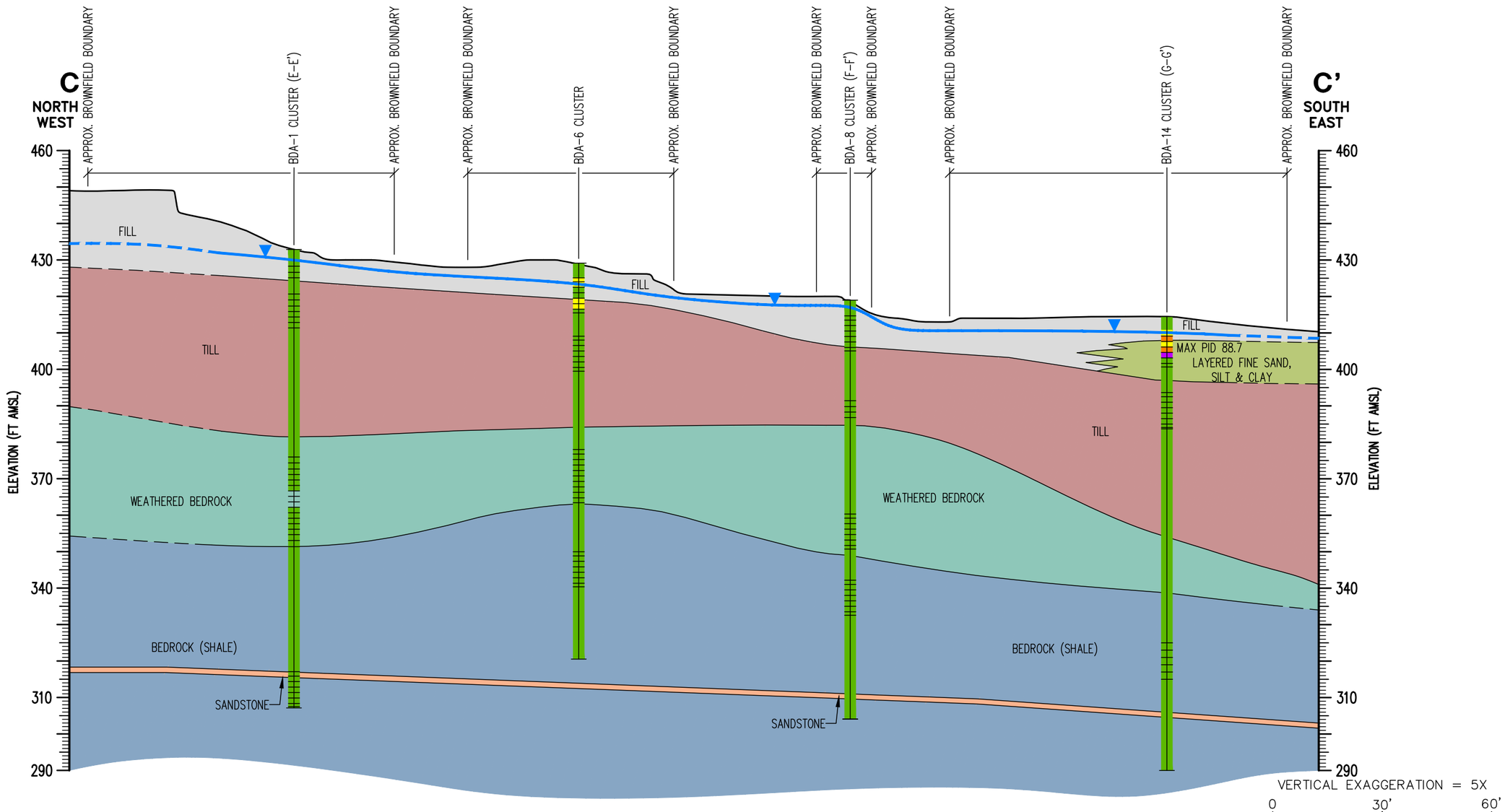
ADDITIONAL BDA WELL INSTALLATION AND GROUNDWATER MONITORING REPORT

CROSS SECTION B-B'

ARCADIS Design & Consultancy for natural and built assets

FIGURE
2B

CITY: SYRACUSE, NY DIV/GROUP: EBC-IM/DV DB/LD: L.POSENAUER PM/TM: W.MCCUNE LYR: ON=*;OFF=REF; (FRZ)
C:\Users\posenauer\BM 360\Arcadis\ANA - BRISTOL-MYERS COMPANY\Project Files\BMS Syracuse BDA 2019 GWS\2020\30039365.3A\01-DWG\BDAWI-GWMR_02A-G_XSEC PDI RESULTS.dwg LAYOUT: 2B SAVED: 4/27/2020 3:27 PM ACADVER: 23.1S (LMS TECH) PAGESETUP: ---
PLOTSTYLETABLE: MONOCHROME.CTB PLOTTED: 4/28/2020 4:15 PM BY: POSENAUER, LISA
XREFS:
BMS-XTITLEB



LEGEND:

BDA-1 CLUSTER

WELL OR BORING ID

GROUND SURFACE

SHALLOW OVERBURDEN GROUNDWATER/SURFACE WATER (2/28/2018) (DASHED WHERE INFERRED)

LITHOLOGIC CONTACT (DASHED WHERE INFERRED)

SCREEN

BOTTOM OF BORING

- FILL
- LAYERED FINE SAND, SILT & CLAY
- TILL
- WEATHERED BEDROCK
- BEDROCK (SHALE)
- SANDSTONE

PID READINGS (PPM):

- <=1
- >1 TO <=10
- >10 TO <=50
- >50

NOTES:

1. ELEVATIONS ARE SHOWN IN FEET ABOVE MEAN SEA LEVEL (FT. AMSL) AND REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM (NAVD) OF 1988.
2. SOIL LAYERS AND GEOLOGICAL CONTACT LOCATIONS ARE APPROXIMATE AND INFERRED BETWEEN BORING LOCATIONS.
3. PHOTOIONIZATION DETECTOR (PID) HEADSPACE READINGS WERE MEASURED FROM EACH SOIL SAMPLE OR BEDROCK CORE WITH AN 11.7 ELECTRON VOLT LAMP. PID READINGS ARE REPORTED IN PARTS PER MILLION (PPM).

VERTICAL EXAGGERATION = 5X

0 30' 60'

VERTICAL SCALE

0 150' 300'

HORIZONTAL SCALE

SITE #C734138: BMS SYRACUSE
NORTH CAMPUS RESTORATION AREA
EAST SYRACUSE, NY

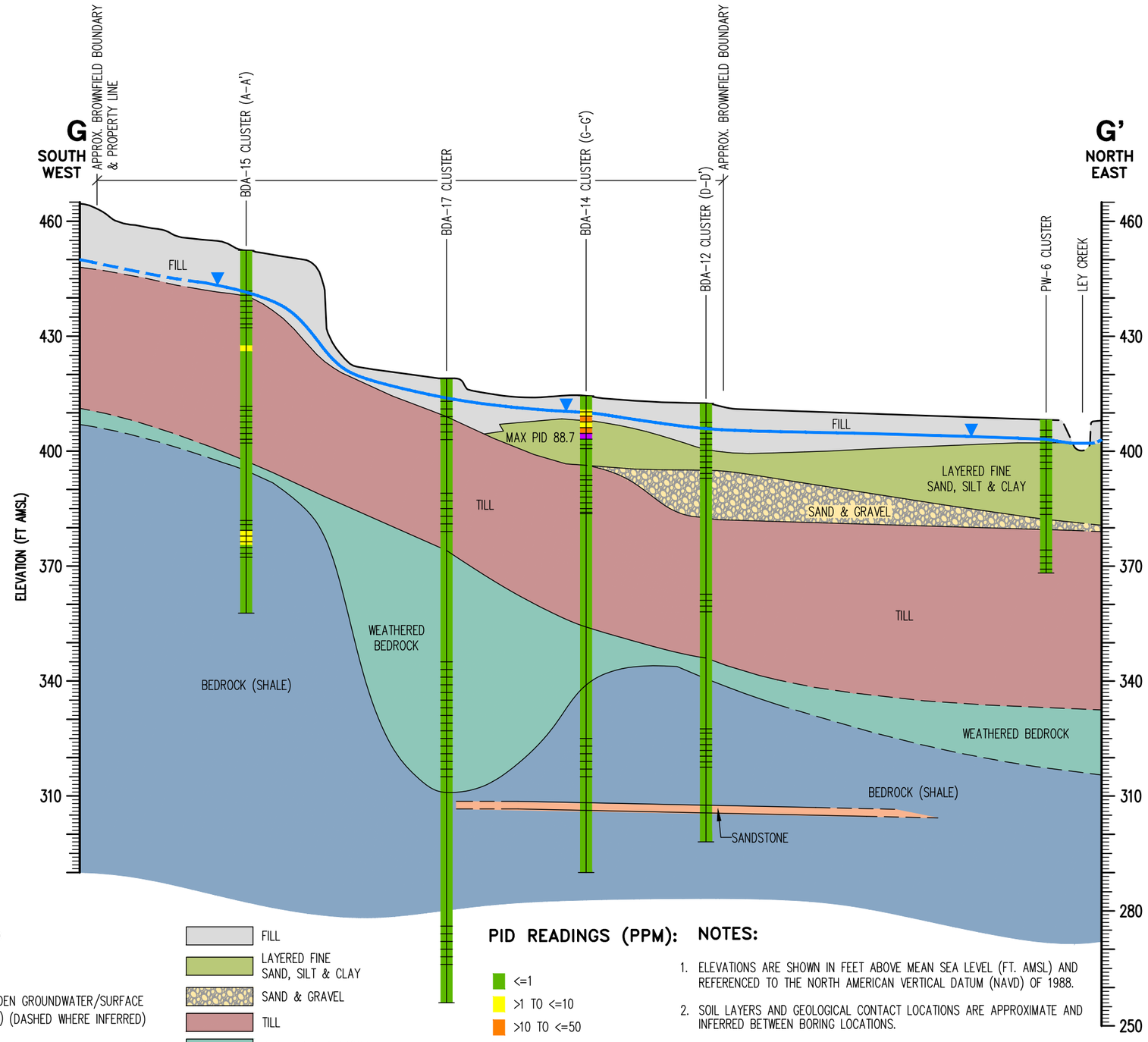
ADDITIONAL BDA WELL INSTALLATION AND GROUNDWATER MONITORING REPORT

CROSS SECTION C-C'

ARCADIS Design & Consultancy for natural and built assets

FIGURE **2C**

CITY: SYRACUSE, NY DIV/GROUP: EBC-IM/DV DB/LD: L.POSENAUER PM/TM: W.MCCUNE LYR: ON=*;OFF=REF, (FR2)
C:\Users\lposenauer\BIM 360\Arcadis\ANA - BRISTOL-MYERS COMPANY\Project Files\BMS Syracuse BDA 2019 GWS\2020\30039365.3A\01-DWG\BDA\WI-GWMR_02A-G_XSEC PDI RESULTS.dwg LAYOUT: 2C SAVED: 4/27/2020 3:27 PM ACADVER: 23.1S (LMS TECH) PAGESETUP: ----
PLOTSTYLETABLE: MONOCHROME.CTB PLOTTED: 4/28/2020 4:15 PM BY: POSENAUER, LISA
XREFS:
BMS-XTITLEB



LEGEND:

BDA-15 CLUSTER

- WELL OR BORING ID
- GROUND SURFACE
- SHALLOW OVERBURDEN GROUNDWATER/SURFACE WATER (2/28/2018) (DASHED WHERE INFERRED)
- LITHOLOGIC CONTACT (DASHED WHERE INFERRED)
- SCREEN
- BOTTOM OF BORING

- FILL
- LAYERED FINE SAND, SILT & CLAY
- SAND & GRAVEL
- TILL
- WEATHERED BEDROCK
- BEDROCK (SHALE)
- SANDSTONE

PID READINGS (PPM):

- <=1
- >1 TO <=10
- >10 TO <=50
- >50

NOTES:

1. ELEVATIONS ARE SHOWN IN FEET ABOVE MEAN SEA LEVEL (FT. AMSL) AND REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM (NAVD) OF 1988.
2. SOIL LAYERS AND GEOLOGICAL CONTACT LOCATIONS ARE APPROXIMATE AND INFERRED BETWEEN BORING LOCATIONS.
3. PHOTOIONIZATION DETECTOR (PID) HEADSPACE READINGS WERE MEASURED FROM EACH SOIL SAMPLE OR BEDROCK CORE WITH AN 11.7 ELECTRON VOLT LAMP. EXCEPT PW-6 CLUSTER WHERE SOIL WAS SCREENED WITH A PID USING AN UNKNOWN LAMP. PID READINGS ARE REPORTED IN PARTS PER MILLION (PPM).

VERTICAL EXAGGERATION = 5X

0 30' 60'

VERTICAL SCALE

0 150' 300'

HORIZONTAL SCALE

SITE #C734138: BMS SYRACUSE
NORTH CAMPUS RESTORATION AREA
EAST SYRACUSE, NY

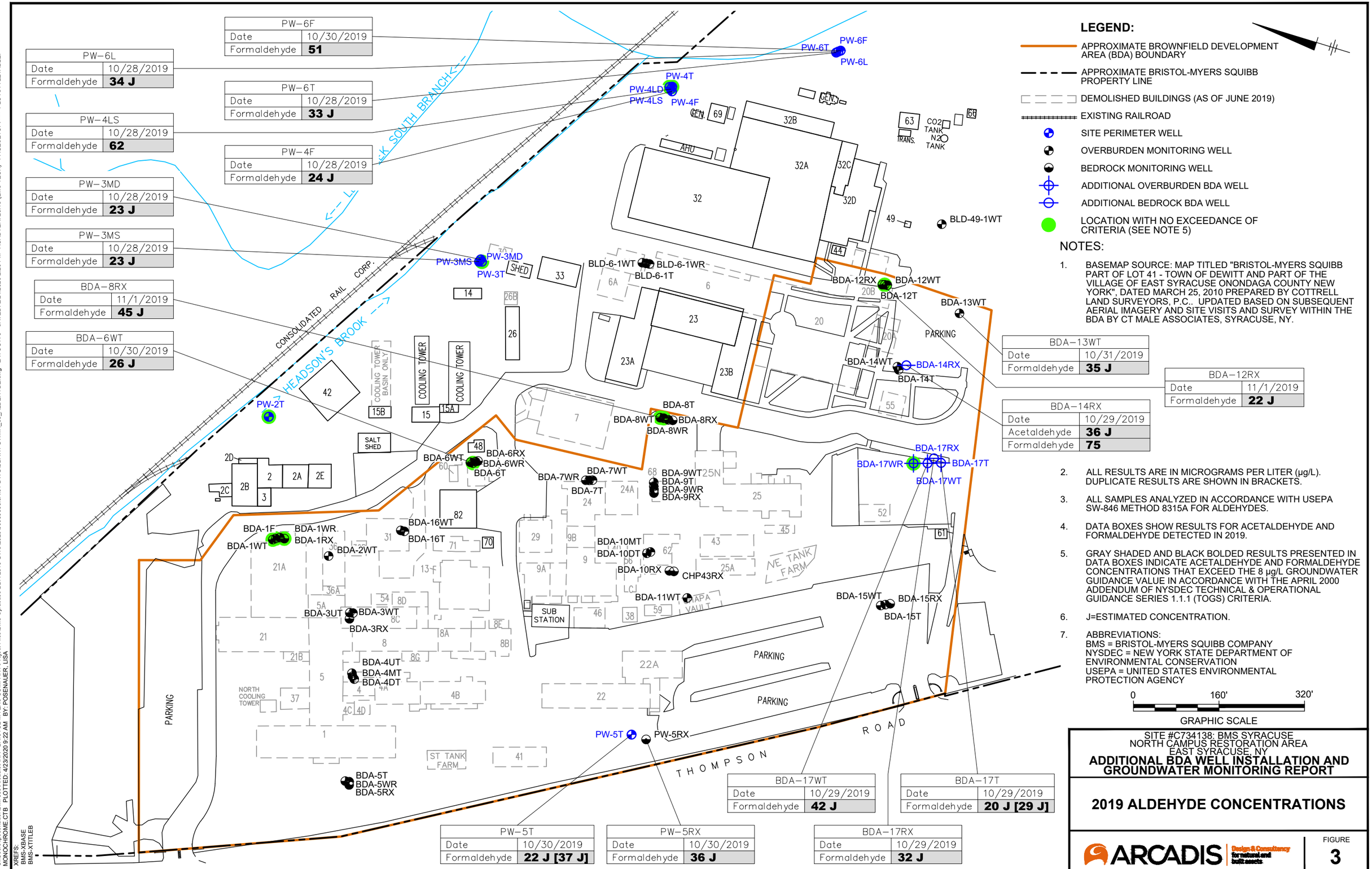
ADDITIONAL BDA WELL INSTALLATION AND GROUNDWATER MONITORING REPORT

CROSS SECTION G-G'

ARCADIS Design & Consultancy for natural and built assets

FIGURE
2G

CITY: SYRACUSE, NY DIV/GROUP: EBC-IM/DV DB/LD: L.POSENAUER PM/TM: W.MCCUNE LYR: ON=*;OFF=REF*;(FRZ)
C:\Users\lposenauer\BIM 360\Arcadis\ANA - BRISTOL-MYERS COMPANY\Project Files\BMS Syracuse BDA 2019 GWS\2020\30039365.3A\01-DWG\BDA WI-GWMR_02A-G_XSEC PDI RESULTS.dwg LAYOUT: 2G SAVED: 4/27/2020 3:27 PM ACADVER: 23.1S (LMS TECH) PAGESETUP: ----
PLOTSTYLETABLE: MONOCHROME.CTB PLOTTED: 4/28/2020 4:15 PM BY: POSENAUER, LISA
XREFS:
BMS-XTITLEB



CITY: SYRACUSE, NY DIV/GROUP: EBC-IM/DV DB/LD: L.POSENAUER PM/TM: W.MCCUNE LYR: ON=*;OFF=REF; (FRZ)
C:\Users\lposenauer\BIM 360\Arcadis\ANA - BRISTOL-MYERS COMPANY\Project Files\BMS Syracuse BDA 2019 GWS\2020\30039365.3A\01-DWG\BDA\WI-GWMR_03_ALDEHYDE.dwg LAYOUT: 3 SAVED: 2/24/2020 2:20 PM ACADVER: 23.1S (LMS TECH) PAGESETUP: ---- PLOTSTYLETABLE:
MONOCHROME.CTB PLOTTED: 4/23/2020 9:22 AM BY: POSENAUER, LISA
XREFS:
BMS-XBASE
BMS-XTITLEB

PW–6L	
Screen Interval	(19.5–29.5)
Date	10/28/2019
Ethyl ether	0.3 J
Total VOC TIC	ND

PW–6F	
Screen Interval	(2.5–6.5)
Date	10/30/2019
All VOC	ND
Total VOC TIC	ND

PW–4LD	
Screen Interval	(17.5–21.0)
Date	10/28/2019
Ethyl ether	3 J
Total VOC TIC	ND

PW–4LS	
Screen Interval	(9.0–14.0)
Date	10/28/2019
Acetone	2 J
Ethyl ether	0.8 J
Total VOC TIC	7 JN

PW–4F	
Screen Interval	(3.0–5.5)
Date	10/28/2019
Acetone	0.7 J
Ethyl ether	1 J
Total VOC TIC	10 JN

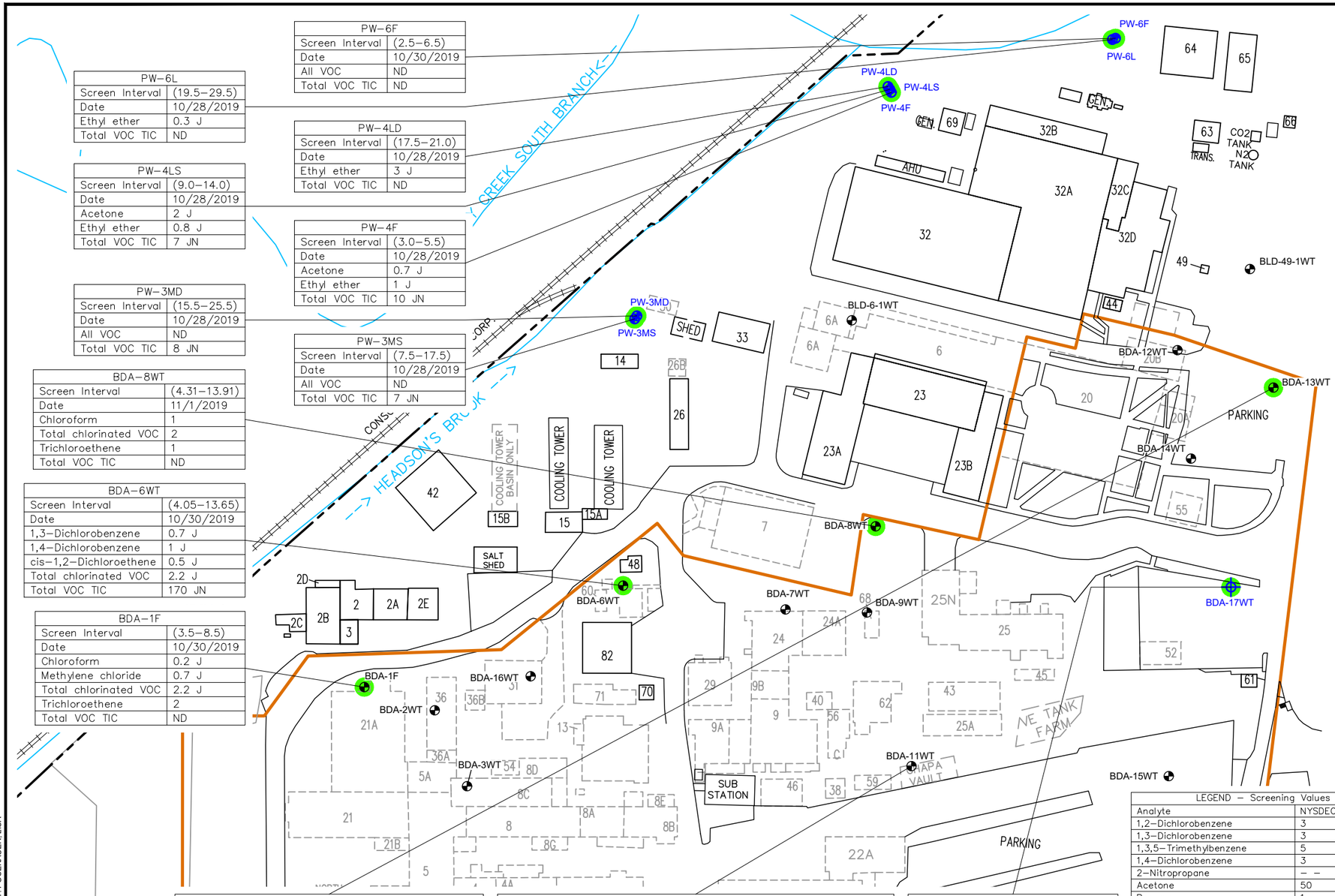
PW–3MD	
Screen Interval	(15.5–25.5)
Date	10/28/2019
All VOC	ND
Total VOC TIC	8 JN

PW–3MS	
Screen Interval	(7.5–17.5)
Date	10/28/2019
All VOC	ND
Total VOC TIC	7 JN

BDA–8WT	
Screen Interval	(4.31–13.91)
Date	11/1/2019
Chloroform	1
Total chlorinated VOC	2
Trichloroethene	1
Total VOC TIC	ND

BDA–6WT	
Screen Interval	(4.05–13.65)
Date	10/30/2019
1,3–Dichlorobenzene	0.7 J
1,4–Dichlorobenzene	1 J
cis–1,2–Dichloroethene	0.5 J
Total chlorinated VOC	2.2 J
Total VOC TIC	170 JN

BDA–1F	
Screen Interval	(3.5–8.5)
Date	10/30/2019
Chloroform	0.2 J
Methylene chloride	0.7 J
Total chlorinated VOC	2.2 J
Trichloroethene	2
Total VOC TIC	ND



BDA–13WT	
Screen Interval	(4.2–13.8)
Date	10/31/2019
1,3,5–Trimethylbenzene	0.4 J
2–Nitropropane	4 J
Acetone	4 J
Chloroform	2
Cyclohexane	27
Cyclohexanone	80 J
Ethylbenzene	2
Isopropylbenzene	2 J
Methyl ethyl ketone (MEK, 2–butanone)	2 J
Methylcyclohexane	3 J
Methylene chloride	2
n–Butylbenzene	0.5 J
sec–Butylbenzene	2 J
Total chlorinated VOC	2
Total VOC TIC	80 JN

BDA–11WT	
Screen Interval	(3.21–12.81)
Date	10/31/2019
1,2–Dichlorobenzene	**4 J**
Acetone	**660 J**
Benzene	**9 J**
cis–1,2–Dichloroethene	**17 J**
Isobutanol	1,400 J
Methyl acetate	25 J
Methyl ethyl ketone (MEK, 2–butanone)	**51 J**
Methyl isobutyl ketone (MIBK, 4–methyl–2–pentanone)	**650**
Methylene chloride	**21,000 D**
Toluene	**48**
Total chlorinated VOC	21 J
Total VOC TIC	ND

BDA–17WT	
Screen Interval	(6.0–16.0)
Date	10/29/2019
Acetone	2 J
Chloroform	0.4 J
Total chlorinated VOC	0.4 J
Total VOC TIC	ND

LEGEND:

- APPROXIMATE BROWNFIELD DEVELOPMENT AREA (BDA) BOUNDARY
- APPROXIMATE BRISTOL-MYERS SQUIBB PROPERTY LINE
- DEMOLISHED BUILDINGS (AS OF JUNE 2019)
- EXISTING RAILROAD
- SITE PERIMETER WELL WITH SCREEN LOCATED ABOVE THE TILL
- OVERBURDEN MONITORING WELL WITH SCREEN LOCATED ABOVE THE TILL
- ADDITIONAL OVERBURDEN BDA WELL
- LOCATION WITH NO EXCEEDANCE OF CRITERIA (SEE NOTE 8)

NOTES:

1. BASEMAP SOURCE: MAP TITLED "BRISTOL-MYERS SQUIBB PART OF LOT 41 - TOWN OF DEWITT AND PART OF THE VILLAGE OF EAST SYRACUSE ONONDAGA COUNTY NEW YORK", DATED MARCH 25, 2010 PREPARED BY COTTRELL LAND SURVEYORS, P.C.. UPDATED BASED ON SUBSEQUENT AERIAL IMAGERY AND SITE VISITS.
2. MONITORING WELL LOCATIONS SURVEY BY CT MALE ASSOCIATES, SYRACUSE, NY.
3. ONLY RESULTS FROM 2019 ARE SHOWN.
4. ONLY WELLS SCREENED ABOVE TILL ARE SHOWN. SCREEN INTERVALS IN FEET BELOW GROUND SURFACE.
5. ALL RESULTS ARE IN MICROGRAMS PER LITER (µg/L). DUPLICATE RESULTS ARE SHOWN IN BRACKETS.
6. ALL SAMPLES ANALYZED IN ACCORDANCE WITH USEPA SW-846 METHOD 8260C FOR VOLATILE ORGANIC COMPOUNDS (VOC).
7. DATA BOXES SHOW ALL RESULTS FOR ANY CONSTITUENT DETECTED IN 2019.
8. GRAY SHADED AND BLACK BOLDED RESULTS PRESENTED IN DATA BOXES SHOW CONCENTRATIONS THAT EXCEED THE NYSDEC TECHNICAL & OPERATIONAL GUIDANCE SERIES 1.1.1 (TOGS) CRITERIA OR A DEFAULT SCREENING VALUE OF 50 µg/L FOR PURPOSES OF THIS REPORT (INDICATED BY *).
9. DATA QUALIFIERS:
   J = ESTIMATED CONCENTRATION
   D = CONCENTRATION BASED ON DILUTED SAMPLE ANALYSIS
   N = PRESUMPTIVE EVIDENCE OF MATERIAL
   ND = NOT DETECTED
10. - - = NO TOGS STANDARD OR GUIDANCE VALUE
11. ABBREVIATIONS:
    BMS = BRISTOL-MYERS SQUIBB COMPANY
    NYSDEC = NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
    TIC = TENTATIVELY IDENTIFIED COMPOUND
    USEPA = UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

LEGEND – Screening Values	
Analyte	NYSDEC TOGS 1.1.1
1,2–Dichlorobenzene	3
1,3–Dichlorobenzene	3
1,3,5–Trimethylbenzene	5
1,4–Dichlorobenzene	3
2–Nitropropane	– –
Acetone	50
Benzene	1
Chloroform	7
cis–1,2–Dichloroethene	5
Cyclohexane	– –
Cyclohexanone	– –
Ethyl ether	– –
Ethylbenzene	5
Isobutanol	– –
Isopropylbenzene	5
Methyl acetate	– –
Methyl ethyl ketone (MEK, 2–butanone)	50
Methylcyclohexane	*
Methyl isobutyl ketone (MIBK, 4–methyl–2–pentanone)	50*
Methylene chloride	5
n–Butylbenzene	5
sec–Butylbenzene	5
Toluene	5
Total chlorinated VOC	– –
Trichloroethene	5

0 160' 320'

GRAPHIC SCALE

SITE #C734138: BMS SYRACUSE
NORTH CAMPUS RESTORATION AREA
EAST SYRACUSE, NY

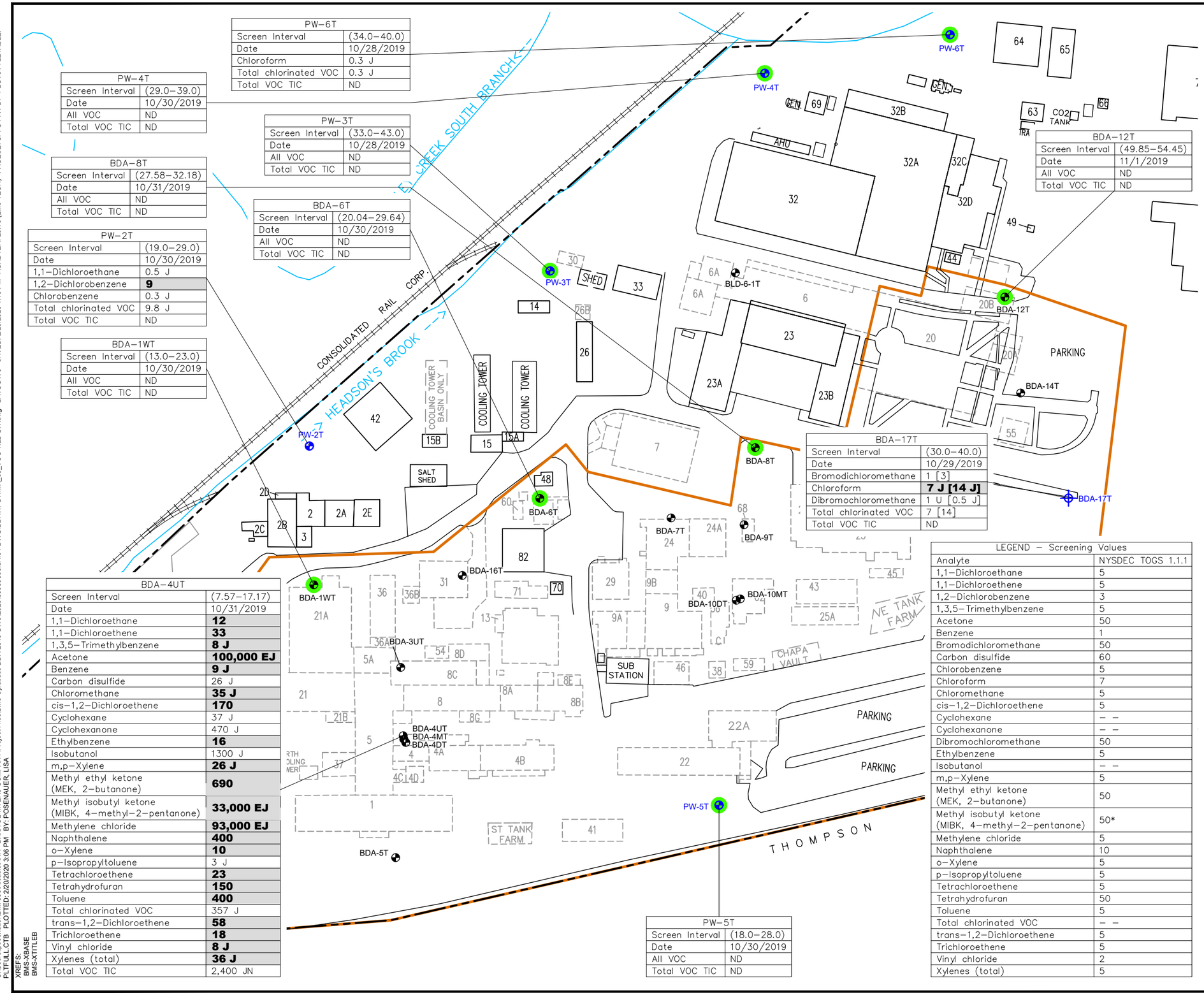
ADDITIONAL BDA WELL INSTALLATION AND GROUNDWATER MONITORING REPORT

VOC IN GROUNDWATER ABOVE TILL - 2019

ARCADIS Design & Consultancy for natural and built assets

FIGURE 4

CITY: SYRACUSE, NY DIV/GROUP: EBC-IM/DV DB/LD: L.POSENAUER PM/TM: W.MCCUNE LYR: ON=*;OFF=REF; (FRZ)
C:\Users\lposenauer\BIM 360\Arcadis\ANA - BRISTOL-MYERS COMPANY\Project Files\BMS Syracuse BDA 2019 GWS\2020\30039365 3A\01-DWG\BDA\WI-GWMR_04_VOC GW ABV TILL.dwg LAYOUT: 4 SAVED: 2/20/2020 11:38 AM ACADVER: 23.1S (LMS TECH) PAGESETUP: C-PA-PDF
PLOTSTYLETABLE: PLTFULL.CTB PLOTTED: 2/20/2020 3:05 PM BY: POSENAUER, LISA
XREFS:
BMS-XBASE
BMS-XTITLEB



PW–6T	
Screen Interval	(34.0–40.0)
Date	10/28/2019
Chloroform	0.3 J
Total chlorinated VOC	0.3 J
Total VOC TIC	ND

PW–4T	
Screen Interval	(29.0–39.0)
Date	10/30/2019
All VOC	ND
Total VOC TIC	ND

PW–3T	
Screen Interval	(33.0–43.0)
Date	10/28/2019
All VOC	ND
Total VOC TIC	ND

BDA–8T	
Screen Interval	(27.58–32.18)
Date	10/31/2019
All VOC	ND
Total VOC TIC	ND

BDA–6T	
Screen Interval	(20.04–29.64)
Date	10/30/2019
All VOC	ND
Total VOC TIC	ND

PW–2T	
Screen Interval	(19.0–29.0)
Date	10/30/2019
1,1–Dichloroethane	0.5 J
1,2–Dichlorobenzene	**9**
Chlorobenzene	0.3 J
Total chlorinated VOC	9.8 J
Total VOC TIC	ND

BDA–1WT	
Screen Interval	(13.0–23.0)
Date	10/30/2019
All VOC	ND
Total VOC TIC	ND

BDA–12T	
Screen Interval	(49.85–54.45)
Date	11/1/2019
All VOC	ND
Total VOC TIC	ND

BDA–17T	
Screen Interval	(30.0–40.0)
Date	10/29/2019
Bromodichloromethane	1 [3]
Chloroform	**7 J [14 J]**
Dibromochloromethane	1 U [0.5 J]
Total chlorinated VOC	7 [14]
Total VOC TIC	ND

BDA–4UT	
Screen Interval	(7.57–17.17)
Date	10/31/2019
1,1–Dichloroethane	**12**
1,1–Dichloroethene	**33**
1,3,5–Trimethylbenzene	**8 J**
Acetone	**100,000 EJ**
Benzene	**9 J**
Carbon disulfide	26 J
Chloromethane	**35 J**
cis–1,2–Dichloroethene	**170**
Cyclohexane	37 J
Cyclohexanone	470 J
Ethylbenzene	**16**
Isobutanol	1300 J
m,p–Xylene	**26 J**
Methyl ethyl ketone (MEK, 2–butanone)	**690**
Methyl isobutyl ketone (MIBK, 4–methyl–2–pentanone)	**33,000 EJ**
Methylene chloride	**93,000 EJ**
Naphthalene	**400**
o–Xylene	**10**
p–Isopropyltoluene	3 J
Tetrachloroethene	**23**
Tetrahydrofuran	**150**
Toluene	**400**
Total chlorinated VOC	357 J
trans–1,2–Dichloroethene	**58**
Trichloroethene	**18**
Vinyl chloride	**8 J**
Xylenes (total)	**36 J**
Total VOC TIC	2,400 JN

PW–5T	
Screen Interval	(18.0–28.0)
Date	10/30/2019
All VOC	ND
Total VOC TIC	ND

LEGEND – Screening Values	
Analyte	NYSDEC TOGS 1.1.1
1,1–Dichloroethane	5
1,1–Dichloroethene	5
1,2–Dichlorobenzene	3
1,3,5–Trimethylbenzene	5
Acetone	50
Benzene	1
Bromodichloromethane	50
Carbon disulfide	60
Chlorobenzene	5
Chloroform	7
Chloromethane	5
cis–1,2–Dichloroethene	5
Cyclohexane	– –
Cyclohexanone	– –
Dibromochloromethane	50
Ethylbenzene	5
Isobutanol	– –
m,p–Xylene	5
Methyl ethyl ketone (MEK, 2–butanone)	50
Methyl isobutyl ketone (MIBK, 4–methyl–2–pentanone)	50*
Methylene chloride	5
Naphthalene	10
o–Xylene	5
p–Isopropyltoluene	5
Tetrachloroethene	5
Tetrahydrofuran	50
Toluene	5
Total chlorinated VOC	– –
trans–1,2–Dichloroethene	5
Trichloroethene	5
Vinyl chloride	2
Xylenes (total)	5

LEGEND:

- APPROXIMATE BROWNFIELD DEVELOPMENT AREA (BDA) BOUNDARY
- APPROXIMATE BRISTOL-MYERS SQUIBB PROPERTY LINE
- DEMOLISHED BUILDINGS (AS OF JUNE 2019)
- EXISTING RAILROAD
- SITE PERIMETER WELL WITH SCREEN LOCATED ABOVE THE TILL
- OVERBURDEN MONITORING WELL WITH SCREEN LOCATED ABOVE THE TILL
- ADDITIONAL OVERBURDEN BDA WELL
- LOCATION WITH NO EXCEEDANCE OF CRITERIA (SEE NOTE 8)

NOTES:

1. BASEMAP SOURCE: MAP TITLED "BRISTOL-MYERS SQUIBB PART OF LOT 41 - TOWN OF DEWITT AND PART OF THE VILLAGE OF EAST SYRACUSE ONONDAGA COUNTY NEW YORK", DATED MARCH 25, 2010 PREPARED BY COTTRELL LAND SURVEYORS, P.C.. UPDATED BASED ON SUBSEQUENT AERIAL IMAGERY AND SITE VISITS.
2. MONITORING WELL LOCATIONS SURVEY BY CT MALE ASSOCIATES, SYRACUSE, NY.
3. ONLY RESULTS FROM 2019 ARE SHOWN.
4. ONLY WELLS SCREENED IN TILL ARE SHOWN. SCREEN INTERVALS IN FEET BELOW GROUND SURFACE.
5. ALL RESULTS ARE IN MICROGRAMS PER LITER (µg/L). DUPLICATE RESULTS ARE SHOWN IN BRACKETS.
6. ALL SAMPLES ANALYZED IN ACCORDANCE WITH USEPA SW-846 METHOD 8260C FOR VOLATILE ORGANIC COMPOUNDS (VOC).
7. DATA BOXES SHOW ALL RESULTS FOR ANY CONSTITUENT DETECTED IN 2019.
8. GRAY SHADED AND BLACK BOLDED RESULTS PRESENTED IN DATA BOXES SHOW CONCENTRATIONS THAT EXCEED THE NYSDEC TECHNICAL & OPERATIONAL GUIDANCE SERIES 1.1.1 (TOGS) CRITERIA OR A DEFAULT SCREENING VALUE OF 50 µg/L FOR PURPOSES OF THIS REPORT (INDICATED BY *).
9. DATA QUALIFIERS:
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   J = ESTIMATED CONCENTRATION
   EJ = THE COMPOUND WAS QUANTITATED ABOVE THE CALIBRATION RANGE. THE ASSOCIATED NUMERICAL VALUE IS AN ESTIMATED CONCENTRATION ONLY.
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    USEPA = UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

0 160' 320'

GRAPHIC SCALE

SITE #C734138: BMS SYRACUSE
NORTH CAMPUS RESTORATION AREA
EAST SYRACUSE, NY

ADDITIONAL BDA WELL INSTALLATION AND GROUNDWATER MONITORING REPORT

VOC IN TILL GROUNDWATER - 2019

ARCADIS Design & Consultancy for natural and built assets

FIGURE 5

CITY: SYRACUSE, NY DIV/GROUP: EBC-IM/DV DBLD: L.POSENAUER PM/TM: W.MCCUNE LYR: ON=*;OFF=REF; (FRZ)
C:\Users\posenauer\BIM 360\Arcadis\ANA - BRISTOL-MYERS COMPANY\Project Files\BMS Syracuse BDA 2019 GWS\2020\3003985.3A\01-DWG\BDA\WI-GWMR_05_VOC TILL GW.dwg LAYOUT: 5 SAVED: 2/20/2020 1:16 PM ACADVER: 23.1S (LMS TECH) PAGESETUP: C-PA-PDF PLOTSTYLETABLE:
PLTFULL.CTB PLOTTED: 2/20/2020 3:06 PM BY: POSENAUER, LISA
XREFS:
BMS-XBASE
BMS-XTITLEB

BDA–14RX	
Screen Interval	(89.0–99.0)
Date	10/29/2019
Toluene	0.7 J
Total VOC TIC	ND

BDA–12RX	
Screen Interval	(83.36–92.96)
Date	11/1/2019
Carbon disulfide	0.3 J
Methyl tert–butyl ether	0.3 J
Total VOC TIC	ND

BDA–17RX	
Screen Interval	(143.0–153.0)
Date	10/29/2019
Acetone	14 J
Bromodichloromethane	4
Chloroform	**21**
Dibromochloromethane	0.9 J
Methyl ethyl ketone (MEK, 2–butanone)	0.8 J
Toluene	0.4 J
Total chlorinated VOC	21
Total VOC TIC	ND

BDA–17WR	
Screen Interval	(74.5–104.5)
Date	10/29/2019
Acetone	4 J
Chloroform	0.3 J
Methyl ethyl ketone (MEK, 2–butanone)	0.7 J
Total chlorinated VOC	0.3 J
Total VOC TIC	15 JN

BDA–8RX	
Screen Interval	(76.81–86.41)
Date	11/1/2019
All VOC	ND
Total VOC TIC	ND

BDA–1RX	
Screen Interval	(115.81–125.41)
Date	10/31/2019
Acetone	0.9 J
Bromodichloromethane	8
Chloroform	**67**
Dibromochloromethane	2
Methylene chloride	0.8 J
Total chlorinated VOC	67
Total VOC TIC	ND

CHP–43RX	
Screen Interval	(44.5–54.2)
Date	11/1/2019
Acetone	**110 J**
Methylene chloride	**370,000 EJ**
Total VOC TIC	ND

PW–5RX	
Screen Interval	(40.32–44.92)
Date	10/30/2019
All VOC	ND
Total VOC TIC	ND

BDA–15RX	
Screen Interval	(70.50–80.10)
Date	10/30/2019
Acetone	28 J
Benzene	0.4 J
Methyl ethyl ketone (MEK, 2–butanone)	2 J
Methyl isobutyl ketone (MIBK, 4–methyl–2–pentanone)	1 J
Methyl tert–butyl ether	0.4 J
Methylene chloride	1 J
Toluene	0.2 J
Total VOC TIC	220 JN

LEGEND – Screening Values	
Analyte	NYSDEC TOGS 1.1.1
Acetone	50
Benzene	1
Bromodichloromethane	5
Carbon disulfide	60
Chloroform	7
Dibromochloromethane	50
Methyl ethyl ketone (MEK, 2–butanone)	50
Methyl isobutyl ketone (MIBK, 4–methyl–2–pentanone)	50*
Methyl tert–butyl ether	10
Methylene chloride	5
Toluene	5
Total chlorinated VOC	– –

LEGEND:

- APPROXIMATE BROWNFIELD DEVELOPMENT AREA (BDA) BOUNDARY
- APPROXIMATE BRISTOL-MYERS SQUIBB PROPERTY LINE
- DEMOLISHED BUILDINGS (AS OF JUNE 2019)
- EXISTING RAILROAD
- BEDROCK MONITORING WELL
- WEATHERED BEDROCK MONITORING WELL
- ADDITIONAL OVERBURDEN BDA WELL
- ADDITIONAL BEDROCK BDA WELL
- LOCATION WITH NO EXCEEDANCE OF CRITERIA (SEE NOTE 8)

NOTES:

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0 160’ 320’

GRAPHIC SCALE

SITE #C734138: BMS SYRACUSE
NORTH CAMPUS RESTORATION AREA
EAST SYRACUSE, NY

ADDITIONAL BDA WELL INSTALLATION AND GROUNDWATER MONITORING REPORT

VOC IN BEDROCK AND WEATHERED BEDROCK GROUNDWATER - 2019

ARCADIS Design & Consultancy for natural and built assets

FIGURE 6

CITY: SYRACUSE, NY DIV/GROUP: EBC-IM/DV DB/LD: L.POSENAUER PM/TM: W.MCCUNE LYR: ON=*;OFF=*REF, (FRZ)
C:\Users\lposenauer\BIM 360\Arcadis\ANA - BRISTOL-MYERS COMPANY*Project Files\BMS Syracuse BDA 2019 GWS\20201300393365.3A\01-DWG\BDAWI-GWMR_06_VOC BR.dwg LAYOUT: 6 SAVED: 2/20/2020 2:59 PM ACADVER: 23.1S (LMS TECH) PAGESETUP: C-PA-PDF PLOTSTYLETABLE:
PLTFULL.CTB PLOTTED: 2/20/2020 3:07 PM BY: POSENAUER, LISA
XREFS:
BMS-XBASE
BMS-XTITLEB

PW-4LD	
Screen Interval	(17.5–21.0)
Date	10/28/2019
All SVOC, Alcohols, & Glycols	ND
Total SVOC TIC	5 JN

PW-4F	
Screen Interval	(3.0–5.5)
Date	10/28/2019
All SVOC, Alcohols, & Glycols	ND
Total SVOC TIC	ND

PW-3MD	
Screen Interval	(15.5–25.5)
Date	10/28/2019
All SVOC, Alcohols, & Glycols	ND
Total SVOC TIC	4 JN

BDA-8WT	
Screen Interval	(4.31–13.91)
Date	11/1/2019
All SVOC, Alcohols, & Glycols	ND
Total SVOC TIC	4 JN

BDA-6WT	
Screen Interval	(4.05–13.65)
Date	10/30/2019
Dicyclohexylamine	**200 D**
Total SVOC TIC	810 JN

BDA-1F	
Screen Interval	(3.5–8.5)
Date	10/30/2019
Ethylene glycol	**7,400 J**
Total SVOC TIC	ND

PW-6F	
Screen Interval	(2.5–6.5)
Date	10/30/2019
bis(2–Ethylhexyl) phthalate	**15**
Fluoranthene	0.21 J
Pyrene	0.19 J
Total SVOC TIC	12 JN

PW-4LS	
Screen Interval	(9.0–14.0)
Date	10/28/2019
All SVOC, Alcohols, & Glycols	ND
Total SVOC TIC	ND

PW-6L	
Screen Interval	(19.5–29.5)
Date	10/28/2019
All SVOC, Alcohols, & Glycols	ND
Total SVOC TIC	6 JN

PW-3MS	
Screen Interval	(7.5–17.5)
Date	10/28/2019
All SVOC, Alcohols, & Glycols	ND
Total SVOC TIC	25 JN

BDA-13WT	
Screen Interval	(4.2–13.8)
Date	10/31/2019
Aniline	**7.5 J**
Dicyclohexylamine	**290 D**
n,n–dimethylaniline	**2.6**
Phenol	**7.7**
Total aniline compounds	10.1 J
Total SVOC TIC	480 JN

BDA-17WT	
Screen Interval	(6.0–16.0)
Date	10/29/2019
All SVOC, Alcohols, & Glycols	ND
Total SVOC TIC	130 JN

BDA-11WT	
Screen Interval	(3.21–12.81)
Date	10/31/2019
Aniline	**14,000 D**
Dicyclohexylamine	**5,500 D**
n,n–dimethylaniline	**6,600 D**
Phenol	**13,000 D**
Total aniline compounds	20,600
Total SVOC TIC	12,000 JN

LEGEND – Screening Values	
Analyte	NYSDEC TOGS 1.1.1
Aniline	5
bis(2–Ethylhexyl) phthalate	5
Dicyclohexylamine	50*
Fluoranthene	50
n,n–dimethylaniline	1
Phenol	1
Pyrene	50
Total aniline compounds	– –
Ethylene glycol	50

LEGEND:

- APPROXIMATE BROWNFIELD DEVELOPMENT AREA (BDA) BOUNDARY
- APPROXIMATE BRISTOL-MYERS SQUIBB PROPERTY LINE
- DEMOLISHED BUILDINGS (AS OF JUNE 2019)
- EXISTING RAILROAD
- SITE PERIMETER WELL WITH SCREEN LOCATED ABOVE THE TILL
- OVERBURDEN MONITORING WELL WITH SCREEN LOCATED ABOVE THE TILL
- ADDITIONAL OVERBURDEN BDA WELL
- LOCATION WITH NO EXCEEDANCE OF CRITERIA (SEE NOTE 8)

NOTES:

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0 160' 320'

GRAPHIC SCALE

SITE #C734138: BMS SYRACUSE
NORTH CAMPUS RESTORATION AREA
EAST SYRACUSE, NY

ADDITIONAL BDA WELL INSTALLATION AND GROUNDWATER MONITORING REPORT

SVOC, ALCOHOLS, AND GLYCOLS IN GROUNDWATER ABOVE TILL - 2019

ARCADIS Design & Consultancy for natural and built assets

FIGURE 7

CITY: SYRACUSE, NY DIV/GROUP: EBC-M/DV DB/LD: L.POSENAUER PM/TM: W.MCCUNE LYR: ON=*;OFF=*REF,(FRZ)
C:\Users\lposenauer\BIM 360\Arcadis\ANA - BRISTOL-MYERS COMPANY\Project Files\BMS Syracuse BDA 2019 GWS\2020\3003936S.3A\01-DWG\BDAWI-GWMR_07_SVOC GW ABV TILL.dwg LAYOUT:7 SAVED: 2/20/2020 1:17 PM ACADVER: 23.1S (LMS TECH) PAGESETUP: C-PA-PDF
PLOTSTYLETABLE: PLTFULL.CTB PLOTTED: 2/20/2020 3:07 PM BY: POSENAUER, LISA
XREFS:
BMS-XBASE
BMS-XTITLEB

PW–6T	
Screen Interval	(34.0–40.0)
Date	10/28/2019
All SVOC, Alcohols, & Glycols	ND
Total SVOC TIC	8 JN

PW–4T	
Screen Interval	(29.0–39.0)
Date	10/30/2019
All SVOC, Alcohols, & Glycols	ND
Total SVOC TIC	ND

PW–3T	
Screen Interval	(33.0–43.0)
Date	10/28/2019
All SVOC, Alcohols, & Glycols	ND
Total SVOC TIC	ND

BDA–8T	
Screen Interval	(27.58–32.18)
Date	10/31/2019
All SVOC, Alcohols, & Glycols	ND
Total SVOC TIC	96 JN

BDA–6T	
Screen Interval	(20.04–29.64)
Date	10/30/2019
All SVOC, Alcohols, & Glycols	ND
Total SVOC TIC	ND

PW–2T	
Screen Interval	(19.0–29.0)
Date	10/30/2019
All SVOC, Alcohols, & Glycols	ND
Total SVOC TIC	200 JN

BDA–1WT	
Screen Interval	(13.0–23.0)
Date	10/30/2019
Screen Interval	(13.0–23.0)
All SVOC, Alcohols, & Glycols	ND
Total SVOC TIC	ND

BDA–12T	
Screen Interval	(49.85–54.45)
Date	11/1/2019
All SVOC, Alcohols, & Glycols	ND
Total SVOC TIC	88 JN

BDA–17T	
Screen Interval	(30.0–40.0)
Date	10/29/2019
All SVOC, Alcohols, & Glycols	ND
Total SVOC TIC	ND

BDA–4UT	
Screen Interval	(7.57–17.17)
Date	10/31/2019
2–Methylnaphthalene	16
3&4–Methylphenol	**560**
Acetophenone	64 J
Carbazole	7.5 J
Naphthalene	**240**
o–Cresol (2–Methylphenol)	**130**
Phenol	**3,300 D**
Triethylamine	**210**
Total SVOC TIC	210,000 JN

PW–5T	
Screen Interval	(18.0–28.0)
Date	10/30/2019
2–Methylnaphthalene	0.43 J [0.51 U]
Total SVOC TIC	33 JN [4 JN]

LEGEND – Screening Values	
Analyte	NYSDEC TOGS 1.1.1
2–Methylnaphthalene	– –
3&4–Methylphenol	1
Acetophenone	– –
Carbazole	– –
Naphthalene	10
o–Cresol (2–Methylphenol)	1
Phenol	1
Triethylamine	50*

LEGEND:

- APPROXIMATE BROWNFIELD DEVELOPMENT AREA (BDA) BOUNDARY
- APPROXIMATE BRISTOL-MYERS SQUIBB PROPERTY LINE
- DEMOLISHED BUILDINGS (AS OF JUNE 2019)
- EXISTING RAILROAD
- SITE PERIMETER WELL WITH SCREEN LOCATED ABOVE THE TILL
- OVERBURDEN MONITORING WELL WITH SCREEN LOCATED ABOVE THE TILL
- ADDITIONAL OVERBURDEN BDA WELL
- LOCATION WITH NO EXCEEDANCE OF CRITERIA (SEE NOTE 8)

NOTES:

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0 160' 320'

GRAPHIC SCALE

SITE #C734138: BMS SYRACUSE
NORTH CAMPUS RESTORATION AREA
EAST SYRACUSE, NY

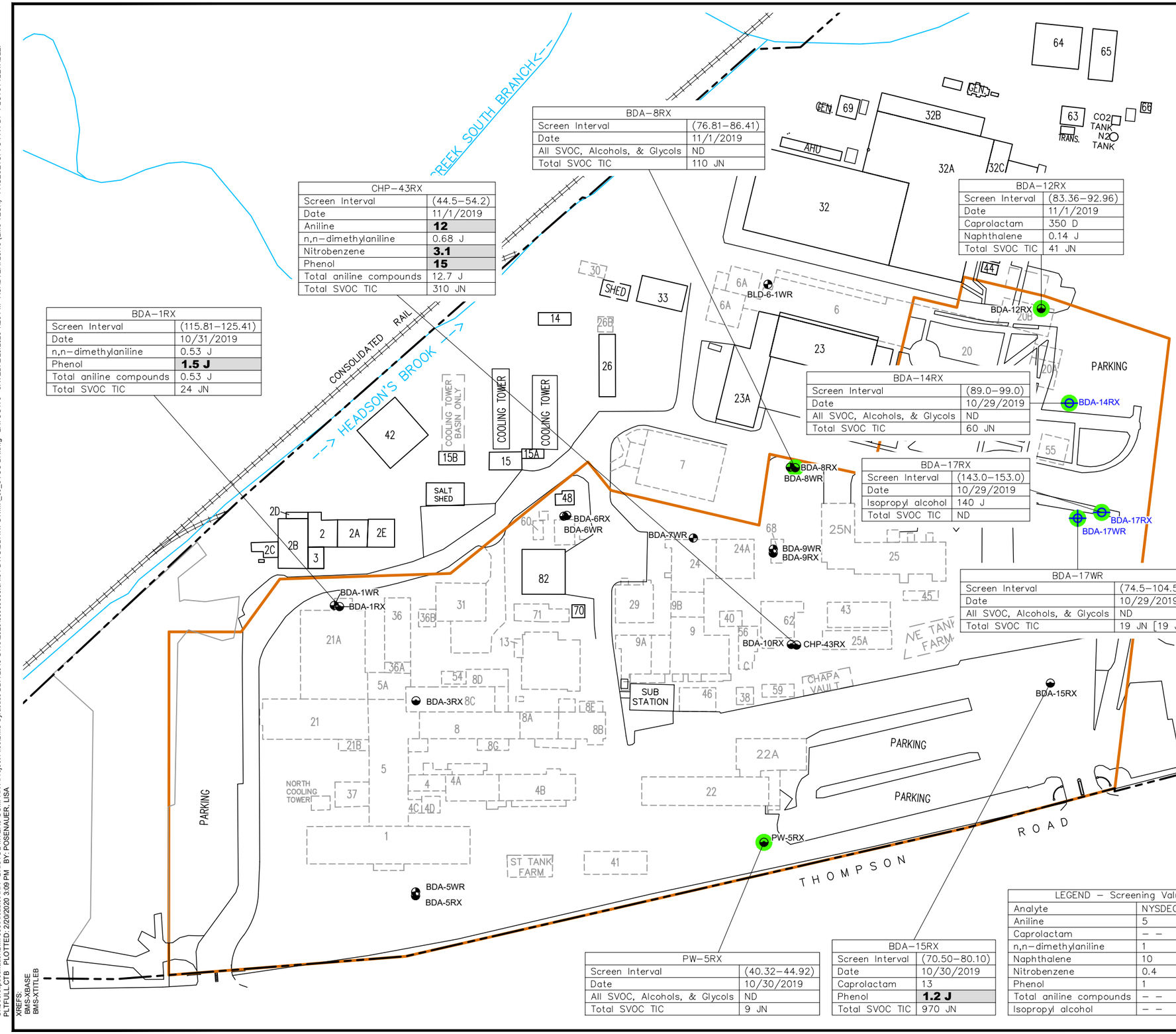
ADDITIONAL BDA WELL INSTALLATION AND GROUNDWATER MONITORING REPORT

SVOC, ALCOHOLS, AND GLYCOLS IN TILL GROUNDWATER - 2019

ARCADIS Design & Consultancy for natural and built assets

FIGURE 8

CITY: SYRACUSE, NY DIV/GROUP: EBC-IM/DV DB/LD: L.POSENAUER PM/TM: W.MCCUNE LYR: ON=*;OFF=REF; (FRZ)
C:\Users\lposenauer\BIM 360\Arcadis\ANA - BRISTOL-MYERS COMPANY\Project Files\BMS Syracuse BDA 2019 GWS\2020\30039365.3A\01-DWG\BDA\WI-GWMR_08_SVOC TILL GW.dwg LAYOUT: 8 SAVED: 2/20/2020 1:21 PM ACADVER: 23.1S (LMS TECH) PAGESETUP: C-PA-PDF PLOTSTYLETABLE: PLTFULL.CTB PLOTTED: 2/20/2020 3:08 PM BY: POSENAUER, LISA
XREFS:
BMS-XBASE
BMS-XTITLEB



LEGEND:

- APPROXIMATE BROWNFIELD DEVELOPMENT AREA (BDA) BOUNDARY
- APPROXIMATE BRISTOL-MYERS SQUIBB PROPERTY LINE
- DEMOLISHED BUILDINGS (AS OF JUNE 2019)
- EXISTING RAILROAD
- BEDROCK MONITORING WELL
- WEATHERED BEDROCK MONITORING WELL
- ADDITIONAL OVERBURDEN BDA WELL
- ADDITIONAL BEDROCK BDA WELL
- LOCATION WITH NO EXCEEDANCE OF CRITERIA (SEE NOTE 8)

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0 160' 320'

GRAPHIC SCALE

SITE #C734138: BMS SYRACUSE
NORTH CAMPUS RESTORATION AREA
EAST SYRACUSE, NY

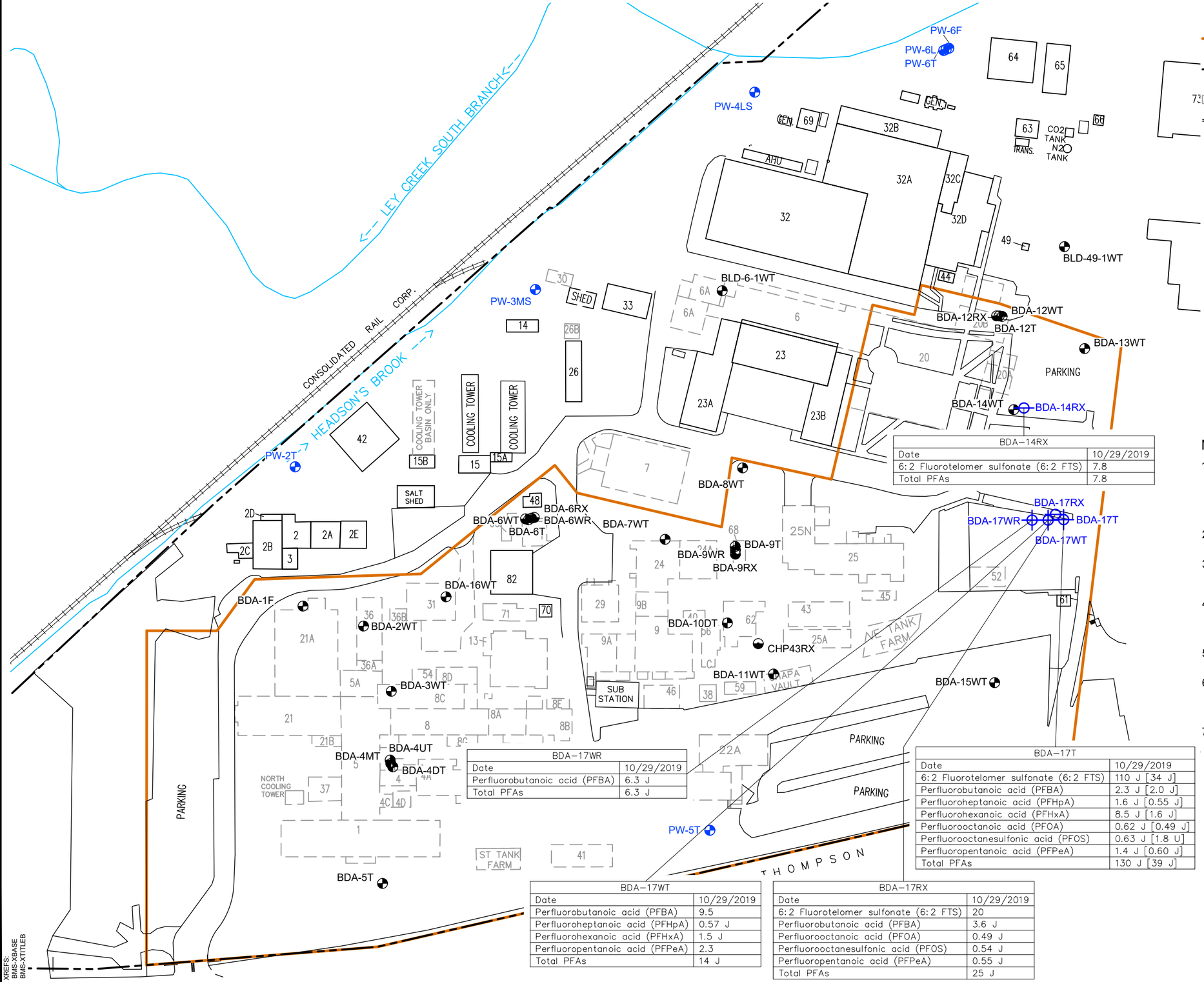
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SVOC, ALCOHOLS, AND GLYCOLS IN BEDROCK AND WEATHERED BEDROCK GROUNDWATER - 2019

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FIGURE 9

CITY: SYRACUSE, NY DIV/GROUP: EBC-IM/DV DB/LD: L.POSENAUER PM/TM: W.MCCUNE LYR: ON=* OFF=REF, (FRZ)
C:\Users\lposenauer\BIM 360\Arcadis\ANA - BRISTOL-MYERS COMPANY\Project Files\BMS Syracuse BDA 2019 GWS\2020\300393665.3A\01-DWG\BDA\WI-GWMR_09_SVOC BR.dwg LAYOUT: 9 SAVED: 2/20/2020 1:20 PM ACADVER: 23.1S (LMS TECH) PAGESETUP: C-PA-PDF PLOTSTYLETABLE:
PLTFULL.CTB PLOTTED: 2/20/2020 3:09 PM BY: POSENAUER, LISA
XREFS:
BMS-XBASE
BMS-XTITLEB



BDA–14RX	
Date	10/29/2019
6:2 Fluorotelomer sulfonate (6:2 FTS)	7.8
Total PFAs	7.8

BDA–17WR	
Date	10/29/2019
Perfluorobutanoic acid (PFBA)	6.3 J
Total PFAs	6.3 J

BDA–17T	
Date	10/29/2019
6:2 Fluorotelomer sulfonate (6:2 FTS)	110 J [34 J]
Perfluorobutanoic acid (PFBA)	2.3 J [2.0 J]
Perfluoroheptanoic acid (PFHpA)	1.6 J [0.55 J]
Perfluorohexanoic acid (PFHxA)	8.5 J [1.6 J]
Perfluorooctanoic acid (PFOA)	0.62 J [0.49 J]
Perfluorooctanesulfonic acid (PFOS)	0.63 J [1.8 U]
Perfluoropentanoic acid (PFPeA)	1.4 J [0.60 J]
Total PFAs	130 J [39 J]

BDA–17WT	
Date	10/29/2019
Perfluorobutanoic acid (PFBA)	9.5
Perfluoroheptanoic acid (PFHpA)	0.57 J
Perfluorohexanoic acid (PFHxA)	1.5 J
Perfluoropentanoic acid (PFPeA)	2.3
Total PFAs	14 J

BDA–17RX	
Date	10/29/2019
6:2 Fluorotelomer sulfonate (6:2 FTS)	20
Perfluorobutanoic acid (PFBA)	3.6 J
Perfluorooctanoic acid (PFOA)	0.49 J
Perfluorooctanesulfonic acid (PFOS)	0.54 J
Perfluoropentanoic acid (PFPeA)	0.55 J
Total PFAs	25 J

LEGEND:

- APPROXIMATE BROWNFIELD DEVELOPMENT AREA (BDA) BOUNDARY
- APPROXIMATE BRISTOL-MYERS SQUIBB PROPERTY LINE
- DEMOLISHED BUILDINGS (AS OF JUNE 2019)
- EXISTING RAILROAD
- SITE PERIMETER WELL
- OVERBURDEN MONITORING WELL
- BEDROCK MONITORING WELL
- ADDITIONAL OVERBURDEN BDA WELL
- ADDITIONAL BEDROCK BDA WELL

NOTES:

1. BASEMAP SOURCE: MAP TITLED "BRISTOL-MYERS SQUIBB PART OF LOT 41 - TOWN OF DEWITT AND PART OF THE VILLAGE OF EAST SYRACUSE ONONDAGA COUNTY NEW YORK", DATED MARCH 25, 2010 PREPARED BY COTTRELL LAND SURVEYORS, P.C.. UPDATED BASED ON SUBSEQUENT AERIAL IMAGERY AND SITE VISITS.
2. ALL RESULTS ARE IN NANOGRAMS PER LITER (ng/L). DUPLICATE RESULTS ARE SHOWN IN BRACKETS.
3. ALL SAMPLES ANALYZED IN ACCORDANCE WITH USEPA 537 MODIFIED FOR GROUNDWATER (FOR PFAS) AND USEPA SW-846 METHOD 8270D-SIM (FOR 1,4-DIOXANE).
4. DATA BOXES SHOW ALL RESULTS FOR PFAS AND 1,4-DIOXANE DETECTED IN 2019. 1,4-DIOXANE WAS NOT DETECTED ABOVE LABORATORY DETECTION LIMITS IN ANY WELLS SAMPLED.
5. PFAS WERE NOT ANALYZED AT LOCATIONS WITHOUT A DATA BOX OR GREEN DOT.
6. DATA QUALIFIERS:
   U = NOT DETECTED AT ASSOCIATED QUANTITATION LIMIT
   J = ESTIMATED CONCENTRATION
7. ABBREVIATIONS:
   BMS = BRISTOL-MYERS SQUIBB COMPANY
   PFAS = PERFLUOROAKYL SUBSTANCES
   USEPA = UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

0 160' 320'

GRAPHIC SCALE

SITE #C734138: BMS SYRACUSE
NORTH CAMPUS RESTORATION AREA
EAST SYRACUSE, NY

ADDITIONAL BDA WELL INSTALLATION AND GROUNDWATER MONITORING REPORT

2019 EMERGING CONTAMINANT CONCENTRATIONS

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FIGURE 10

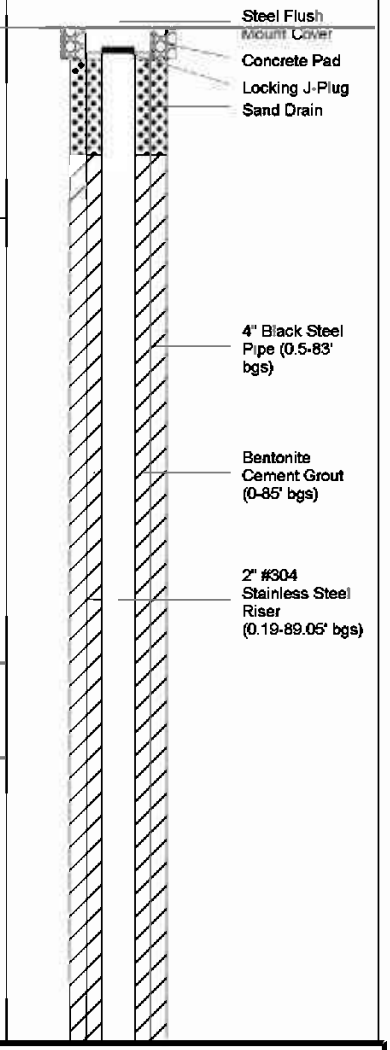
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PLTFULL.CTB PLOTTED: 2/20/2020 3:10 PM BY: POSENAUER, LISA
XREFS:
BMS-XBASE
BMS-XTITLEB

ATTACHMENT 1

Soil Boring and Well Construction Logs

Date Start/Finish:	8/23/19- 9/10/19	Northing: 1116930.007'	Well ID/Boring ID: **BDA-14RX**
Drilling Company:	Parratt-Wolff	Easting: 953314.602'	Client: Bristol-Myers Squibb
Driller's Name:	Devin Gawarecki/Brad Palmer	**Casing Elevation:** 413.79'	
Drilling Method:	Rotary Sonic/Rock Core	Borehole Depth: 124' bgs	**Site Location:** Bristol-Myers Squibb, Thompson Road, East Syracuse, NY
Casing Size:	6"	Surface Elevation: 413.981'	
Rig Type:	Track Mounted Mini Sonic and Truck Mounted CME-55	Descriptions By: Evan Green/ David Cornell	
Sampling Method:	4" Sonic Core/HQ Rock Core		

Depth (ft. bgs) / Elevation (ft. AMSL)	Sample Run Number	Sample/Int/Type	RQD (%)	Recovery (feet)	PID Headspace (ppm)	Geologic Column	Bedrock Fractures	Stratigraphic Description
0 / 415					0.0			Dark gray ASPHALT Fragments, some angular fine Gravel, trace Silt, loose - medium dense, moist - wet. [Fill]
					0.0			
					0.0			
5 / 410					0.0			Dark brown (10YR 3/3) medium - high plasticity CLAY, some Silt, trace fine Gravel, medium stiff. [Fill]
	1	0-10'	NA	5.0	0.0			
					0.3			
					1.4			Very faint petroleum like odor from 7-10' bgs.
					1.8			
10 / 405					1.9			
					0.9			Yellowish brown (10YR 5/4) medium plasticity SILT and CLAY, little very fine Sand, stiff, moist, faint petroleum like odor. [Fill]
					2.5			
					1.1			Yellowish brown (10YR 5/4) fine SAND, little Silt, loose - medium dense, wet. [Sand]
	2	10-20'	NA	8.5	0.4			
15 / 400					0.0			
					0.0			Increased Silt content from 15-16' bgs
					0.0			



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Remarks: bgs = below ground surface; HF = horizontal fracture; MB = mechanical break. VF = vertical fracture; ' = feet; " = inches.
Soil samples were screened using a 11.7 eV lamp.
Analytical soil sample collected from 20.5-22.5' bgs.
Vertical and horizontal fracutures are called out in the geologic descriptions due to high density of mechanical breaks.
Northing and easting provided in U.S. survey feet refrenced to New York State Plane Central Zone NAD 83. Elevations are in U.S. survey feet refrenced to the North American Vertical Datum of 1988 (NAVD 88).

Client: Bristol-Myers Squibb

Well/Boring ID: BDA-14RX

Borehole Depth: 124' bgs

Site Location:

Bristol-Myers Squibb
Thompson Road
East Syracuse, NY

Depth (ft. bgs) / Elevation (ft. AMSL)	Sample Run Number	Sample/Int/Type	RQD (%)	Recovery (feet)	PID Headspace (ppm)	Geologic Column	Bedrock Fractures	Stratigraphic Description	Well Construction
395 / 20	2	10-20'	NA	8.5	0.0			Increased Silt content from 17-18' bgs.	
					0.0			Increased Silt content from 19-20' bgs.	
					0.0				
					0.0			Reddish brown (5YR 5/4) SILT, some subrounded fine - coarse Gravel, little very fine - fine sand, stiff - very stiff, dry. [Top of Till]	4" Black Steel Pipe (0.5-83' bgs)
					0.0				
390 / 25	3	20-30'	NA	7.0	0.0				Bentonite Cement Grout (0-85' bgs)
					0.0				
					0.0				2" #304 Stainless Steel Riser (0.19-89.05' bgs)
					0.0				
					0.0			No Recovery	
385 / 30					0.0				
					0.0			Reddish brown (5YR 5/4) unconsolidated SILT, little fine Sand, little subrounded fine Gravel, trace Clay, very stiff - hard, moist. [Till]	
					0.0				
	4	30-35'	NA	3.5	0.0				
380 / 35					0.0			Little medium plasticity Clay from 33-35' bgs.	
					0.0				
					0.0			Reddish brown (5YR 5/4) consolidated SILT, some unconsolidated Silt, little subangular fine Gravel, medium stiff, dry. [Till]	

ARCADIS Design & Consultancy for natural and built assets

Remarks: bgs = below ground surface; HF = horizontal fracture; MB = mechanical break. VF = vertical fracture; ' = feet; " = inches.
Soil samples were screened using a 11.7 eV lamp.
Analytical soil sample collected from 20.5-22.5' bgs.
Vertical and horizontal fracutures are called out in the geologic descriptions due to high density of mechanical breaks.
Northing and easting provided in U.S. survey feet refrenced to New York State Plane Central Zone NAD 83. Elevations are in U.S. survey feet refrenced to the North American Vertical Datum of 1988 (NAVD 88).

Client: Bristol-Myers Squibb

Well/Boring ID: BDA-14RX

Borehole Depth: 124' bgs

Site Location:

Bristol-Myers Squibb
Thompson Road
East Syracuse, NY

Depth (ft. bgs) / Elevation (ft. AMSL)	Sample Run Number	Sample/Int/Type	RQD (%)	Recovery (feet)	PID Headspace (ppm)	Geologic Column	Bedrock Fractures	Stratigraphic Description	Well Construction
375 / 40	5	35-40'	NA	5.0	0.0				
370 / 45	6	40-45'	NA	5.0	0.0			Reddish brown (10YR 5/4) unconsolidated SILT, some subangular fine Gravel, little medium plasticity Clay, very hard, moist. [Till].	4" Black Steel Pipe (0.5-83' bgs); Bentonite Cement Grout (0-85' bgs); 2" #304 Stainless Steel Riser (0.19-89.05' bgs)
365 / 50	7	45-50'	NA	4.7	0.0			Increased consolidated Silt content from 50-55' bgs.	
360 / 55	8	50-55'	NA	5.0	0.0				

Remarks: bgs = below ground surface; HF = horizontal fracture; MB = mechanical break. VF = vertical fracture; ' = feet; " = inches.
Soil samples were screened using a 11.7 eV lamp.
Analytical soil sample collected from 20.5-22.5' bgs.
Vertical and horizontal fracutures are called out in the geologic descriptions due to high density of mechanical breaks.
Northing and easting provided in U.S. survey feet refrenced to New York State Plane Central Zone NAD 83. Elevations are in U.S. survey feet refrenced to the North American Vertical Datum of 1988 (NAVD 88).

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Client: Bristol-Myers Squibb

Well/Boring ID: BDA-14RX

Borehole Depth: 124' bgs

Site Location:

Bristol-Myers Squibb
Thompson Road
East Syracuse, NY

Depth (ft. bgs) / Elevation (ft. AMSL)	Sample Run Number	Sample/Int/Type	RQD (%)	Recovery (feet)	PID Headspace (ppm)	Geologic Column	Bedrock Fractures	Stratigraphic Description	Well Construction
355 / 60	9	55-60'	NA	5.0	0.0			Greenish gray (GLEY 1 5/10GY) consolidated SILT, little subangular fine - medium Shale Fragments, trace Clay, stiff - very stiff, dry - moist. [Top of Weathered Bedrock]	4" Black Steel Pipe (0.5-83' bgs)
350 / 65	10	60-65'	NA	5.0	0.0				Bentonite Cement Grout (0-85' bgs)
345 / 70	11	65-70'	NA	5.0	0.0			Increased Clay content from 68-70' bgs.	2" #304 Stainless Steel Riser (0.19-89.05' bgs)
					0.0			Decrased Shale Fragment content from 70-71.5' bgs.	
340 / 75	12	70-75'	NA	5.0	0.0			Greenish gray (GLEY 1 5/10GY) unconsolidated SILT, little consolidated Silt, little rounded fine - coarse Gravel, loose, dry. [Weathered Bedrock]	
					0.0			Greenish gray (GLEY 1 5/10GY) angular fine - coarse SHALE Fragments with gypsum veins throughout, trace Silt, very dense - hard, dry - moist. [Top of Bedrock]	

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Remarks: bgs = below ground surface; HF = horizontal fracture; MB = mechanical break. VF = vertical fracture; ' = feet; " = inches.
Soil samples were screened using a 11.7 eV lamp.
Analytical soil sample collected from 20.5-22.5' bgs.
Vertical and horizontal fracutures are called out in the geologic descriptions due to high density of mechanical breaks.
Northing and easting provided in U.S. survey feet refrenced to New York State Plane Central Zone NAD 83. Elevations are in U.S. survey feet refrenced to the North American Vertical Datum of 1988 (NAVD 88).

Client: Bristol-Myers Squibb

Well/Boring ID: BDA-14RX

Borehole Depth: 124' bgs

Site Location:

Bristol-Myers Squibb
Thompson Road
East Syracuse, NY

Depth (ft. bgs) / Elevation (ft. AMSL)	Sample Run Number	Sample/Int/Type	RQD (%)	Recovery (feet)	PID Headspace (ppm)	Geologic Column	Bedrock Fractures	Stratigraphic Description	Well Construction
335 / 80	13	75-80'	NA	4.7	0.0				Bentonite Cement Grout (0-85' bgs)
					0.0				
					0.0				4" Black Steel Pipe (0.5-83' bgs)
					0.0				
	14	80-84'	NA	4.7	0.0				2" #304 Stainless Steel Riser (0.19-89.05' bgs)
					0.0				
330 / 85					0.0			End of sonic drilling, begin rock coring portion of boring at 84' bgs.	
								Greenish gray (GLEY 1 5/10GY) turning reddish brown (2.5YR 3/4) at 91', SHALE, finely laminated, moderately weathered, hard. [Bedrock]	
									Bentonite Seal (85-87' bgs)
									#0 Silica Sand Pack (87-101' bgs)
325 / 90	Run 1	84-94'	38.2	9.8	0.0			Horizontal Fracture at 91' bgs.	
									2" #304 Stainless Steel 0.010" slotted screen 89.05-98.65' bgs)
320 / 95	Run 2	94-104'	28.9	9.0	0.0			Reddish brown (2.5YR 3/4) SHALE, finely laminated, moderate - highly weathered from 94-96' lightly weathered from 96-104', hard, gypsum nodules at 94.8, 95.5, 101.5' and 106.2'. [Bedrock]	

ARCADIS Design & Consultancy for natural and built assets

Remarks: bgs = below ground surface; HF = horizontal fracture; MB = mechanical break. VF = vertical fracture; ' = feet; " = inches.
Soil samples were screened using a 11.7 eV lamp.
Analytical soil sample collected from 20.5-22.5' bgs.
Vertical and horizontal fracutures are called out in the geologic descriptions due to high density of mechanical breaks.
Northing and easting provided in U.S. survey feet refrenced to New York State Plane Central Zone NAD 83. Elevations are in U.S. survey feet refrenced to the North American Vertical Datum of 1988 (NAVD 88).

Client: Bristol-Myers Squibb

Well/Boring ID: BDA-14RX

Borehole Depth: 124' bgs

Site Location:

Bristol-Myers Squibb
Thompson Road
East Syracuse, NY

Depth (ft. bgs) / Elevation (ft. AMSL)	Sample Run Number	Sample/Int/Type	RQD (%)	Recovery (feet)	PID Headspace (ppm)	Geologic Column	Bedrock Fractures	Stratigraphic Description	Well Construction
315 / 100	Run 2	94-104'	26.9	9.0	0.0		MB		#0 Silica Sand Pack (87-101' bgs) 2" #304 Stainless Steel 0.010" slotted screen 89.05-98.65' bgs) 2" Stainless Steel Sump (98.65-99' bgs)
310 / 105	Run 3	104-114'	36.5	9.6	0.0		MB	Greenish gray (GLEY 1 5/10GY) SANDSTONE, fine - medium grained, slight weathering, moderately hard, gypsum veins at 107.2, 107.3 and 107.4' bgs [Sandstone]	Bentonite Cement Grout (110-124' bgs)
305 / 110							MB	Reddish brown (2.5YR 3/4) SHALE, very finely laminated, slight weathering, hard - very hard, gypsum veins at 109.2, 111.1, 111.4, 111.5, and 112. [Bedrock]	
300 / 115	Run 4	104-114'	0.0	8.5	0.0		MB	Horizontal Fracture at 112.2' bgs.	
							MB	Greenish gray (GLEY 1 5/10GY) from 114 - 115.5 and 117.5 - 119, reddish brown (2.5YR 3/4) from 115.5 - 117.5 and 119 - 124 SHALE, finely laminated, slight weathering, hard, interbeded gypsum veins at 114.8, 115.1, 115.6, 117.8, 118.2, 118.4, and 121.5. [Bedrock]	
							MB	Horizontal Fractures at 114.6', 115.1' and 115.5' bgs.	

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Remarks: bgs = below ground surface; HF = horizontal fracture; MB = mechanical break. VF = vertical fracture; ' = feet; " = inches.
Soil samples were screened using a 11.7 eV lamp.
Analytical soil sample collected from 20.5-22.5' bgs.
Vertical and horizontal fracutures are called out in the geologic descriptions due to high density of mechanical breaks.
Northing and easting provided in U.S. survey feet refrenced to New York State Plane Central Zone NAD 83. Elevations are in U.S. survey feet refrenced to the North American Vertical Datum of 1988 (NAVD 88).

Client: Bristol-Myers Squibb

Well/Boring ID: BDA-14RX

Borehole Depth: 124' bgs

Site Location:

Bristol-Myers Squibb
Thompson Road
East Syracuse, NY

Depth (ft. bgs) / Elevation (ft. AMSL)	Sample Run Number	Sample/Int/Type	RQD (%)	Recovery (feet)	PID Headspace (ppm)	Geologic Column	Bedrock Fractures	Stratigraphic Description	Well Construction
295 / 120	Run 4	114-124'	0.0	8.5	0.0		MB MB MB MB HF MB MB MB MB HF MB MB MB MB MB MB MB MB MB MB MB MB MB MB	Horizontal Fracture at 117' bgs. Horizontal Fracture at 118.9' bgs. Vertical Fracture at 122' bgs. End of boring 124' bgs.	Bentonite Cement Grout (110-124' bgs)
290 / 125									
285 / 130									
280 / 135									

ARCADIS Design & Consultancy for natural and built assets

Remarks: bgs = below ground surface; HF = horizontal fracture; MB = mechanical break. VF = vertical fracture; ' = feet; " = inches.
Soil samples were screened using a 11.7 eV lamp.
Analytical soil sample collected from 20.5-22.5' bgs.
Vertical and horizontal fracutures are called out in the geologic descriptions due to high density of mechanical breaks.
Northing and easting provided in U.S. survey feet refrenced to New York State Plane Central Zone NAD 83. Elevations are in U.S. survey feet refrenced to the North American Vertical Datum of 1988 (NAVD 88).

Date Start/Finish: 8/22/19	**Northing:** 1116848.498	Well/Boring ID: BDA-17WT
Drilling Company: Parrett-Wolff	**Easting:** 953152.485'	**Client:** Bristol-Myers Squibb
Driller's Name: Devin Gawerecki/Brad Palmer	**Casing Elevation:** 419.028'	
Drilling Method: Rotary Sonic	**Borehole Depth:** 16' bgs	**Location:** Bristol-Myers Squibb Thompson Road East Syracuse, NY
Sampling Method: NA	**Surface Elevation:** 419.445	
Rig Type: Track mounted Mini Sonic	**Descriptions By:** Evan Green	
Casing Size: 4"		

DEPTH / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (ft)	PID Headspace (ppm)	Geologic Column	Stratigraphic Description	Well/Boring Construction
420							
0	NA	NA	NA	NA		Blind drilled to 16' bgs. For soil descriptions see boring log BDA-17RX.	Steel Flush Mount Cover Concrete Pad Locking J-Plug Sand Drain Bentonite Seal (2-4' bgs) 2" #304 Stainless Steel Riser (0.17-6.05' bgs) #0 Silica Sand Pack (4-16' bgs) 2" #304 Stainless Steel 0.010" slotted screen (6.05-15.65' bgs) 2" Stainless Steel Sump (15.65-16' bgs)
415 5							
410 10							
405 15							

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Remarks: bgs = below ground surface; ' = feet; " = inches

Northing and easting provided in U.S. survey feet refrenced to New York State Plane Central Zone NAD 83. Elevations are in U.S. survey feet refrenced to the North American Vertical Datum of 1988 (NAVD 88).

Date Start/Finish: 8/21/19	**Northing:** 1116841.074'	Well/Boring ID: BDA-17T
Drilling Company: Parrett-Wolff	**Easting:** 953153.72'	**Client:** Bristol-Myers Squibb
Driller's Name: Devin Gawerecki/Brad Palmer	**Casing Elevation:** 419.151	
Drilling Method: Rotary Sonic	**Borehole Depth:** 40' bgs	**Location:** Bristol-Myers Squibb Thompson Road East Syracuse, NY
Sampling Method: NA	**Surface Elevation:** 419.355	
Rig Type: Track mounted Mini Sonic	**Descriptions By:** Evan Green	
Casing Size: 4"		

DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (ft)	PID Headspace (ppm)	Geologic Column	Stratigraphic Description	Well/Boring Construction
0	420							
5	415	NA	NA	NA	NA		Blind drilled to 40' bgs. For soil descriptions see boring log BDA-17RX.	Steel Flush Mount Cover Concrete Pad Locking J-Plug Sand Drain 2" #304 Stainless Steel Riser (0.18-30.05' bgs) Bentonite Cement Grout (2-26' bgs)
10	410							
15	405							

Remarks: bgs = below ground surface; NA = not applicable; ' = feet; " = inches

Northing and easting provided in U.S. survey feet refrenced to New York State Plane Central Zone NAD 83. Elevations are in U.S. survey feet refrenced to the North American Vertical Datum of 1988 (NAVD 88).

ARCADIS Design & Consultancy for natural and built assets

Client: Bristol-Myers Squibb

Well/Boring ID: BDA-17T

Borehole Depth: 40' bgs

Site Location:

Bristol-Myers Squibb
Thompson Road
East Syracuse, NY

DEPTH / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (ft)	PID Headspace (ppm)	Geologic Column	Stratigraphic Description	Well/Boring Construction
400 / 20						Blind drilled to 40' bgs. For soil descriptions see boring log BDA-17RX.	2" #304 Stainless Steel Riser (0 18-30 05' bgs)
395 / 25	NA	NA	NA	NA			Bentonite Cement Grout (2-26' bgs)
							Bentonite Seal (26-28' bgs)
390 / 30							#0 Silica Sand Pack (28-40' bgs)
							2" #304 Stainless Steel 0 010" slotted screen (30 05-39 65' bgs)
385 / 35							

ARCADIS Design & Consultancy for natural and built assets

Remarks: bgs = below ground surface; NA = not applicable; ' = feet; " = inches

Northing and easting provided in U.S. survey feet refrenced to New York State Plane Central Zone NAD 83. Elevations are in U.S. survey feet refrenced to the North American Vertical Datum of 1988 (NAVD 88).

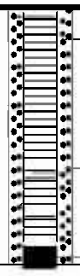
Client: Bristol-Myers Squibb

Well/Boring ID: BDA-17T

Borehole Depth: 40' bgs

Site Location:

Bristol-Myers Squibb
Thompson Road
East Syracuse, NY

DEPTH / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (ft)	PID Headspace (ppm)	Geologic Column	Stratigraphic Description	Well/Boring Construction
380 / 0	NA	NA	NA	NA		Blind drilled to 40' bgs. For soil descriptions see boring log BDA-17RX.	 #0 Silica Sand Pack (28-40' bgs); 2" #304 Stainless Steel 0.010" slotted screen (30.05-39.65' bgs); 2" Stainless Steel Sump (39.65-40' bgs)
375 / 5							
370 / 10						End of boring at 40' bgs.	
365 / 15							

ARCADIS Design & Consultancy for natural and built assets

Remarks: bgs = below ground surface; NA = not applicable; ' = feet; " = inches

Northing and easting provided in U.S. survey feet refrenced to New York State Plane Central Zone NAD 83. Elevations are in U.S. survey feet refrenced to the North American Vertical Datum of 1988 (NAVD 88).

Date Start/Finish: 8/16/19 -8/20/19	**Northing:** 1116825.744'	Well/Boring ID: BDA-17WR
Drilling Company: Parrett-Wolff	**Easting:** 953156.716'	**Client:** Bristol-Myers Squibb
Driller's Name: Devin Gawerecki/Brad Palmer	**Casing Elevation:** 418.508'	
Drilling Method: Rotary Sonic	**Borehole Depth:** 104.5' bgs	**Location:** Bristol-Myers Squibb Thompson Road East Syracuse, NY
Sampling Method: NA	**Surface Elevation:** 418.949'	
Rig Type: Track mounted Mini Sonic	**Descriptions By:** Evan Green	
Casing Size: 4"		

DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (ft)	PID Headspace (ppm)	Geologic Column	Stratigraphic Description	Well/Boring Construction
0	420							
5	415	NA	NA	NA	NA		Blind drilled to 104 5' bgs. For soil descriptions see boring log BDA-17RX.	Steel Flush Mount Cover Concrete Pad Locking J-Plug Sand Drain 2" #304 Stainless Steel Riser (0.39-74.55' bgs) Bentonite Cement Grout (2-70.5' bgs)
10	410							
15	405							

Remarks: bgs = below ground surface; NA = not applicable; ' = feet; " = inches

Northing and easting provided in U.S. survey feet refrenced to New York State Plane Central Zone NAD 83. Elevations are in U.S. survey feet refrenced to the North American Vertical Datum of 1988 (NAVD 88).

ARCADIS Design & Consultancy for natural and built assets

Client: Bristol-Myers Squibb

Well/Boring ID: BDA-17WR

Borehole Depth: 104.5' bgs

Site Location:

Bristol-Myers Squibb
Thompson Road
East Syracuse, NY

DEPTH / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (ft)	PID Headspace (ppm)	Geologic Column	Stratigraphic Description	Well/Boring Construction
400 / 20						Blind drilled to 104.5' bgs. For soil descriptions see boring log BDA-17RX.	2" #304 Stainless Steel Riser (0.39-74.55' bgs)
395 / 25	NA	NA	NA	NA			Bentonite Cement Grout (2-70.5' bgs)
390 / 30							
385 / 35							

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Client: Bristol-Myers Squibb

Well/Boring ID: BDA-17WR

Borehole Depth: 104.5' bgs

Site Location:

Bristol-Myers Squibb
Thompson Road
East Syracuse, NY

DEPTH / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (ft)	PID Headspace (ppm)	Geologic Column	Stratigraphic Description	Well/Boring Construction
380 / 40						Blind drilled to 104.5' bgs. For soil descriptions see boring log BDA-17RX	2" #304 Stainless Steel Riser (0.39-74.55' bgs)
375 / 45	NA	NA	NA	NA			Bentonite Cement Grout (2-70.5' bgs)
370 / 50							
365 / 55							

Remarks: bgs = below ground surface; NA = not applicable; ' = feet; " = inches

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ARCADIS Design & Consultancy for natural and built assets

Client: Bristol-Myers Squibb

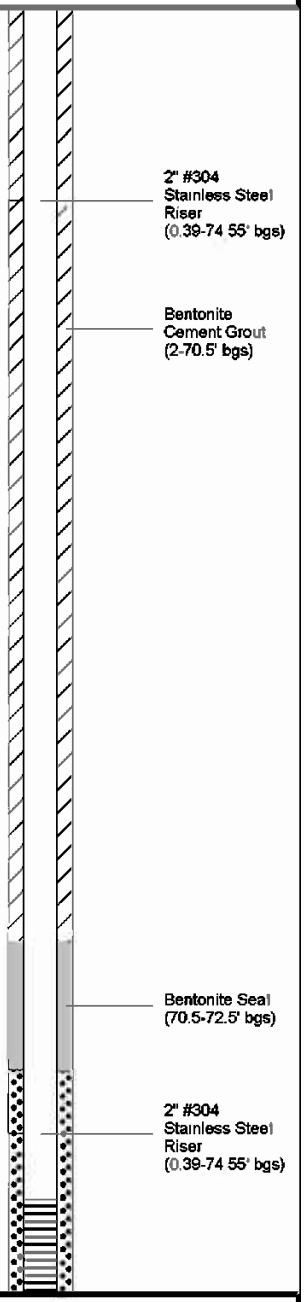
Well/Boring ID: BDA-17WR

Borehole Depth: 104.5' bgs

Site Location:

Bristol-Myers Squibb
Thompson Road
East Syracuse, NY

DEPTH / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (ft)	PID Headspace (ppm)	Geologic Column	Stratigraphic Description	Well/Boring Construction
260 / 60	NA	NA	NA	NA		Blind drilled to 104.5' bgs. For soil descriptions see boring log BDA-17RX.	2" #304 Stainless Steel Riser (0.39-74.55' bgs); Bentonite Cement Grout (2-70.5' bgs); Bentonite Seal (70.5-72.5' bgs); 2" #304 Stainless Steel Riser (0.39-74.55' bgs)
255 / 65							
250 / 70							
245 / 75							



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Client: Bristol-Myers Squibb

Well/Boring ID: BDA-17WR

Borehole Depth: 104.5' bgs

Site Location:

Bristol-Myers Squibb
Thompson Road
East Syracuse, NY

DEPTH / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (ft)	PID Headspace (ppm)	Geologic Column	Stratigraphic Description	Well/Boring Construction
340 / 80	NA	NA	NA	NA		Blind drilled to 104.5' bgs. For soil descriptions see boring log BDA-17RX.	#0 Silica Sand Pack (72.5-104.5' bgs) 2" #304 Stainless Steel 0.010" slotted screen (74.55-104.15' bgs)
335 / 85							
330 / 90							
325 / 95							

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Client: Bristol-Myers Squibb

Well/Boring ID: BDA-17WR

Borehole Depth: 104.5' bgs

Site Location:

Bristol-Myers Squibb
Thompson Road
East Syracuse, NY

DEPTH / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (ft)	PID Headspace (ppm)	Geologic Column	Stratigraphic Description	Well/Boring Construction
320 / 100	NA	NA	NA	NA		Blind drilled to 104.5' bgs. For soil descriptions see boring log BDA-17RX.	#0 Silica Sand Pack (72.5-104.5' bgs); 2" #304 Stainless Steel 0.010" slotted screen (74.55-104.15' bgs); 2" Stainless Steel Sump (104.15-104.5' bgs)
315 / 105						End of boring at 104.5' bgs.	
310 / 110							
305 / 115							

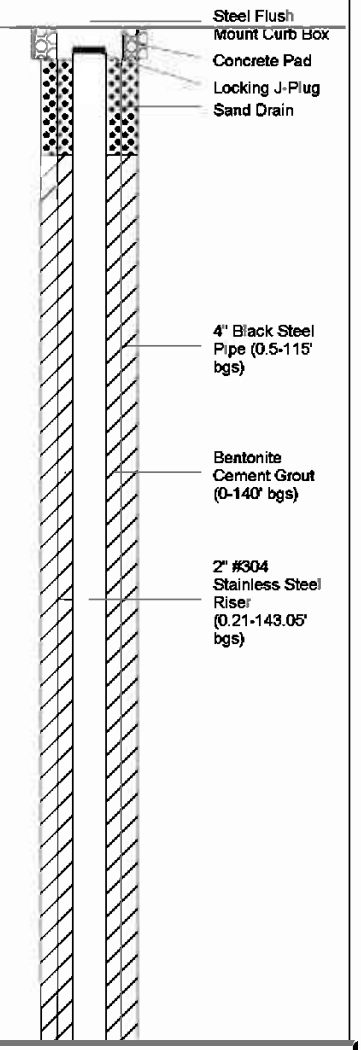
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Remarks: bgs = below ground surface; NA = not applicable; ' = feet; " = inches

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Date Start/Finish:	8/12/19- 9/6/19	Northing:	1116832.653'	Well ID/Boring ID:	BDA-17RX
Drilling Company:	Parratt-Wolff	Easting:	953155.172'	Client:	Bristol-Myers Squibb
Driller's Name:	Devin Gawarecki/Wayne Nielson	**Casing Elevation:**	418.990'		
Drilling Method:	Rotary Sonic/Rock Core	Borehole Depth:	165' bgs	**Site Location:**	Bristol-Myers Squibb Thompson Road East Syracuse, NY
Casing Size:	6"	Surface Elevation:	419.198'		
Rig Type:	Track Mounted Mini Sonic and Truck Mounted CME-55	Descriptions By:	Evan Green/ David Cornell		
Sampling Method:	4" Sonic Core/HQ Rock Core				

Depth (ft. bgs) / Elevation (ft. AMSL)	Sample Run Number	Sample/Int/Type	RQD (%)	Recovery (feet)	PID Headspace (ppm)	Geologic Column	Bedrock Fractures	Stratigraphic Description
420 / 0					0.0			Black ASPHALT fragments, some fine - medium Sand, little subrounded fine Gravel, loose dry - moist. [Fill]
					0.0			
					0.0			
415 / 5	1	0-10'	NA	9.0	0.0			Dark gray (5YR 4/1) SILT, some low plasticity Clay, little subrounded fine Gravel, medium stiff, dry - moist. [Fill]
					0.0			
					0.0			
					0.0			Reddish brown (5YR 4/4) low - medium plasticity SILT and CLAY, some fine Sand, little coarse Sand, trace subrounded fine Gravel, trace Cobble, stiff, dry - moist. [Top of Till]
410 / 10					0.0			
					0.2			Dark reddish gray (5YR 4/2) SILT, some fine Sand, little subrounded fine - coarse Gravel, very stiff, dry - moist. [Till]
	2	10-20'	NA	10.0	0.0			
405 / 15					0.0			
					0.0			



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Soil samples were screened using a 11.7 eV lamp.
Analytical soil sample collected from 9-11' bgs.
Vertical and horizontal fracutures are called out in the geologic descriptions due to high density of mechanical breaks.
Northing and easting provided in U.S. survey feet refrenced to New York State Plane Central Zone NAD 83. Elevations are in U.S. survey feet refrenced to the North American Vertical Datum of 1988 (NAVD 88).

Client: Bristol-Myers Squibb

Well/Boring ID: BDA-17RX

Borehole Depth: 165' bgs

Site Location:

Bristol-Myers Squibb
Thompson Road
East Syracuse, NY

Depth (ft. bgs) / Elevation (ft. AMSL)	Sample Run Number	Sample/Int/Type	RQD (%)	Recovery (feet)	PID Headspace (ppm)	Geologic Column	Bedrock Fractures	Stratigraphic Description	Well Construction
400 / 20	2	10-20'	NA	10.0	0.0				4" Black Steel Pipe (0.5-115' bgs)
395 / 25	3	20-30'	NA	10.0	0.0			Little low - medium plasticity Clay from 27 - 32' bgs.	Bentonite Cement Grout (0-140' bgs)
390 / 30	4	30-35'	NA	5.0	0.0			Trace Cobble from 30 - 32' bgs.	2" #304 Stainless Steel Riser (0.21-143.05' bgs)
385 / 35					0.0			Dark reddish gray (5YR 4/2) low plasticity SILT and CLAY, little subangular fine Gravel, little fine Sand, stiff, moist - wet. [Till]	

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Remarks: bgs = below ground surface; HF = horizontal fracture; MB = mechanical break; VF = vertical fracture; ' = feet; " = inches.
Soil samples were screened using a 11.7 eV lamp.
Analytical soil sample collected from 9-11' bgs.
Vertical and horizontal fracutures are called out in the geologic descriptions due to high density of mechanical breaks.
Northing and easting provided in U.S. survey feet refrenced to New York State Plane Central Zone NAD 83. Elevations are in U.S. survey feet refrenced to the North American Vertical Datum of 1988 (NAVD 88).

Client: Bristol-Myers Squibb

Well/Boring ID: BDA-17RX

Borehole Depth: 165' bgs

Site Location:

Bristol-Myers Squibb
Thompson Road
East Syracuse, NY

Depth (ft. bgs) / Elevation (ft. AMSL)	Sample Run Number	Sample/Int/Type	RQD (%)	Recovery (feet)	PID Headspace (ppm)	Geologic Column	Bedrock Fractures	Stratigraphic Description	Well Construction
					0.0				
	5	35-40'	NA	5.0	0.0			Dark reddish gray (5YR 4/2) SILT, little subangular fine Gravel, trace fine Sand, trace Clay, medium stiff, moist - wet. [Till]	
380					0.0				
40					0.0			Higher fine Sand content and increase in density from 40 - 42.5' bgs.	
	6	40-45'	NA	5.0	0.0			Greenish gray (GLEY 1 5/10GY) consolidated SILT, little gypsum stringers, friable, dry. [Top of Weathered Bedrock]	4" Black Steel Pipe (0.5-115' bgs)
375					0.0				Bentonite Cement Grout (0-140' bgs)
45					0.0			Increased unconsolidated Silt content at 45' bgs.	2" #304 Stainless Steel Riser (0.21-143.05' bgs)
	7	45-50'	NA	5.0	0.0			Turning Reddish brown (5YR 4/3) and trace Shale chips after 48' bgs.	
370					0.0			Greenish gray (GLEY 5/10GY) SHALE fragments, trace gypsum stringers, finely laminated, slight - moderate weathering, little unconsolidated Silt, loose, dry [Weathered Bedrock].	
50					0.0			Reddish brown (5YR 4/3) mottled greenish gray (GLEY 1 5/10GY) consolidated SILT, little gypsum stringers, slightly friable, moist - dry. [Weathered Bedrock]	
	8	50-55'	NA	5.0	0.0			Some competent Shale fragments from 52.5 - 54' bgs.	
365					0.0			Increased unconsolidated Silt content from 54 - 55' bgs.	
55					0.0				

ARCADIS Design & Consultancy for natural and built assets

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Soil samples were screened using a 11.7 eV lamp.
Analytical soil sample collected from 9-11' bgs.
Vertical and horizontal fracutures are called out in the geologic descriptions due to high density of mechanical breaks.
Northing and easting provided in U.S. survey feet refrenced to New York State Plane Central Zone NAD 83. Elevations are in U.S. survey feet refrenced to the North American Vertical Datum of 1988 (NAVD 88).

Client: Bristol-Myers Squibb

Well/Boring ID: BDA-17RX

Borehole Depth: 165' bgs

Site Location:

Bristol-Myers Squibb
Thompson Road
East Syracuse, NY

Depth (ft. bgs) / Elevation (ft. AMSL)	Sample Run Number	Sample/Int/Type	RQD (%)	Recovery (feet)	PID Headspace (ppm)	Geologic Column	Bedrock Fractures	Stratigraphic Description	Well Construction
360 / 60	9	55-60'	NA	5.0	0.0			Reddish brown (5YR 4/3) SHALE fragments, some unconsolidated Silt, little consolidated Silt, loose, moist.[Weathered Bedrock]	
					0.0			Reddish brown (5YR 4/3) medium - high plasticity SILT and CLAY, some fine - coarse Sand, little angular fine Gravel, stiff, moist. [Weathered Bedrock]	
					0.0			Reddish brown (5YR 5/4) angular SHALE fragments, little consolidated Silt, little gypsum stringers, dense, moist. [Weathered Bedrock]	
					0.0			Greenish gray (GLEY 1 5/10GY) consolidated SILT, little subangular fine - coarse Gravel, very hard, moist.[Weathered Bedrock]	
					0.0			Greenish gray (GLEY 1 5/10GY) low plasticity SILT and CLAY, some fine - coarse Sand, trace subangular fine Gravel, soft - medium dense, moist - wet. [Weathered Bedrock]	4" Black Steel Pipe (0.5-115' bgs)
355 / 65	10	60-65'	NA	5.0	0.0			Greenish gray (GLEY 1 5/10GY) unconsolidated SILT, little consolidated Silt, trace angular fine - coarse Gravel, loose, dry. [Weathered Bedrock]	Bentonite Cement Grout (0-140' bgs)
					0.0			Greenish gray (GLEY 1 5/10GY) angular fine - coarse SHALE fragments, little gypsum stringers, little unconsolidated silt, very dense, dry - moist. [Weathered Bedrock]	2" #304 Stainless Steel Riser (0.21-143.05' bgs)
350 / 70	11	65-70'	NA	5.0	0.0			Increased unconsolidated Silt content from 67-71' bgs.	
					0.0			Greenish gray (GLEY 1 5/10GY) unconsolidated SILT, little consolidated Silt, little angular fine - coarse Gravel, loose, dry. [Weathered Bedrock]	
345 / 75	12	70-75'	NA	5.0	0.0			Increased unconsolidated Silt content from 71-75' bgs.	

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Soil samples were screened using a 11.7 eV lamp.
Analytical soil sample collected from 9-11' bgs.
Vertical and horizontal fracutures are called out in the geologic descriptions due to high density of mechanical breaks.
Northing and easting provided in U.S. survey feet refrenced to New York State Plane Central Zone NAD 83. Elevations are in U.S. survey feet refrenced to the North American Vertical Datum of 1988 (NAVD 88).

Client: Bristol-Myers Squibb

Well/Boring ID: BDA-17RX

Borehole Depth: 165' bgs

Site Location:

Bristol-Myers Squibb
Thompson Road
East Syracuse, NY

Depth (ft. bgs) / Elevation (ft. AMSL)	Sample Run Number	Sample/Int/Type	RQD (%)	Recovery (feet)	PID Headspace (ppm)	Geologic Column	Bedrock Fractures	Stratigraphic Description	Well Construction
					0.0			Increased unconsolidated Silt content from 76.5-79' bgs.	
	13	75-80'	NA	5.0	0.0				
340 / 80					0.0			Greenish gray (GLEY 1 5/10GY) anguler fine - coarse SHALE fragments, some unconsolidated Silt, little consolidated Silt, dense, dry - moist. [Weathered Bedrock]	
					0.0			Greenish gray (GLEY 1 5/10GY) consolidated SILT, little medium plasticity Clay, very hard, moist - wet. [Weathered Bedrock]	
					0.0			Increased unconsolidated Silt content from 81-85' bgs.	4" Black Steel Pipe (0.5-115' bgs)
	14	80-85'	NA	5.0	0.0				Bentonite Cement Grout (0-140' bgs)
335 / 85					0.0				2" #304 Stainless Steel Riser (0 21-143 05' bgs)
					0.0			Greenish gray (GLEY 1 5/10GY) subangular - angular fine coarse SHALE fragments, some unconsolidated Silt, little consolidated Silt, medium dense, dry - moist. [Weathered Bedrock]	
	15	85-90'	NA	5.0	0.0				
330 / 90					0.0			Greenish gray (GLEY 1 5/10GY) high plasticity SILT and CLAY, little fine Sand, very hard, moist. [Weathered Bedrock]	
					0.0			Greenish gray (GLEY 1 5/10GY) unconsolidated SILT, little fine - medium Sand, little subanguler fine Gravel, trace Cobble, loose, dry. [Weathered Bedrock]	
	16	90-95'	NA	5.0	0.0			Little low plasticity Clay after 92.5' bgs.	
325 / 95					0.0				
					0.0				

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Soil samples were screened using a 11.7 eV lamp.
Analytical soil sample collected from 9-11' bgs.
Vertical and horizontal fracutures are called out in the geologic descriptions due to high density of mechanical breaks.
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Client: Bristol-Myers Squibb

Well/Boring ID: BDA-17RX

Borehole Depth: 165' bgs

Site Location:

Bristol-Myers Squibb
Thompson Road
East Syracuse, NY

Depth (ft. bgs) / Elevation (ft. AMSL)	Sample Run Number	Sample/Int/Type	RQD (%)	Recovery (feet)	PID Headspace (ppm)	Geologic Column	Bedrock Fractures	Stratigraphic Description	Well Construction
100 / 320	17	95-100'	NA	5.0	0.0			Pale red (7 5R 6/4), greenish gray in part (GLEY 1 5/5G) SILT and fine SAND, some subangular - angular fine - coarse Gravel (possible bedrock fragments), trace gypsum nodules, medium dense, dry. [Weathered Bedrock]	
105 / 315	18	100-105'	NA	5.0	0.0			Pale red (7.5R 6/4), greenish gray in part (GLEY 1 5/5G) interbeded bands of alternating medium plasticity SILT and CLAY and subangular medium Gravel (possible Shale bedrock fragments) very dense, moist. [Weathered Bedrock]	4" Black Steel Pipe (0.5-115' bgs)
110 / 310	19	105-110'	NA	5.0	0.0			Red (5R 4/6) SILT (possible pulverized bedrock) some Cobble (cylindrical Shale fragments, possible Shale bedrock), little subangular - angular fine - medium Gravel, medium dense, wet.[Weathered Bedrock]	Bentonite Cement Grout (0-140' bgs)
115 / 305	20	110-115'	NA	5.0	0.0			Pale red (7.5R 6/4), greenish gray in part (GLEY 1 5/5G) angular fine - coarse GRAVEL (possible Shale bedrock fragments) trace fine - coarse Sand (possible pulverized bedrock), medium dense - dense, dry - moist. [Top of Bedrock]	2" #304 Stainless Steel Riser (0.21-143.05' bgs)
					0.0			Pale red (7.5R 6/4) interbedded COBBLE (possible cylindrical Shale fragments) and unconsolidated SILT, little subangular fine Gravel, very hard, dry. [Bedrock]	
					0.0			Greenish gray (GLEY 1 5/10GY) subangular fine - coarse GRAVEL, little unconsolidated Silt, medium dense, dry [Bedrock]	
					0.0		MB	Dark reddish brown (2 5 YR 3/4) mottled greenish gray (GLEY 1 5/10GY) SHALE, finely laminated, slight weathering, hard - very hard, interbedded gypsum veins at 117.9' and from 120-122'. [Bedrock]	

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Analytical soil sample collected from 9-11' bgs.
Vertical and horizontal fracutures are called out in the geologic descriptions due to high density of mechanical breaks.
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Client: Bristol-Myers Squibb

Well/Boring ID: BDA-17RX

Borehole Depth: 165' bgs

Site Location:

Bristol-Myers Squibb
Thompson Road
East Syracuse, NY

Depth (ft. bgs) / Elevation (ft. AMSL)	Sample Run Number	Sample/Int/Type	RQD (%)	Recovery (feet)	PID Headspace (ppm)	Geologic Column	Bedrock Fractures	Stratigraphic Description	Well Construction
300 / 120	Run 1	115-125'	24.8	9.6	0.0		MB	4" black steel casing grouted into borehole at 115' bgs.	
295 / 125							MB	Dark reddish brown (2 5 YR 3/4) mottled greenish gray (GLEY 1 5/10GY) from 133-135' SHALE, very finely laminated, slight - moderate weathering, medium hard - hard, interbedded gypsum veins at 129', 132' and 132 5' [Bedrock]	
290 / 130	Run 2	125-135'	34.7	9.5	0.0		VF MB	Vertical Fracture at 130' bgs.	Bentonite Cement Grout (0-140' bgs); 2" #304 Stainless Steel Riser (0.21-143.05' bgs)
285 / 135							MB	Becoming more weathered after 133' bgs.	
							MB	Greenish gray (GLEY 1 5/10GY) SHALE, finely laminated, moderate - highly weathered, moderately soft, frequent interbedded gypsum veins. [Bedrock]	

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Analytical soil sample collected from 9-11' bgs.
Vertical and horizontal fracutures are called out in the geologic descriptions due to high density of mechanical breaks.
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Client: Bristol-Myers Squibb

Well/Boring ID: BDA-17RX

Borehole Depth: 165' bgs

Site Location:

Bristol-Myers Squibb
Thompson Road
East Syracuse, NY

Depth (ft. bgs) / Elevation (ft. AMSL)	Sample Run Number	Sample/Int/Type	RQD (%)	Recovery (feet)	PID Headspace (ppm)	Geologic Column	Bedrock Fractures	Stratigraphic Description
							MB	Horizontal Fracture at 135.8' bgs.
							MB	Dark reddish brown (2.5YR 3/4) SHALE, finely laminated, slightly weathered, moderately hard, interbedded gypsum veins at 138, 138.5, 138.9, and 139' bgs. [Bedrock]
280							MB	
140	Run 3	135-145'	4.9	9.4	0.0		MB	Greenish gray (GLEY 1 5/10GY) SHALE, finely laminated, moderate - highly weathered, moderately soft, frequent interbedded gypsum veins. [Bedrock]
							MB	
275							MB	
145							MB	Greenish gray (GLEY 1 5/10GY) SHALE, very fine lamination, slight - moderate weathering, hard, gypsum nodules at 147.4 and 148.3 [Bedrock]
							MB	
270							MB	
150	Run 4	145-155'	18.7	8.9	0.0		MB	Alternating bands of greenish grey (GLEY 1 5/10GY) and reddish brown (2.5YR 3/4) SHALE, finely laminated, moderate weathering, hard, interbedded gypsum veins at 152', 152.1', 152.3' and 153.7' bgs. [Bedrock]
							MB	
							MB	
							MB	
							MB	
							MB	
							MB	
							MB	
							MB	
							MB	
							MB	Vertical Fracature at 153.7' bgs.
265							MB HF	Horizontal Fracture at 154.3' bgs.
155							MB	Greenish gray (GLEY 1 5/10GY) mottled reddish brown (2.5 YR 3/4) SHALE, finely laminated, highly weathered, soft - moderately soft. [Bedrock]

Well Construction

- Bentonite Cement Grout (0-140' bgs)
- 2" #304 Stainless Steel Riser (0.21-143.05' bgs)
- Bentonite Seal (140-142' bgs)
- #0 Silica Sand Pack (141-155' bgs)
- 2" #304 Stainless Steel 0.010" slotted screen 143.05-152.65' bgs)
- 2" Stainless Steel Sump (152.65-153' bgs)
- Bentonite Cement Grout (155-165' bgs)

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Analytical soil sample collected from 9-11' bgs.
Vertical and horizontal fracutures are called out in the geologic descriptions due to high density of mechanical breaks.
Northing and easting provided in U.S. survey feet refrenced to New York State Plane Central Zone NAD 83. Elevations are in U.S. survey feet refrenced to the North American Vertical Datum of 1988 (NAVD 88).

Client: Bristol-Myers Squibb

Well/Boring ID: BDA-17RX

Borehole Depth: 165' bgs

Site Location:

Bristol-Myers Squibb
Thompson Road
East Syracuse, NY

Depth (ft. bgs) / Elevation (ft. AMSL)	Sample Run Number	Sample/Int/Type	RQD (%)	Recovery (feet)	PID Headspace (ppm)	Geologic Column	Bedrock Fractures	Stratigraphic Description	Well Construction
260 / 160	Run 5	155-165'	17.2	9.7	0.0		MB	Reddish brown (2.5YR 3/4) SHALE, very finely laminated, slight - moderate weathering, hard [Bedrock]	Bentonite Cement Grout (155-165' bgs)
255 / 165							MB	Greenish gray (GLEY 1 5/10GY) SHALE, finely laminated, slight weathering, hard, interbedded gypsum veins at 163.3, 163.4, 163.5, 163.7, 163.8, and 164' bgs [Bedrock]	
							HF	Horizontal Fracture at 164.9' bgs. End of boring 165' bgs.	
250 / 170									
245 / 175									

ARCADIS Design & Consultancy for natural and built assets

Remarks: bgs = below ground surface; HF = horizontal fracture; MB = mechanical break; VF = vertical fracture; ' = feet; " = inches.
Soil samples were screened using a 11.7 eV lamp.
Analytical soil sample collected from 9-11' bgs.
Vertical and horizontal fracutures are called out in the geologic descriptions due to high density of mechanical breaks.
Northing and easting provided in U.S. survey feet refrenced to New York State Plane Central Zone NAD 83. Elevations are in U.S. survey feet refrenced to the North American Vertical Datum of 1988 (NAVD 88).

ATTACHMENT 2

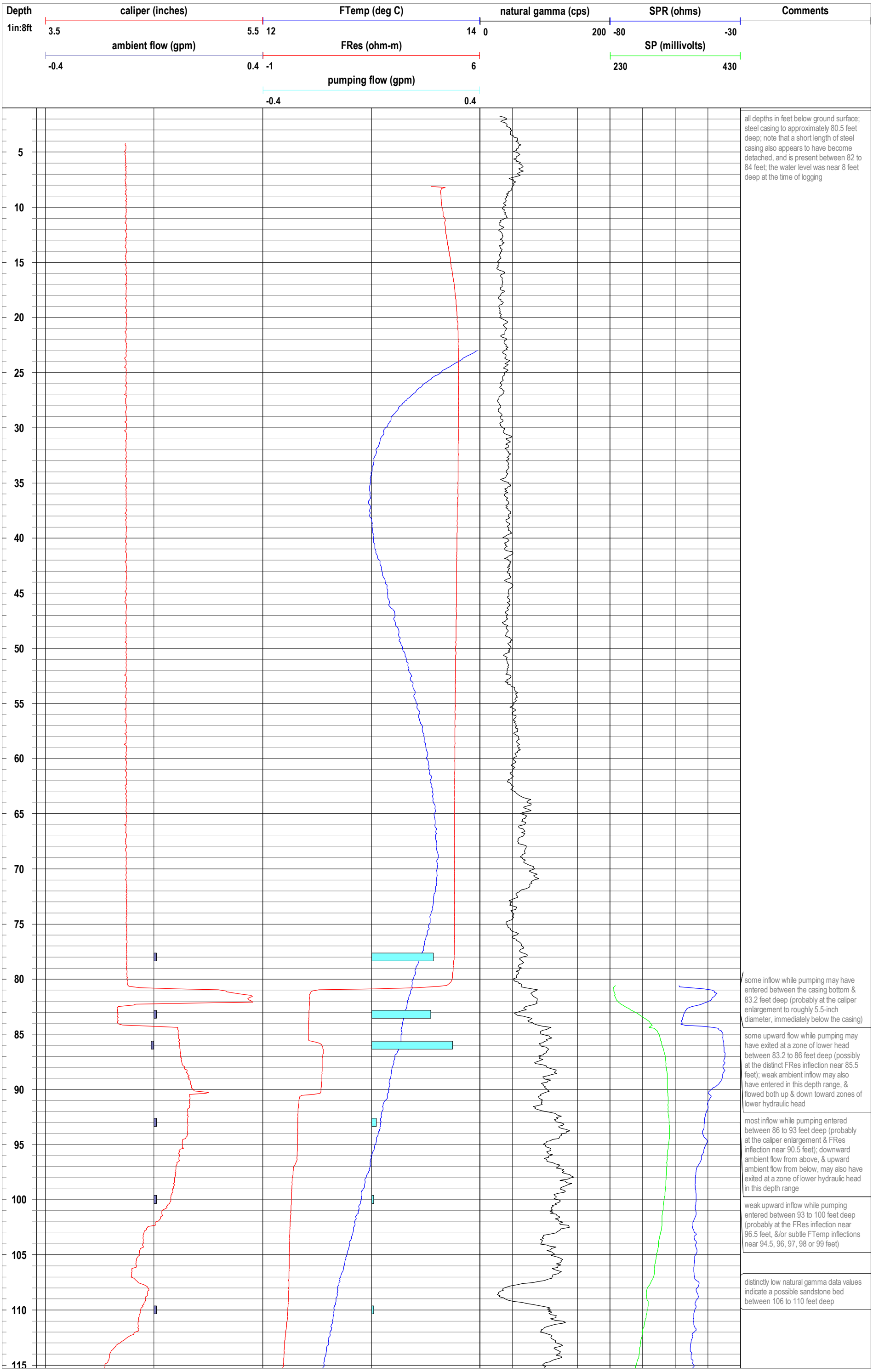
Soil and Bedrock Core Photologs
(provided in electronic file format only)

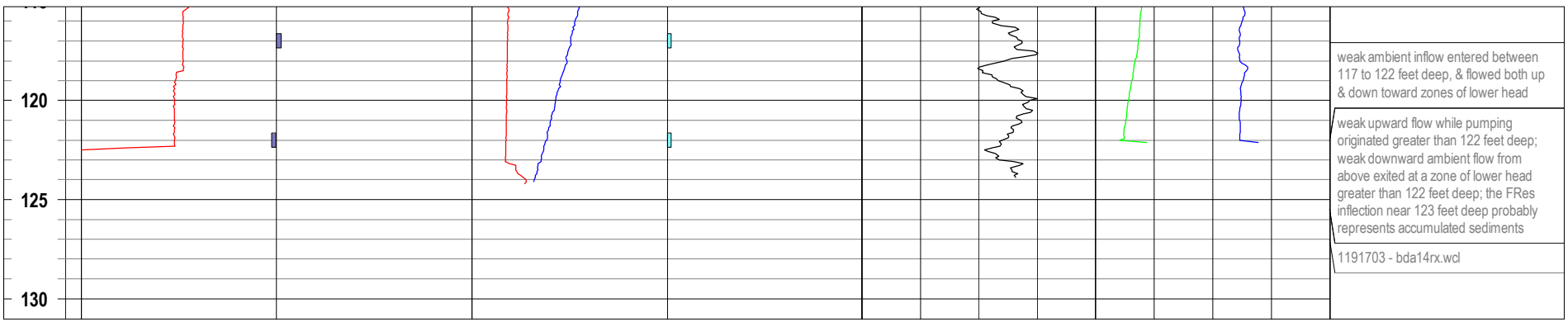
ATTACHMENT 3

Geophysical Logs, Packer Testing Results, and Televiewing Files

Bedrock Geophysical Logs

ARCADIS / East Syracuse, NY - BDA-14RX conventional log plot



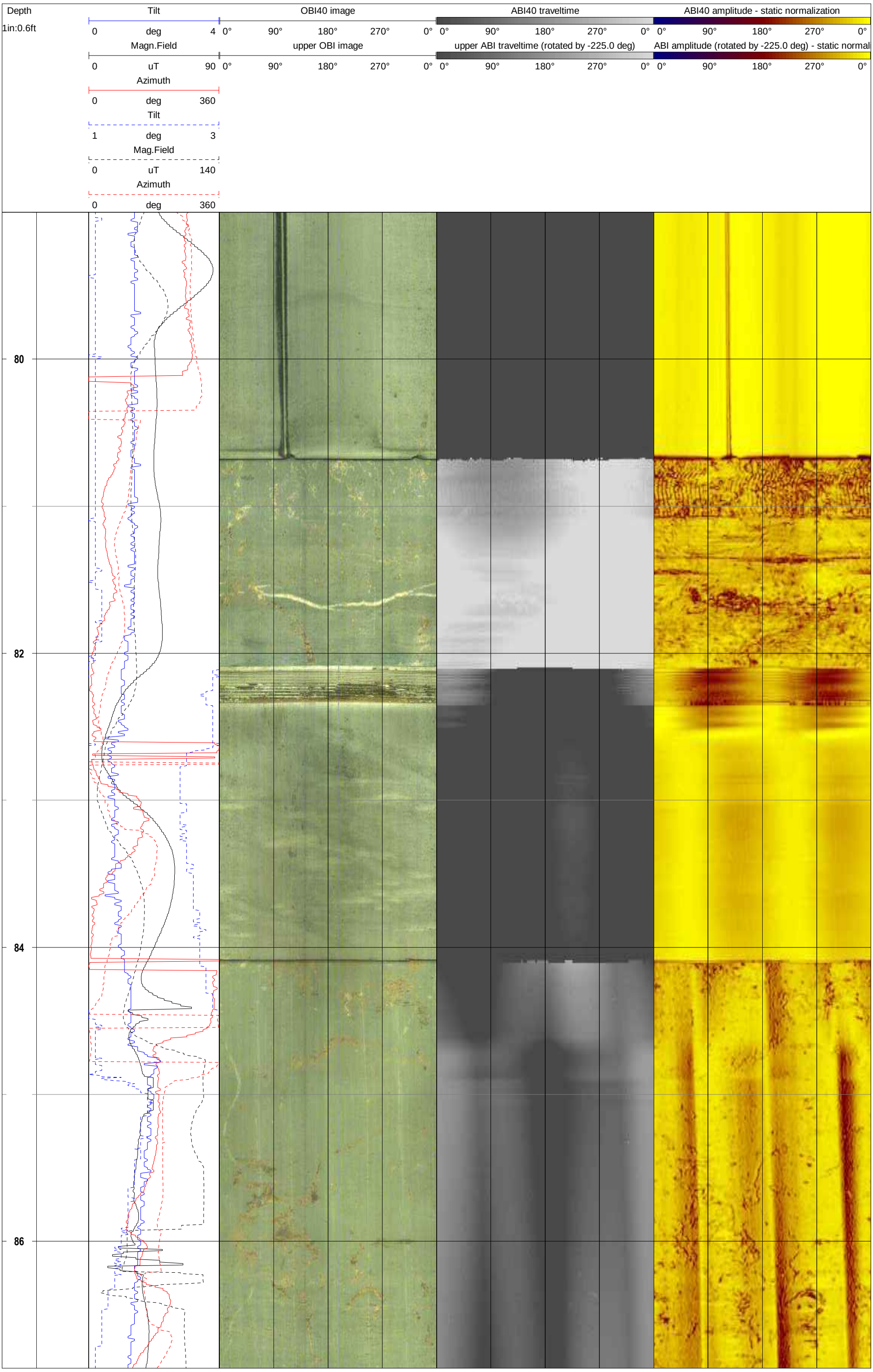


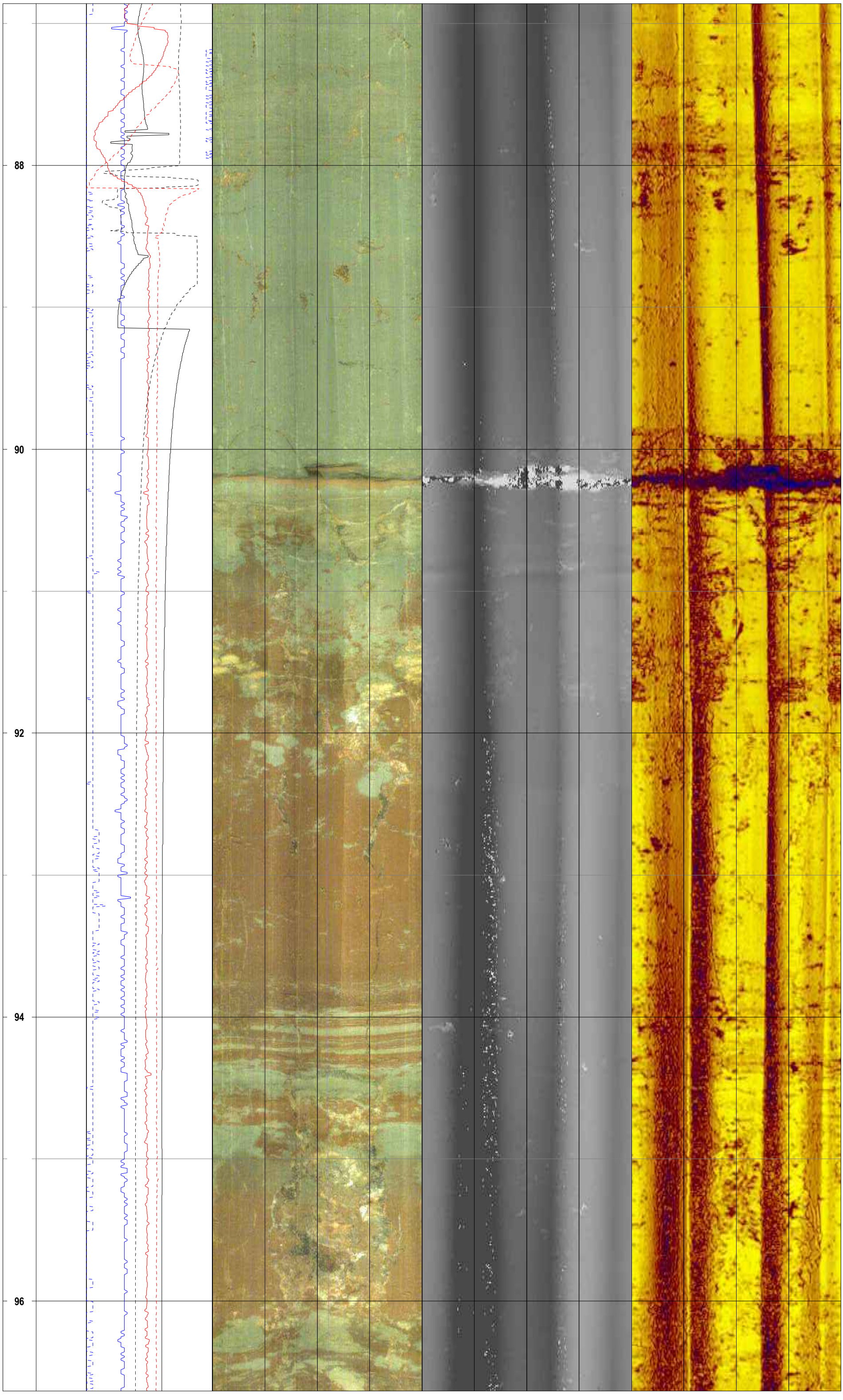
weak ambient inflow entered between 117 to 122 feet deep, & flowed both up & down toward zones of lower head

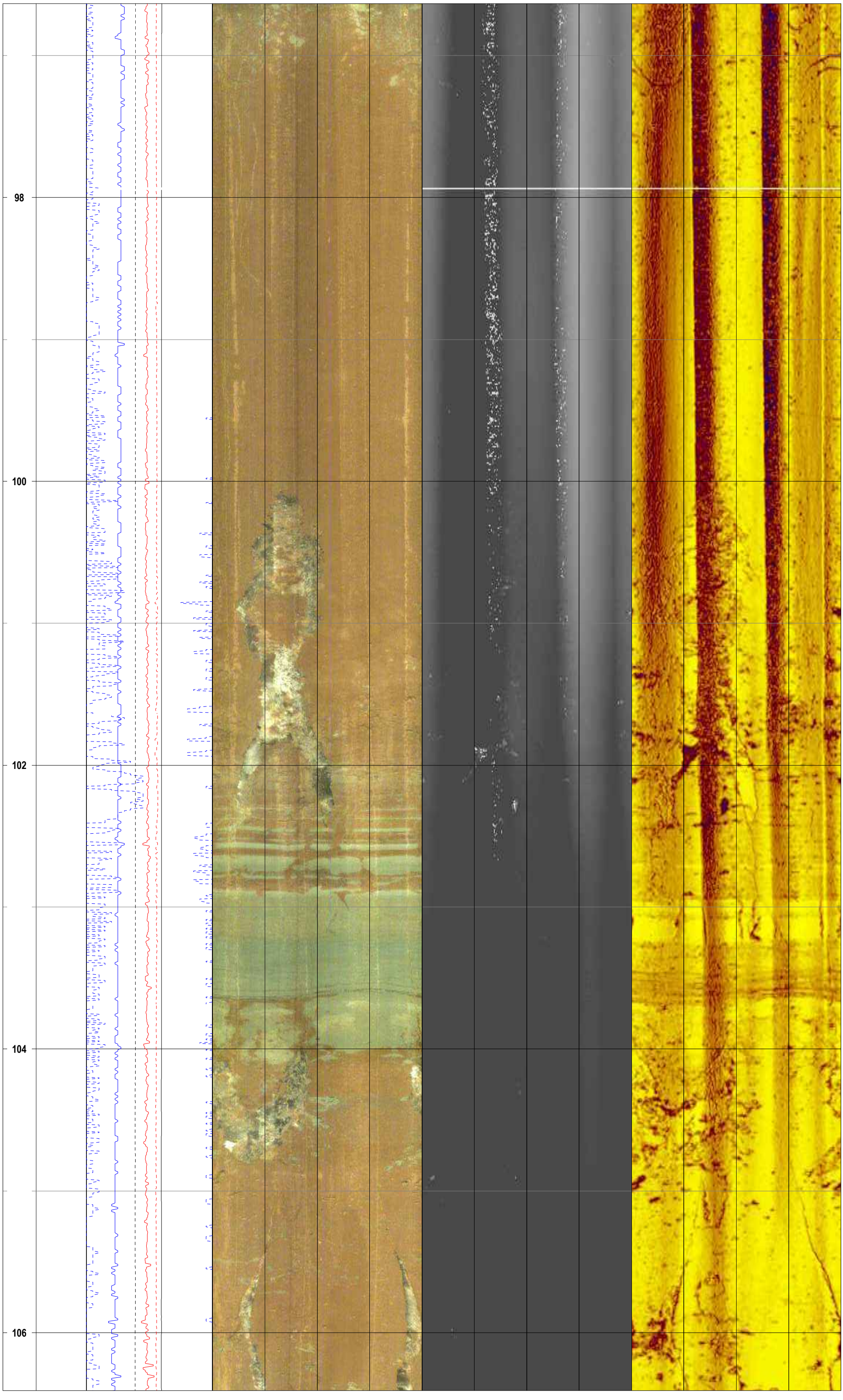
weak upward flow while pumping originated greater than 122 feet deep; weak downward ambient flow from above exited at a zone of lower head greater than 122 feet deep; the FRes inflection near 123 feet deep probably represents accumulated sediments

1191703 - bda14rx.wcl

ARCADIS / East Syracuse, NY - BDA-14RX optical & acoustic televiewer log plot




88
90
92
94
96


98
100
102
104
106

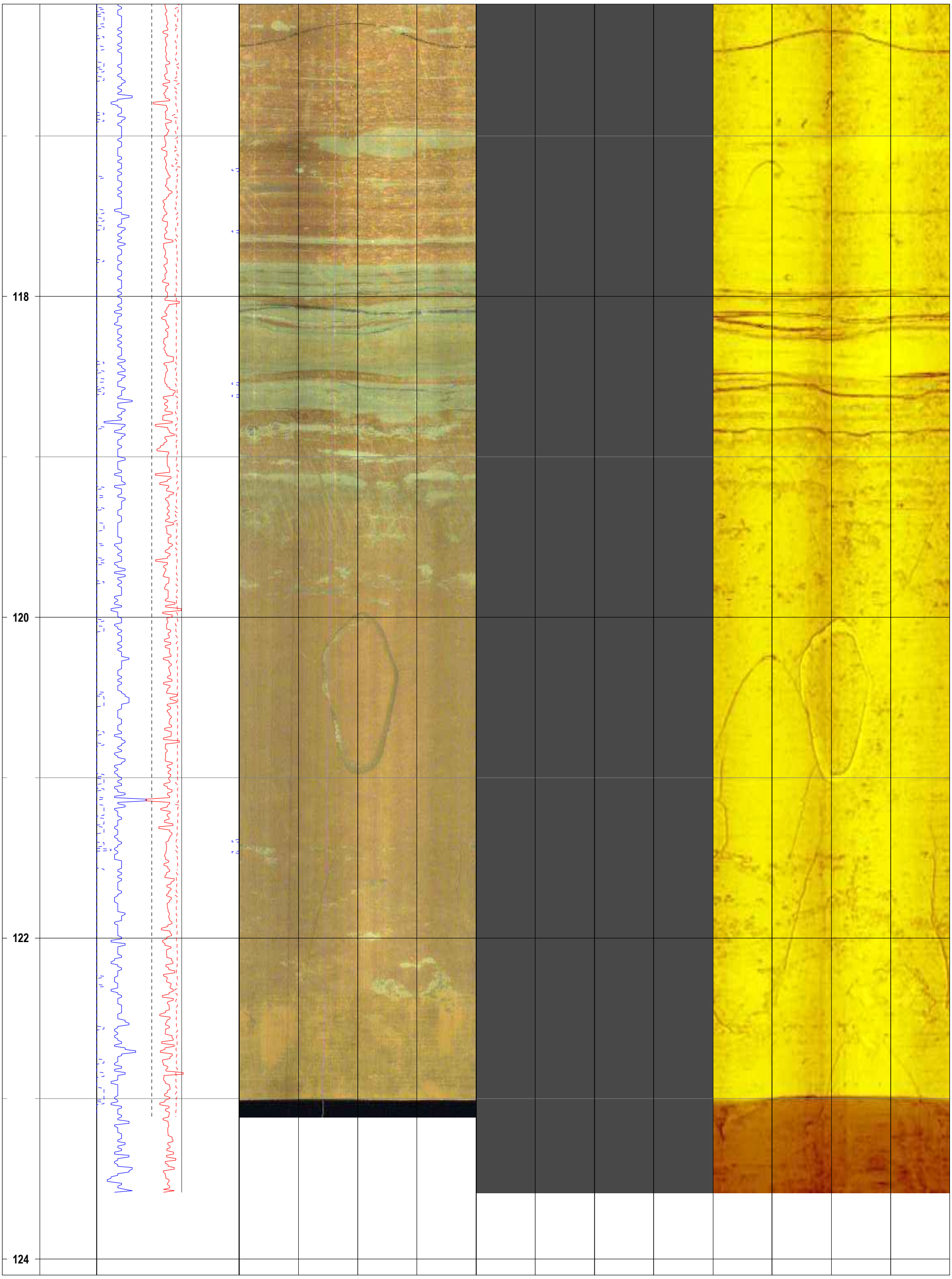
108

110

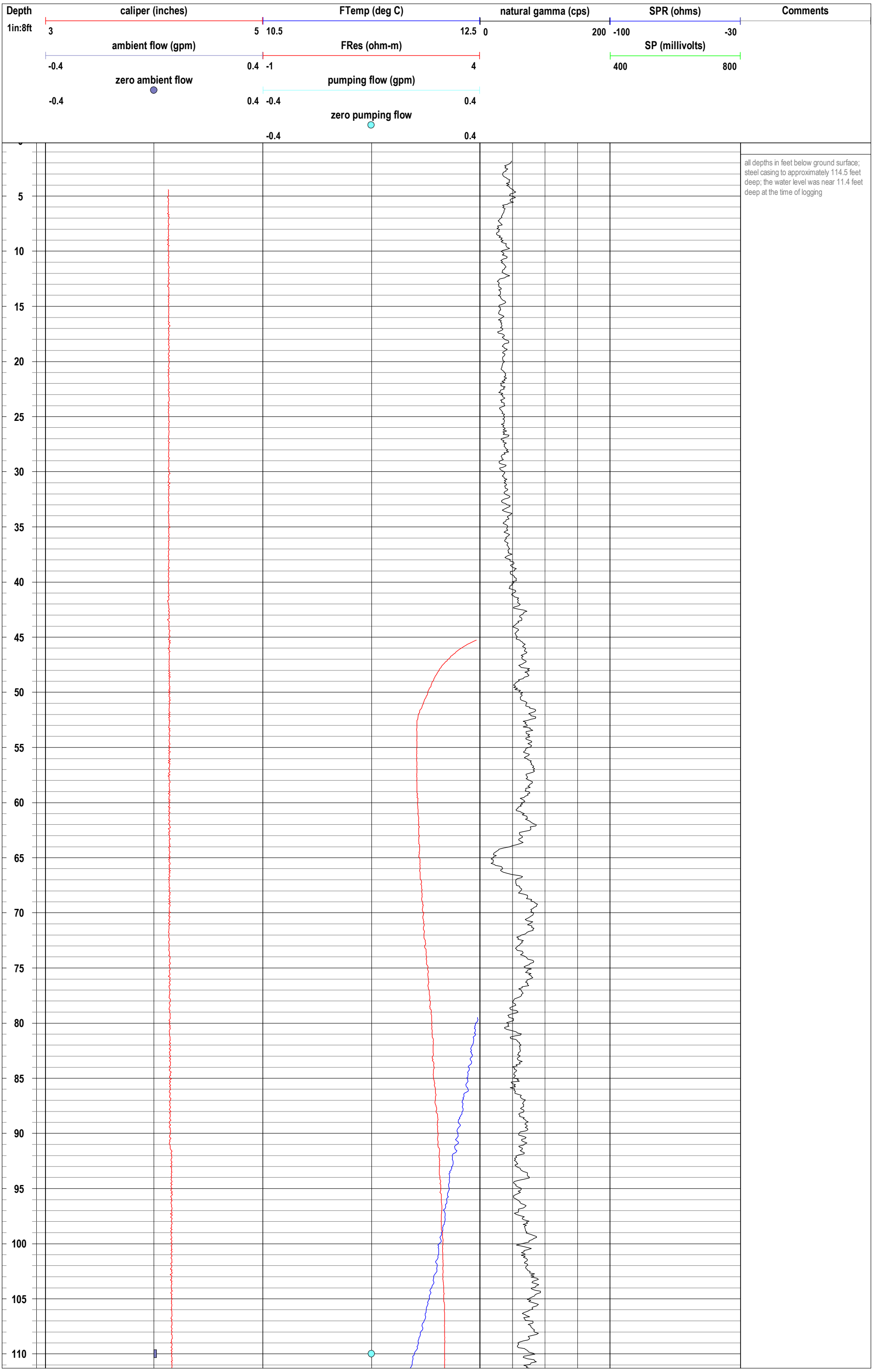
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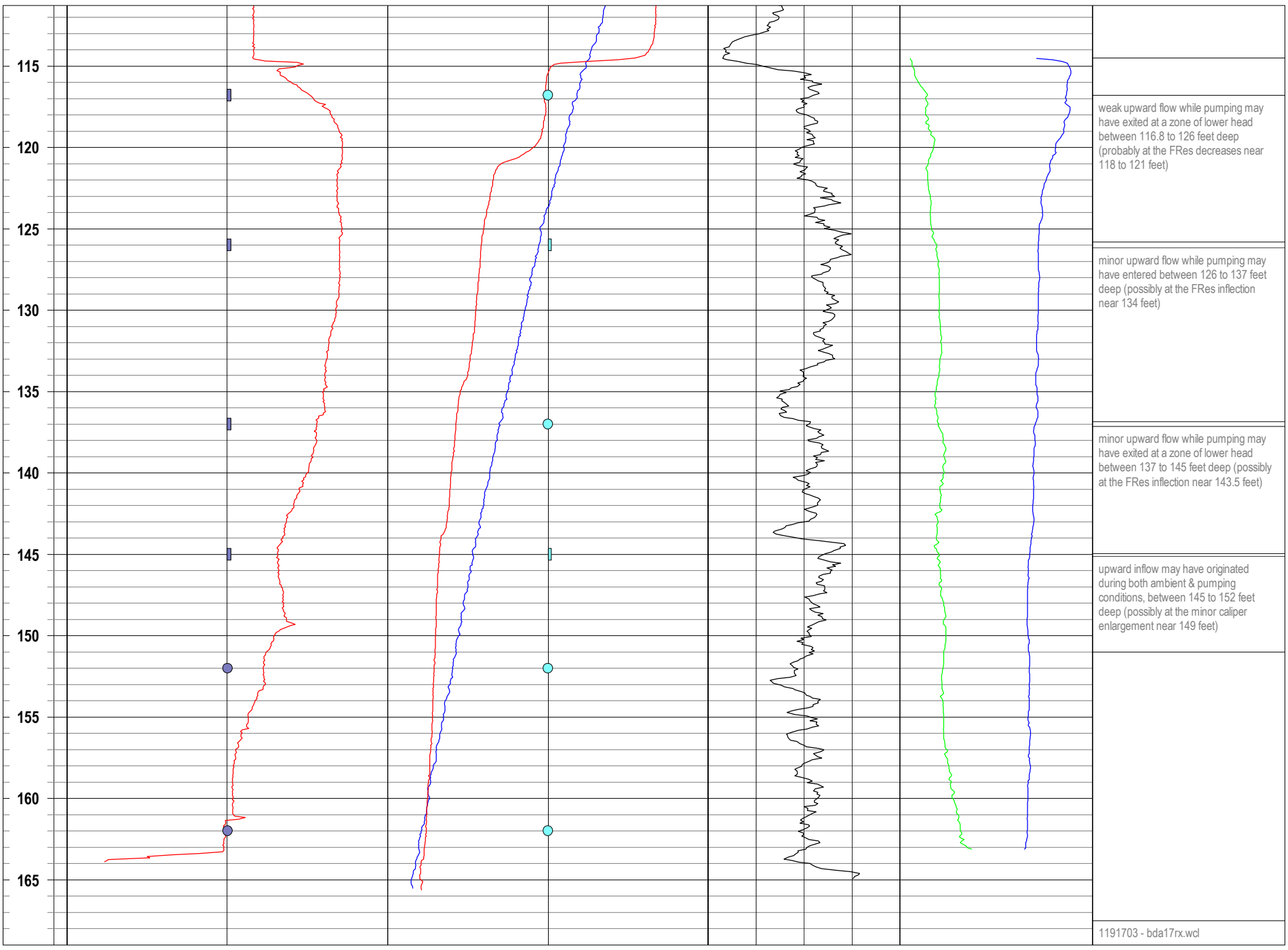
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116

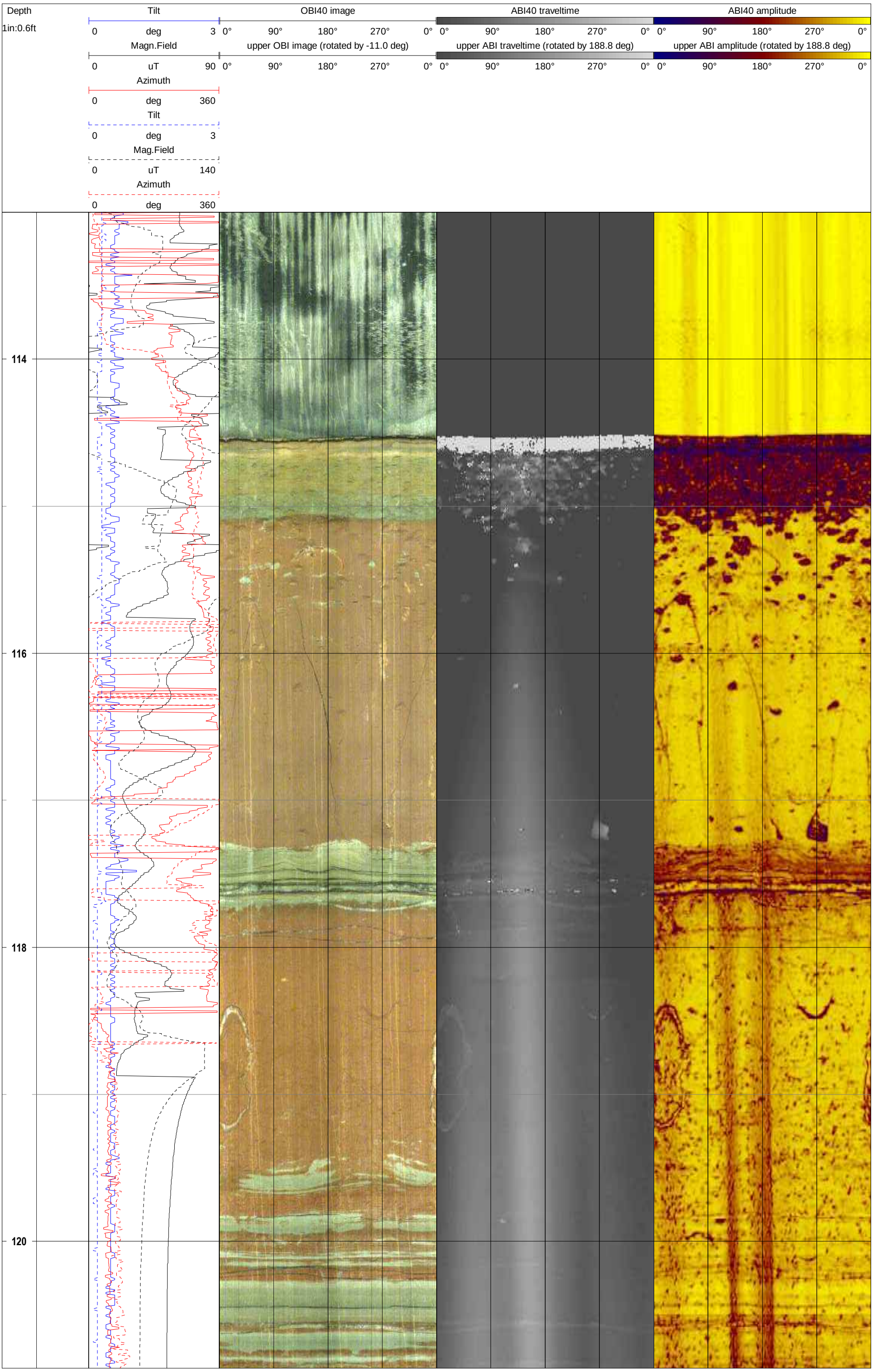

118
120
122
124

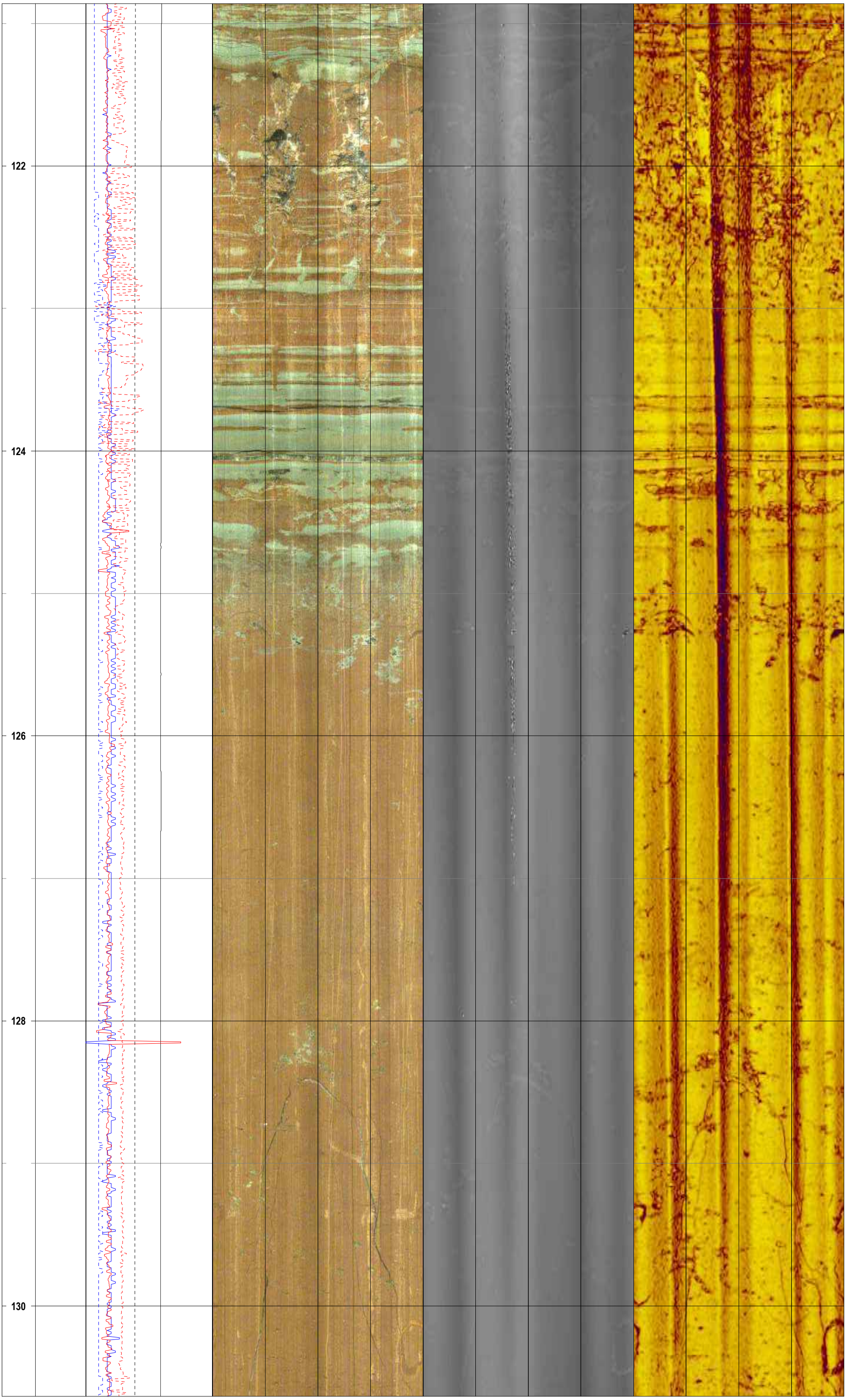
ARCADIS / East Syracuse, NY - BDA-17RX conventional log plot

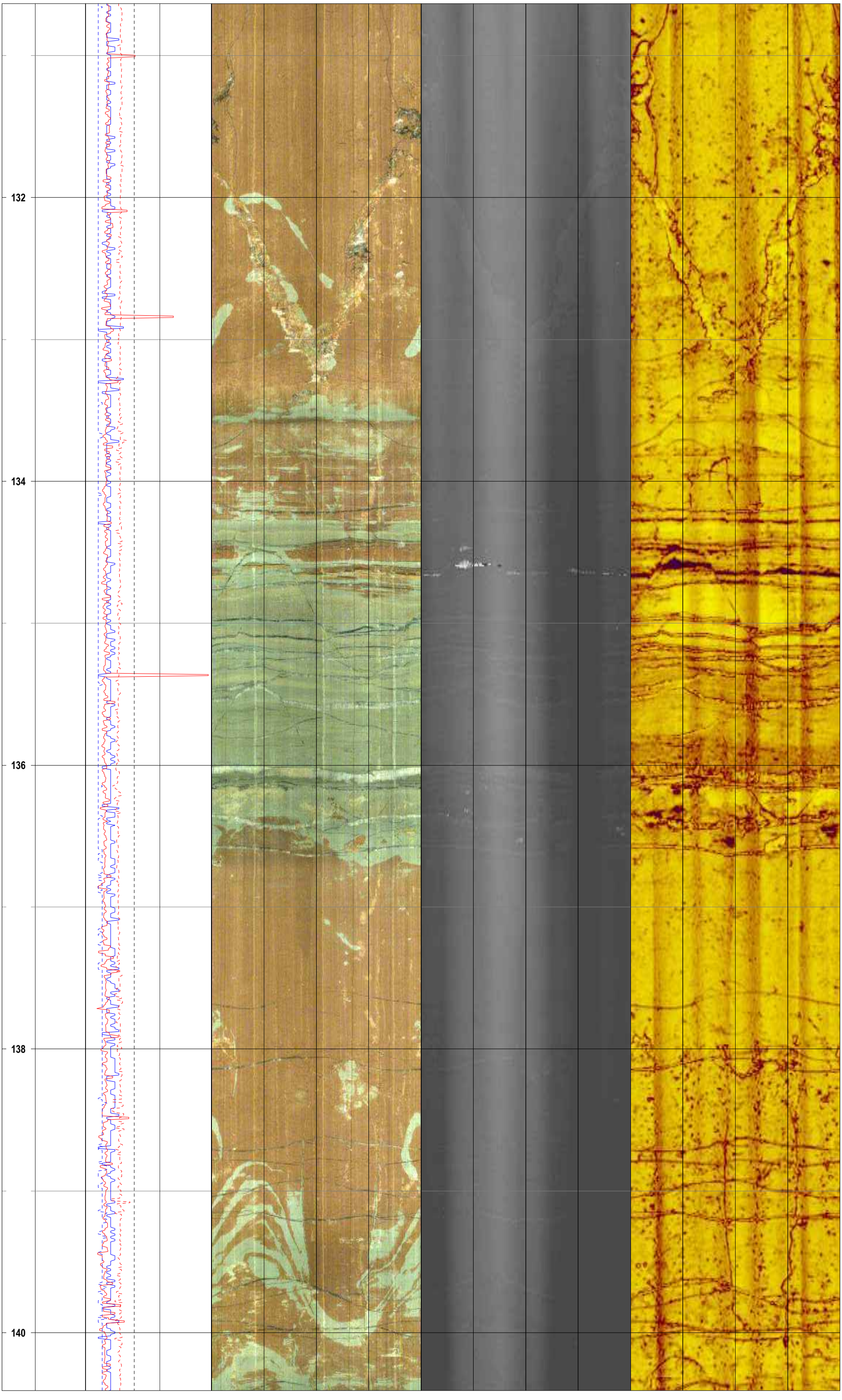


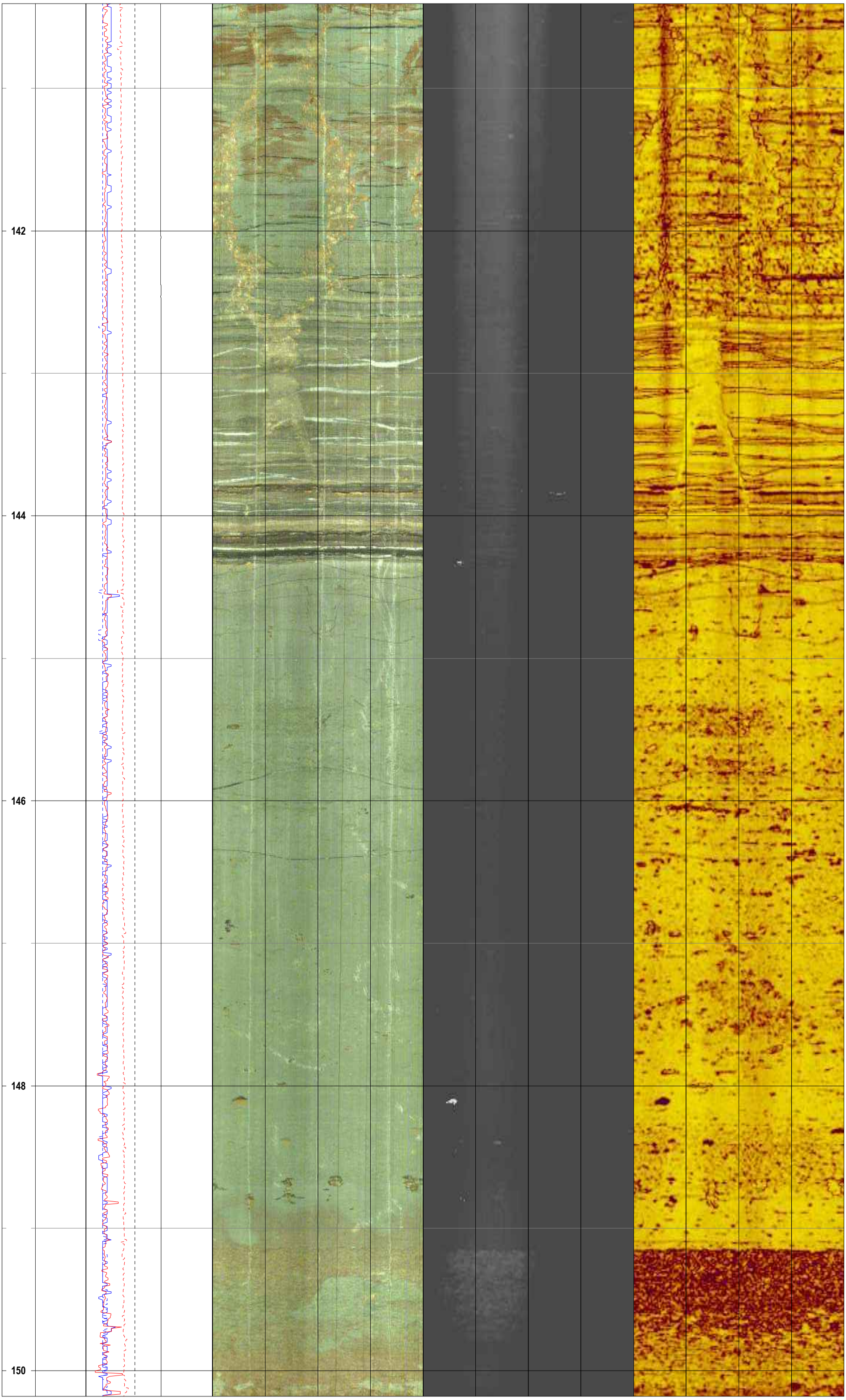

115
120
125
130
135
140
145
150
155
160
165
weak upward flow while pumping may have exited at a zone of lower head between 116.8 to 126 feet deep (probably at the FRes decreases near 118 to 121 feet)
minor upward flow while pumping may have entered between 126 to 137 feet deep (possibly at the FRes inflection near 134 feet)
minor upward flow while pumping may have exited at a zone of lower head between 137 to 145 feet deep (possibly at the FRes inflection near 143.5 feet)
upward inflow may have originated during both ambient & pumping conditions, between 145 to 152 feet deep (possibly at the minor caliper enlargement near 149 feet)
1191703 - bda17rx.wcl

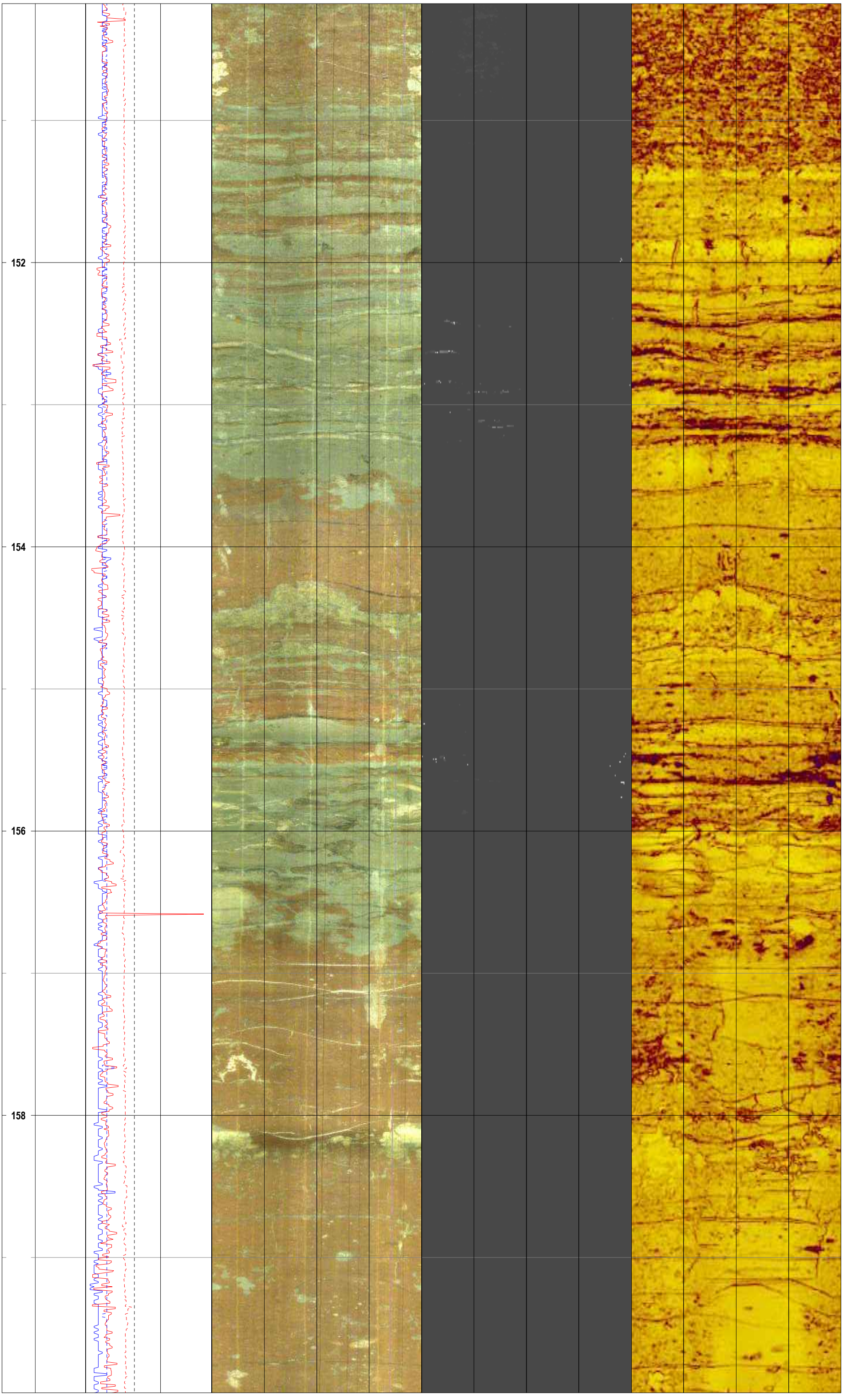
ARCADIS / East Syracuse, NY - BDA-17RX optical & acoustic televiewer log plot

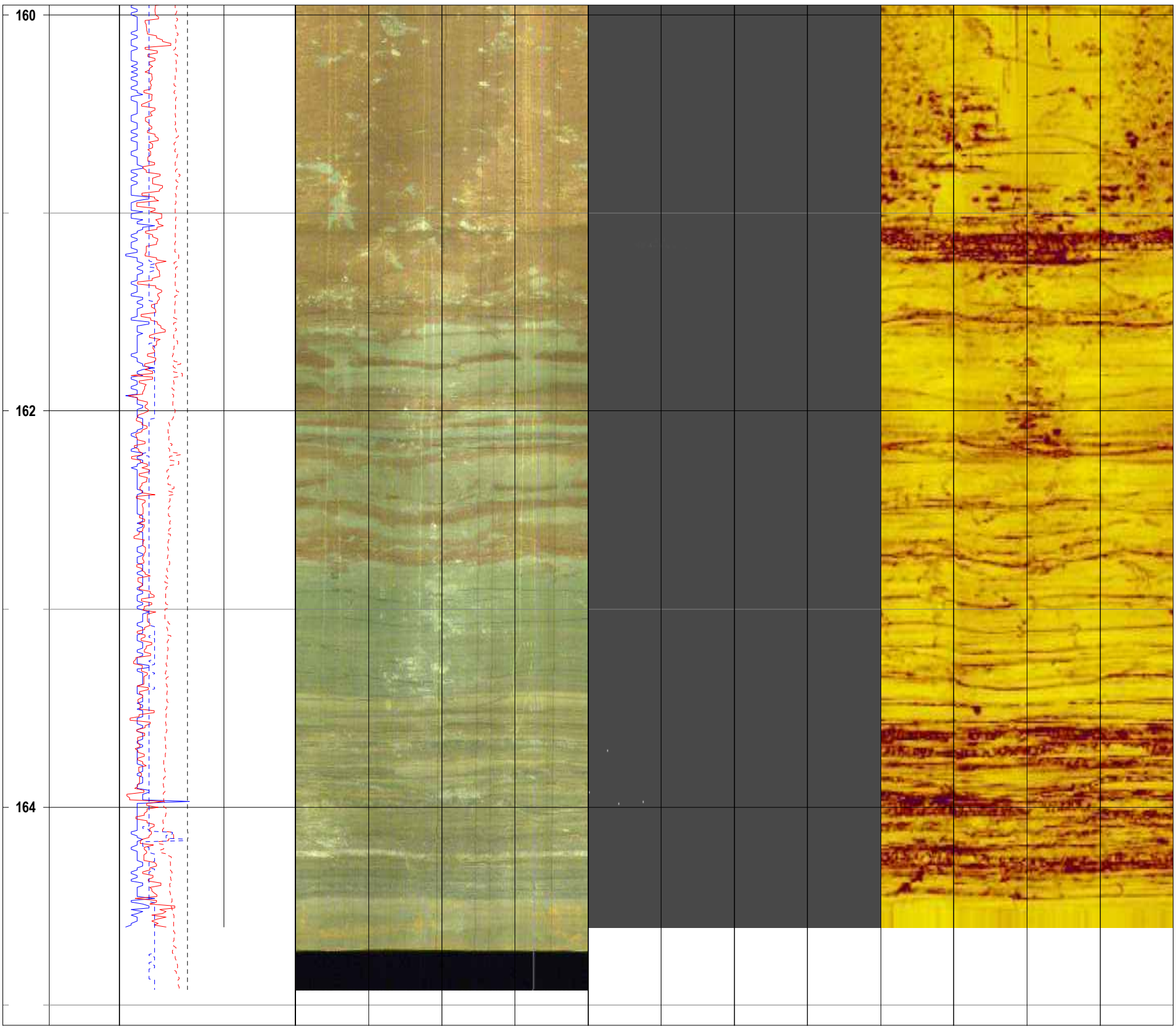



122
124
126
128
130


132
134
136
138
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142
144
146
148
150


152
154
156
158


160
162
164

Packer Testing Logs

Packer Test Data Sheet
"Falling" or "Rising" Head Test

ARCADIS

Site: BMS E Syracuse
Date: 9/4/19
Diameter of Corehole: 3.78"
Depth of Well Casing (bgs): 114.5' bgs

Well Location: BDA-17RX
Packer Interval: 115-125
Diameter of Standpipe: 2"
Height of Standpipe (ags): 2.1'

Elapsed Time (min)	Depth to Water (Inside Standpipe) (feet)	Depth to Water (Outside Standpipe) (feet)	Comments
0	0.36	17.75	
2	0.38	17.42	
4	0.43	17.44	
6	0.44	17.44	
8	0.46	17.44	
10	0.48	17.44	
12	0.49	17.44	
14	0.52	17.44	
16	0.54	17.44	

$V = \pi r^2 \cdot h$

$r = 0.083$

$h = 0.18$

$V = 0.00396\ ft^3$

$f = \frac{0.00369\ ft^3}{16\ min}$

$f = 0.000247\ ft^3/min$

$f = 0.000247 \times \frac{28316\ ml}{1\ ft^3}$

$f = 7.01\ ml/min$

Packer Test Data Sheet
"Falling" or "Rising" Head Test

ARCADIS

Site: BMS Syracuse
Date: 9/4/19
Diameter of Corehole: 3.78"
Depth of Well Casing (bgs): 114.5'

Well Location: BDA-17RX
Packer Interval: 125-135
Diameter of Standpipe: 2"
Height of Standpipe (ags): 2.1'

Elapsed Time (min)	Depth to Water (Inside Standpipe) (feet)	Depth to Water (Outside Standpipe) (feet)	Comments
0	0.11	16.20	
2	6.21	16.25	
4	6.29	16.26	
6	0.37	16.27	
8	0.44	16.27	23.36 ml/min
10	0.52	12.627	
12	0.60	16.28	
14	0.65	16.28	
16	0.71	16.28	

Packer Test Data Sheet
"Falling" or "Rising" Head Test

ARCADIS

Site: BMS E structure
Date: 9/5/19
Diameter of Corehole: 3.784
Depth of Well Casing (bgs): 114.5'

Well Location: BDA-17Rx
Packer Interval: 135-145
Diameter of Standpipe: 2"
Height of Standpipe (ags): 2.1'

Elapsed Time (min)	Depth to Water (Inside Standpipe) (feet)	Depth to Water (Outside Standpipe) (feet)	Comments
0	0.20	17.00	
2	0.25	16.96	
4	0.31	16.94	
6	0.36	16.93	
8	0.40	16.92	
10	0.44	16.90	
12	0.47	16.90	
14	0.50	16.89	
16	0.55	16.88	

136 ml/min

Packer Test Data Sheet
"Falling" or "Rising" Head Test

ARCADIS

Site: BMS E Syracuse
Date: 9/5/19
Diameter of Corehole: 3 7/8"
Depth of Well Casing (bgs): 114.5'

Well Location: BDA-17R1
Packer Interval: 145-155
Diameter of Standpipe: 2"
Height of Standpipe (ags): 2.1'

Elapsed Time (min)	Depth to Water (Inside Standpipe) (feet)	Depth to Water (Outside Standpipe) (feet)	Comments
0	0.22	21.91	
2	0.96	21.65	
4	1.35	21.52	
6	1.74	21.46	
8	2.12	21.44	
10	2.44	21.44	
12	2.79	21.44	
14	3.20	21.43	
16	3.41	21.43	

V = 0.022.4
V = 0.07 ft3
16 min
0.0044 ft3/min
28316 mL
1 ft3
124.2 mL/min

Packer Test Data Sheet
"Falling" or "Rising" Head Test

© ARCADIS

Site: BMS E Syracuse
Date: 9/6/14
Diameter of Corehole: 3 7/8"
Depth of Well Casing (bgs): 114.5'

Well Location: BCA-17Rx
Packer Interval: 155-165
Diameter of Standpipe: 2"
Height of Standpipe (ags): 2.5'

Elapsed Time (min)	Depth to Water (Inside Standpipe) (feet)	Depth to Water (Outside Standpipe) (feet)	Comments
0	0.15	16.05	1145.6 ml/min
2	0.91	15.95	
4	1.59	15.79	
6	2.0	15.20	
8	2.44	15.68	
10	2.89	15.67	
12	3.20	15.66	
14	3.53	15.66	
16	3.89	15.67	

Packer Test Data Sheet
"Falling" or "Rising" Head Test

ARCADIS

Site: BMS E SYRACUSE
Date: 9/9/19
Diameter of Corehole: ~~3.75"~~
Depth of Well Casing (bgs): 83

Well Location: BDA-14RX
Packer Interval: ~~84-9~~
Diameter of Standpipe: 2"
Height of Standpipe (ags): 3.2

Elapsed Time (min)	Depth to Water (Inside Standpipe) (feet)	Depth to Water (Outside Standpipe) (feet)	Comments
0	6.20	9.78	
2	2.40	9.80	
4	4.86	9.80	
6	6.50	9.80	
8	7.91	9.81	
10	9.01	9.81	
12	9.87	9.81	425.2 ml/min
14	10.52	9.81	
16	11.12	9.81	

Packer Test Data Sheet
"Falling" or "Rising" Head Test

ARCADIS

Site: BMS Syracuse
Date: 9/9/14
Diameter of Corehole: 3.75"
Depth of Well Casing (bgs): 83'

Well Location: BDA-14R1
Packer Interval: 94-104
Diameter of Standpipe: 2"
Height of Standpipe (ags): 4.6'

Elapsed Time (min)	Depth to Water (Inside Standpipe) (feet)	Depth to Water (Outside Standpipe) (feet)	Comments
0	0.1	10.81	
2	0.38	10.91	
4	0.61	10.93	
6	0.81	10.94	
8	0.92	10.94	
10	1.07	10.94	52.9 ml / min
12	1.21	10.94	
14	1.35	10.94	
16	1.46	10.94	

Packer Test Data Sheet
"Falling" or "Rising" Head Test

ARCADIS

Site: BMP E Stock
Date: 4/10/19
Diameter of Corehole: 5 7/8"
Depth of Well Casing (bgs): 83'

Well Location: BDA-14RX
Packer Interval: 104-114
Diameter of Standpipe: 2"
Height of Standpipe (ags): 4.3'

Elapsed Time (min)	Depth to Water (Inside Standpipe) (feet)	Depth to Water (Outside Standpipe) (feet)	Comments
0	6.10	11.14	
2	1.30	11.21	
4	2.25	11.22	
6	3.19	11.22	
8	3.91	11.22	
10	4.46	11.22	
12	5.35	11.22	
14	5.96	11.22	
16	6.48	11.22	

248.4 ml/min

Packer Test Data Sheet
"Falling" or "Rising" Head Test

ARCADIS

Site: BMS E Syracuse
Date: 9/16/19
Diameter of Corehole: 3.78"
Depth of Well Casing (bgs): 83'

Well Location: BDA-14RX
Packer Interval: 114-124
Diameter of Standpipe: 2"
Height of Standpipe (ags): 4.1'

Elapsed Time (min)	Depth to Water (Inside Standpipe) (feet)	Depth to Water (Outside Standpipe) (feet)	Comments
0	0.11	11.69	
2	0.53	11.90	
4	0.79	11.99	
6	0.87	12.0	51.8 ml/min
8	1.01	12.01	
10	1.12	12.02	
12	1.23	12.02	
14	1.36	12.02	
16	1.44	12.02	

Televiewing Files
(provided in electronic file format only)

ATTACHMENT 4

Bedrock Well Construction Summaries

Well ID: **BDA-14RX**
Ground Elevation: 413.98 feet
GW Elevation: 405.95 feet
(October 29, 2019)

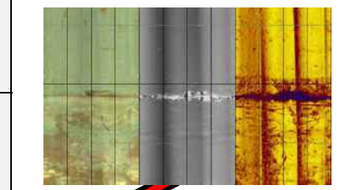
Well Construction
Screen: 89.05-98.65 ft bgs
Bottom of Well: 99.0
Sand Pack: 87.0-101.0 ft bgs
Bentonite Seal: 85.0-87.0 ft bgs
Grout: 0-85.0 ft bgs

Corehole Backfill
Bentonite 101.0-124.0 ft bgs

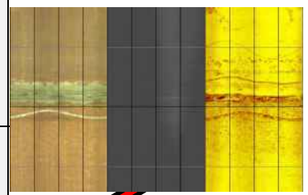


Lithologic Description	Packer Flow (ml/min.)	PID (ppm)	RQD	Elevation (ft amsl)	4-inch Steel Casing set at 83 feet bgs	Depth (ft bgs)	Geophysical Logging & Down-Hole Televiewing Observations
Greenish gray turning reddish brown at 91', moderately weathered	425	ND	38.2%	330–325		84–89	
				324–322		90–92	Possible moderate to large sized horizontal fracture (Caliper enlargement) at 90.5'
				321		93	
Reddish brown Shale with gypsum nodules ar 94.8 and 95.5', moderate to highly weatherd.				320–319		94–95	
Reddish brown Shale with gypsum and mica nodule from 106.2 - 106.8', slightly weathered.	53	ND	26.9%	318–313		96–101	Subtle Fres decrease around 96'
				312–311		102–103	
Greenish gray fine - medium grained Sandstone with gypsum veins over 107.2 - 1-7.4', slightly weathered	248	ND	36.5%	310–304		104–110	Low natural gamma data values indicate possible Sandstone bed from 106 - 110'
Reddish brown Shale with rare interbedded gypsum veins, slightly weathered.				303–301		111–113	Possible small horizontal fracture at 112.2'
Greenish gray from 114 - 115.5' and 117.5 - 119, reddish brown from 115.5 - 117.5' and 119 - 124' Shale with occasionally interbedded gypsum vein, slightly weathered.	52	ND	0.0%	300–291		114–123	Possible small 45º fracture at 114.6' Possible small 45º fracture at 115.1' Possible small 45º fracture at 117' Possible small horizontal fractures around 119' Possible small vertical fracture from 121.1 - 122.9'
				290		124	

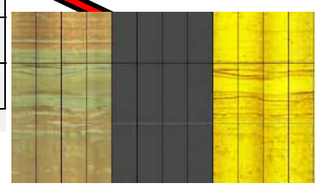
Bottom of corehole at 124' bgs.











Notes:
PID=Photoionization Detector
RQD=Rock Quality Designation

	Sand
	Bentonite
	Grout

Well ID: **BDA-17RX**
Ground Elevation: 419.20 feet
GW Elevation: 307.43 feet
(October 29, 2019)

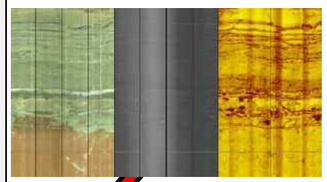
Well Construction
Screen: 143.05-152.65 ft bgs
Bottom of Well: 153.0
Sand Pack: 141.0-155.0 ft bgs
Bentonite Seal: 139.0-141.0 ft bgs
Grout: 0-139.0 ft bgs

Corehole Backfill
Bentonite: 155.0-165.0 ft bgs



Lithologic Description	Packer Flow (ml/min.)	PID (ppm)	RQD	Elevation (ft amsl)	4-inch Steel Casing set at 115 feet bgs	Depth (ft bgs)	Geophysical Logging & Down-Hole Televiewing Observations
Dark reddish brown and greenish gray Shale with occasional interbedded gypsum slightly weathered	7	ND	24.6%	306–297	Grout	115–124	
						125	Distinct Fres decrease around 118 - 121'
Dark reddish brown Shale with rare gypsum nodules, slightly weathered.	23	ND	34.7%	296–287	Grout	125–134	
						135	Possible very fine vertical fracture 130-131.8'
Greenish gray Shale with frequent interbedded gypsum, modeate to highly weathered.	14	ND	4.9%	286–277	Grout	135–144	Possible moderate sized horizontal fracture and subtle Fres decrease around 134-135'
Dark reddish brown Shale with rare gypsum nodules, slightly weathered.				286–281	Grout	135–140	
				280	Bentonite	141	
Greenish gray Shale with frequent interbedded gypsum, modeate to highly weathered.				279–278	Sand	142–143	Subtle Fres decrease around 143.5'
				277		144	
Greenish gray Shale with rare gypsum nodules, slight to moderate weathering.	124	ND	18.7%	276–268		145–153	Minor caliper enlargement at 149'
Alternating bands of greensih gray and reddish brown Shale with rare interbedded gypsum, moderate weathering				267		154	Possible moderate sized 45º fracture at 153.7'
Greenish gray mottled reddish brown Shale, highly weatherd.	146	ND	17.2%	266–257	Sand	155–164	`
Reddish brown Shale, slightly weathered.				265–261	Bentonite	156–160	
Greenish gray Shale with frequent interbedded gypsum, slightly weathered.				260–257		161–164	Minor caliper enlargement at 161'
				256		165	Possible moderate sized horizontal fracture at 164.9'

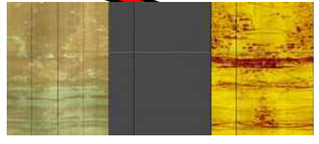
Bottom of corehole at 165' bgs.











Notes:
PID=Photoionization Detector
RQD=Rock Quality Designation

Sand
Bentonite
Grout

ATTACHMENT 5

Monitoring Well Development Logs

Site | Event

GROUND-WATER SAMPLING LOG

Sampling Personnel: Nicholas Kanaver | **Well ID:** BDA - 14RX
Client / Job Number: | **Date:**
Weather: | **Time In:** 1340 **Time Out:** 1250 10/21 10/22

Well Information

Depth to Water:	(feet)	7.64'	(from MP)
Total Depth:	(feet)	99.02	(from MP)
Length of Water Column:	(feet)	91.38	
Volume of Water in Well:	(gal)	14.89	
~~Three~~ 10 Well Volumes:	(gal)	148.9 Gal	

Well Type:		(Flushmount)		Stick-Up
Well Material:		(Stainless Steel)		(PVC)
Well Locked:		Yes		(No)
Measuring Point Marked:		(Yes)		No
Well Diameter:	1"	(2")	Other:	

Purging Information

Purging Method:	Bailer	Peristaltic	(Waterra)	Other:
Tubing/Bailer Material:	Steel	(Polyethylene)	Teflon	Other:
Sampling Method:	Bailer	Peristaltic	Waterra	(Other: NA)

Duration of Pumping: (min) 280
Average Pumping Rate: ~~L/min~~ ~~(ml/min)~~ 0.88 Water-Quality Meter Type: HORIBA
Total Volume Removed: (gal) 150 Did well go dry: Yes (No)

Conversion Factors				
gal / ft. of water	1" ID	2" ID	4" ID	6" ID
	0.041	0.163	0.653	1.469
1 gal = 3.785 L =3785 ml = 0.1337 cubic feet				

Unit Stability			
pH	DO	Cond.	ORP
± 0.1	±10%	± 3.0%	± 10 mV

10/21 → 10/22

Parameter:	1	2	3	4	5	6	7	8	9
	1340	1400	1420	1440	1500	1130	1150	1205 ~~1200~~	1220
Volume Purged (gal)	0	15	30	45	60	75	90	105	120
Rate (~~mL/min~~ Gal/min)	0.75	0.75	0.75	0.75	0.75	1.00	1.00	1.00	1.00
Depth to Water (ft.)	7.64	23.65	27.61	22.15	27.22	11.61	24.91	27.31	28.80
pH	8.60	8.29	7.70	7.62	7.63	7.71	7.68	7.70	7.67
Temp. (C)	14.78	14.25	14.05	14.22	14.14	14.50	14.15	13.98	13.96
Conductivity (mS/cm)	10.6	12.0	12.20	12.10	11.70	11.70	11.90	11.60	11.40
Dissolved Oxygen (mg/L)	0.00	0.00	0.00	0.67	0.35	0.23	0.00	0.21	0.12
ORP (mV)	200	-51	-114	-106	-121	-91	-120	-130	-127
Turbidity (NTU)	>1000	>1000	>1000	>1000	>1000	>1000	>1000	>1000	>1000
Notes:	///	///	///	///	///	///	///	///	///

Sampling Information

Analyses	#	Laboratory
Sample ID:	Sample Time:	
MS/MSD: Yes	No	
Duplicate: Yes	No	
Duplicate ID	Dup. Time:	
Chain of Custody Signed By:		

Problems / Observations

Site | Event

GROUND-WATER SAMPLING LOG

Sampling Personnel: Nicholas Kanaver | **Well ID:** BDA - 14Rx cont.
Client / Job Number: BMS | **Date:** 10/22/19
Weather: ~70°F cloudy | **Time In:** 1340 | **Time Out:** 10/21

Well Information

Depth to Water:	(feet)	7.64'	(from MP)
Total Depth:	(feet)	99.02'	(from MP)
Length of Water Column:	(feet)	91.38	
Volume of Water in Well:	(gal)	14.89	
~~Three~~ 10 Well Volumes:	(gal)	148.9	

Well Type:	(Flushmount)		Stick-Up
Well Material:	(Stainless Steel)		PVC
Well Locked:		Yes	(No)
Measuring Point Marked:		(Yes)	No
Well Diameter:	1"	(2")	Other:

Purging Information

Purging Method:	Bailer	Peristaltic	(Waterra)	Other:
Tubing/Bailer Material:	Steel	(Polyethylene)	Teflon	Other:
Sampling Method:	Bailer	Peristaltic	Waterra	(Other: NA)

Duration of Pumping:	(min)	280		
Average Pumping Rate:	~~(ml/min)~~	Gal/min 0.33	Water-Quality Meter Type:	HORIBA
Total Volume Removed:	(gal)	150	Did well go dry: Yes	(No)

Conversion Factors

gal / ft. of water	1" ID	2" ID	4" ID	6" ID
	0.041	0.163	0.653	1.469

1 gal = 3.785 L =3785 ml = 0.1337 cubic feet

Unit Stability

pH	DO	Cond.	ORP
± 0.1	±10%	± 3.0%	± 10 mV

10/22 →

Parameter:	1	2	3	4	5	6	7	8	9
	1235	1250							
Volume Purged (gal)	135	150							
Rate (mL/min)	1.00	~~7.00~~ SP							
Depth to Water (ft.)	29.21	28.68							
pH	7.66	7.68							
Temp. (C)	13.90	1388							
Conductivity (mS/cm)	11.20	11.10							
Dissolved Oxygen (mg/L)	0.69	0.50							
ORP (mV)	-125	-132							
Turbidity (NTU)	950	981							
Notes:	111								

Sampling Information

Analyses	#	Laboratory
Sample ID:	Sample Time:	
MS/MSD: Yes	No	
Duplicate: Yes	No	
Duplicate ID	Dup. Time:	
Chain of Custody Signed By:		

Problems / Observations

Pg _____ of _____

Site

WELL DEVELOPMENT LOG

Event

Sampling Personnel: N. KANAGER, E. GREEN
Well ID: BDA-17-INT
Client / Job Number: BMS / 300333396
Date: 9/24/19
Weather: ~65°F, LIGHT RAIN
Time In: 1000 Time Out: 1615

Well Information

Depth to Water:	(feet) 7.94	(from MP)
Total Depth:	(feet) 15.33	(from MP)
Length of Water Column:	(feet) 7.39	
Volume of Water in Well:	(gal) 1.2	

Well Type:	(Flushmount)		Stick-Up
Well Material:	(Stainless Steel)		PVC
Well Locked:		Yes	(No)
Measuring Point Marked:		(Yes)	No
Well Diameter:	1"	(2")	Other:

Purging Information

Purging Method:	Bailer	Peristaltic	(Waterra)	Other:
Tubing/Bailer Material:	Steel	Polyethylene	(Waterra)	Other:
Duration of Pumping:	(min) 170.0 MIN			
Average Pumping Rate:	(ml/min) 0.10	Water-Quality Meter Type:	(Horiba U-22/LaMotte 2020)	
Total Volume Removed:	(gal) 12.2	Did well go dry:	(Yes)	No

Conversion Factors				
gal / ft. of water	1" ID	2" ID	4" ID	6" ID
	0.041	0.163	0.653	1.469
1 gal = 3.785 L =3785 ml = 0.1337 cubic feet				

Parameter:	1	2	3	4	5	6	7	8	9	10	11	12	13
	1117	1125	1138	1358	1418	1434	1451	1529	1535	1549	1614		
Volume Purged (gal)	1.2	2.4	3.6	4.8	6.0	7.2	8.4	9.6	10.8	11.0	12.2		
Rate (~~ml/min~~ gal/MIN)	0.11	0.15	0.09	0.12	0.06	0.08	0.07	0.17	0.15	0.06	0.05		
Depth to Water (ft.)	10.46	12.82	14.25	6.43	9.71	11.69	13.42	6.76	8.36	10.98	13.32		
pH	7.10	6.76	7.02	7.17	7.09	6.98	7.14	7.10	7.15	7.36	7.36		
Temp. (C)	17.92	17.91	17.71	18.88	18.90	19.14	18.74	18.71	18.75	18.67	18.41		
Conductivity (mS/cm)	2.41	2.45	2.50	1.57	1.28	1.40	1.64	0.832	0.821	0.921	1.20		
Dissolved Oxygen (mg/L)	6.29	11.33	6.37	8.92	9.91	7.59	8.69	8.93	9.01	8.63	8.49		
Turbidity (NTU)	610	71000	71000	71000	71000	71000	71000	71000	71000	71000	71000		
Notes:													

96.1
-94.6
1.5 GAL

water added
71.7
68.6
13.1 Gal
-81.7
-80.2
1.5 GAL
94.6
-90.3
4.3 GAL

Problems / Observations

- PUMPING STARTED @ 1035
- DRY @ 1040
- ~~DRY~~ DTW @ 1106 7.84', PUMPING RESUMED
- DRY @ 1138
- DTW @ 1243 11.81'
- PUMPING RESUMED AT 1348
- DRY @ 1455
- PUMPING RESUMED @ 1529
- REACHED 3 WELL VOLUMES PURGED @ 1615

10.4 Gallons Added to well

Site

WELL DEVELOPMENT LOG

Event

Sampling Personnel: N. KANAUER, E. Green
Client / Job Number: BMS/30033396
Weather: ~65°F LIGHT RAIN

Well ID: BDA - 17T
Date: 9/24/19
Time In: 1540 Time Out: 1007
9/24 9/26

Well Information

Depth to Water:	(feet)	5.33	(from MP)
Total Depth:	(feet)	38.83	(from MP)
Length of Water Column:	(feet)	33.50	
Volume of Water in Well:	(gal)	5.46	

Well Type:	(Flushmount)		Stick-Up
Well Material:	(Stainless Steel)		PVC
Well Locked:		Yes	(No)
Measuring Point Marked:		(Yes)	No
Well Diameter:	1"	(2")	Other:

Purging Information

Purging Method:	Bailer	Peristaltic	(Waterra)	Other:
Tubing/Bailer Material:	Steel	Polyethylene	(Waterra)	Other:
Duration of Pumping:	(min)	—	~~*~~ NOT ACCURATE ~~*~~	
Average Pumping Rate: ~~0.42 (mL/min)~~	Gal/min	Water-Quality Meter Type:	(Horiba U-22/LaMotte 2020)	
Total Volume Removed:	(gal) 56	Did well go dry:	(Yes)	No

Conversion Factors

gal / ft. of water	1" ID	2" ID	4" ID	6" ID
	0.041	0.163	0.653	1.469

1 gal = 3.785 L = 3785 ml = 0.1337 cubic feet

9/25 9/26

Parameter:	1	2	3	4	5	6	7	8	9	10	11	12	13
	1100	1115	1238	1308	1355	1410	1508	1520	0938	1028	1046	0932	0938
Volume Purged (gal)	4	8	12	16	20	24	28	32	36	40	44	48	52
Rate (mL/min)	0.4	—	0.22	0.13	0.57	0.27	—	—	0.50	~~0.10~~	0.22	0.80	0.67
Depth to Water (ft.)	30.41	38.10	26.41	36.15	21.08	34.41	15.08	31.60	21.48	10.56	22.30	29.90	37.65
pH	7.02	7.31	7.46	7.65	7.69	7.40	7.45	7.40	8.28	8.11	7.80	8.36	7.84
Temp. (C)	17.72	16.41	16.61	16.18	17.32	17.25	17.20	17.15	16.63	17.12	17.77	17.94	17.36
Conductivity (mS/cm)	2.53	2.50	1.88	1.50	0.773	0.938	0.813	0.673	0.814	1.03	0.679	0.562	0.923
Dissolved Oxygen (mg/L)	2.22	1.66	7.75	8.00	11.60	9.66	15.00	11.50	11.65	15.21	10.78	11.05	11.13
Turbidity (NTU)	>500	>500	>500	>500	>500	>500	>500	>500	>500	>500	>500	>500	>500
Notes:													

- PUMPING RESUMED 0927 9/26/19

53.8 Gal ADDED

Problems / Observations

- DRY @ 1110
- ADDING potable water to well @ 1150
- LEVEL @ 1220 8.38', PUMPING RESUMED
- WELL DRY @ 1310
- PUMPING RESUMED @ 1348
- DRY @ 1421 ~~AFTER~~ @ 27 Gal
- DRY @ 1533 @ 34 Gal
- PUMPING RESUMED @ 0930 9/25/19
- DRY @ 0954
- PUMPING RESUMED @ 1027

8
- 88.9
81.7
7.26 Gal

90.3
- 88.9
1.6 Gal

19.4
~~19.9~~
-17.3
2.1 Gal

24.2
-19.4
4.8 Gal

WATER ADDED
~~57.25~~
63.75
- 57.25
6.50 Gal

78.4
71.7
6.7 Gal

102.9
- 96.1
6.8 Gal

80.2
- 78.4
1.8 Gal

25.3
-24.2
1.1 Gal

33.4
-26.1
7.3 Gal

40.4
-33.4
7.0 Gal

41.3
- 40.4
0.9 Gal

Site

WELL DEVELOPMENT LOG

Event

Sampling Personnel: N. KANAUER, E. GREEN
Well ID: BDA-17T CONT
Client / Job Number: AMS / 300333964
Date: 9/24/19 - 9/26/19
Weather: ~65°F LT RAIN
Time In: 1040 (9/24) Time Out: 1010 (9/26)

Well Information

Depth to Water:	(feet)	5.33	(from MP)
Total Depth:	(feet)	38.83	(from MP)
Length of Water Column:	(feet)	33.50	
Volume of Water in Well:	(gal)	5.46	

Well Type:			Flushmount	Stick-Up
Well Material:			Stainless Steel	PVC
Well Locked:			Yes	No
Measuring Point Marked:			Yes	No
Well Diameter:	1"	2"	Other:	

Purging Information

Purging Method:	Bailer	Peristaltic	Waterra	Other:
Tubing/Bailer Material:	Steel	Polyethylene	Waterra	Other:
Duration of Pumping:	(min)	— DNOT ACCURATE		
Average Pumping Rate: 0.42 ~~(ml/min)~~ GAL/MIN			Water-Quality Meter Type:	Horiba U-22/LaMotte 2020
Total Volume Removed:	(gal)	56	Did well go dry:	Yes No

Conversion Factors

gal / ft. of water	1" ID	2" ID	4" ID	6" ID
	0.041	0.163	0.653	1.469

1 gal = 3.785 L = 3785 ml = 0.1337 cubic feet

Parameter:	1	2	3	4	5	6	7	8	9	10	11	12	13
	1007												
Volume Purged (gal)	56												
Rate (mL/min)	—												
Depth to Water (ft.)	22.37												
pH	7.56												
Temp. (C)	17.52												
Conductivity (mS/cm)	0.68												
Dissolved Oxygen (mg/L)	18.91												
Turbidity (NTU)	7500												
Notes:													

Problems / Observations

Site

WELL DEVELOPMENT LOG

Event

Sampling Personnel: N. KANAHER E. GREEN
Well ID: BDA-17WR
Client / Job Number: BMS / 30033396
Date: 9/25/19
Weather: ~70°F sunny
Time In: 0840 Time Out: 1550

Well Information

Depth to Water:	12.71 (feet)	(from MP)
Total Depth:	104.5 (feet)	(from MP)
Length of Water Column:	91.8 (feet)	
Volume of Water in Well:	15 (gal)	

Well Type:		(Flushmount)	Stick-Up
Well Material:		(Stainless Steel)	PVC
Well Locked:		Yes	(No)
Measuring Point Marked:		(Yes)	No
Well Diameter:	1"	(2)	Other:

Purging Information

Purging Method:	Bailer	Peristaltic	(Waterra)	Other:
Tubing/Bailer Material:	Steel	Polyethylene	(Waterra)	Other:
Duration of Pumping:	(min) —			
Average Pumping Rate:	0.71 ~~(ml/min)~~ Gal/min	Water-Quality Meter Type:	(Horiba U22/LaMotte 2020)	
Total Volume Removed:	(gal) 150	Did well go dry:	Yes	(No)

Conversion Factors				
gal / ft of water	1" ID	2" ID	4" ID	6" ID
	0.041	0.163	0.653	1.469
1 gal = 3.785 L =3785 ml = 0.1337 cubic feet				

Parameter:	1	2	3	4	5	6	7	8	9	10	11	12	13
	0904	0925	0953	1016	1053	1440	1505	1523	1537	1550			
Volume Purged (gal)	15	30	45	60	75	90	105	120	135	150			
Rate (mL/min) 0.63 →	~~0.63~~	~~0.71~~	0.54	0.60	0.43	1.0	0.60	0.83	1.07	—			
Depth to Water (ft.)	17.45	19.34	18.40	17.91	16.73	16.31	16.46	18.85	23.65	27.85			
pH	10.01	9.64	9.3	9.12	9.9	10.85	11.58	11.18	10.58	10.56			
Temp. (C)	14.83	15.14	15.95	17.44	17.60	19.15	17.67	16.90	16.37	17.10			
Conductivity (mS/cm)	14.0	15.4	16.4	17.6	18.2	14.3	13.1	15.8	16.9	17.1			
Dissolved Oxygen (mg/L)	1.76	1.66	1.15	1.96	1.53	2.64	3.04	3.45	2.54	~~18.66~~ 3.61			
Turbidity (NTU)	>1000	>1000	631	>1000	732	>1000	907	819	>1000	>1000			
Notes:	DTB 85.36	DTB 85.6	DTB 86.6		DTB 86.4				DTB 104.2				

Problems / Observations

- 16.35' of silt is in the bottom of the well before pursing
- 1100 water not removing sediment from well, will attempt to use Monsoon
- 1425 Used utility pump to jet well to break up sediment — 12 gallons added
- 1510 additional 8 gallons jetted into well

12 Gal ADDED

Site

Event

GROUND-WATER SAMPLING LOG Development

Sampling Personnel: E Green & N Kanauer
Client / Job Number: BMS
Weather: 40s/50s Raining

Well ID: BDA-17R
Date: 10/17/19 - 10/21/19
Time In: 1000 10/19 **Time Out:** 1240 10/21

Well Information

Depth to Water:	4.05	(feet) (from MP)
Total Depth:	154.1	(feet) (from MP)
Length of Water Column:	150.05	(feet)
Volume of Water in Well:	24.5	(gal)
~~Three~~ 10 Well Volumes:	245.0	(gal)

Well Type:	(Flushmount)	Stick-Up	
Well Material:	(Stainless Steel)	PVC	
Well Locked:	Yes	(No)	
Measuring Point Marked:	(Yes)	No	
Well Diameter:	1"	(2")	Other:

Purging Information

Purging Method:	Bailer	Peristaltic	(Waterra) Teflon	Other:
Tubing/Bailer Material:	Steel	(Polyethylene)		Other:
Sampling Method:	Bailer	Peristaltic	Waterra	(Other) NA
Duration of Pumping:	(min) 660			
Average Pumping Rate: ~~gpm~~ (ml/min)	0.39	Water-Quality Meter Type:		
Total Volume Removed:	(gal) 245	Did well go dry:	(Yes)	No

Conversion Factors				
gal / ft. of water	1" ID	2" ID	4" ID	6" ID
	0.041	0.163	0.653	1.469
1 gal = 3.785 L =3785 ml = 0.1337 cubic feet				

Unit Stability			
pH	DO	Cond.	ORP
± 0.1	±10%	± 3.0%	± 10 mV

10/17 → 203.3 Gallons added 10/18 → 10/21

Parameter:	1	2	3	4	5	6	7	8	9
	1030	1155	1355	1500	1630	1205	1415	1500	1100
Volume Purged (gal)	0	25	50	75	100	125	150	175	200
Rate (mL/min)	0.29	0.50	0.50	0.28	0.26	0.19	0.56	0.42	0.42
Depth to Water (ft.)	12.41	118.40	48.69	75.62	53.91	41.20	22.21	144.90	76.69
pH	9.42	12.14	9.23	8.93	8.56	6.62	8.47	8.36	8.16
Temp. (C)	14.5	12.39	12.25	12.91	11.56	11.07	12.84	13.14	12.76
Conductivity (mS/cm)	36	8.23	0.767	0.591	0.439	0.522	0.301	0.358	0.381
Dissolved Oxygen (mg/L)	2.14	1.32	6.95	8.55	2.90	7.61	5.83	5.02	5.48
ORP (mV)	41	-35	87	197	270	149	199	280	218
Turbidity (NTU)	>1000	363	50	532	34.9	37.9	14.0	162	19.4
Notes:	HH	HH	HH	HH	HH	HH	HH	HH	HH

Sampling Information

Analyses	#	Laboratory

Sample ID:		Sample Time:
MS/MSD:	Yes	No
Duplicate:	Yes	No
Duplicate ID		Dup. Time:
Chain of Custody Signed By:		

149.8 - 120.9 = 28.9 Gal
184.2 - 149.8 = 34.4 Gal

Problems / Observations

- DRY @ 1230
- 1310 GENERATOR DIED
- 1340 PUMPING RESUMED
- DRY @ 1435
- SURGE BLOCK PULLED OFF @ 1450
- PUMPING STARTED @ 1030 10/18/19 due to heavy ~~RAIN~~ Rain. DTW 44.90'
- PUMPING STOPED @ 1130, RESUMED 1150
- PUMPING STOPED @ 1240 - 1320
- PUMPING STOPPED @ 1350 - 1400

77.5 ~~87.5~~
- 43.2
~~44.3 Gal~~
34.3 Gal

94.1
- 77.5
16.6 Gal

94.1
- 120.8
26.7 Gal

Site | Event

GROUND-WATER SAMPLING LOG

Sampling Personnel: NICHOLAS KANAUER | **Well ID:** BDA - 17Rx cont.
Client / Job Number: BMS | **Date:** 10/21/19
Weather: ~ | **Time In:** 1000 10/17 **Time Out:** 1245 10/21

Well Information

Depth to Water:	(feet) 4.05	(from MP)
Total Depth:	(feet) 154.10	(from MP)
Length of Water Column:	(feet) 150.05	
Volume of Water in Well:	(gal) 24.5	
~~Three~~ 10 Well Volumes:	(gal) 245.0	

Well Type:	(Flushmount)		Stick-Up
Well Material:	(Stainless Steel)		PVC
Well Locked:		Yes	(No)
Measuring Point Marked:		(Yes)	No
Well Diameter:	1"	(2")	Other:

Purging Information

Purging Method:	Bailer	Peristaltic	(Waterra)	Other:
Tubing/Bailer Material:	Steel	(Polyethylene)	Teflon	Other:
Sampling Method:	Bailer	Peristaltic	Waterra	(Other: NA)

Duration of Pumping: (min) 660
Average Pumping Rate: ~~G/min~~ (~~ml/min~~) 0.39 Water-Quality Meter Type:
Total Volume Removed: (gal) 245 Did well go dry: (Yes) No

203.30 Gallons added

Conversion Factors				
gal / ft. of water	1" ID	2" ID	4" ID	6" ID
	0.041	0.163	0.653	1.469
1 gal = 3.785 L =3785 ml = 0.1337 cubic feet				

Unit Stability			
pH	DO	Cond.	ORP
± 0.1	±10%	± 3.0%	± 10 mV

Parameter:	1	2	3	4	5	6	7	8	9
	1200	1240							
Volume Purged (gal)	225	245							
Rate (mL/min)	0.50	ND							
Depth to Water (ft.)	41.35	120.2							
pH	8.57	8.35							
Temp. (C)	13.94	14.30							
Conductivity (mS/cm)	0.547	0.346							
Dissolved Oxygen (mg/L)	4.62	4.75							
ORP (mV)	331	344							
Turbidity (NTU)	4.60	121							
Notes:	IIII								

Sampling Information

Analyses	#	Laboratory
Sample ID:	Sample Time:	
MS/MSD: Yes	No	
Duplicate: Yes	No	
Duplicate ID	Dup. Time:	
Chain of Custody Signed By:		

Problems / Observations

- Pumping started 1000 on 10/21
- Surge Block clogged @ 1145, Pumping Resumed @ 1155
- Pumping complete @ 1240

218.3
~~228.3~~
-184.2
34.1 Gal
246.6
-218.3
28.3 Gal

Pg ____ of ____

ATTACHMENT 6

Daily CAMP Monitoring Reports

Arcadis U.S., Inc.
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New York 13202
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Environmental North

Anne Locke
Associate Manager, Environmental Protection
Environmental, Health and Safety Department
Bristol-Myers Squibb
P.O. Box 4755
Syracuse, NY 13221

Subject:
Community Air Monitoring During Phase II RI Well Installations Bristol-Myers Squibb Syracuse Facility – East Syracuse, New York 13057

Date:
August 11, 2019

Contact:
William McCune

Phone:
315-671-9172

Email:
William.McCune@arcadis.com

Our ref:
B0087363.0037

Dear Ms. Locke:

The following is a summary of the community air monitoring plan (CAMP) provided by Arcadis U.S., Inc. (Arcadis) during the Phase II Remedial Investigation (RI) drilling activities conducted at the Bristol-Myers Squibb (BMS) Syracuse North Campus, East Syracuse, NY on August 12, 2019.

August 12, 2019: Parratt-Wolff Inc. (Parratt-Wolff) and Arcadis setup to begin sonic drilling activities at BDA-17RX from 7:00 AM to 12:15 PM. Parratt-Wolff began Sonic drilling activities at 12:15 PM and concluded at 4:20 PM. CAMP monitoring included a photo ionization detector at a breathing zone, upwind, and downwind location. Arcadis conducted CAMP monitoring in the breathing zone and at a downwind location for the duration of intrusive activities, from 9:30 AM to 4:15 PM. A 11.7 eV PID was not available until the late afternoon so CAMP monitoring began at 11:10 AM at the upwind location. The prevailing wind direction was observed originating from the south through the day. Air quality parameters did not exceed CAMP standards at any time during work activities.

Please contact us with any questions or comments pertaining to this project.

Sincerely,

Arcadis U.S., Inc.

William McCune
Principal Geologist

Attachments

1 CAMP Data Logs
2 Site Sketches/Notes

Test 001

Instrument		Data Properties	
Model	DustTrak DRX	Start Date	08/12/2019
Instrument S/N	8533151804	Start Time	11:30:44
		Stop Date	08/12/2019
		Stop Time	16:15:44
		Total Time	0:04:45:00
		Logging Interval	900 seconds

Test Data

Data Point	Date	Time	PM1 mg/m^3	PM2.5 mg/m^3	RESP mg/m^3	PM10 mg/m^3	TOTAL mg/m^3
1	08/12/2019	11:45:44	0.015	0.016	0.016	0.019	0.021
2	08/12/2019	12:00:44	0.015	0.015	0.015	0.017	0.018
3	08/12/2019	12:15:44	0.015	0.015	0.015	0.017	0.018
4	08/12/2019	12:30:44	0.018	0.019	0.019	0.023	0.026
5	08/12/2019	12:45:44	0.076	0.081	0.096	0.197	0.286
6	08/12/2019	13:00:44	0.018	0.018	0.019	0.021	0.023
7	08/12/2019	13:15:44	0.021	0.022	0.023	0.025	0.029
8	08/12/2019	13:30:44	0.020	0.021	0.021	0.023	0.024
9	08/12/2019	13:45:44	0.019	0.020	0.020	0.022	0.023
10	08/12/2019	14:00:44	0.021	0.021	0.022	0.028	0.035
11	08/12/2019	14:15:44	0.017	0.018	0.018	0.021	0.024
12	08/12/2019	14:30:44	0.019	0.019	0.019	0.023	0.026
13	08/12/2019	14:45:44	0.019	0.019	0.020	0.022	0.024
14	08/12/2019	15:00:44	0.031	0.032	0.034	0.048	0.069
15	08/12/2019	15:15:44	0.020	0.021	0.021	0.023	0.025
16	08/12/2019	15:30:44	0.024	0.025	0.026	0.031	0.037
17	08/12/2019	15:45:44	0.020	0.020	0.021	0.023	0.025
18	08/12/2019	16:00:44	0.036	0.037	0.039	0.054	0.080
19	08/12/2019	16:15:44	0.020	0.021	0.021	0.025	0.029

==========
19/08/09 16:46
****
Summary

Unit Name MiniRAE 3000(PGM-7320)
Unit SN 592-903549
Unit Firmware Ver V2.20A

Running Mode Hygiene Mode
Datalog Mode Auto
Diagnostic Mode No
Stop Reason Power Down

Site ID 00000000
User ID 00000001

Begin 8/9/2019 16:46:16
End 8/9/2019 16:46:24
Sample Period(s) 60
Number of Records 0

Sensor PID(ppm)
Sensor SN S023030154V7
Measure Type Min; Avg; Max; Real
Span 100.0
Span 2 1000.0
Low Alarm 50.0
High Alarm 100.0
Over Alarm 2000.0
STEL Alarm 10025.0
TWA Alarm 10.0
Measurement Gas Isobutylene
Calibration Time 8/9/2019 16:13

****
Datalog

0 record.

==========
19/08/09 17:00
****
Summary

Unit Name MiniRAE 3000(PGM-7320)
Unit SN 592-903549
Unit Firmware Ver V2.20A

Running Mode Hygiene Mode
Datalog Mode Auto
Diagnostic Mode No
Stop Reason Pause in Menu Mode

Site ID 00000000
User ID 00000001

Begin 8/9/2019 17:00:28
End 8/9/2019 17:00:56
Sample Period(s) 60
Number of Records 0

Sensor PID(ppm)
Sensor SN S023030154V7
Measure Type Min; Avg; Max; Real
Span 100.0
Span 2 1000.0
Low Alarm 50.0
High Alarm 100.0
Over Alarm 2000.0
STEL Alarm 10025.0
TWA Alarm 10.0
Measurement Gas Isobutylene
Calibration Time 8/9/2019 16:13

****
Datalog

0 record.

==========
19/08/09 17:02
****
Summary

Unit Name MiniRAE 3000(PGM-7320)
Unit SN 592-903549
Unit Firmware Ver V2.20A

Running Mode Hygiene Mode
Datalog Mode Auto
Diagnostic Mode No
Stop Reason Power Down

Site ID 00000000
User ID 00000001

Begin 8/9/2019 17:02:50
End 8/9/2019 17:03:18
Sample Period(s) 60
Number of Records 0

Sensor PID(ppm)
Sensor SN S023030154V7
Measure Type Min; Avg; Max; Real
Span 100.0
Span 2 1000.0
Low Alarm 50.0
High Alarm 100.0
Over Alarm 2000.0
STEL Alarm 10025.0
TWA Alarm 10.0
Measurement Gas Isobutylene

Calibration Time 8/9/2019 17:02

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Datalog

0 record.

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19/08/12 09:48

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Summary

Unit Name MiniRAE 3000(PGM-7320)
Unit SN 592-903549
Unit Firmware Ver V2.20A

Running Mode Hygiene Mode
Datalog Mode Auto
Diagnostic Mode No
Stop Reason Power Down

Site ID 00000000
User ID 00000001

Begin 8/12/2019 09:48:48
End 8/12/2019 16:25:45
Sample Period(s) 60
Number of Records 396

Sensor PID(ppm)
Sensor SN S023030154V7
Measure Type Min; Avg; Max; Real
Span 100.0
Span 2 1000.0
Low Alarm 50.0
High Alarm 100.0
Over Alarm 2000.0
STEL Alarm 10025.0
TWA Alarm 10.0
Measurement Gas Isobutylene
Calibration Time 8/9/2019 17:02
Peak 0.2
Min 0.0
Average 0.1

****

Datalog

Index	Date/Time	PID(ppm) (Min)	PID(ppm) (Avg)	PID(ppm) (Max)	PID(ppm) (Real)
001	8/12/2019 09:49:48	0.0	0.0	0.0	0.0
002	8/12/2019 09:50:48	0.0	0.0	0.0	0.0
003	8/12/2019 09:51:48	0.0	0.0	0.0	0.0
004	8/12/2019 09:52:48	0.0	0.0	0.0	0.0
005	8/12/2019 09:53:48	0.0	0.0	0.0	0.0
006	8/12/2019 09:54:48	0.0	0.0	0.0	0.0
007	8/12/2019 09:55:48	0.0	0.0	0.0	0.0
008	8/12/2019 09:56:48	0.0	0.0	0.0	0.0

009	8/12/2019 09:57:48	0.0	0.0	0.0	0.0
010	8/12/2019 09:58:48	0.0	0.0	0.0	0.0
011	8/12/2019 09:59:48	0.0	0.0	0.0	0.0
012	8/12/2019 10:00:48	0.0	0.0	0.0	0.0
013	8/12/2019 10:01:48	0.0	0.0	0.0	0.0
014	8/12/2019 10:02:48	0.0	0.0	0.0	0.0
015	8/12/2019 10:03:48	0.0	0.0	0.0	0.0
016	8/12/2019 10:04:48	0.0	0.0	0.0	0.0
017	8/12/2019 10:05:48	0.0	0.0	0.0	0.0
018	8/12/2019 10:06:48	0.0	0.0	0.0	0.0
019	8/12/2019 10:07:48	0.0	0.0	0.0	0.0
020	8/12/2019 10:08:48	0.0	0.0	0.0	0.0
021	8/12/2019 10:09:48	0.0	0.0	0.0	0.0
022	8/12/2019 10:10:48	0.0	0.0	0.0	0.0
023	8/12/2019 10:11:48	0.0	0.0	0.0	0.0
024	8/12/2019 10:12:48	0.0	0.0	0.0	0.0
025	8/12/2019 10:13:48	0.0	0.0	0.0	0.0
026	8/12/2019 10:14:48	0.0	0.0	0.0	0.0
027	8/12/2019 10:15:48	0.0	0.0	0.0	0.0
028	8/12/2019 10:16:48	0.0	0.0	0.0	0.0
029	8/12/2019 10:17:48	0.0	0.0	0.0	0.0
030	8/12/2019 10:18:48	0.0	0.0	0.0	0.0
031	8/12/2019 10:19:48	0.0	0.0	0.0	0.0
032	8/12/2019 10:20:48	0.0	0.0	0.0	0.0
033	8/12/2019 10:21:48	0.0	0.0	0.0	0.0
034	8/12/2019 10:22:48	0.0	0.0	0.0	0.0
035	8/12/2019 10:23:48	0.0	0.0	0.0	0.0
036	8/12/2019 10:24:48	0.0	0.0	0.0	0.0
037	8/12/2019 10:25:48	0.0	0.0	0.0	0.0
038	8/12/2019 10:26:48	0.0	0.0	0.0	0.0
039	8/12/2019 10:27:48	0.0	0.0	0.0	0.0
040	8/12/2019 10:28:48	0.0	0.0	0.0	0.0
041	8/12/2019 10:29:48	0.0	0.0	0.0	0.0
042	8/12/2019 10:30:48	0.0	0.0	0.0	0.0
043	8/12/2019 10:31:48	0.0	0.0	0.0	0.0
044	8/12/2019 10:32:48	0.0	0.0	0.0	0.0
045	8/12/2019 10:33:48	0.0	0.0	0.0	0.0
046	8/12/2019 10:34:48	0.0	0.0	0.0	0.0
047	8/12/2019 10:35:48	0.0	0.0	0.0	0.0
048	8/12/2019 10:36:48	0.0	0.0	0.0	0.0
049	8/12/2019 10:37:48	0.0	0.0	0.0	0.0
050	8/12/2019 10:38:48	0.0	0.0	0.0	0.0
051	8/12/2019 10:39:48	0.0	0.0	0.0	0.0
052	8/12/2019 10:40:48	0.0	0.0	0.0	0.0
053	8/12/2019 10:41:48	0.0	0.0	0.0	0.0
054	8/12/2019 10:42:48	0.0	0.0	0.0	0.0
055	8/12/2019 10:43:48	0.0	0.0	0.0	0.0
056	8/12/2019 10:44:48	0.0	0.0	0.0	0.0
057	8/12/2019 10:45:48	0.0	0.0	0.0	0.0
058	8/12/2019 10:46:48	0.0	0.0	0.0	0.0
059	8/12/2019 10:47:48	0.0	0.0	0.0	0.0
060	8/12/2019 10:48:48	0.0	0.0	0.0	0.0
061	8/12/2019 10:49:48	0.0	0.0	0.0	0.0
062	8/12/2019 10:50:48	0.0	0.0	0.0	0.0
063	8/12/2019 10:51:48	0.0	0.0	0.0	0.0
064	8/12/2019 10:52:48	0.0	0.0	0.0	0.0
065	8/12/2019 10:53:48	0.0	0.0	0.0	0.0

066	8/12/2019 10:54:48	0.0	0.0	0.0	0.0
067	8/12/2019 10:55:48	0.0	0.0	0.0	0.0
068	8/12/2019 10:56:48	0.0	0.0	0.0	0.0
069	8/12/2019 10:57:48	0.0	0.0	0.0	0.0
070	8/12/2019 10:58:48	0.0	0.0	0.0	0.0
071	8/12/2019 10:59:48	0.0	0.0	0.0	0.0
072	8/12/2019 11:00:48	0.0	0.0	0.0	0.0
073	8/12/2019 11:01:48	0.0	0.0	0.0	0.0
074	8/12/2019 11:02:48	0.0	0.0	0.0	0.0
075	8/12/2019 11:03:48	0.0	0.0	0.0	0.0
076	8/12/2019 11:04:48	0.0	0.0	0.0	0.0
077	8/12/2019 11:05:48	0.0	0.0	0.0	0.0
078	8/12/2019 11:06:48	0.0	0.0	0.0	0.0
079	8/12/2019 11:07:48	0.0	0.0	0.0	0.0
080	8/12/2019 11:08:48	0.0	0.0	0.0	0.0
081	8/12/2019 11:09:48	0.0	0.0	0.0	0.0
082	8/12/2019 11:10:48	0.0	0.0	0.0	0.0
083	8/12/2019 11:11:48	0.0	0.0	0.0	0.0
084	8/12/2019 11:12:48	0.0	0.0	0.0	0.0
085	8/12/2019 11:13:48	0.0	0.0	0.0	0.0
086	8/12/2019 11:14:48	0.0	0.0	0.0	0.0
087	8/12/2019 11:15:48	0.0	0.0	0.0	0.0
088	8/12/2019 11:16:48	0.0	0.0	0.0	0.0
089	8/12/2019 11:17:48	0.0	0.0	0.0	0.0
090	8/12/2019 11:18:48	0.0	0.0	0.0	0.0
091	8/12/2019 11:19:48	0.0	0.0	0.0	0.0
092	8/12/2019 11:20:48	0.0	0.0	0.0	0.0
093	8/12/2019 11:21:48	0.0	0.0	0.0	0.0
094	8/12/2019 11:22:48	0.0	0.0	0.0	0.0
095	8/12/2019 11:23:48	0.0	0.0	0.0	0.0
096	8/12/2019 11:24:48	0.0	0.0	0.0	0.0
097	8/12/2019 11:25:48	0.0	0.0	0.0	0.0
098	8/12/2019 11:26:48	0.0	0.0	0.0	0.0
099	8/12/2019 11:27:48	0.0	0.0	0.0	0.0
100	8/12/2019 11:28:48	0.0	0.0	0.0	0.0
101	8/12/2019 11:29:48	0.0	0.0	0.0	0.0
102	8/12/2019 11:30:48	0.0	0.0	0.0	0.0
103	8/12/2019 11:31:48	0.0	0.0	0.0	0.0
104	8/12/2019 11:32:48	0.0	0.0	0.0	0.0
105	8/12/2019 11:33:48	0.0	0.0	0.0	0.0
106	8/12/2019 11:34:48	0.0	0.0	0.0	0.0
107	8/12/2019 11:35:48	0.0	0.0	0.0	0.0
108	8/12/2019 11:36:48	0.0	0.0	0.0	0.0
109	8/12/2019 11:37:48	0.0	0.0	0.0	0.0
110	8/12/2019 11:38:48	0.0	0.0	0.0	0.0
111	8/12/2019 11:39:48	0.0	0.0	0.0	0.0
112	8/12/2019 11:40:48	0.0	0.0	0.0	0.0
113	8/12/2019 11:41:48	0.0	0.0	0.0	0.0
114	8/12/2019 11:42:48	0.0	0.0	0.0	0.0
115	8/12/2019 11:43:48	0.0	0.0	0.0	0.0
116	8/12/2019 11:44:48	0.0	0.0	0.0	0.0
117	8/12/2019 11:45:48	0.0	0.0	0.0	0.0
118	8/12/2019 11:46:48	0.0	0.0	0.0	0.0
119	8/12/2019 11:47:48	0.0	0.0	0.0	0.0
120	8/12/2019 11:48:48	0.0	0.0	0.0	0.0
121	8/12/2019 11:49:48	0.0	0.0	0.0	0.0
122	8/12/2019 11:50:48	0.0	0.0	0.0	0.0

123	8/12/2019	11:51:48	0.0	0.0	0.0	0.0
124	8/12/2019	11:52:48	0.0	0.0	0.0	0.0
125	8/12/2019	11:53:48	0.0	0.0	0.0	0.0
126	8/12/2019	11:54:48	0.0	0.0	0.0	0.0
127	8/12/2019	11:55:48	0.0	0.0	0.0	0.0
128	8/12/2019	11:56:48	0.0	0.0	0.0	0.0
129	8/12/2019	11:57:48	0.0	0.0	0.0	0.0
130	8/12/2019	11:58:48	0.0	0.0	0.0	0.0
131	8/12/2019	11:59:48	0.0	0.0	0.0	0.0
132	8/12/2019	12:00:48	0.0	0.0	0.0	0.0
133	8/12/2019	12:01:48	0.0	0.0	0.0	0.0
134	8/12/2019	12:02:48	0.0	0.0	0.0	0.0
135	8/12/2019	12:03:48	0.0	0.0	0.0	0.0
136	8/12/2019	12:04:48	0.0	0.0	0.0	0.0
137	8/12/2019	12:05:48	0.0	0.0	0.0	0.0
138	8/12/2019	12:06:48	0.0	0.0	0.0	0.0
139	8/12/2019	12:07:48	0.0	0.0	0.0	0.0
140	8/12/2019	12:08:48	0.0	0.0	0.0	0.0
141	8/12/2019	12:09:48	0.0	0.0	0.0	0.0
142	8/12/2019	12:10:48	0.0	0.0	0.0	0.0
143	8/12/2019	12:11:48	0.0	0.0	0.0	0.0
144	8/12/2019	12:12:48	0.0	0.0	0.0	0.0
145	8/12/2019	12:13:48	0.0	0.0	0.0	0.0
146	8/12/2019	12:14:48	0.0	0.0	0.0	0.0
147	8/12/2019	12:15:48	0.0	0.0	0.0	0.0
148	8/12/2019	12:16:48	0.0	0.0	0.0	0.0
149	8/12/2019	12:17:48	0.0	0.0	0.0	0.0
150	8/12/2019	12:18:48	0.0	0.0	0.0	0.0
151	8/12/2019	12:19:48	0.0	0.0	0.0	0.0
152	8/12/2019	12:20:48	0.0	0.0	0.0	0.0
153	8/12/2019	12:21:48	0.0	0.0	0.0	0.0
154	8/12/2019	12:22:48	0.0	0.0	0.0	0.0
155	8/12/2019	12:23:48	0.0	0.0	0.0	0.0
156	8/12/2019	12:24:48	0.0	0.0	0.0	0.0
157	8/12/2019	12:25:48	0.0	0.0	0.0	0.0
158	8/12/2019	12:26:48	0.0	0.0	0.0	0.0
159	8/12/2019	12:27:48	0.0	0.0	0.0	0.0
160	8/12/2019	12:28:48	0.0	0.0	0.0	0.0
161	8/12/2019	12:29:48	0.0	0.0	0.0	0.0
162	8/12/2019	12:30:48	0.0	0.0	0.0	0.0
163	8/12/2019	12:31:48	0.0	0.0	0.0	0.0
164	8/12/2019	12:32:48	0.0	0.0	0.0	0.0
165	8/12/2019	12:33:48	0.0	0.0	0.0	0.0
166	8/12/2019	12:34:48	0.0	0.0	0.0	0.0
167	8/12/2019	12:35:48	0.0	0.0	0.0	0.0
168	8/12/2019	12:36:48	0.0	0.0	0.0	0.0
169	8/12/2019	12:37:48	0.0	0.0	0.0	0.0
170	8/12/2019	12:38:48	0.0	0.0	0.0	0.0
171	8/12/2019	12:39:48	0.0	0.0	0.0	0.0
172	8/12/2019	12:40:48	0.0	0.0	0.0	0.0
173	8/12/2019	12:41:48	0.0	0.0	0.0	0.0
174	8/12/2019	12:42:48	0.0	0.0	0.0	0.0
175	8/12/2019	12:43:48	0.0	0.0	0.0	0.0
176	8/12/2019	12:44:48	0.0	0.0	0.0	0.0
177	8/12/2019	12:45:48	0.0	0.0	0.0	0.0
178	8/12/2019	12:46:48	0.0	0.0	0.0	0.0
179	8/12/2019	12:47:48	0.0	0.0	0.0	0.0

180	8/12/2019	12:48:48	0.0	0.0	0.0	0.0
181	8/12/2019	12:49:48	0.0	0.0	0.0	0.0
182	8/12/2019	12:50:48	0.0	0.0	0.0	0.0
183	8/12/2019	12:51:48	0.0	0.0	0.0	0.0
184	8/12/2019	12:52:48	0.0	0.0	0.0	0.0
185	8/12/2019	12:53:48	0.0	0.0	0.0	0.0
186	8/12/2019	12:54:48	0.0	0.0	0.0	0.0
187	8/12/2019	12:55:48	0.0	0.0	0.0	0.0
188	8/12/2019	12:56:48	0.0	0.0	0.0	0.0
189	8/12/2019	12:57:48	0.0	0.0	0.0	0.0
190	8/12/2019	12:58:48	0.0	0.0	0.0	0.0
191	8/12/2019	12:59:48	0.0	0.0	0.0	0.0
192	8/12/2019	13:00:48	0.0	0.0	0.0	0.0
193	8/12/2019	13:01:48	0.0	0.0	0.0	0.0
194	8/12/2019	13:02:48	0.0	0.0	0.0	0.0
195	8/12/2019	13:03:48	0.0	0.0	0.0	0.0
196	8/12/2019	13:04:48	0.0	0.0	0.1	0.0
197	8/12/2019	13:05:48	0.0	0.0	0.1	0.0
198	8/12/2019	13:06:48	0.0	0.0	0.1	0.1
199	8/12/2019	13:07:48	0.0	0.0	0.1	0.0
200	8/12/2019	13:08:48	0.0	0.0	0.1	0.1
201	8/12/2019	13:09:48	0.0	0.1	0.1	0.1
202	8/12/2019	13:10:48	0.0	0.1	0.1	0.1
203	8/12/2019	13:11:48	0.0	0.1	0.1	0.1
204	8/12/2019	13:12:48	0.0	0.1	0.1	0.1
205	8/12/2019	13:13:48	0.0	0.1	0.1	0.0
206	8/12/2019	13:14:48	0.0	0.1	0.1	0.1
207	8/12/2019	13:15:48	0.0	0.1	0.1	0.1
208	8/12/2019	13:16:48	0.1	0.1	0.1	0.1
209	8/12/2019	13:17:48	0.1	0.1	0.1	0.1
210	8/12/2019	13:18:48	0.1	0.1	0.1	0.1
211	8/12/2019	13:19:48	0.1	0.1	0.1	0.1
212	8/12/2019	13:20:48	0.1	0.1	0.1	0.1
213	8/12/2019	13:21:48	0.0	0.1	0.1	0.1
214	8/12/2019	13:22:48	0.1	0.1	0.1	0.1
215	8/12/2019	13:23:48	0.1	0.1	0.1	0.1
216	8/12/2019	13:24:48	0.1	0.1	0.1	0.1
217	8/12/2019	13:25:48	0.1	0.1	0.1	0.1
218	8/12/2019	13:26:48	0.1	0.1	0.1	0.1
219	8/12/2019	13:27:48	0.1	0.1	0.1	0.1
220	8/12/2019	13:28:48	0.1	0.1	0.1	0.1
221	8/12/2019	13:29:48	0.1	0.1	0.1	0.1
222	8/12/2019	13:30:48	0.1	0.1	0.1	0.1
223	8/12/2019	13:31:48	0.1	0.1	0.1	0.1
224	8/12/2019	13:32:48	0.1	0.1	0.1	0.1
225	8/12/2019	13:33:48	0.1	0.1	0.1	0.1
226	8/12/2019	13:34:48	0.1	0.1	0.1	0.1
227	8/12/2019	13:35:48	0.1	0.1	0.1	0.1
228	8/12/2019	13:36:48	0.1	0.1	0.1	0.1
229	8/12/2019	13:37:48	0.1	0.1	0.1	0.1
230	8/12/2019	13:38:48	0.1	0.1	0.1	0.1
231	8/12/2019	13:39:48	0.1	0.1	0.1	0.1
232	8/12/2019	13:40:48	0.1	0.1	0.1	0.1
233	8/12/2019	13:41:48	0.1	0.1	0.1	0.1
234	8/12/2019	13:42:48	0.1	0.1	0.1	0.1
235	8/12/2019	13:43:48	0.1	0.1	0.1	0.1
236	8/12/2019	13:44:48	0.1	0.1	0.1	0.1

237	8/12/2019	13:45:48	0.1	0.1	0.1	0.1
238	8/12/2019	13:46:48	0.1	0.1	0.1	0.1
239	8/12/2019	13:47:48	0.1	0.1	0.1	0.1
240	8/12/2019	13:48:48	0.1	0.1	0.1	0.1
241	8/12/2019	13:49:48	0.1	0.1	0.1	0.1
242	8/12/2019	13:50:48	0.1	0.1	0.1	0.1
243	8/12/2019	13:51:48	0.1	0.1	0.1	0.1
244	8/12/2019	13:52:48	0.1	0.1	0.1	0.1
245	8/12/2019	13:53:48	0.1	0.1	0.1	0.1
246	8/12/2019	13:54:48	0.1	0.1	0.1	0.1
247	8/12/2019	13:55:48	0.1	0.1	0.1	0.1
248	8/12/2019	13:56:48	0.1	0.1	0.1	0.1
249	8/12/2019	13:57:48	0.1	0.1	0.1	0.1
250	8/12/2019	13:58:48	0.1	0.1	0.1	0.1
251	8/12/2019	13:59:48	0.1	0.1	0.1	0.1
252	8/12/2019	14:00:48	0.1	0.1	0.1	0.1
253	8/12/2019	14:01:48	0.1	0.1	0.1	0.1
254	8/12/2019	14:02:48	0.1	0.1	0.1	0.1
255	8/12/2019	14:03:48	0.1	0.1	0.1	0.1
256	8/12/2019	14:04:48	0.1	0.1	0.1	0.1
257	8/12/2019	14:05:48	0.1	0.1	0.1	0.1
258	8/12/2019	14:06:48	0.1	0.1	0.1	0.1
259	8/12/2019	14:07:48	0.1	0.1	0.1	0.1
260	8/12/2019	14:08:48	0.1	0.1	0.1	0.1
261	8/12/2019	14:09:48	0.1	0.1	0.1	0.1
262	8/12/2019	14:10:48	0.1	0.1	0.1	0.1
263	8/12/2019	14:11:48	0.1	0.1	0.1	0.1
264	8/12/2019	14:12:48	0.1	0.1	0.1	0.1
265	8/12/2019	14:13:48	0.1	0.1	0.1	0.1
266	8/12/2019	14:14:48	0.1	0.1	0.1	0.1
267	8/12/2019	14:15:48	0.1	0.1	0.1	0.1
268	8/12/2019	14:16:48	0.1	0.1	0.1	0.1
269	8/12/2019	14:17:48	0.1	0.1	0.1	0.1
270	8/12/2019	14:18:48	0.1	0.1	0.1	0.1
271	8/12/2019	14:19:48	0.1	0.1	0.2	0.1
272	8/12/2019	14:20:48	0.1	0.2	0.2	0.1
273	8/12/2019	14:21:48	0.1	0.1	0.2	0.2
274	8/12/2019	14:22:48	0.1	0.1	0.2	0.2
275	8/12/2019	14:23:48	0.1	0.1	0.2	0.1
276	8/12/2019	14:24:48	0.1	0.1	0.2	0.1
277	8/12/2019	14:25:48	0.1	0.1	0.1	0.1
278	8/12/2019	14:26:48	0.1	0.1	0.2	0.2
279	8/12/2019	14:27:48	0.1	0.1	0.2	0.1
280	8/12/2019	14:28:48	0.1	0.1	0.1	0.1
281	8/12/2019	14:29:48	0.1	0.1	0.1	0.1
282	8/12/2019	14:30:48	0.1	0.1	0.2	0.1
283	8/12/2019	14:31:48	0.1	0.1	0.2	0.1
284	8/12/2019	14:32:48	0.1	0.1	0.2	0.1
285	8/12/2019	14:33:48	0.1	0.1	0.2	0.1
286	8/12/2019	14:34:48	0.1	0.1	0.2	0.1
287	8/12/2019	14:35:48	0.1	0.1	0.2	0.2
288	8/12/2019	14:36:48	0.1	0.1	0.2	0.1
289	8/12/2019	14:37:48	0.1	0.1	0.2	0.2
290	8/12/2019	14:38:48	0.1	0.2	0.2	0.2
291	8/12/2019	14:39:48	0.1	0.2	0.2	0.1
292	8/12/2019	14:40:48	0.1	0.2	0.2	0.2
293	8/12/2019	14:41:48	0.1	0.2	0.2	0.2

294	8/12/2019	14:42:48	0.2	0.2	0.2	0.2
295	8/12/2019	14:43:48	0.1	0.2	0.2	0.1
296	8/12/2019	14:44:48	0.1	0.2	0.2	0.2
297	8/12/2019	14:45:48	0.2	0.2	0.2	0.2
298	8/12/2019	14:46:48	0.2	0.2	0.2	0.2
299	8/12/2019	14:47:48	0.2	0.2	0.2	0.2
300	8/12/2019	14:48:48	0.2	0.2	0.2	0.2
301	8/12/2019	14:49:48	0.2	0.2	0.2	0.2
302	8/12/2019	14:50:48	0.2	0.2	0.2	0.2
303	8/12/2019	14:51:48	0.2	0.2	0.2	0.2
304	8/12/2019	14:52:48	0.2	0.2	0.2	0.2
305	8/12/2019	14:53:48	0.2	0.2	0.2	0.2
306	8/12/2019	14:54:48	0.2	0.2	0.2	0.2
307	8/12/2019	14:55:48	0.2	0.2	0.2	0.2
308	8/12/2019	14:56:48	0.2	0.2	0.2	0.2
309	8/12/2019	14:57:48	0.2	0.2	0.2	0.2
310	8/12/2019	14:58:48	0.2	0.2	0.2	0.2
311	8/12/2019	14:59:48	0.2	0.2	0.2	0.2
312	8/12/2019	15:00:48	0.2	0.2	0.2	0.2
313	8/12/2019	15:01:48	0.2	0.2	0.2	0.2
314	8/12/2019	15:02:48	0.2	0.2	0.2	0.2
315	8/12/2019	15:03:48	0.2	0.2	0.2	0.2
316	8/12/2019	15:04:48	0.2	0.2	0.2	0.2
317	8/12/2019	15:05:48	0.2	0.2	0.2	0.2
318	8/12/2019	15:06:48	0.2	0.2	0.2	0.2
319	8/12/2019	15:07:48	0.2	0.2	0.2	0.2
320	8/12/2019	15:08:48	0.2	0.2	0.2	0.2
321	8/12/2019	15:09:48	0.2	0.2	0.2	0.2
322	8/12/2019	15:10:48	0.2	0.2	0.2	0.2
323	8/12/2019	15:11:48	0.2	0.2	0.2	0.2
324	8/12/2019	15:12:48	0.2	0.2	0.2	0.2
325	8/12/2019	15:13:48	0.2	0.2	0.2	0.2
326	8/12/2019	15:14:48	0.2	0.2	0.2	0.2
327	8/12/2019	15:15:48	0.2	0.2	0.2	0.2
328	8/12/2019	15:16:48	0.2	0.2	0.2	0.2
329	8/12/2019	15:17:48	0.2	0.2	0.2	0.2
330	8/12/2019	15:18:48	0.2	0.2	0.2	0.2
331	8/12/2019	15:19:48	0.2	0.2	0.2	0.2
332	8/12/2019	15:20:48	0.2	0.2	0.2	0.2
333	8/12/2019	15:21:48	0.2	0.2	0.2	0.2
334	8/12/2019	15:22:48	0.2	0.2	0.2	0.2
335	8/12/2019	15:23:48	0.2	0.2	0.2	0.2
336	8/12/2019	15:24:48	0.2	0.2	0.2	0.2
337	8/12/2019	15:25:48	0.2	0.2	0.2	0.2
338	8/12/2019	15:26:48	0.2	0.2	0.2	0.2
339	8/12/2019	15:27:48	0.2	0.2	0.2	0.2
340	8/12/2019	15:28:48	0.2	0.2	0.2	0.2
341	8/12/2019	15:29:48	0.2	0.2	0.2	0.2
342	8/12/2019	15:30:48	0.2	0.2	0.2	0.2
343	8/12/2019	15:31:48	0.2	0.2	0.2	0.2
344	8/12/2019	15:32:48	0.2	0.2	0.2	0.2
345	8/12/2019	15:33:48	0.2	0.2	0.2	0.2
346	8/12/2019	15:34:48	0.2	0.2	0.2	0.2
347	8/12/2019	15:35:48	0.2	0.2	0.2	0.2
348	8/12/2019	15:36:48	0.2	0.2	0.2	0.2
349	8/12/2019	15:37:48	0.2	0.2	0.2	0.2
350	8/12/2019	15:38:48	0.2	0.2	0.2	0.2

351	8/12/2019	15:39:48	0.2	0.2	0.2	0.2
352	8/12/2019	15:40:48	0.2	0.2	0.2	0.2
353	8/12/2019	15:41:48	0.2	0.2	0.2	0.2
354	8/12/2019	15:42:48	0.2	0.2	0.2	0.2
355	8/12/2019	15:43:48	0.2	0.2	0.2	0.2
356	8/12/2019	15:44:48	0.2	0.2	0.2	0.2
357	8/12/2019	15:45:48	0.2	0.2	0.2	0.2
358	8/12/2019	15:46:48	0.2	0.2	0.2	0.2
359	8/12/2019	15:47:48	0.2	0.2	0.2	0.2
360	8/12/2019	15:48:48	0.2	0.2	0.2	0.2
361	8/12/2019	15:49:48	0.2	0.2	0.2	0.2
362	8/12/2019	15:50:48	0.2	0.2	0.2	0.2
363	8/12/2019	15:51:48	0.2	0.2	0.2	0.2
364	8/12/2019	15:52:48	0.2	0.2	0.2	0.2
365	8/12/2019	15:53:48	0.2	0.2	0.2	0.2
366	8/12/2019	15:54:48	0.2	0.2	0.2	0.2
367	8/12/2019	15:55:48	0.2	0.2	0.2	0.2
368	8/12/2019	15:56:48	0.2	0.2	0.2	0.2
369	8/12/2019	15:57:48	0.2	0.2	0.2	0.2
370	8/12/2019	15:58:48	0.2	0.2	0.2	0.2
371	8/12/2019	15:59:48	0.2	0.2	0.2	0.2
372	8/12/2019	16:00:48	0.2	0.2	0.2	0.2
373	8/12/2019	16:01:48	0.2	0.2	0.2	0.2
374	8/12/2019	16:02:48	0.2	0.2	0.2	0.2
375	8/12/2019	16:03:48	0.2	0.2	0.2	0.2
376	8/12/2019	16:04:48	0.2	0.2	0.2	0.2
377	8/12/2019	16:05:48	0.2	0.2	0.2	0.2
378	8/12/2019	16:06:48	0.2	0.2	0.2	0.2
379	8/12/2019	16:07:48	0.2	0.2	0.2	0.2
380	8/12/2019	16:08:48	0.2	0.2	0.2	0.2
381	8/12/2019	16:09:48	0.2	0.2	0.2	0.2
382	8/12/2019	16:10:48	0.2	0.2	0.2	0.2
383	8/12/2019	16:11:48	0.2	0.2	0.2	0.2
384	8/12/2019	16:12:48	0.2	0.2	0.2	0.2
385	8/12/2019	16:13:48	0.2	0.2	0.2	0.2
386	8/12/2019	16:14:48	0.2	0.2	0.2	0.2
387	8/12/2019	16:15:48	0.2	0.2	0.2	0.2
388	8/12/2019	16:16:48	0.2	0.2	0.2	0.2
389	8/12/2019	16:17:48	0.2	0.2	0.2	0.2
390	8/12/2019	16:18:48	0.2	0.2	0.2	0.2
391	8/12/2019	16:19:48	0.2	0.2	0.2	0.2
392	8/12/2019	16:20:48	0.2	0.2	0.2	0.2
393	8/12/2019	16:21:48	0.2	0.2	0.2	0.2
394	8/12/2019	16:22:48	0.2	0.2	0.2	0.2
395	8/12/2019	16:23:48	0.2	0.2	0.2	0.2
396	8/12/2019	16:24:48	0.2	0.2	0.2	0.2
Peak			0.2	0.2	0.2	0.2
Min			0.0	0.0	0.0	0.0
Average				0.1	0.1	0.1

****

TWA/STEL

Index		PID(ppm) Date/Time	PID(ppm) (TWA)	(STEL)
001	8/12/2019	09:49:48	0.0	---
002	8/12/2019	09:50:48	0.0	---
003	8/12/2019	09:51:48	0.0	---

004	8/12/2019 09:52:48	0.0	---
005	8/12/2019 09:53:48	0.0	---
006	8/12/2019 09:54:48	0.0	---
007	8/12/2019 09:55:48	0.0	---
008	8/12/2019 09:56:48	0.0	---
009	8/12/2019 09:57:48	0.0	---
010	8/12/2019 09:58:48	0.0	---
011	8/12/2019 09:59:48	0.0	---
012	8/12/2019 10:00:48	0.0	---
013	8/12/2019 10:01:48	0.0	---
014	8/12/2019 10:02:48	0.0	---
015	8/12/2019 10:03:48	0.0	0.0
016	8/12/2019 10:04:48	0.0	0.0
017	8/12/2019 10:05:48	0.0	0.0
018	8/12/2019 10:06:48	0.0	0.0
019	8/12/2019 10:07:48	0.0	0.0
020	8/12/2019 10:08:48	0.0	0.0
021	8/12/2019 10:09:48	0.0	0.0
022	8/12/2019 10:10:48	0.0	0.0
023	8/12/2019 10:11:48	0.0	0.0
024	8/12/2019 10:12:48	0.0	0.0
025	8/12/2019 10:13:48	0.0	0.0
026	8/12/2019 10:14:48	0.0	0.0
027	8/12/2019 10:15:48	0.0	0.0
028	8/12/2019 10:16:48	0.0	0.0
029	8/12/2019 10:17:48	0.0	0.0
030	8/12/2019 10:18:48	0.0	0.0
031	8/12/2019 10:19:48	0.0	0.0
032	8/12/2019 10:20:48	0.0	0.0
033	8/12/2019 10:21:48	0.0	0.0
034	8/12/2019 10:22:48	0.0	0.0
035	8/12/2019 10:23:48	0.0	0.0
036	8/12/2019 10:24:48	0.0	0.0
037	8/12/2019 10:25:48	0.0	0.0
038	8/12/2019 10:26:48	0.0	0.0
039	8/12/2019 10:27:48	0.0	0.0
040	8/12/2019 10:28:48	0.0	0.0
041	8/12/2019 10:29:48	0.0	0.0
042	8/12/2019 10:30:48	0.0	0.0
043	8/12/2019 10:31:48	0.0	0.0
044	8/12/2019 10:32:48	0.0	0.0
045	8/12/2019 10:33:48	0.0	0.0
046	8/12/2019 10:34:48	0.0	0.0
047	8/12/2019 10:35:48	0.0	0.0
048	8/12/2019 10:36:48	0.0	0.0
049	8/12/2019 10:37:48	0.0	0.0
050	8/12/2019 10:38:48	0.0	0.0
051	8/12/2019 10:39:48	0.0	0.0
052	8/12/2019 10:40:48	0.0	0.0
053	8/12/2019 10:41:48	0.0	0.0
054	8/12/2019 10:42:48	0.0	0.0
055	8/12/2019 10:43:48	0.0	0.0
056	8/12/2019 10:44:48	0.0	0.0
057	8/12/2019 10:45:48	0.0	0.0
058	8/12/2019 10:46:48	0.0	0.0
059	8/12/2019 10:47:48	0.0	0.0
060	8/12/2019 10:48:48	0.0	0.0

061	8/12/2019 10:49:48	0.0	0.0
062	8/12/2019 10:50:48	0.0	0.0
063	8/12/2019 10:51:48	0.0	0.0
064	8/12/2019 10:52:48	0.0	0.0
065	8/12/2019 10:53:48	0.0	0.0
066	8/12/2019 10:54:48	0.0	0.0
067	8/12/2019 10:55:48	0.0	0.0
068	8/12/2019 10:56:48	0.0	0.0
069	8/12/2019 10:57:48	0.0	0.0
070	8/12/2019 10:58:48	0.0	0.0
071	8/12/2019 10:59:48	0.0	0.0
072	8/12/2019 11:00:48	0.0	0.0
073	8/12/2019 11:01:48	0.0	0.0
074	8/12/2019 11:02:48	0.0	0.0
075	8/12/2019 11:03:48	0.0	0.0
076	8/12/2019 11:04:48	0.0	0.0
077	8/12/2019 11:05:48	0.0	0.0
078	8/12/2019 11:06:48	0.0	0.0
079	8/12/2019 11:07:48	0.0	0.0
080	8/12/2019 11:08:48	0.0	0.0
081	8/12/2019 11:09:48	0.0	0.0
082	8/12/2019 11:10:48	0.0	0.0
083	8/12/2019 11:11:48	0.0	0.0
084	8/12/2019 11:12:48	0.0	0.0
085	8/12/2019 11:13:48	0.0	0.0
086	8/12/2019 11:14:48	0.0	0.0
087	8/12/2019 11:15:48	0.0	0.0
088	8/12/2019 11:16:48	0.0	0.0
089	8/12/2019 11:17:48	0.0	0.0
090	8/12/2019 11:18:48	0.0	0.0
091	8/12/2019 11:19:48	0.0	0.0
092	8/12/2019 11:20:48	0.0	0.0
093	8/12/2019 11:21:48	0.0	0.0
094	8/12/2019 11:22:48	0.0	0.0
095	8/12/2019 11:23:48	0.0	0.0
096	8/12/2019 11:24:48	0.0	0.0
097	8/12/2019 11:25:48	0.0	0.0
098	8/12/2019 11:26:48	0.0	0.0
099	8/12/2019 11:27:48	0.0	0.0
100	8/12/2019 11:28:48	0.0	0.0
101	8/12/2019 11:29:48	0.0	0.0
102	8/12/2019 11:30:48	0.0	0.0
103	8/12/2019 11:31:48	0.0	0.0
104	8/12/2019 11:32:48	0.0	0.0
105	8/12/2019 11:33:48	0.0	0.0
106	8/12/2019 11:34:48	0.0	0.0
107	8/12/2019 11:35:48	0.0	0.0
108	8/12/2019 11:36:48	0.0	0.0
109	8/12/2019 11:37:48	0.0	0.0
110	8/12/2019 11:38:48	0.0	0.0
111	8/12/2019 11:39:48	0.0	0.0
112	8/12/2019 11:40:48	0.0	0.0
113	8/12/2019 11:41:48	0.0	0.0
114	8/12/2019 11:42:48	0.0	0.0
115	8/12/2019 11:43:48	0.0	0.0
116	8/12/2019 11:44:48	0.0	0.0
117	8/12/2019 11:45:48	0.0	0.0

118	8/12/2019 11:46:48	0.0	0.0
119	8/12/2019 11:47:48	0.0	0.0
120	8/12/2019 11:48:48	0.0	0.0
121	8/12/2019 11:49:48	0.0	0.0
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123	8/12/2019 11:51:48	0.0	0.0
124	8/12/2019 11:52:48	0.0	0.0
125	8/12/2019 11:53:48	0.0	0.0
126	8/12/2019 11:54:48	0.0	0.0
127	8/12/2019 11:55:48	0.0	0.0
128	8/12/2019 11:56:48	0.0	0.0
129	8/12/2019 11:57:48	0.0	0.0
130	8/12/2019 11:58:48	0.0	0.0
131	8/12/2019 11:59:48	0.0	0.0
132	8/12/2019 12:00:48	0.0	0.0
133	8/12/2019 12:01:48	0.0	0.0
134	8/12/2019 12:02:48	0.0	0.0
135	8/12/2019 12:03:48	0.0	0.0
136	8/12/2019 12:04:48	0.0	0.0
137	8/12/2019 12:05:48	0.0	0.0
138	8/12/2019 12:06:48	0.0	0.0
139	8/12/2019 12:07:48	0.0	0.0
140	8/12/2019 12:08:48	0.0	0.0
141	8/12/2019 12:09:48	0.0	0.0
142	8/12/2019 12:10:48	0.0	0.0
143	8/12/2019 12:11:48	0.0	0.0
144	8/12/2019 12:12:48	0.0	0.0
145	8/12/2019 12:13:48	0.0	0.0
146	8/12/2019 12:14:48	0.0	0.0
147	8/12/2019 12:15:48	0.0	0.0
148	8/12/2019 12:16:48	0.0	0.0
149	8/12/2019 12:17:48	0.0	0.0
150	8/12/2019 12:18:48	0.0	0.0
151	8/12/2019 12:19:48	0.0	0.0
152	8/12/2019 12:20:48	0.0	0.0
153	8/12/2019 12:21:48	0.0	0.0
154	8/12/2019 12:22:48	0.0	0.0
155	8/12/2019 12:23:48	0.0	0.0
156	8/12/2019 12:24:48	0.0	0.0
157	8/12/2019 12:25:48	0.0	0.0
158	8/12/2019 12:26:48	0.0	0.0
159	8/12/2019 12:27:48	0.0	0.0
160	8/12/2019 12:28:48	0.0	0.0
161	8/12/2019 12:29:48	0.0	0.0
162	8/12/2019 12:30:48	0.0	0.0
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164	8/12/2019 12:32:48	0.0	0.0
165	8/12/2019 12:33:48	0.0	0.0
166	8/12/2019 12:34:48	0.0	0.0
167	8/12/2019 12:35:48	0.0	0.0
168	8/12/2019 12:36:48	0.0	0.0
169	8/12/2019 12:37:48	0.0	0.0
170	8/12/2019 12:38:48	0.0	0.0
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172	8/12/2019 12:40:48	0.0	0.0
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174	8/12/2019 12:42:48	0.0	0.0

175	8/12/2019 12:43:48	0.0	0.0
176	8/12/2019 12:44:48	0.0	0.0
177	8/12/2019 12:45:48	0.0	0.0
178	8/12/2019 12:46:48	0.0	0.0
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186	8/12/2019 12:54:48	0.0	0.0
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189	8/12/2019 12:57:48	0.0	0.0
190	8/12/2019 12:58:48	0.0	0.0
191	8/12/2019 12:59:48	0.0	0.0
192	8/12/2019 13:00:48	0.0	0.0
193	8/12/2019 13:01:48	0.0	0.0
194	8/12/2019 13:02:48	0.0	0.0
195	8/12/2019 13:03:48	0.0	0.0
196	8/12/2019 13:04:48	0.0	0.0
197	8/12/2019 13:05:48	0.0	0.0
198	8/12/2019 13:06:48	0.0	0.0
199	8/12/2019 13:07:48	0.0	0.0
200	8/12/2019 13:08:48	0.0	0.0
201	8/12/2019 13:09:48	0.0	0.0
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204	8/12/2019 13:12:48	0.0	0.0
205	8/12/2019 13:13:48	0.0	0.0
206	8/12/2019 13:14:48	0.0	0.0
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208	8/12/2019 13:16:48	0.0	0.1
209	8/12/2019 13:17:48	0.0	0.1
210	8/12/2019 13:18:48	0.0	0.1
211	8/12/2019 13:19:48	0.0	0.1
212	8/12/2019 13:20:48	0.0	0.1
213	8/12/2019 13:21:48	0.0	0.1
214	8/12/2019 13:22:48	0.0	0.1
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220	8/12/2019 13:28:48	0.0	0.1
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227	8/12/2019 13:35:48	0.0	0.1
228	8/12/2019 13:36:48	0.0	0.1
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232	8/12/2019 13:40:48	0.0	0.1
233	8/12/2019 13:41:48	0.0	0.1
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236	8/12/2019 13:44:48	0.0	0.1
237	8/12/2019 13:45:48	0.0	0.1
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243	8/12/2019 13:51:48	0.0	0.1
244	8/12/2019 13:52:48	0.0	0.1
245	8/12/2019 13:53:48	0.0	0.1
246	8/12/2019 13:54:48	0.0	0.1
247	8/12/2019 13:55:48	0.0	0.1
248	8/12/2019 13:56:48	0.0	0.1
249	8/12/2019 13:57:48	0.0	0.1
250	8/12/2019 13:58:48	0.0	0.1
251	8/12/2019 13:59:48	0.0	0.1
252	8/12/2019 14:00:48	0.0	0.1
253	8/12/2019 14:01:48	0.0	0.1
254	8/12/2019 14:02:48	0.0	0.1
255	8/12/2019 14:03:48	0.0	0.1
256	8/12/2019 14:04:48	0.0	0.1
257	8/12/2019 14:05:48	0.0	0.1
258	8/12/2019 14:06:48	0.0	0.1
259	8/12/2019 14:07:48	0.0	0.1
260	8/12/2019 14:08:48	0.0	0.1
261	8/12/2019 14:09:48	0.0	0.1
262	8/12/2019 14:10:48	0.0	0.1
263	8/12/2019 14:11:48	0.0	0.1
264	8/12/2019 14:12:48	0.0	0.1
265	8/12/2019 14:13:48	0.0	0.1
266	8/12/2019 14:14:48	0.0	0.1
267	8/12/2019 14:15:48	0.0	0.1
268	8/12/2019 14:16:48	0.0	0.1
269	8/12/2019 14:17:48	0.0	0.1
270	8/12/2019 14:18:48	0.0	0.1
271	8/12/2019 14:19:48	0.0	0.1
272	8/12/2019 14:20:48	0.0	0.1
273	8/12/2019 14:21:48	0.0	0.1
274	8/12/2019 14:22:48	0.0	0.1
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282	8/12/2019 14:30:48	0.0	0.1
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288	8/12/2019 14:36:48	0.0	0.1

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290	8/12/2019 14:38:48	0.0	0.1
291	8/12/2019 14:39:48	0.0	0.1
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293	8/12/2019 14:41:48	0.0	0.1
294	8/12/2019 14:42:48	0.0	0.1
295	8/12/2019 14:43:48	0.0	0.1
296	8/12/2019 14:44:48	0.0	0.2
297	8/12/2019 14:45:48	0.0	0.2
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299	8/12/2019 14:47:48	0.0	0.2
300	8/12/2019 14:48:48	0.0	0.2
301	8/12/2019 14:49:48	0.0	0.2
302	8/12/2019 14:50:48	0.0	0.2
303	8/12/2019 14:51:48	0.0	0.2
304	8/12/2019 14:52:48	0.0	0.2
305	8/12/2019 14:53:48	0.0	0.2
306	8/12/2019 14:54:48	0.0	0.2
307	8/12/2019 14:55:48	0.0	0.2
308	8/12/2019 14:56:48	0.0	0.2
309	8/12/2019 14:57:48	0.0	0.2
310	8/12/2019 14:58:48	0.0	0.2
311	8/12/2019 14:59:48	0.0	0.2
312	8/12/2019 15:00:48	0.0	0.2
313	8/12/2019 15:01:48	0.0	0.2
314	8/12/2019 15:02:48	0.0	0.2
315	8/12/2019 15:03:48	0.0	0.2
316	8/12/2019 15:04:48	0.0	0.2
317	8/12/2019 15:05:48	0.0	0.2
318	8/12/2019 15:06:48	0.0	0.2
319	8/12/2019 15:07:48	0.0	0.2
320	8/12/2019 15:08:48	0.0	0.2
321	8/12/2019 15:09:48	0.0	0.2
322	8/12/2019 15:10:48	0.0	0.2
323	8/12/2019 15:11:48	0.0	0.2
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325	8/12/2019 15:13:48	0.0	0.2
326	8/12/2019 15:14:48	0.0	0.2
327	8/12/2019 15:15:48	0.0	0.2
328	8/12/2019 15:16:48	0.0	0.2
329	8/12/2019 15:17:48	0.0	0.2
330	8/12/2019 15:18:48	0.0	0.2
331	8/12/2019 15:19:48	0.0	0.2
332	8/12/2019 15:20:48	0.0	0.2
333	8/12/2019 15:21:48	0.0	0.2
334	8/12/2019 15:22:48	0.0	0.2
335	8/12/2019 15:23:48	0.0	0.2
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344	8/12/2019 15:32:48	0.0	0.2
345	8/12/2019 15:33:48	0.0	0.2

346	8/12/2019 15:34:48	0.0	0.2
347	8/12/2019 15:35:48	0.0	0.2
348	8/12/2019 15:36:48	0.0	0.2
349	8/12/2019 15:37:48	0.0	0.2
350	8/12/2019 15:38:48	0.0	0.2
351	8/12/2019 15:39:48	0.0	0.2
352	8/12/2019 15:40:48	0.0	0.2
353	8/12/2019 15:41:48	0.0	0.2
354	8/12/2019 15:42:48	0.0	0.2
355	8/12/2019 15:43:48	0.0	0.2
356	8/12/2019 15:44:48	0.0	0.2
357	8/12/2019 15:45:48	0.0	0.2
358	8/12/2019 15:46:48	0.0	0.2
359	8/12/2019 15:47:48	0.0	0.2
360	8/12/2019 15:48:48	0.0	0.2
361	8/12/2019 15:49:48	0.0	0.2
362	8/12/2019 15:50:48	0.0	0.2
363	8/12/2019 15:51:48	0.1	0.2
364	8/12/2019 15:52:48	0.1	0.2
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366	8/12/2019 15:54:48	0.1	0.2
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368	8/12/2019 15:56:48	0.1	0.2
369	8/12/2019 15:57:48	0.1	0.2
370	8/12/2019 15:58:48	0.1	0.2
371	8/12/2019 15:59:48	0.1	0.2
372	8/12/2019 16:00:48	0.1	0.2
373	8/12/2019 16:01:48	0.1	0.2
374	8/12/2019 16:02:48	0.1	0.2
375	8/12/2019 16:03:48	0.1	0.2
376	8/12/2019 16:04:48	0.1	0.2
377	8/12/2019 16:05:48	0.1	0.2
378	8/12/2019 16:06:48	0.1	0.2
379	8/12/2019 16:07:48	0.1	0.2
380	8/12/2019 16:08:48	0.1	0.2
381	8/12/2019 16:09:48	0.1	0.2
382	8/12/2019 16:10:48	0.1	0.2
383	8/12/2019 16:11:48	0.1	0.2
384	8/12/2019 16:12:48	0.1	0.2
385	8/12/2019 16:13:48	0.1	0.2
386	8/12/2019 16:14:48	0.1	0.2
387	8/12/2019 16:15:48	0.1	0.2
388	8/12/2019 16:16:48	0.1	0.2
389	8/12/2019 16:17:48	0.1	0.2
390	8/12/2019 16:18:48	0.1	0.2
391	8/12/2019 16:19:48	0.1	0.2
392	8/12/2019 16:20:48	0.1	0.2
393	8/12/2019 16:21:48	0.1	0.2
394	8/12/2019 16:22:48	0.1	0.2
395	8/12/2019 16:23:48	0.1	0.2
396	8/12/2019 16:24:48	0.1	0.2

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19/08/12 17:06

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Summary

Unit Name MiniRAE 3000(PGM-7320)

Unit SN 592-903549
Unit Firmware Ver V2.20A

Running Mode Hygiene Mode
Datalog Mode Auto
Diagnostic Mode No
Stop Reason Pause in Communication Mode

Site ID 00000000
User ID 00000001

Begin8/12/2019 17:06:42
End 8/12/2019 17:07:00
Sample Period(s) 60
Number of Records 0

Sensor PID(ppm)
Sensor SN S023030154V7
Measure Type Min; Avg; Max; Real
Span 100.0
Span 2 1000.0
Low Alarm 50.0
High Alarm100.0
Over Alarm2000.0
STEL Alarm 10025.0
TWA Alarm10.0
Measurement Gas Isobutylene
Calibration Time 8/9/2019 17:02

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Datalog

0 record.

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19/08/12 10:11
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Summary

Unit Name MiniRAE 3000(PGM-7320)
Unit SN 592-914273
Unit Firmware Ver V1.20A

Running Mode Hygiene Mode
Measure Type Min; Avg; Max; Real
Datalog Mode Continuous
Datalog Type Manual
Diagnostic Mode No
Stop Reason Power Down

Site ID RAE00005
User ID 00000001

Begin 8/12/2019 10:11:14
End 8/12/2019 10:11:23
Sample Period(s) 60
Number of Records 0

Sensor VOC(ppm)
Span 100.000
Span 2 N/A
Low Alarm 50.000
High Alarm 100.000
Over Alarm 2000.000
STEL Alarm 25.000
TWA Alarm 10.000
Measurement Gas Isobutylene
Calibration Time 8/12/2019 10:06

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Datalog

0 record.

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19/08/12 11:22
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Summary

Unit Name MiniRAE 3000(PGM-7320)
Unit SN 592-914273
Unit Firmware Ver V1.20A

Running Mode Hygiene Mode
Measure Type Min; Avg; Max; Real
Datalog Mode Continuous
Datalog Type Manual
Diagnostic Mode No
Stop Reason Power Down

Site ID RAE00005
User ID 00000001

Begin 8/12/2019 11:22:31
End 8/12/2019 16:27:04
Sample Period(s) 60
Number of Records 304

Sensor VOC(ppm)
Span 100.000
Span 2 N/A
Low Alarm 50.000
High Alarm 100.000
Over Alarm 2000.000
STEL Alarm 25.000
TWA Alarm 10.000
Measurement Gas Isobutylene
Calibration Time 8/12/2019 10:06
Peak 0.358
Min 0.000
Average 0.272

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Datalog

Index	Date/Time	VOC(ppm) (Min)	VOC(ppm) (Avg)	VOC(ppm) (Max)	VOC(ppm) (Real)
001	8/12/2019 11:23:31	0.000	0.000	0.000	0.000
002	8/12/2019 11:24:31	0.000	0.000	0.000	0.000
003	8/12/2019 11:25:31	0.000	0.000	0.000	0.000
004	8/12/2019 11:26:31	0.000	0.000	0.000	0.000
005	8/12/2019 11:27:31	0.000	0.000	0.000	0.000
006	8/12/2019 11:28:31	0.000	0.000	0.000	0.000
007	8/12/2019 11:29:31	0.000	0.000	0.000	0.000
008	8/12/2019 11:30:31	0.000	0.000	0.000	0.000
009	8/12/2019 11:31:31	0.000	0.000	0.000	0.000
010	8/12/2019 11:32:31	0.000	0.000	0.000	0.000
011	8/12/2019 11:33:31	0.000	0.000	0.000	0.000
012	8/12/2019 11:34:31	0.000	0.000	0.000	0.000
013	8/12/2019 11:35:31	0.000	0.000	0.000	0.000
014	8/12/2019 11:36:31	0.000	0.000	0.009	0.009
015	8/12/2019 11:37:31	0.000	0.004	0.011	0.002
016	8/12/2019 11:38:31	0.000	0.002	0.008	0.006
017	8/12/2019 11:39:31	0.006	0.020	0.028	0.023
018	8/12/2019 11:40:31	0.013	0.024	0.033	0.023
019	8/12/2019 11:41:31	0.016	0.026	0.033	0.030
020	8/12/2019 11:42:31	0.027	0.028	0.032	0.028
021	8/12/2019 11:43:31	0.025	0.038	0.048	0.042
022	8/12/2019 11:44:31	0.042	0.051	0.058	0.058
023	8/12/2019 11:45:31	0.051	0.057	0.066	0.065
024	8/12/2019 11:46:31	0.064	0.072	0.081	0.076
025	8/12/2019 11:47:31	0.076	0.083	0.091	0.081
026	8/12/2019 11:48:31	0.080	0.090	0.104	0.104
027	8/12/2019 11:49:31	0.101	0.107	0.112	0.110
028	8/12/2019 11:50:31	0.106	0.110	0.113	0.111
029	8/12/2019 11:51:31	0.109	0.111	0.116	0.114
030	8/12/2019 11:52:31	0.113	0.118	0.125	0.125
031	8/12/2019 11:53:31	0.087	0.099	0.124	0.096

032	8/12/2019 11:54:31	0.096	0.111	0.130	0.130
033	8/12/2019 11:55:31	0.132	0.155	0.168	0.168
034	8/12/2019 11:56:31	0.168	0.175	0.179	0.177
035	8/12/2019 11:57:31	0.176	0.181	0.187	0.176
036	8/12/2019 11:58:31	0.174	0.176	0.179	0.174
037	8/12/2019 11:59:31	0.169	0.172	0.175	0.173
038	8/12/2019 12:00:31	0.171	0.176	0.182	0.182
039	8/12/2019 12:01:31	0.177	0.189	0.221	0.194
040	8/12/2019 12:02:31	0.183	0.187	0.193	0.185
041	8/12/2019 12:03:31	0.184	0.191	0.197	0.194
042	8/12/2019 12:04:31	0.182	0.193	0.206	0.183
043	8/12/2019 12:05:31	0.184	0.207	0.230	0.230
044	8/12/2019 12:06:31	0.227	0.233	0.242	0.241
045	8/12/2019 12:07:31	0.238	0.242	0.245	0.245
046	8/12/2019 12:08:31	0.242	0.245	0.249	0.249
047	8/12/2019 12:09:31	0.246	0.250	0.256	0.254
048	8/12/2019 12:10:31	0.240	0.245	0.253	0.245
049	8/12/2019 12:11:31	0.246	0.248	0.253	0.251
050	8/12/2019 12:12:31	0.243	0.248	0.255	0.243
051	8/12/2019 12:13:31	0.234	0.239	0.243	0.235
052	8/12/2019 12:14:31	0.232	0.243	0.257	0.254
053	8/12/2019 12:15:31	0.246	0.250	0.257	0.253
054	8/12/2019 12:16:31	0.243	0.248	0.252	0.243
055	8/12/2019 12:17:31	0.236	0.240	0.244	0.240
056	8/12/2019 12:18:31	0.235	0.240	0.245	0.239
057	8/12/2019 12:19:31	0.238	0.241	0.247	0.238
058	8/12/2019 12:20:31	0.239	0.249	0.262	0.259
059	8/12/2019 12:21:31	0.253	0.257	0.261	0.258
060	8/12/2019 12:22:31	0.256	0.261	0.267	0.263
061	8/12/2019 12:23:31	0.259	0.262	0.267	0.262
062	8/12/2019 12:24:31	0.263	0.270	0.289	0.272
063	8/12/2019 12:25:31	0.270	0.276	0.282	0.281
064	8/12/2019 12:26:31	0.270	0.274	0.280	0.277
065	8/12/2019 12:27:31	0.273	0.277	0.283	0.277
066	8/12/2019 12:28:31	0.267	0.272	0.280	0.268
067	8/12/2019 12:29:31	0.265	0.269	0.273	0.265
068	8/12/2019 12:30:31	0.264	0.272	0.279	0.264
069	8/12/2019 12:31:31	0.263	0.281	0.288	0.288
070	8/12/2019 12:32:31	0.286	0.289	0.295	0.286
071	8/12/2019 12:33:31	0.285	0.299	0.311	0.307
072	8/12/2019 12:34:31	0.305	0.311	0.321	0.321
073	8/12/2019 12:35:31	0.309	0.314	0.320	0.312
074	8/12/2019 12:36:31	0.314	0.324	0.333	0.321
075	8/12/2019 12:37:31	0.321	0.323	0.327	0.322
076	8/12/2019 12:38:31	0.318	0.321	0.325	0.320
077	8/12/2019 12:39:31	0.320	0.326	0.329	0.327
078	8/12/2019 12:40:31	0.321	0.324	0.330	0.324
079	8/12/2019 12:41:31	0.320	0.323	0.327	0.322
080	8/12/2019 12:42:31	0.322	0.326	0.331	0.328
081	8/12/2019 12:43:31	0.324	0.325	0.328	0.328
082	8/12/2019 12:44:31	0.318	0.323	0.330	0.319
083	8/12/2019 12:45:31	0.306	0.313	0.318	0.313
084	8/12/2019 12:46:31	0.298	0.303	0.314	0.308
085	8/12/2019 12:47:31	0.302	0.306	0.311	0.307
086	8/12/2019 12:48:31	0.308	0.321	0.327	0.326
087	8/12/2019 12:49:31	0.324	0.327	0.332	0.325
088	8/12/2019 12:50:31	0.317	0.323	0.329	0.323

089	8/12/2019	12:51:31	0.318	0.323	0.329	0.327
090	8/12/2019	12:52:31	0.322	0.324	0.327	0.324
091	8/12/2019	12:53:31	0.316	0.320	0.325	0.316
092	8/12/2019	12:54:31	0.307	0.311	0.316	0.309
093	8/12/2019	12:55:31	0.306	0.319	0.336	0.336
094	8/12/2019	12:56:31	0.326	0.330	0.337	0.329
095	8/12/2019	12:57:31	0.314	0.321	0.329	0.320
096	8/12/2019	12:58:31	0.319	0.333	0.341	0.340
097	8/12/2019	12:59:31	0.329	0.334	0.339	0.331
098	8/12/2019	13:00:31	0.324	0.328	0.331	0.327
099	8/12/2019	13:01:31	0.320	0.324	0.329	0.323
100	8/12/2019	13:02:31	0.323	0.326	0.332	0.323
101	8/12/2019	13:03:31	0.316	0.318	0.323	0.319
102	8/12/2019	13:04:31	0.315	0.317	0.320	0.317
103	8/12/2019	13:05:31	0.315	0.319	0.324	0.318
104	8/12/2019	13:06:31	0.316	0.320	0.325	0.322
105	8/12/2019	13:07:31	0.319	0.322	0.325	0.323
106	8/12/2019	13:08:31	0.316	0.321	0.326	0.322
107	8/12/2019	13:09:31	0.318	0.323	0.328	0.318
108	8/12/2019	13:10:31	0.318	0.326	0.335	0.329
109	8/12/2019	13:11:31	0.322	0.327	0.332	0.325
110	8/12/2019	13:12:31	0.323	0.328	0.334	0.333
111	8/12/2019	13:13:31	0.327	0.330	0.336	0.332
112	8/12/2019	13:14:31	0.331	0.334	0.340	0.340
113	8/12/2019	13:15:31	0.338	0.346	0.351	0.351
114	8/12/2019	13:16:31	0.342	0.349	0.352	0.342
115	8/12/2019	13:17:31	0.339	0.344	0.349	0.346
116	8/12/2019	13:18:31	0.344	0.348	0.354	0.352
117	8/12/2019	13:19:31	0.347	0.350	0.355	0.349
118	8/12/2019	13:20:31	0.344	0.348	0.352	0.346
119	8/12/2019	13:21:31	0.341	0.344	0.347	0.347
120	8/12/2019	13:22:31	0.345	0.352	0.358	0.358
121	8/12/2019	13:23:31	0.349	0.354	0.360	0.350
122	8/12/2019	13:24:31	0.333	0.341	0.350	0.334
123	8/12/2019	13:25:31	0.318	0.324	0.335	0.322
124	8/12/2019	13:26:31	0.309	0.312	0.318	0.315
125	8/12/2019	13:27:31	0.304	0.309	0.316	0.305
126	8/12/2019	13:28:31	0.304	0.307	0.312	0.312
127	8/12/2019	13:29:31	0.310	0.316	0.322	0.318
128	8/12/2019	13:30:31	0.318	0.326	0.334	0.333
129	8/12/2019	13:31:31	0.323	0.329	0.336	0.332
130	8/12/2019	13:32:31	0.333	0.338	0.342	0.338
131	8/12/2019	13:33:31	0.330	0.334	0.340	0.332
132	8/12/2019	13:34:31	0.329	0.331	0.335	0.329
133	8/12/2019	13:35:31	0.314	0.321	0.329	0.315
134	8/12/2019	13:36:31	0.310	0.314	0.317	0.316
135	8/12/2019	13:37:31	0.303	0.315	0.321	0.304
136	8/12/2019	13:38:31	0.303	0.307	0.314	0.311
137	8/12/2019	13:39:31	0.308	0.311	0.315	0.308
138	8/12/2019	13:40:31	0.291	0.299	0.308	0.298
139	8/12/2019	13:41:31	0.297	0.300	0.306	0.305
140	8/12/2019	13:42:31	0.302	0.304	0.307	0.303
141	8/12/2019	13:43:31	0.302	0.304	0.308	0.306
142	8/12/2019	13:44:31	0.302	0.304	0.307	0.305
143	8/12/2019	13:45:31	0.296	0.300	0.305	0.300
144	8/12/2019	13:46:31	0.295	0.301	0.306	0.306
145	8/12/2019	13:47:31	0.302	0.307	0.313	0.302

146	8/12/2019 13:48:31	0.2870.2980.3060.291
147	8/12/2019 13:49:31	0.2890.2940.3000.292
148	8/12/2019 13:50:31	0.2900.2940.3010.294
149	8/12/2019 13:51:31	0.2950.3020.3060.300
150	8/12/2019 13:52:31	0.2960.2990.3030.297
151	8/12/2019 13:53:31	0.2930.2950.2980.295
152	8/12/2019 13:54:31	0.2950.2970.3000.298
153	8/12/2019 13:55:31	0.2920.2960.2990.298
154	8/12/2019 13:56:31	0.2870.2940.2990.287
155	8/12/2019 13:57:31	0.2810.2870.2940.293
156	8/12/2019 13:58:31	0.2860.2910.2940.286
157	8/12/2019 13:59:31	0.2840.2890.2950.295
158	8/12/2019 14:00:31	0.2960.3040.3110.300
159	8/12/2019 14:01:31	0.2930.2970.3020.301
160	8/12/2019 14:02:31	0.2890.2950.3020.294
161	8/12/2019 14:03:31	0.2940.3030.3200.320
162	8/12/2019 14:04:31	0.3010.3060.3190.305
163	8/12/2019 14:05:31	0.3040.3060.3120.309
164	8/12/2019 14:06:31	0.2940.3000.3080.299
165	8/12/2019 14:07:31	0.2950.2990.3030.303
166	8/12/2019 14:08:31	0.2940.3010.3060.297
167	8/12/2019 14:09:31	0.2880.2950.2990.288
168	8/12/2019 14:10:31	0.2860.2900.2940.293
169	8/12/2019 14:11:31	0.2930.3020.3070.302
170	8/12/2019 14:12:31	0.2970.3040.3080.297
171	8/12/2019 14:13:31	0.2920.2970.3010.301
172	8/12/2019 14:14:31	0.2970.3010.3050.297
173	8/12/2019 14:15:31	0.2960.3000.3030.301
174	8/12/2019 14:16:31	0.2930.2980.3020.293
175	8/12/2019 14:17:31	0.2930.3030.3080.305
176	8/12/2019 14:18:31	0.2980.3000.3050.301
177	8/12/2019 14:19:31	0.2970.3020.3060.305
178	8/12/2019 14:20:31	0.3040.3060.3090.305
179	8/12/2019 14:21:31	0.3020.3100.3220.322
180	8/12/2019 14:22:31	0.3110.3150.3220.312
181	8/12/2019 14:23:31	0.3130.3160.3210.314
182	8/12/2019 14:24:31	0.3140.3190.3260.324
183	8/12/2019 14:25:31	0.3140.3170.3240.316
184	8/12/2019 14:26:31	0.3070.3130.3190.310
185	8/12/2019 14:27:31	0.3000.3060.3130.300
186	8/12/2019 14:28:31	0.2990.3060.3120.307
187	8/12/2019 14:29:31	0.2960.3000.3070.300
188	8/12/2019 14:30:31	0.2950.3000.3040.295
189	8/12/2019 14:31:31	0.2940.2960.2990.297
190	8/12/2019 14:32:31	0.2960.3010.3050.304
191	8/12/2019 14:33:31	0.2970.3020.3090.297
192	8/12/2019 14:34:31	0.2960.3010.3060.301
193	8/12/2019 14:35:31	0.2920.2980.3030.303
194	8/12/2019 14:36:31	0.3030.3080.3110.309
195	8/12/2019 14:37:31	0.3060.3090.3140.307
196	8/12/2019 14:38:31	0.3050.3080.3120.305
197	8/12/2019 14:39:31	0.2980.3020.3060.298
198	8/12/2019 14:40:31	0.2890.2930.2970.293
199	8/12/2019 14:41:31	0.2900.2970.3070.303
200	8/12/2019 14:42:31	0.2950.2980.3030.295
201	8/12/2019 14:43:31	0.2910.2940.3020.301
202	8/12/2019 14:44:31	0.3010.3050.3070.304

203	8/12/2019 14:45:31	0.3010.3040.3090.309
204	8/12/2019 14:46:31	0.3010.3040.3090.303
205	8/12/2019 14:47:31	0.3020.3060.3100.306
206	8/12/2019 14:48:31	0.3020.3070.3120.311
207	8/12/2019 14:49:31	0.3090.3130.3180.313
208	8/12/2019 14:50:31	0.3100.3140.3170.316
209	8/12/2019 14:51:31	0.3060.3100.3170.308
210	8/12/2019 14:52:31	0.3050.3080.3110.310
211	8/12/2019 14:53:31	0.3050.3090.3120.308
212	8/12/2019 14:54:31	0.3060.3090.3160.315
213	8/12/2019 14:55:31	0.3070.3100.3140.308
214	8/12/2019 14:56:31	0.3040.3100.3140.304
215	8/12/2019 14:57:31	0.3010.3040.3070.302
216	8/12/2019 14:58:31	0.2910.2950.3030.294
217	8/12/2019 14:59:31	0.2910.2950.3000.300
218	8/12/2019 15:00:31	0.2950.3000.3050.304
219	8/12/2019 15:01:31	0.3020.3050.3080.307
220	8/12/2019 15:02:31	0.3010.3030.3090.304
221	8/12/2019 15:03:31	0.2990.3030.3070.302
222	8/12/2019 15:04:31	0.2920.2980.3040.299
223	8/12/2019 15:05:31	0.2890.2940.3000.292
224	8/12/2019 15:06:31	0.2900.2920.2970.291
225	8/12/2019 15:07:31	0.2900.2980.3040.299
226	8/12/2019 15:08:31	0.2900.2990.3070.306
227	8/12/2019 15:09:31	0.2960.2990.3060.302
228	8/12/2019 15:10:31	0.2920.2960.3050.295
229	8/12/2019 15:11:31	0.2940.3000.3060.304
230	8/12/2019 15:12:31	0.2980.3030.3080.306
231	8/12/2019 15:13:31	0.2980.3020.3060.303
232	8/12/2019 15:14:31	0.2960.2990.3020.298
233	8/12/2019 15:15:31	0.2910.2950.2980.295
234	8/12/2019 15:16:31	0.2900.2930.2980.296
235	8/12/2019 15:17:31	0.2880.2910.2950.289
236	8/12/2019 15:18:31	0.2860.2880.2920.288
237	8/12/2019 15:19:31	0.2830.2860.2910.284
238	8/12/2019 15:20:31	0.2780.2830.2880.286
239	8/12/2019 15:21:31	0.2820.2870.2930.292
240	8/12/2019 15:22:31	0.2870.2900.2930.289
241	8/12/2019 15:23:31	0.2860.2880.2900.288
242	8/12/2019 15:24:31	0.2850.2870.2910.287
243	8/12/2019 15:25:31	0.2830.2850.2880.286
244	8/12/2019 15:26:31	0.2800.2850.2890.280
245	8/12/2019 15:27:31	0.2790.2870.2940.291
246	8/12/2019 15:28:31	0.2880.2920.2980.291
247	8/12/2019 15:29:31	0.2820.2860.2920.287
248	8/12/2019 15:30:31	0.2800.2900.2990.299
249	8/12/2019 15:31:31	0.2900.2930.2970.290
250	8/12/2019 15:32:31	0.2900.2930.2960.290
251	8/12/2019 15:33:31	0.2900.2940.2990.298
252	8/12/2019 15:34:31	0.2950.2990.3130.301
253	8/12/2019 15:35:31	0.2970.3030.3090.304
254	8/12/2019 15:36:31	0.3030.3080.3130.312
255	8/12/2019 15:37:31	0.3020.3070.3150.302
256	8/12/2019 15:38:31	0.3010.3060.3140.311
257	8/12/2019 15:39:31	0.3100.3170.3210.319
258	8/12/2019 15:40:31	0.3190.3240.3300.321
259	8/12/2019 15:41:31	0.3160.3200.3230.318

260	8/12/2019 15:42:31	0.313	0.319 0.326 0.315
261	8/12/2019 15:43:31	0.313	0.317 0.321 0.319
262	8/12/2019 15:44:31	0.311	0.316 0.322 0.311
263	8/12/2019 15:45:31	0.308	0.312 0.316 0.309
264	8/12/2019 15:46:31	0.302	0.305 0.311 0.303
265	8/12/2019 15:47:31	0.302	0.304 0.306 0.302
266	8/12/2019 15:48:31	0.302	0.303 0.306 0.304
267	8/12/2019 15:49:31	0.299	0.301 0.304 0.300
268	8/12/2019 15:50:31	0.297	0.301 0.306 0.303
269	8/12/2019 15:51:31	0.292	0.296 0.303 0.296
270	8/12/2019 15:52:31	0.291	0.297 0.302 0.300
271	8/12/2019 15:53:31	0.297	0.301 0.308 0.308
272	8/12/2019 15:54:31	0.305	0.308 0.312 0.305
273	8/12/2019 15:55:31	0.302	0.306 0.311 0.303
274	8/12/2019 15:56:31	0.297	0.299 0.304 0.299
275	8/12/2019 15:57:31	0.297	0.300 0.303 0.300
276	8/12/2019 15:58:31	0.296	0.299 0.303 0.297
277	8/12/2019 15:59:31	0.296	0.298 0.301 0.299
278	8/12/2019 16:00:31	0.299	0.303 0.306 0.306
279	8/12/2019 16:01:31	0.307	0.311 0.314 0.311
280	8/12/2019 16:02:31	0.307	0.308 0.312 0.309
281	8/12/2019 16:03:31	0.292	0.300 0.310 0.298
282	8/12/2019 16:04:31	0.300	0.321 0.331 0.325
283	8/12/2019 16:05:31	0.319	0.324 0.331 0.322
284	8/12/2019 16:06:31	0.318	0.324 0.331 0.327
285	8/12/2019 16:07:31	0.326	0.328 0.332 0.328
286	8/12/2019 16:08:31	0.318	0.323 0.328 0.324
287	8/12/2019 16:09:31	0.321	0.324 0.337 0.337
288	8/12/2019 16:10:31	0.325	0.331 0.338 0.325
289	8/12/2019 16:11:31	0.319	0.322 0.325 0.321
290	8/12/2019 16:12:31	0.313	0.317 0.323 0.316
291	8/12/2019 16:13:31	0.317	0.320 0.323 0.321
292	8/12/2019 16:14:31	0.313	0.320 0.325 0.313
293	8/12/2019 16:15:31	0.309	0.314 0.320 0.319
294	8/12/2019 16:16:31	0.303	0.310 0.318 0.304
295	8/12/2019 16:17:31	0.305	0.310 0.316 0.310
296	8/12/2019 16:18:31	0.305	0.308 0.311 0.306
297	8/12/2019 16:19:31	0.300	0.304 0.307 0.305
298	8/12/2019 16:20:31	0.295	0.300 0.306 0.303
299	8/12/2019 16:21:31	0.294	0.298 0.304 0.295
300	8/12/2019 16:22:31	0.286	0.290 0.299 0.287
301	8/12/2019 16:23:31	0.285	0.287 0.289 0.288
302	8/12/2019 16:24:31	0.288	0.291 0.294 0.290
303	8/12/2019 16:25:31	0.283	0.285 0.290 0.285
304	8/12/2019 16:26:31	0.282	0.285 0.288 0.287
Peak		0.349	0.354 0.360 0.358
Min		0.000	0.000 0.000 0.000
Average		0.266	0.271 0.277 0.272

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TWA/STEL

Index	Date/Time	VOC(ppm) (TWA)	VOC(ppm) (STEL)
001	8/12/2019 11:23:31	0.000	---
002	8/12/2019 11:24:31	0.000	---
003	8/12/2019 11:25:31	0.000	---
004	8/12/2019 11:26:31	0.000	---

005	8/12/2019 11:27:31	0.000---
006	8/12/2019 11:28:31	0.000---
007	8/12/2019 11:29:31	0.000---
008	8/12/2019 11:30:31	0.000---
009	8/12/2019 11:31:31	0.000---
010	8/12/2019 11:32:31	0.000---
011	8/12/2019 11:33:31	0.000---
012	8/12/2019 11:34:31	0.000---
013	8/12/2019 11:35:31	0.000---
014	8/12/2019 11:36:31	0.000---
015	8/12/2019 11:37:31	0.0000.001
016	8/12/2019 11:38:31	0.0000.001
017	8/12/2019 11:39:31	0.0000.003
018	8/12/2019 11:40:31	0.0000.004
019	8/12/2019 11:41:31	0.0000.006
020	8/12/2019 11:42:31	0.0000.008
021	8/12/2019 11:43:31	0.0000.011
022	8/12/2019 11:44:31	0.0000.015
023	8/12/2019 11:45:31	0.0010.019
024	8/12/2019 11:46:31	0.0010.024
025	8/12/2019 11:47:31	0.0010.030
026	8/12/2019 11:48:31	0.0010.036
027	8/12/2019 11:49:31	0.0010.044
028	8/12/2019 11:50:31	0.0020.051
029	8/12/2019 11:51:31	0.0020.059
030	8/12/2019 11:52:31	0.0020.067
031	8/12/2019 11:53:31	0.0020.073
032	8/12/2019 11:54:31	0.0030.081
033	8/12/2019 11:55:31	0.0030.091
034	8/12/2019 11:56:31	0.0030.101
035	8/12/2019 11:57:31	0.0040.111
036	8/12/2019 11:58:31	0.0040.120
037	8/12/2019 11:59:31	0.0040.129
038	8/12/2019 12:00:31	0.0050.137
039	8/12/2019 12:01:31	0.0050.146
040	8/12/2019 12:02:31	0.0060.153
041	8/12/2019 12:03:31	0.0060.161
042	8/12/2019 12:04:31	0.0060.166
043	8/12/2019 12:05:31	0.0070.174
044	8/12/2019 12:06:31	0.0070.183
045	8/12/2019 12:07:31	0.0080.192
046	8/12/2019 12:08:31	0.0080.200
047	8/12/2019 12:09:31	0.0090.210
048	8/12/2019 12:10:31	0.0090.218
049	8/12/2019 12:11:31	0.0100.224
050	8/12/2019 12:12:31	0.0100.228
051	8/12/2019 12:13:31	0.0110.232
052	8/12/2019 12:14:31	0.0110.237
053	8/12/2019 12:15:31	0.0120.243
054	8/12/2019 12:16:31	0.0120.247
055	8/12/2019 12:17:31	0.0130.250
056	8/12/2019 12:18:31	0.0130.253
057	8/12/2019 12:19:31	0.0140.256
058	8/12/2019 12:20:31	0.0140.261
059	8/12/2019 12:21:31	0.0150.263
060	8/12/2019 12:22:31	0.0160.265
061	8/12/2019 12:23:31	0.0160.266

062	8/12/2019	12:24:31	0.0170.267
063	8/12/2019	12:25:31	0.0170.269
064	8/12/2019	12:26:31	0.0180.271
065	8/12/2019	12:27:31	0.0180.273
066	8/12/2019	12:28:31	0.0190.275
067	8/12/2019	12:29:31	0.0200.277
068	8/12/2019	12:30:31	0.0200.277
069	8/12/2019	12:31:31	0.0210.280
070	8/12/2019	12:32:31	0.0210.282
071	8/12/2019	12:33:31	0.0220.287
072	8/12/2019	12:34:31	0.0230.292
073	8/12/2019	12:35:31	0.0230.297
074	8/12/2019	12:36:31	0.0240.301
075	8/12/2019	12:37:31	0.0250.306
076	8/12/2019	12:38:31	0.0250.310
077	8/12/2019	12:39:31	0.0260.314
078	8/12/2019	12:40:31	0.0270.317
079	8/12/2019	12:41:31	0.0270.320
080	8/12/2019	12:42:31	0.0280.323
081	8/12/2019	12:43:31	0.0290.327
082	8/12/2019	12:44:31	0.0290.330
083	8/12/2019	12:45:31	0.0300.333
084	8/12/2019	12:46:31	0.0310.336
085	8/12/2019	12:47:31	0.0310.338
086	8/12/2019	12:48:31	0.0320.340
087	8/12/2019	12:49:31	0.0330.342
088	8/12/2019	12:50:31	0.0330.342
089	8/12/2019	12:51:31	0.0340.343
090	8/12/2019	12:52:31	0.0350.343
091	8/12/2019	12:53:31	0.0350.342
092	8/12/2019	12:54:31	0.0360.342
093	8/12/2019	12:55:31	0.0370.342
094	8/12/2019	12:56:31	0.0370.343
095	8/12/2019	12:57:31	0.0380.343
096	8/12/2019	12:58:31	0.0390.343
097	8/12/2019	12:59:31	0.0390.344
098	8/12/2019	13:00:31	0.0400.344
099	8/12/2019	13:01:31	0.0410.345
100	8/12/2019	13:02:31	0.0410.346
101	8/12/2019	13:03:31	0.0420.347
102	8/12/2019	13:04:31	0.0430.346
103	8/12/2019	13:05:31	0.0430.345
104	8/12/2019	13:06:31	0.0440.345
105	8/12/2019	13:07:31	0.0450.345
106	8/12/2019	13:08:31	0.0450.345
107	8/12/2019	13:09:31	0.0460.345
108	8/12/2019	13:10:31	0.0470.346
109	8/12/2019	13:11:31	0.0470.346
110	8/12/2019	13:12:31	0.0480.346
111	8/12/2019	13:13:31	0.0490.347
112	8/12/2019	13:14:31	0.0500.347
113	8/12/2019	13:15:31	0.0500.348
114	8/12/2019	13:16:31	0.0510.349
115	8/12/2019	13:17:31	0.0520.351
116	8/12/2019	13:18:31	0.0520.353
117	8/12/2019	13:19:31	0.0530.355
118	8/12/2019	13:20:31	0.0540.357

119	8/12/2019	13:21:31	0.0550.358
120	8/12/2019	13:22:31	0.0550.361
121	8/12/2019	13:23:31	0.0560.363
122	8/12/2019	13:24:31	0.0570.363
123	8/12/2019	13:25:31	0.0570.364
124	8/12/2019	13:26:31	0.0580.363
125	8/12/2019	13:27:31	0.0590.361
126	8/12/2019	13:28:31	0.0590.360
127	8/12/2019	13:29:31	0.0600.359
128	8/12/2019	13:30:31	0.0610.359
129	8/12/2019	13:31:31	0.0610.357
130	8/12/2019	13:32:31	0.0620.357
131	8/12/2019	13:33:31	0.0630.356
132	8/12/2019	13:34:31	0.0640.355
133	8/12/2019	13:35:31	0.0640.352
134	8/12/2019	13:36:31	0.0650.350
135	8/12/2019	13:37:31	0.0650.348
136	8/12/2019	13:38:31	0.0660.344
137	8/12/2019	13:39:31	0.0670.342
138	8/12/2019	13:40:31	0.0670.339
139	8/12/2019	13:41:31	0.0680.338
140	8/12/2019	13:42:31	0.0690.337
141	8/12/2019	13:43:31	0.0690.337
142	8/12/2019	13:44:31	0.0700.337
143	8/12/2019	13:45:31	0.0710.336
144	8/12/2019	13:46:31	0.0710.334
145	8/12/2019	13:47:31	0.0720.332
146	8/12/2019	13:48:31	0.0720.329
147	8/12/2019	13:49:31	0.0730.326
148	8/12/2019	13:50:31	0.0740.324
149	8/12/2019	13:51:31	0.0740.323
150	8/12/2019	13:52:31	0.0750.321
151	8/12/2019	13:53:31	0.0750.321
152	8/12/2019	13:54:31	0.0760.320
153	8/12/2019	13:55:31	0.0770.319
154	8/12/2019	13:56:31	0.0770.319
155	8/12/2019	13:57:31	0.0780.318
156	8/12/2019	13:58:31	0.0790.317
157	8/12/2019	13:59:31	0.0790.316
158	8/12/2019	14:00:31	0.0800.316
159	8/12/2019	14:01:31	0.0800.316
160	8/12/2019	14:02:31	0.0810.315
161	8/12/2019	14:03:31	0.0820.316
162	8/12/2019	14:04:31	0.0820.317
163	8/12/2019	14:05:31	0.0830.318
164	8/12/2019	14:06:31	0.0840.318
165	8/12/2019	14:07:31	0.0840.319
166	8/12/2019	14:08:31	0.0850.319
167	8/12/2019	14:09:31	0.0850.318
168	8/12/2019	14:10:31	0.0860.318
169	8/12/2019	14:11:31	0.0870.318
170	8/12/2019	14:12:31	0.0870.319
171	8/12/2019	14:13:31	0.0880.319
172	8/12/2019	14:14:31	0.0890.320
173	8/12/2019	14:15:31	0.0890.320
174	8/12/2019	14:16:31	0.0900.320
175	8/12/2019	14:17:31	0.0900.320

176	8/12/2019	14:18:31	0.0910.321
177	8/12/2019	14:19:31	0.0920.320
178	8/12/2019	14:20:31	0.0920.320
179	8/12/2019	14:21:31	0.0930.321
180	8/12/2019	14:22:31	0.0940.321
181	8/12/2019	14:23:31	0.0940.322
182	8/12/2019	14:24:31	0.0950.324
183	8/12/2019	14:25:31	0.0960.326
184	8/12/2019	14:26:31	0.0960.327
185	8/12/2019	14:27:31	0.0970.327
186	8/12/2019	14:28:31	0.0980.328
187	8/12/2019	14:29:31	0.0980.327
188	8/12/2019	14:30:31	0.0990.327
189	8/12/2019	14:31:31	0.0990.327
190	8/12/2019	14:32:31	0.1000.328
191	8/12/2019	14:33:31	0.1010.327
192	8/12/2019	14:34:31	0.1010.327
193	8/12/2019	14:35:31	0.1020.327
194	8/12/2019	14:36:31	0.1030.327
195	8/12/2019	14:37:31	0.1030.326
196	8/12/2019	14:38:31	0.1040.326
197	8/12/2019	14:39:31	0.1040.325
198	8/12/2019	14:40:31	0.1050.323
199	8/12/2019	14:41:31	0.1060.322
200	8/12/2019	14:42:31	0.1060.321
201	8/12/2019	14:43:31	0.1070.321
202	8/12/2019	14:44:31	0.1080.321
203	8/12/2019	14:45:31	0.1080.321
204	8/12/2019	14:46:31	0.1090.322
205	8/12/2019	14:47:31	0.1090.323
206	8/12/2019	14:48:31	0.1100.323
207	8/12/2019	14:49:31	0.1110.324
208	8/12/2019	14:50:31	0.1110.325
209	8/12/2019	14:51:31	0.1120.325
210	8/12/2019	14:52:31	0.1130.325
211	8/12/2019	14:53:31	0.1130.326
212	8/12/2019	14:54:31	0.1140.326
213	8/12/2019	14:55:31	0.1150.327
214	8/12/2019	14:56:31	0.1150.328
215	8/12/2019	14:57:31	0.1160.328
216	8/12/2019	14:58:31	0.1170.327
217	8/12/2019	14:59:31	0.1170.327
218	8/12/2019	15:00:31	0.1180.327
219	8/12/2019	15:01:31	0.1180.327
220	8/12/2019	15:02:31	0.1190.327
221	8/12/2019	15:03:31	0.1200.327
222	8/12/2019	15:04:31	0.1200.326
223	8/12/2019	15:05:31	0.1210.325
224	8/12/2019	15:06:31	0.1220.323
225	8/12/2019	15:07:31	0.1220.323
226	8/12/2019	15:08:31	0.1230.322
227	8/12/2019	15:09:31	0.1230.322
228	8/12/2019	15:10:31	0.1240.321
229	8/12/2019	15:11:31	0.1250.320
230	8/12/2019	15:12:31	0.1250.320
231	8/12/2019	15:13:31	0.1260.321
232	8/12/2019	15:14:31	0.1270.321

233	8/12/2019 15:15:31	0.1270.320
234	8/12/2019 15:16:31	0.1280.320
235	8/12/2019 15:17:31	0.1280.319
236	8/12/2019 15:18:31	0.1290.318
237	8/12/2019 15:19:31	0.1300.316
238	8/12/2019 15:20:31	0.1300.316
239	8/12/2019 15:21:31	0.1310.316
240	8/12/2019 15:22:31	0.1310.315
241	8/12/2019 15:23:31	0.1320.315
242	8/12/2019 15:24:31	0.1330.313
243	8/12/2019 15:25:31	0.1330.312
244	8/12/2019 15:26:31	0.1340.311
245	8/12/2019 15:27:31	0.1340.311
246	8/12/2019 15:28:31	0.1350.310
247	8/12/2019 15:29:31	0.1360.308
248	8/12/2019 15:30:31	0.1360.309
249	8/12/2019 15:31:31	0.1370.308
250	8/12/2019 15:32:31	0.1370.308
251	8/12/2019 15:33:31	0.1380.308
252	8/12/2019 15:34:31	0.1390.309
253	8/12/2019 15:35:31	0.1390.311
254	8/12/2019 15:36:31	0.1400.312
255	8/12/2019 15:37:31	0.1410.313
256	8/12/2019 15:38:31	0.1410.314
257	8/12/2019 15:39:31	0.1420.317
258	8/12/2019 15:40:31	0.1430.319
259	8/12/2019 15:41:31	0.1430.321
260	8/12/2019 15:42:31	0.1440.323
261	8/12/2019 15:43:31	0.1450.325
262	8/12/2019 15:44:31	0.1450.326
263	8/12/2019 15:45:31	0.1460.328
264	8/12/2019 15:46:31	0.1460.328
265	8/12/2019 15:47:31	0.1470.329
266	8/12/2019 15:48:31	0.1480.330
267	8/12/2019 15:49:31	0.1480.330
268	8/12/2019 15:50:31	0.1490.330
269	8/12/2019 15:51:31	0.1500.330
270	8/12/2019 15:52:31	0.1500.329
271	8/12/2019 15:53:31	0.1510.329
272	8/12/2019 15:54:31	0.1510.329
273	8/12/2019 15:55:31	0.1520.328
274	8/12/2019 15:56:31	0.1530.326
275	8/12/2019 15:57:31	0.1530.325
276	8/12/2019 15:58:31	0.1540.324
277	8/12/2019 15:59:31	0.1550.323
278	8/12/2019 16:00:31	0.1550.322
279	8/12/2019 16:01:31	0.1560.322
280	8/12/2019 16:02:31	0.1570.323
281	8/12/2019 16:03:31	0.1570.323
282	8/12/2019 16:04:31	0.1580.324
283	8/12/2019 16:05:31	0.1590.325
284	8/12/2019 16:06:31	0.1590.327
285	8/12/2019 16:07:31	0.1600.329
286	8/12/2019 16:08:31	0.1610.331
287	8/12/2019 16:09:31	0.1610.333
288	8/12/2019 16:10:31	0.1620.334
289	8/12/2019 16:11:31	0.1630.335

290	8/12/2019	16:12:31	0.1630.336
291	8/12/2019	16:13:31	0.1640.338
292	8/12/2019	16:14:31	0.1650.339
293	8/12/2019	16:15:31	0.1650.340
294	8/12/2019	16:16:31	0.1660.340
295	8/12/2019	16:17:31	0.1670.340
296	8/12/2019	16:18:31	0.1670.340
297	8/12/2019	16:19:31	0.1680.340
298	8/12/2019	16:20:31	0.1680.339
299	8/12/2019	16:21:31	0.1690.337
300	8/12/2019	16:22:31	0.1700.334
301	8/12/2019	16:23:31	0.1700.332
302	8/12/2019	16:24:31	0.1710.329
303	8/12/2019	16:25:31	0.1710.326
304	8/12/2019	16:26:31	0.1720.323

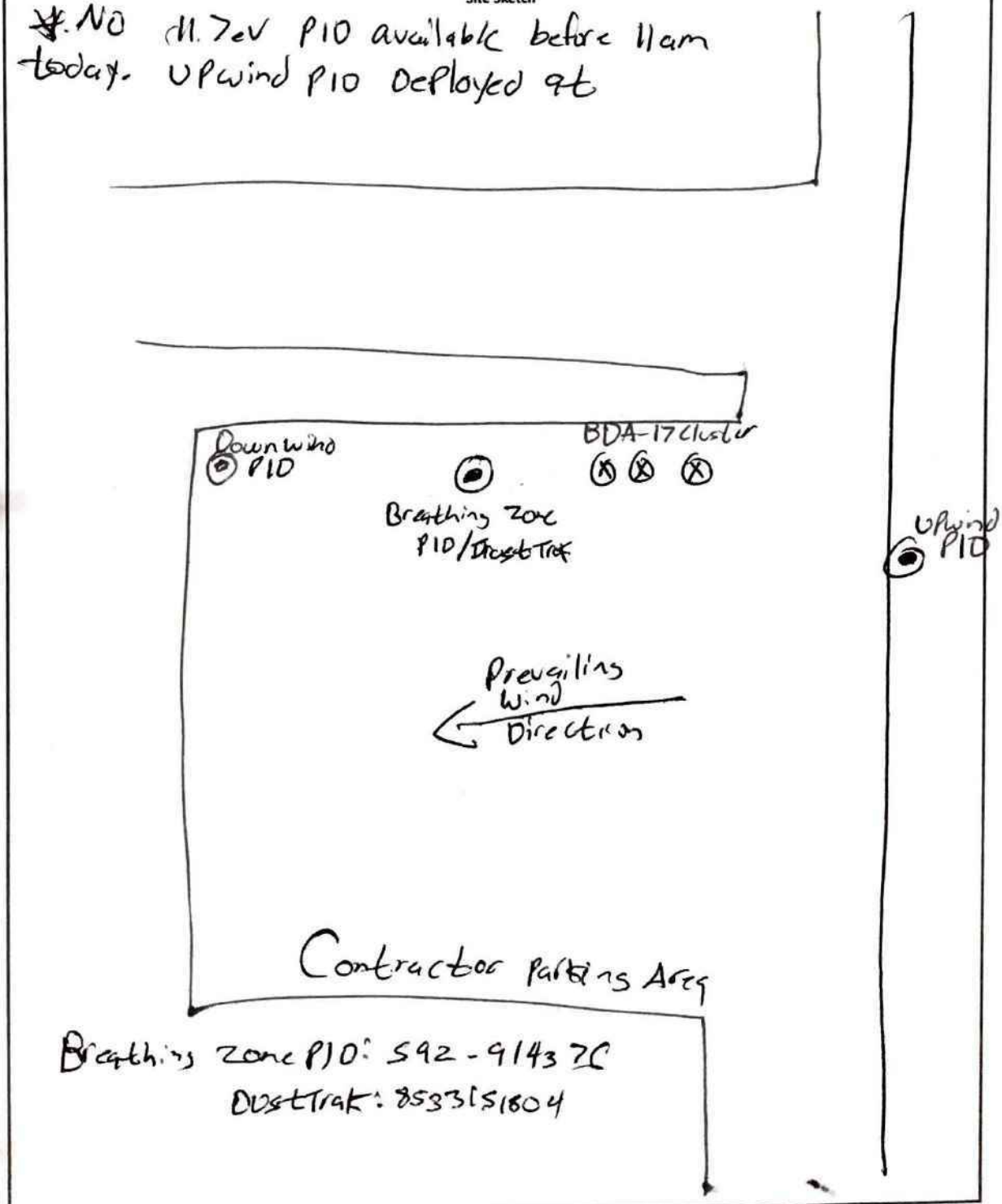
ARCADIS Design & Consultancy for natural and built assets

Daily CAMP Log

Project	Phase 2 Groundwater RI
Location	East Syracuse, NY
Date	8/12/14
Weather Conditions	70's Partly Cloudy
Upwind Monitor	592-9143 73
Downwind Monitor	592-90 5504
Start Time	0730
End Time	

Site Sketch

*. NO 11.7eV PID available before 11am today. Upwind PID Deployed at



Breathing zone PID: 592-91437C

DustTrak: 8533151804

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Environmental North

Anne Locke
Associate Manager, Environmental Protection
Environmental, Health and Safety Department
Bristol-Myers Squibb
P.O. Box 4755
Syracuse, NY 13221

Date:
August 13, 2019

Contact:
William McCune

Phone:
315-671-9172

Email:
William.McCune@arcadis.com

Our ref:
B0087363.0037

Subject:
Community Air Monitoring During Phase II RI Well Installations Bristol-Myers Squibb Syracuse Facility – East Syracuse, New York 13057

Dear Ms. Locke:

The following is a summary of the community air monitoring plan (CAMP) provided by Arcadis U.S., Inc. (Arcadis) during the Phase II Remedial Investigation (RI) drilling activities conducted at the Bristol-Myers Squibb (BMS) Syracuse North Campus, East Syracuse, NY on August 13, 2019.

August 13, 2019: Parratt-Wolff Inc. (Parratt-Wolff) continued sonic drilling activities at BDA-17RX, drilling from 8:25 AM to 5:15 PM. CAMP monitoring included photo ionization detectors at upwind and downwind locations and a DustTrak at a breathing zone location. The prevailing wind direction was observed originating from the south through the day. Air quality parameters did not exceed CAMP standards at any time during work activities. Table 1 shows the serial numbers and associated CAMP stations locations.

CAMP Station Locations	Serial Number
Breathing Zone DustTrak	#8533151804
Upwind PID	#592-914273
Downwind PID	#592-905549

Please contact us with any questions or comments pertaining to this project.

Sincerely,

Arcadis U.S., Inc.

William McCune
Principal Geologist

Attachments

1 CAMP Data Logs
2 Site Sketches/Notes

Test 002

Instrument		Data Properties	
Model	DustTrak DRX	Start Date	08/13/2019
Instrument S/N	8533151804	Start Time	07:49:10
		Stop Date	08/13/2019
		Stop Time	17:04:10
		Total Time	0:09:15:00
		Logging Interval	900 seconds

Test Data

Data Point	Date	Time	PM1 mg/m^3	PM2.5 mg/m^3	RESP mg/m^3	PM10 mg/m^3	TOTAL mg/m^3
1	08/13/2019	08:04:10	0.024	0.025	0.025	0.027	0.028
2	08/13/2019	08:19:10	0.024	0.025	0.025	0.027	0.029
3	08/13/2019	08:34:10	0.024	0.025	0.025	0.027	0.028
4	08/13/2019	08:49:10	0.025	0.026	0.026	0.029	0.033
5	08/13/2019	09:04:10	0.024	0.025	0.025	0.027	0.028
6	08/13/2019	09:19:10	0.029	0.030	0.031	0.036	0.040
7	08/13/2019	09:34:10	0.026	0.027	0.027	0.031	0.035
8	08/13/2019	09:49:10	0.025	0.025	0.026	0.028	0.030
9	08/13/2019	10:04:10	0.023	0.023	0.024	0.025	0.025
10	08/13/2019	10:19:10	0.025	0.026	0.026	0.028	0.031
11	08/13/2019	10:34:10	0.024	0.024	0.025	0.026	0.027
12	08/13/2019	10:49:10	0.031	0.033	0.035	0.043	0.051
13	08/13/2019	11:04:10	0.025	0.025	0.026	0.028	0.030
14	08/13/2019	11:19:10	0.025	0.026	0.026	0.028	0.029
15	08/13/2019	11:34:10	0.027	0.028	0.028	0.031	0.034
16	08/13/2019	11:49:10	0.027	0.028	0.029	0.031	0.035
17	08/13/2019	12:04:10	0.028	0.028	0.029	0.032	0.034
18	08/13/2019	12:19:10	0.028	0.028	0.029	0.031	0.033
19	08/13/2019	12:34:10	0.028	0.028	0.029	0.031	0.032
20	08/13/2019	12:49:10	0.027	0.027	0.028	0.029	0.030
21	08/13/2019	13:04:10	0.036	0.036	0.037	0.047	0.064
22	08/13/2019	13:19:10	0.048	0.049	0.050	0.071	0.105
23	08/13/2019	13:34:10	0.031	0.032	0.033	0.038	0.047
24	08/13/2019	13:49:10	0.027	0.027	0.028	0.029	0.030
25	08/13/2019	14:04:10	0.027	0.028	0.028	0.030	0.031
26	08/13/2019	14:19:10	0.028	0.029	0.030	0.033	0.037
27	08/13/2019	14:34:10	0.027	0.027	0.028	0.029	0.030
28	08/13/2019	14:49:10	0.027	0.028	0.028	0.034	0.040
29	08/13/2019	15:04:10	0.022	0.023	0.024	0.028	0.033
30	08/13/2019	15:19:10	0.025	0.027	0.028	0.032	0.036
31	08/13/2019	15:34:10	0.024	0.025	0.026	0.028	0.029
32	08/13/2019	15:49:10	0.046	0.048	0.050	0.068	0.105
33	08/13/2019	16:04:10	0.024	0.024	0.025	0.026	0.027
34	08/13/2019	16:19:10	0.023	0.024	0.024	0.026	0.027
35	08/13/2019	16:34:10	0.023	0.024	0.024	0.025	0.026

Test Data							
Data Point	**Date**	**Time**	**PM1 mg/m^3**	**PM2.5 mg/m^3**	**RESP mg/m^3**	**PM10 mg/m^3**	**TOTAL mg/m^3**
36	08/13/2019	16:49:10	0.024	0.025	0.025	0.027	0.028
37	08/13/2019	17:04:10	0.025	0.026	0.026	0.032	0.041

==========
19/08/13 07:55
****
Summary

Unit Name MiniRAE 3000(PGM-7320)
Unit SN 592-903549
Unit Firmware Ver V2.20A

Running Mode Hygiene Mode
Datalog Mode Auto
Diagnostic Mode No
Stop Reason Power Down

Site ID 00000000
User ID 00000001

Begin 8/13/2019 07:55:12
End 8/13/2019 17:06:21
Sample Period(s) 60
Number of Records 551

Sensor PID(ppm)
Sensor SN S023030154V7
Measure Type Min; Avg; Max; Real
Span 100.0
Span 2 1000.0
Low Alarm 50.0
High Alarm 100.0
Over Alarm 2000.0
STEL Alarm 10025.0
TWA Alarm 10.0
Measurement Gas Isobutylene
Calibration Time 8/13/2019 07:53
Peak 0.0
Min 0.0
Average 0.0

****
Datalog

Index	Date/Time	PID(ppm) (Min)	PID(ppm) (Avg)	PID(ppm) (Max)	PID(ppm) (Real)
001	8/13/2019 07:56:12	0.0	0.0	0.0	0.0
002	8/13/2019 07:57:12	0.0	0.0	0.0	0.0
003	8/13/2019 07:58:12	0.0	0.0	0.0	0.0
004	8/13/2019 07:59:12	0.0	0.0	0.0	0.0
005	8/13/2019 08:00:12	0.0	0.0	0.0	0.0
006	8/13/2019 08:01:12	0.0	0.0	0.0	0.0
007	8/13/2019 08:02:12	0.0	0.0	0.0	0.0
008	8/13/2019 08:03:12	0.0	0.0	0.0	0.0
009	8/13/2019 08:04:12	0.0	0.0	0.0	0.0
010	8/13/2019 08:05:12	0.0	0.0	0.0	0.0
011	8/13/2019 08:06:12	0.0	0.0	0.0	0.0
012	8/13/2019 08:07:12	0.0	0.0	0.0	0.0
013	8/13/2019 08:08:12	0.0	0.0	0.0	0.0
014	8/13/2019 08:09:12	0.0	0.0	0.0	0.0

015	8/13/2019 08:10:12	0.0	0.0	0.0	0.0
016	8/13/2019 08:11:12	0.0	0.0	0.0	0.0
017	8/13/2019 08:12:12	0.0	0.0	0.0	0.0
018	8/13/2019 08:13:12	0.0	0.0	0.0	0.0
019	8/13/2019 08:14:12	0.0	0.0	0.0	0.0
020	8/13/2019 08:15:12	0.0	0.0	0.0	0.0
021	8/13/2019 08:16:12	0.0	0.0	0.0	0.0
022	8/13/2019 08:17:12	0.0	0.0	0.0	0.0
023	8/13/2019 08:18:12	0.0	0.0	0.0	0.0
024	8/13/2019 08:19:12	0.0	0.0	0.0	0.0
025	8/13/2019 08:20:12	0.0	0.0	0.0	0.0
026	8/13/2019 08:21:12	0.0	0.0	0.0	0.0
027	8/13/2019 08:22:12	0.0	0.0	0.0	0.0
028	8/13/2019 08:23:12	0.0	0.0	0.0	0.0
029	8/13/2019 08:24:12	0.0	0.0	0.0	0.0
030	8/13/2019 08:25:12	0.0	0.0	0.0	0.0
031	8/13/2019 08:26:12	0.0	0.0	0.0	0.0
032	8/13/2019 08:27:12	0.0	0.0	0.0	0.0
033	8/13/2019 08:28:12	0.0	0.0	0.0	0.0
034	8/13/2019 08:29:12	0.0	0.0	0.0	0.0
035	8/13/2019 08:30:12	0.0	0.0	0.0	0.0
036	8/13/2019 08:31:12	0.0	0.0	0.0	0.0
037	8/13/2019 08:32:12	0.0	0.0	0.0	0.0
038	8/13/2019 08:33:12	0.0	0.0	0.0	0.0
039	8/13/2019 08:34:12	0.0	0.0	0.0	0.0
040	8/13/2019 08:35:12	0.0	0.0	0.0	0.0
041	8/13/2019 08:36:12	0.0	0.0	0.0	0.0
042	8/13/2019 08:37:12	0.0	0.0	0.0	0.0
043	8/13/2019 08:38:12	0.0	0.0	0.0	0.0
044	8/13/2019 08:39:12	0.0	0.0	0.0	0.0
045	8/13/2019 08:40:12	0.0	0.0	0.0	0.0
046	8/13/2019 08:41:12	0.0	0.0	0.0	0.0
047	8/13/2019 08:42:12	0.0	0.0	0.0	0.0
048	8/13/2019 08:43:12	0.0	0.0	0.0	0.0
049	8/13/2019 08:44:12	0.0	0.0	0.0	0.0
050	8/13/2019 08:45:12	0.0	0.0	0.0	0.0
051	8/13/2019 08:46:12	0.0	0.0	0.0	0.0
052	8/13/2019 08:47:12	0.0	0.0	0.0	0.0
053	8/13/2019 08:48:12	0.0	0.0	0.0	0.0
054	8/13/2019 08:49:12	0.0	0.0	0.0	0.0
055	8/13/2019 08:50:12	0.0	0.0	0.0	0.0
056	8/13/2019 08:51:12	0.0	0.0	0.0	0.0
057	8/13/2019 08:52:12	0.0	0.0	0.0	0.0
058	8/13/2019 08:53:12	0.0	0.0	0.0	0.0
059	8/13/2019 08:54:12	0.0	0.0	0.0	0.0
060	8/13/2019 08:55:12	0.0	0.0	0.0	0.0
061	8/13/2019 08:56:12	0.0	0.0	0.0	0.0
062	8/13/2019 08:57:12	0.0	0.0	0.0	0.0
063	8/13/2019 08:58:12	0.0	0.0	0.0	0.0
064	8/13/2019 08:59:12	0.0	0.0	0.0	0.0
065	8/13/2019 09:00:12	0.0	0.0	0.0	0.0
066	8/13/2019 09:01:12	0.0	0.0	0.0	0.0
067	8/13/2019 09:02:12	0.0	0.0	0.0	0.0
068	8/13/2019 09:03:12	0.0	0.0	0.0	0.0
069	8/13/2019 09:04:12	0.0	0.0	0.0	0.0
070	8/13/2019 09:05:12	0.0	0.0	0.0	0.0
071	8/13/2019 09:06:12	0.0	0.0	0.0	0.0

072	8/13/2019 09:07:12	0.0	0.0	0.0	0.0
073	8/13/2019 09:08:12	0.0	0.0	0.0	0.0
074	8/13/2019 09:09:12	0.0	0.0	0.0	0.0
075	8/13/2019 09:10:12	0.0	0.0	0.0	0.0
076	8/13/2019 09:11:12	0.0	0.0	0.0	0.0
077	8/13/2019 09:12:12	0.0	0.0	0.0	0.0
078	8/13/2019 09:13:12	0.0	0.0	0.0	0.0
079	8/13/2019 09:14:12	0.0	0.0	0.0	0.0
080	8/13/2019 09:15:12	0.0	0.0	0.0	0.0
081	8/13/2019 09:16:12	0.0	0.0	0.0	0.0
082	8/13/2019 09:17:12	0.0	0.0	0.0	0.0
083	8/13/2019 09:18:12	0.0	0.0	0.0	0.0
084	8/13/2019 09:19:12	0.0	0.0	0.0	0.0
085	8/13/2019 09:20:12	0.0	0.0	0.0	0.0
086	8/13/2019 09:21:12	0.0	0.0	0.0	0.0
087	8/13/2019 09:22:12	0.0	0.0	0.0	0.0
088	8/13/2019 09:23:12	0.0	0.0	0.0	0.0
089	8/13/2019 09:24:12	0.0	0.0	0.0	0.0
090	8/13/2019 09:25:12	0.0	0.0	0.0	0.0
091	8/13/2019 09:26:12	0.0	0.0	0.0	0.0
092	8/13/2019 09:27:12	0.0	0.0	0.0	0.0
093	8/13/2019 09:28:12	0.0	0.0	0.0	0.0
094	8/13/2019 09:29:12	0.0	0.0	0.0	0.0
095	8/13/2019 09:30:12	0.0	0.0	0.0	0.0
096	8/13/2019 09:31:12	0.0	0.0	0.0	0.0
097	8/13/2019 09:32:12	0.0	0.0	0.0	0.0
098	8/13/2019 09:33:12	0.0	0.0	0.0	0.0
099	8/13/2019 09:34:12	0.0	0.0	0.0	0.0
100	8/13/2019 09:35:12	0.0	0.0	0.0	0.0
101	8/13/2019 09:36:12	0.0	0.0	0.0	0.0
102	8/13/2019 09:37:12	0.0	0.0	0.0	0.0
103	8/13/2019 09:38:12	0.0	0.0	0.0	0.0
104	8/13/2019 09:39:12	0.0	0.0	0.0	0.0
105	8/13/2019 09:40:12	0.0	0.0	0.0	0.0
106	8/13/2019 09:41:12	0.0	0.0	0.0	0.0
107	8/13/2019 09:42:12	0.0	0.0	0.0	0.0
108	8/13/2019 09:43:12	0.0	0.0	0.0	0.0
109	8/13/2019 09:44:12	0.0	0.0	0.0	0.0
110	8/13/2019 09:45:12	0.0	0.0	0.0	0.0
111	8/13/2019 09:46:12	0.0	0.0	0.0	0.0
112	8/13/2019 09:47:12	0.0	0.0	0.0	0.0
113	8/13/2019 09:48:12	0.0	0.0	0.0	0.0
114	8/13/2019 09:49:12	0.0	0.0	0.0	0.0
115	8/13/2019 09:50:12	0.0	0.0	0.0	0.0
116	8/13/2019 09:51:12	0.0	0.0	0.0	0.0
117	8/13/2019 09:52:12	0.0	0.0	0.0	0.0
118	8/13/2019 09:53:12	0.0	0.0	0.0	0.0
119	8/13/2019 09:54:12	0.0	0.0	0.0	0.0
120	8/13/2019 09:55:12	0.0	0.0	0.0	0.0
121	8/13/2019 09:56:12	0.0	0.0	0.0	0.0
122	8/13/2019 09:57:12	0.0	0.0	0.0	0.0
123	8/13/2019 09:58:12	0.0	0.0	0.0	0.0
124	8/13/2019 09:59:12	0.0	0.0	0.0	0.0
125	8/13/2019 10:00:12	0.0	0.0	0.0	0.0
126	8/13/2019 10:01:12	0.0	0.0	0.0	0.0
127	8/13/2019 10:02:12	0.0	0.0	0.0	0.0
128	8/13/2019 10:03:12	0.0	0.0	0.0	0.0

129	8/13/2019	10:04:12	0.0	0.0	0.0	0.0
130	8/13/2019	10:05:12	0.0	0.0	0.0	0.0
131	8/13/2019	10:06:12	0.0	0.0	0.0	0.0
132	8/13/2019	10:07:12	0.0	0.0	0.0	0.0
133	8/13/2019	10:08:12	0.0	0.0	0.0	0.0
134	8/13/2019	10:09:12	0.0	0.0	0.0	0.0
135	8/13/2019	10:10:12	0.0	0.0	0.0	0.0
136	8/13/2019	10:11:12	0.0	0.0	0.0	0.0
137	8/13/2019	10:12:12	0.0	0.0	0.0	0.0
138	8/13/2019	10:13:12	0.0	0.0	0.0	0.0
139	8/13/2019	10:14:12	0.0	0.0	0.0	0.0
140	8/13/2019	10:15:12	0.0	0.0	0.0	0.0
141	8/13/2019	10:16:12	0.0	0.0	0.0	0.0
142	8/13/2019	10:17:12	0.0	0.0	0.0	0.0
143	8/13/2019	10:18:12	0.0	0.0	0.0	0.0
144	8/13/2019	10:19:12	0.0	0.0	0.0	0.0
145	8/13/2019	10:20:12	0.0	0.0	0.0	0.0
146	8/13/2019	10:21:12	0.0	0.0	0.0	0.0
147	8/13/2019	10:22:12	0.0	0.0	0.0	0.0
148	8/13/2019	10:23:12	0.0	0.0	0.0	0.0
149	8/13/2019	10:24:12	0.0	0.0	0.0	0.0
150	8/13/2019	10:25:12	0.0	0.0	0.0	0.0
151	8/13/2019	10:26:12	0.0	0.0	0.0	0.0
152	8/13/2019	10:27:12	0.0	0.0	0.0	0.0
153	8/13/2019	10:28:12	0.0	0.0	0.0	0.0
154	8/13/2019	10:29:12	0.0	0.0	0.0	0.0
155	8/13/2019	10:30:12	0.0	0.0	0.0	0.0
156	8/13/2019	10:31:12	0.0	0.0	0.0	0.0
157	8/13/2019	10:32:12	0.0	0.0	0.0	0.0
158	8/13/2019	10:33:12	0.0	0.0	0.0	0.0
159	8/13/2019	10:34:12	0.0	0.0	0.0	0.0
160	8/13/2019	10:35:12	0.0	0.0	0.0	0.0
161	8/13/2019	10:36:12	0.0	0.0	0.0	0.0
162	8/13/2019	10:37:12	0.0	0.0	0.0	0.0
163	8/13/2019	10:38:12	0.0	0.0	0.0	0.0
164	8/13/2019	10:39:12	0.0	0.0	0.0	0.0
165	8/13/2019	10:40:12	0.0	0.0	0.0	0.0
166	8/13/2019	10:41:12	0.0	0.0	0.0	0.0
167	8/13/2019	10:42:12	0.0	0.0	0.0	0.0
168	8/13/2019	10:43:12	0.0	0.0	0.0	0.0
169	8/13/2019	10:44:12	0.0	0.0	0.0	0.0
170	8/13/2019	10:45:12	0.0	0.0	0.0	0.0
171	8/13/2019	10:46:12	0.0	0.0	0.0	0.0
172	8/13/2019	10:47:12	0.0	0.0	0.0	0.0
173	8/13/2019	10:48:12	0.0	0.0	0.0	0.0
174	8/13/2019	10:49:12	0.0	0.0	0.0	0.0
175	8/13/2019	10:50:12	0.0	0.0	0.0	0.0
176	8/13/2019	10:51:12	0.0	0.0	0.0	0.0
177	8/13/2019	10:52:12	0.0	0.0	0.0	0.0
178	8/13/2019	10:53:12	0.0	0.0	0.0	0.0
179	8/13/2019	10:54:12	0.0	0.0	0.0	0.0
180	8/13/2019	10:55:12	0.0	0.0	0.0	0.0
181	8/13/2019	10:56:12	0.0	0.0	0.0	0.0
182	8/13/2019	10:57:12	0.0	0.0	0.0	0.0
183	8/13/2019	10:58:12	0.0	0.0	0.0	0.0
184	8/13/2019	10:59:12	0.0	0.0	0.0	0.0
185	8/13/2019	11:00:12	0.0	0.0	0.0	0.0

186	8/13/2019	11:01:12	0.0	0.0	0.0	0.0
187	8/13/2019	11:02:12	0.0	0.0	0.0	0.0
188	8/13/2019	11:03:12	0.0	0.0	0.0	0.0
189	8/13/2019	11:04:12	0.0	0.0	0.0	0.0
190	8/13/2019	11:05:12	0.0	0.0	0.0	0.0
191	8/13/2019	11:06:12	0.0	0.0	0.0	0.0
192	8/13/2019	11:07:12	0.0	0.0	0.0	0.0
193	8/13/2019	11:08:12	0.0	0.0	0.0	0.0
194	8/13/2019	11:09:12	0.0	0.0	0.0	0.0
195	8/13/2019	11:10:12	0.0	0.0	0.0	0.0
196	8/13/2019	11:11:12	0.0	0.0	0.0	0.0
197	8/13/2019	11:12:12	0.0	0.0	0.0	0.0
198	8/13/2019	11:13:12	0.0	0.0	0.0	0.0
199	8/13/2019	11:14:12	0.0	0.0	0.0	0.0
200	8/13/2019	11:15:12	0.0	0.0	0.0	0.0
201	8/13/2019	11:16:12	0.0	0.0	0.0	0.0
202	8/13/2019	11:17:12	0.0	0.0	0.0	0.0
203	8/13/2019	11:18:12	0.0	0.0	0.0	0.0
204	8/13/2019	11:19:12	0.0	0.0	0.0	0.0
205	8/13/2019	11:20:12	0.0	0.0	0.0	0.0
206	8/13/2019	11:21:12	0.0	0.0	0.0	0.0
207	8/13/2019	11:22:12	0.0	0.0	0.0	0.0
208	8/13/2019	11:23:12	0.0	0.0	0.0	0.0
209	8/13/2019	11:24:12	0.0	0.0	0.0	0.0
210	8/13/2019	11:25:12	0.0	0.0	0.0	0.0
211	8/13/2019	11:26:12	0.0	0.0	0.0	0.0
212	8/13/2019	11:27:12	0.0	0.0	0.0	0.0
213	8/13/2019	11:28:12	0.0	0.0	0.0	0.0
214	8/13/2019	11:29:12	0.0	0.0	0.0	0.0
215	8/13/2019	11:30:12	0.0	0.0	0.0	0.0
216	8/13/2019	11:31:12	0.0	0.0	0.0	0.0
217	8/13/2019	11:32:12	0.0	0.0	0.0	0.0
218	8/13/2019	11:33:12	0.0	0.0	0.0	0.0
219	8/13/2019	11:34:12	0.0	0.0	0.0	0.0
220	8/13/2019	11:35:12	0.0	0.0	0.0	0.0
221	8/13/2019	11:36:12	0.0	0.0	0.0	0.0
222	8/13/2019	11:37:12	0.0	0.0	0.0	0.0
223	8/13/2019	11:38:12	0.0	0.0	0.0	0.0
224	8/13/2019	11:39:12	0.0	0.0	0.0	0.0
225	8/13/2019	11:40:12	0.0	0.0	0.0	0.0
226	8/13/2019	11:41:12	0.0	0.0	0.0	0.0
227	8/13/2019	11:42:12	0.0	0.0	0.0	0.0
228	8/13/2019	11:43:12	0.0	0.0	0.0	0.0
229	8/13/2019	11:44:12	0.0	0.0	0.0	0.0
230	8/13/2019	11:45:12	0.0	0.0	0.0	0.0
231	8/13/2019	11:46:12	0.0	0.0	0.0	0.0
232	8/13/2019	11:47:12	0.0	0.0	0.0	0.0
233	8/13/2019	11:48:12	0.0	0.0	0.0	0.0
234	8/13/2019	11:49:12	0.0	0.0	0.0	0.0
235	8/13/2019	11:50:12	0.0	0.0	0.0	0.0
236	8/13/2019	11:51:12	0.0	0.0	0.0	0.0
237	8/13/2019	11:52:12	0.0	0.0	0.0	0.0
238	8/13/2019	11:53:12	0.0	0.0	0.0	0.0
239	8/13/2019	11:54:12	0.0	0.0	0.0	0.0
240	8/13/2019	11:55:12	0.0	0.0	0.0	0.0
241	8/13/2019	11:56:12	0.0	0.0	0.0	0.0
242	8/13/2019	11:57:12	0.0	0.0	0.0	0.0

243	8/13/2019 11:58:12	0.0	0.0	0.0	0.0
244	8/13/2019 11:59:12	0.0	0.0	0.0	0.0
245	8/13/2019 12:00:12	0.0	0.0	0.0	0.0
246	8/13/2019 12:01:12	0.0	0.0	0.0	0.0
247	8/13/2019 12:02:12	0.0	0.0	0.0	0.0
248	8/13/2019 12:03:12	0.0	0.0	0.0	0.0
249	8/13/2019 12:04:12	0.0	0.0	0.0	0.0
250	8/13/2019 12:05:12	0.0	0.0	0.0	0.0
251	8/13/2019 12:06:12	0.0	0.0	0.0	0.0
252	8/13/2019 12:07:12	0.0	0.0	0.0	0.0
253	8/13/2019 12:08:12	0.0	0.0	0.0	0.0
254	8/13/2019 12:09:12	0.0	0.0	0.0	0.0
255	8/13/2019 12:10:12	0.0	0.0	0.0	0.0
256	8/13/2019 12:11:12	0.0	0.0	0.0	0.0
257	8/13/2019 12:12:12	0.0	0.0	0.0	0.0
258	8/13/2019 12:13:12	0.0	0.0	0.0	0.0
259	8/13/2019 12:14:12	0.0	0.0	0.0	0.0
260	8/13/2019 12:15:12	0.0	0.0	0.0	0.0
261	8/13/2019 12:16:12	0.0	0.0	0.0	0.0
262	8/13/2019 12:17:12	0.0	0.0	0.0	0.0
263	8/13/2019 12:18:12	0.0	0.0	0.0	0.0
264	8/13/2019 12:19:12	0.0	0.0	0.0	0.0
265	8/13/2019 12:20:12	0.0	0.0	0.0	0.0
266	8/13/2019 12:21:12	0.0	0.0	0.0	0.0
267	8/13/2019 12:22:12	0.0	0.0	0.0	0.0
268	8/13/2019 12:23:12	0.0	0.0	0.0	0.0
269	8/13/2019 12:24:12	0.0	0.0	0.0	0.0
270	8/13/2019 12:25:12	0.0	0.0	0.0	0.0
271	8/13/2019 12:26:12	0.0	0.0	0.0	0.0
272	8/13/2019 12:27:12	0.0	0.0	0.0	0.0
273	8/13/2019 12:28:12	0.0	0.0	0.0	0.0
274	8/13/2019 12:29:12	0.0	0.0	0.0	0.0
275	8/13/2019 12:30:12	0.0	0.0	0.0	0.0
276	8/13/2019 12:31:12	0.0	0.0	0.0	0.0
277	8/13/2019 12:32:12	0.0	0.0	0.0	0.0
278	8/13/2019 12:33:12	0.0	0.0	0.0	0.0
279	8/13/2019 12:34:12	0.0	0.0	0.0	0.0
280	8/13/2019 12:35:12	0.0	0.0	0.0	0.0
281	8/13/2019 12:36:12	0.0	0.0	0.0	0.0
282	8/13/2019 12:37:12	0.0	0.0	0.0	0.0
283	8/13/2019 12:38:12	0.0	0.0	0.0	0.0
284	8/13/2019 12:39:12	0.0	0.0	0.0	0.0
285	8/13/2019 12:40:12	0.0	0.0	0.0	0.0
286	8/13/2019 12:41:12	0.0	0.0	0.0	0.0
287	8/13/2019 12:42:12	0.0	0.0	0.0	0.0
288	8/13/2019 12:43:12	0.0	0.0	0.0	0.0
289	8/13/2019 12:44:12	0.0	0.0	0.0	0.0
290	8/13/2019 12:45:12	0.0	0.0	0.0	0.0
291	8/13/2019 12:46:12	0.0	0.0	0.0	0.0
292	8/13/2019 12:47:12	0.0	0.0	0.0	0.0
293	8/13/2019 12:48:12	0.0	0.0	0.0	0.0
294	8/13/2019 12:49:12	0.0	0.0	0.0	0.0
295	8/13/2019 12:50:12	0.0	0.0	0.0	0.0
296	8/13/2019 12:51:12	0.0	0.0	0.0	0.0
297	8/13/2019 12:52:12	0.0	0.0	0.0	0.0
298	8/13/2019 12:53:12	0.0	0.0	0.0	0.0
299	8/13/2019 12:54:12	0.0	0.0	0.0	0.0

300	8/13/2019 12:55:12	0.0	0.0	0.0	0.0
301	8/13/2019 12:56:12	0.0	0.0	0.0	0.0
302	8/13/2019 12:57:12	0.0	0.0	0.0	0.0
303	8/13/2019 12:58:12	0.0	0.0	0.0	0.0
304	8/13/2019 12:59:12	0.0	0.0	0.0	0.0
305	8/13/2019 13:00:12	0.0	0.0	0.0	0.0
306	8/13/2019 13:01:12	0.0	0.0	0.0	0.0
307	8/13/2019 13:02:12	0.0	0.0	0.0	0.0
308	8/13/2019 13:03:12	0.0	0.0	0.0	0.0
309	8/13/2019 13:04:12	0.0	0.0	0.0	0.0
310	8/13/2019 13:05:12	0.0	0.0	0.0	0.0
311	8/13/2019 13:06:12	0.0	0.0	0.0	0.0
312	8/13/2019 13:07:12	0.0	0.0	0.0	0.0
313	8/13/2019 13:08:12	0.0	0.0	0.0	0.0
314	8/13/2019 13:09:12	0.0	0.0	0.0	0.0
315	8/13/2019 13:10:12	0.0	0.0	0.0	0.0
316	8/13/2019 13:11:12	0.0	0.0	0.0	0.0
317	8/13/2019 13:12:12	0.0	0.0	0.0	0.0
318	8/13/2019 13:13:12	0.0	0.0	0.0	0.0
319	8/13/2019 13:14:12	0.0	0.0	0.0	0.0
320	8/13/2019 13:15:12	0.0	0.0	0.0	0.0
321	8/13/2019 13:16:12	0.0	0.0	0.0	0.0
322	8/13/2019 13:17:12	0.0	0.0	0.0	0.0
323	8/13/2019 13:18:12	0.0	0.0	0.0	0.0
324	8/13/2019 13:19:12	0.0	0.0	0.0	0.0
325	8/13/2019 13:20:12	0.0	0.0	0.0	0.0
326	8/13/2019 13:21:12	0.0	0.0	0.0	0.0
327	8/13/2019 13:22:12	0.0	0.0	0.0	0.0
328	8/13/2019 13:23:12	0.0	0.0	0.0	0.0
329	8/13/2019 13:24:12	0.0	0.0	0.0	0.0
330	8/13/2019 13:25:12	0.0	0.0	0.0	0.0
331	8/13/2019 13:26:12	0.0	0.0	0.0	0.0
332	8/13/2019 13:27:12	0.0	0.0	0.0	0.0
333	8/13/2019 13:28:12	0.0	0.0	0.0	0.0
334	8/13/2019 13:29:12	0.0	0.0	0.0	0.0
335	8/13/2019 13:30:12	0.0	0.0	0.0	0.0
336	8/13/2019 13:31:12	0.0	0.0	0.0	0.0
337	8/13/2019 13:32:12	0.0	0.0	0.0	0.0
338	8/13/2019 13:33:12	0.0	0.0	0.0	0.0
339	8/13/2019 13:34:12	0.0	0.0	0.0	0.0
340	8/13/2019 13:35:12	0.0	0.0	0.0	0.0
341	8/13/2019 13:36:12	0.0	0.0	0.0	0.0
342	8/13/2019 13:37:12	0.0	0.0	0.0	0.0
343	8/13/2019 13:38:12	0.0	0.0	0.0	0.0
344	8/13/2019 13:39:12	0.0	0.0	0.0	0.0
345	8/13/2019 13:40:12	0.0	0.0	0.0	0.0
346	8/13/2019 13:41:12	0.0	0.0	0.0	0.0
347	8/13/2019 13:42:12	0.0	0.0	0.0	0.0
348	8/13/2019 13:43:12	0.0	0.0	0.0	0.0
349	8/13/2019 13:44:12	0.0	0.0	0.0	0.0
350	8/13/2019 13:45:12	0.0	0.0	0.0	0.0
351	8/13/2019 13:46:12	0.0	0.0	0.0	0.0
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353	8/13/2019 13:48:12	0.0	0.0	0.0	0.0
354	8/13/2019 13:49:12	0.0	0.0	0.0	0.0
355	8/13/2019 13:50:12	0.0	0.0	0.0	0.0
356	8/13/2019 13:51:12	0.0	0.0	0.0	0.0

357	8/13/2019	13:52:12	0.0	0.0	0.0	0.0
358	8/13/2019	13:53:12	0.0	0.0	0.0	0.0
359	8/13/2019	13:54:12	0.0	0.0	0.0	0.0
360	8/13/2019	13:55:12	0.0	0.0	0.0	0.0
361	8/13/2019	13:56:12	0.0	0.0	0.0	0.0
362	8/13/2019	13:57:12	0.0	0.0	0.0	0.0
363	8/13/2019	13:58:12	0.0	0.0	0.0	0.0
364	8/13/2019	13:59:12	0.0	0.0	0.0	0.0
365	8/13/2019	14:00:12	0.0	0.0	0.0	0.0
366	8/13/2019	14:01:12	0.0	0.0	0.0	0.0
367	8/13/2019	14:02:12	0.0	0.0	0.0	0.0
368	8/13/2019	14:03:12	0.0	0.0	0.0	0.0
369	8/13/2019	14:04:12	0.0	0.0	0.0	0.0
370	8/13/2019	14:05:12	0.0	0.0	0.0	0.0
371	8/13/2019	14:06:12	0.0	0.0	0.0	0.0
372	8/13/2019	14:07:12	0.0	0.0	0.0	0.0
373	8/13/2019	14:08:12	0.0	0.0	0.0	0.0
374	8/13/2019	14:09:12	0.0	0.0	0.0	0.0
375	8/13/2019	14:10:12	0.0	0.0	0.0	0.0
376	8/13/2019	14:11:12	0.0	0.0	0.0	0.0
377	8/13/2019	14:12:12	0.0	0.0	0.0	0.0
378	8/13/2019	14:13:12	0.0	0.0	0.0	0.0
379	8/13/2019	14:14:12	0.0	0.0	0.0	0.0
380	8/13/2019	14:15:12	0.0	0.0	0.0	0.0
381	8/13/2019	14:16:12	0.0	0.0	0.0	0.0
382	8/13/2019	14:17:12	0.0	0.0	0.0	0.0
383	8/13/2019	14:18:12	0.0	0.0	0.0	0.0
384	8/13/2019	14:19:12	0.0	0.0	0.0	0.0
385	8/13/2019	14:20:12	0.0	0.0	0.0	0.0
386	8/13/2019	14:21:12	0.0	0.0	0.0	0.0
387	8/13/2019	14:22:12	0.0	0.0	0.0	0.0
388	8/13/2019	14:23:12	0.0	0.0	0.0	0.0
389	8/13/2019	14:24:12	0.0	0.0	0.0	0.0
390	8/13/2019	14:25:12	0.0	0.0	0.0	0.0
391	8/13/2019	14:26:12	0.0	0.0	0.0	0.0
392	8/13/2019	14:27:12	0.0	0.0	0.0	0.0
393	8/13/2019	14:28:12	0.0	0.0	0.0	0.0
394	8/13/2019	14:29:12	0.0	0.0	0.0	0.0
395	8/13/2019	14:30:12	0.0	0.0	0.0	0.0
396	8/13/2019	14:31:12	0.0	0.0	0.0	0.0
397	8/13/2019	14:32:12	0.0	0.0	0.0	0.0
398	8/13/2019	14:33:12	0.0	0.0	0.0	0.0
399	8/13/2019	14:34:12	0.0	0.0	0.0	0.0
400	8/13/2019	14:35:12	0.0	0.0	0.0	0.0
401	8/13/2019	14:36:12	0.0	0.0	0.0	0.0
402	8/13/2019	14:37:12	0.0	0.0	0.0	0.0
403	8/13/2019	14:38:12	0.0	0.0	0.0	0.0
404	8/13/2019	14:39:12	0.0	0.0	0.0	0.0
405	8/13/2019	14:40:12	0.0	0.0	0.0	0.0
406	8/13/2019	14:41:12	0.0	0.0	0.0	0.0
407	8/13/2019	14:42:12	0.0	0.0	0.0	0.0
408	8/13/2019	14:43:12	0.0	0.0	0.0	0.0
409	8/13/2019	14:44:12	0.0	0.0	0.0	0.0
410	8/13/2019	14:45:12	0.0	0.0	0.0	0.0
411	8/13/2019	14:46:12	0.0	0.0	0.0	0.0
412	8/13/2019	14:47:12	0.0	0.0	0.0	0.0
413	8/13/2019	14:48:12	0.0	0.0	0.0	0.0

414	8/13/2019 14:49:12	0.0	0.0	0.0	0.0
415	8/13/2019 14:50:12	0.0	0.0	0.0	0.0
416	8/13/2019 14:51:12	0.0	0.0	0.0	0.0
417	8/13/2019 14:52:12	0.0	0.0	0.0	0.0
418	8/13/2019 14:53:12	0.0	0.0	0.0	0.0
419	8/13/2019 14:54:12	0.0	0.0	0.0	0.0
420	8/13/2019 14:55:12	0.0	0.0	0.0	0.0
421	8/13/2019 14:56:12	0.0	0.0	0.0	0.0
422	8/13/2019 14:57:12	0.0	0.0	0.0	0.0
423	8/13/2019 14:58:12	0.0	0.0	0.0	0.0
424	8/13/2019 14:59:12	0.0	0.0	0.0	0.0
425	8/13/2019 15:00:12	0.0	0.0	0.0	0.0
426	8/13/2019 15:01:12	0.0	0.0	0.0	0.0
427	8/13/2019 15:02:12	0.0	0.0	0.0	0.0
428	8/13/2019 15:03:12	0.0	0.0	0.0	0.0
429	8/13/2019 15:04:12	0.0	0.0	0.0	0.0
430	8/13/2019 15:05:12	0.0	0.0	0.0	0.0
431	8/13/2019 15:06:12	0.0	0.0	0.0	0.0
432	8/13/2019 15:07:12	0.0	0.0	0.0	0.0
433	8/13/2019 15:08:12	0.0	0.0	0.0	0.0
434	8/13/2019 15:09:12	0.0	0.0	0.0	0.0
435	8/13/2019 15:10:12	0.0	0.0	0.0	0.0
436	8/13/2019 15:11:12	0.0	0.0	0.0	0.0
437	8/13/2019 15:12:12	0.0	0.0	0.0	0.0
438	8/13/2019 15:13:12	0.0	0.0	0.0	0.0
439	8/13/2019 15:14:12	0.0	0.0	0.0	0.0
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443	8/13/2019 15:18:12	0.0	0.0	0.0	0.0
444	8/13/2019 15:19:12	0.0	0.0	0.0	0.0
445	8/13/2019 15:20:12	0.0	0.0	0.0	0.0
446	8/13/2019 15:21:12	0.0	0.0	0.0	0.0
447	8/13/2019 15:22:12	0.0	0.0	0.0	0.0
448	8/13/2019 15:23:12	0.0	0.0	0.0	0.0
449	8/13/2019 15:24:12	0.0	0.0	0.0	0.0
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452	8/13/2019 15:27:12	0.0	0.0	0.0	0.0
453	8/13/2019 15:28:12	0.0	0.0	0.0	0.0
454	8/13/2019 15:29:12	0.0	0.0	0.0	0.0
455	8/13/2019 15:30:12	0.0	0.0	0.0	0.0
456	8/13/2019 15:31:12	0.0	0.0	0.0	0.0
457	8/13/2019 15:32:12	0.0	0.0	0.0	0.0
458	8/13/2019 15:33:12	0.0	0.0	0.0	0.0
459	8/13/2019 15:34:12	0.0	0.0	0.0	0.0
460	8/13/2019 15:35:12	0.0	0.0	0.0	0.0
461	8/13/2019 15:36:12	0.0	0.0	0.0	0.0
462	8/13/2019 15:37:12	0.0	0.0	0.0	0.0
463	8/13/2019 15:38:12	0.0	0.0	0.0	0.0
464	8/13/2019 15:39:12	0.0	0.0	0.0	0.0
465	8/13/2019 15:40:12	0.0	0.0	0.0	0.0
466	8/13/2019 15:41:12	0.0	0.0	0.0	0.0
467	8/13/2019 15:42:12	0.0	0.0	0.0	0.0
468	8/13/2019 15:43:12	0.0	0.0	0.0	0.0
469	8/13/2019 15:44:12	0.0	0.0	0.0	0.0
470	8/13/2019 15:45:12	0.0	0.0	0.0	0.0

471	8/13/2019 15:46:12	0.0	0.0	0.0	0.0
472	8/13/2019 15:47:12	0.0	0.0	0.0	0.0
473	8/13/2019 15:48:12	0.0	0.0	0.0	0.0
474	8/13/2019 15:49:12	0.0	0.0	0.0	0.0
475	8/13/2019 15:50:12	0.0	0.0	0.0	0.0
476	8/13/2019 15:51:12	0.0	0.0	0.0	0.0
477	8/13/2019 15:52:12	0.0	0.0	0.0	0.0
478	8/13/2019 15:53:12	0.0	0.0	0.0	0.0
479	8/13/2019 15:54:12	0.0	0.0	0.0	0.0
480	8/13/2019 15:55:12	0.0	0.0	0.0	0.0
481	8/13/2019 15:56:12	0.0	0.0	0.0	0.0
482	8/13/2019 15:57:12	0.0	0.0	0.0	0.0
483	8/13/2019 15:58:12	0.0	0.0	0.0	0.0
484	8/13/2019 15:59:12	0.0	0.0	0.0	0.0
485	8/13/2019 16:00:12	0.0	0.0	0.0	0.0
486	8/13/2019 16:01:12	0.0	0.0	0.0	0.0
487	8/13/2019 16:02:12	0.0	0.0	0.0	0.0
488	8/13/2019 16:03:12	0.0	0.0	0.0	0.0
489	8/13/2019 16:04:12	0.0	0.0	0.0	0.0
490	8/13/2019 16:05:12	0.0	0.0	0.0	0.0
491	8/13/2019 16:06:12	0.0	0.0	0.0	0.0
492	8/13/2019 16:07:12	0.0	0.0	0.0	0.0
493	8/13/2019 16:08:12	0.0	0.0	0.0	0.0
494	8/13/2019 16:09:12	0.0	0.0	0.0	0.0
495	8/13/2019 16:10:12	0.0	0.0	0.0	0.0
496	8/13/2019 16:11:12	0.0	0.0	0.0	0.0
497	8/13/2019 16:12:12	0.0	0.0	0.0	0.0
498	8/13/2019 16:13:12	0.0	0.0	0.0	0.0
499	8/13/2019 16:14:12	0.0	0.0	0.0	0.0
500	8/13/2019 16:15:12	0.0	0.0	0.0	0.0
501	8/13/2019 16:16:12	0.0	0.0	0.0	0.0
502	8/13/2019 16:17:12	0.0	0.0	0.0	0.0
503	8/13/2019 16:18:12	0.0	0.0	0.0	0.0
504	8/13/2019 16:19:12	0.0	0.0	0.0	0.0
505	8/13/2019 16:20:12	0.0	0.0	0.0	0.0
506	8/13/2019 16:21:12	0.0	0.0	0.0	0.0
507	8/13/2019 16:22:12	0.0	0.0	0.0	0.0
508	8/13/2019 16:23:12	0.0	0.0	0.0	0.0
509	8/13/2019 16:24:12	0.0	0.0	0.0	0.0
510	8/13/2019 16:25:12	0.0	0.0	0.0	0.0
511	8/13/2019 16:26:12	0.0	0.0	0.0	0.0
512	8/13/2019 16:27:12	0.0	0.0	0.0	0.0
513	8/13/2019 16:28:12	0.0	0.0	0.0	0.0
514	8/13/2019 16:29:12	0.0	0.0	0.0	0.0
515	8/13/2019 16:30:12	0.0	0.0	0.0	0.0
516	8/13/2019 16:31:12	0.0	0.0	0.0	0.0
517	8/13/2019 16:32:12	0.0	0.0	0.0	0.0
518	8/13/2019 16:33:12	0.0	0.0	0.0	0.0
519	8/13/2019 16:34:12	0.0	0.0	0.0	0.0
520	8/13/2019 16:35:12	0.0	0.0	0.0	0.0
521	8/13/2019 16:36:12	0.0	0.0	0.0	0.0
522	8/13/2019 16:37:12	0.0	0.0	0.0	0.0
523	8/13/2019 16:38:12	0.0	0.0	0.0	0.0
524	8/13/2019 16:39:12	0.0	0.0	0.0	0.0
525	8/13/2019 16:40:12	0.0	0.0	0.0	0.0
526	8/13/2019 16:41:12	0.0	0.0	0.0	0.0
527	8/13/2019 16:42:12	0.0	0.0	0.0	0.0

528	8/13/2019	16:43:12	0.0	0.0	0.0	0.0
529	8/13/2019	16:44:12	0.0	0.0	0.0	0.0
530	8/13/2019	16:45:12	0.0	0.0	0.0	0.0
531	8/13/2019	16:46:12	0.0	0.0	0.0	0.0
532	8/13/2019	16:47:12	0.0	0.0	0.0	0.0
533	8/13/2019	16:48:12	0.0	0.0	0.0	0.0
534	8/13/2019	16:49:12	0.0	0.0	0.0	0.0
535	8/13/2019	16:50:12	0.0	0.0	0.0	0.0
536	8/13/2019	16:51:12	0.0	0.0	0.0	0.0
537	8/13/2019	16:52:12	0.0	0.0	0.0	0.0
538	8/13/2019	16:53:12	0.0	0.0	0.0	0.0
539	8/13/2019	16:54:12	0.0	0.0	0.0	0.0
540	8/13/2019	16:55:12	0.0	0.0	0.0	0.0
541	8/13/2019	16:56:12	0.0	0.0	0.0	0.0
542	8/13/2019	16:57:12	0.0	0.0	0.0	0.0
543	8/13/2019	16:58:12	0.0	0.0	0.0	0.0
544	8/13/2019	16:59:12	0.0	0.0	0.0	0.0
545	8/13/2019	17:00:12	0.0	0.0	0.0	0.0
546	8/13/2019	17:01:12	0.0	0.0	0.0	0.0
547	8/13/2019	17:02:12	0.0	0.0	0.0	0.0
548	8/13/2019	17:03:12	0.0	0.0	0.0	0.0
549	8/13/2019	17:04:12	0.0	0.0	0.0	0.0
550	8/13/2019	17:05:12	0.0	0.0	0.0	0.0
551	8/13/2019	17:06:12	0.0	0.0	0.0	0.0
Peak			0.0	0.0	0.0	0.0
Min			0.0	0.0	0.0	0.0
Average				0.0	0.0	0.0

****

TWA/STEL

Index	PID(ppm) Date/Time		PID(ppm) (TWA)	(STEL)
001	8/13/2019	07:56:12	0.0	---
002	8/13/2019	07:57:12	0.0	---
003	8/13/2019	07:58:12	0.0	---
004	8/13/2019	07:59:12	0.0	---
005	8/13/2019	08:00:12	0.0	---
006	8/13/2019	08:01:12	0.0	---
007	8/13/2019	08:02:12	0.0	---
008	8/13/2019	08:03:12	0.0	---
009	8/13/2019	08:04:12	0.0	---
010	8/13/2019	08:05:12	0.0	---
011	8/13/2019	08:06:12	0.0	---
012	8/13/2019	08:07:12	0.0	---
013	8/13/2019	08:08:12	0.0	---
014	8/13/2019	08:09:12	0.0	---
015	8/13/2019	08:10:12	0.0	0.0
016	8/13/2019	08:11:12	0.0	0.0
017	8/13/2019	08:12:12	0.0	0.0
018	8/13/2019	08:13:12	0.0	0.0
019	8/13/2019	08:14:12	0.0	0.0
020	8/13/2019	08:15:12	0.0	0.0
021	8/13/2019	08:16:12	0.0	0.0
022	8/13/2019	08:17:12	0.0	0.0
023	8/13/2019	08:18:12	0.0	0.0
024	8/13/2019	08:19:12	0.0	0.0
025	8/13/2019	08:20:12	0.0	0.0

026	8/13/2019 08:21:12	0.0	0.0
027	8/13/2019 08:22:12	0.0	0.0
028	8/13/2019 08:23:12	0.0	0.0
029	8/13/2019 08:24:12	0.0	0.0
030	8/13/2019 08:25:12	0.0	0.0
031	8/13/2019 08:26:12	0.0	0.0
032	8/13/2019 08:27:12	0.0	0.0
033	8/13/2019 08:28:12	0.0	0.0
034	8/13/2019 08:29:12	0.0	0.0
035	8/13/2019 08:30:12	0.0	0.0
036	8/13/2019 08:31:12	0.0	0.0
037	8/13/2019 08:32:12	0.0	0.0
038	8/13/2019 08:33:12	0.0	0.0
039	8/13/2019 08:34:12	0.0	0.0
040	8/13/2019 08:35:12	0.0	0.0
041	8/13/2019 08:36:12	0.0	0.0
042	8/13/2019 08:37:12	0.0	0.0
043	8/13/2019 08:38:12	0.0	0.0
044	8/13/2019 08:39:12	0.0	0.0
045	8/13/2019 08:40:12	0.0	0.0
046	8/13/2019 08:41:12	0.0	0.0
047	8/13/2019 08:42:12	0.0	0.0
048	8/13/2019 08:43:12	0.0	0.0
049	8/13/2019 08:44:12	0.0	0.0
050	8/13/2019 08:45:12	0.0	0.0
051	8/13/2019 08:46:12	0.0	0.0
052	8/13/2019 08:47:12	0.0	0.0
053	8/13/2019 08:48:12	0.0	0.0
054	8/13/2019 08:49:12	0.0	0.0
055	8/13/2019 08:50:12	0.0	0.0
056	8/13/2019 08:51:12	0.0	0.0
057	8/13/2019 08:52:12	0.0	0.0
058	8/13/2019 08:53:12	0.0	0.0
059	8/13/2019 08:54:12	0.0	0.0
060	8/13/2019 08:55:12	0.0	0.0
061	8/13/2019 08:56:12	0.0	0.0
062	8/13/2019 08:57:12	0.0	0.0
063	8/13/2019 08:58:12	0.0	0.0
064	8/13/2019 08:59:12	0.0	0.0
065	8/13/2019 09:00:12	0.0	0.0
066	8/13/2019 09:01:12	0.0	0.0
067	8/13/2019 09:02:12	0.0	0.0
068	8/13/2019 09:03:12	0.0	0.0
069	8/13/2019 09:04:12	0.0	0.0
070	8/13/2019 09:05:12	0.0	0.0
071	8/13/2019 09:06:12	0.0	0.0
072	8/13/2019 09:07:12	0.0	0.0
073	8/13/2019 09:08:12	0.0	0.0
074	8/13/2019 09:09:12	0.0	0.0
075	8/13/2019 09:10:12	0.0	0.0
076	8/13/2019 09:11:12	0.0	0.0
077	8/13/2019 09:12:12	0.0	0.0
078	8/13/2019 09:13:12	0.0	0.0
079	8/13/2019 09:14:12	0.0	0.0
080	8/13/2019 09:15:12	0.0	0.0
081	8/13/2019 09:16:12	0.0	0.0
082	8/13/2019 09:17:12	0.0	0.0

083	8/13/2019 09:18:12	0.0	0.0
084	8/13/2019 09:19:12	0.0	0.0
085	8/13/2019 09:20:12	0.0	0.0
086	8/13/2019 09:21:12	0.0	0.0
087	8/13/2019 09:22:12	0.0	0.0
088	8/13/2019 09:23:12	0.0	0.0
089	8/13/2019 09:24:12	0.0	0.0
090	8/13/2019 09:25:12	0.0	0.0
091	8/13/2019 09:26:12	0.0	0.0
092	8/13/2019 09:27:12	0.0	0.0
093	8/13/2019 09:28:12	0.0	0.0
094	8/13/2019 09:29:12	0.0	0.0
095	8/13/2019 09:30:12	0.0	0.0
096	8/13/2019 09:31:12	0.0	0.0
097	8/13/2019 09:32:12	0.0	0.0
098	8/13/2019 09:33:12	0.0	0.0
099	8/13/2019 09:34:12	0.0	0.0
100	8/13/2019 09:35:12	0.0	0.0
101	8/13/2019 09:36:12	0.0	0.0
102	8/13/2019 09:37:12	0.0	0.0
103	8/13/2019 09:38:12	0.0	0.0
104	8/13/2019 09:39:12	0.0	0.0
105	8/13/2019 09:40:12	0.0	0.0
106	8/13/2019 09:41:12	0.0	0.0
107	8/13/2019 09:42:12	0.0	0.0
108	8/13/2019 09:43:12	0.0	0.0
109	8/13/2019 09:44:12	0.0	0.0
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111	8/13/2019 09:46:12	0.0	0.0
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113	8/13/2019 09:48:12	0.0	0.0
114	8/13/2019 09:49:12	0.0	0.0
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125	8/13/2019 10:00:12	0.0	0.0
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127	8/13/2019 10:02:12	0.0	0.0
128	8/13/2019 10:03:12	0.0	0.0
129	8/13/2019 10:04:12	0.0	0.0
130	8/13/2019 10:05:12	0.0	0.0
131	8/13/2019 10:06:12	0.0	0.0
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133	8/13/2019 10:08:12	0.0	0.0
134	8/13/2019 10:09:12	0.0	0.0
135	8/13/2019 10:10:12	0.0	0.0
136	8/13/2019 10:11:12	0.0	0.0
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139	8/13/2019 10:14:12	0.0	0.0

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143	8/13/2019 10:18:12	0.0	0.0
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147	8/13/2019 10:22:12	0.0	0.0
148	8/13/2019 10:23:12	0.0	0.0
149	8/13/2019 10:24:12	0.0	0.0
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151	8/13/2019 10:26:12	0.0	0.0
152	8/13/2019 10:27:12	0.0	0.0
153	8/13/2019 10:28:12	0.0	0.0
154	8/13/2019 10:29:12	0.0	0.0
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156	8/13/2019 10:31:12	0.0	0.0
157	8/13/2019 10:32:12	0.0	0.0
158	8/13/2019 10:33:12	0.0	0.0
159	8/13/2019 10:34:12	0.0	0.0
160	8/13/2019 10:35:12	0.0	0.0
161	8/13/2019 10:36:12	0.0	0.0
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164	8/13/2019 10:39:12	0.0	0.0
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167	8/13/2019 10:42:12	0.0	0.0
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174	8/13/2019 10:49:12	0.0	0.0
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182	8/13/2019 10:57:12	0.0	0.0
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184	8/13/2019 10:59:12	0.0	0.0
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187	8/13/2019 11:02:12	0.0	0.0
188	8/13/2019 11:03:12	0.0	0.0
189	8/13/2019 11:04:12	0.0	0.0
190	8/13/2019 11:05:12	0.0	0.0
191	8/13/2019 11:06:12	0.0	0.0
192	8/13/2019 11:07:12	0.0	0.0
193	8/13/2019 11:08:12	0.0	0.0
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203	8/13/2019 11:18:12	0.0	0.0
204	8/13/2019 11:19:12	0.0	0.0
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212	8/13/2019 11:27:12	0.0	0.0
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229	8/13/2019 11:44:12	0.0	0.0
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248	8/13/2019 12:03:12	0.0	0.0
249	8/13/2019 12:04:12	0.0	0.0
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251	8/13/2019 12:06:12	0.0	0.0
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253	8/13/2019 12:08:12	0.0	0.0

254	8/13/2019 12:09:12	0.0	0.0
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258	8/13/2019 12:13:12	0.0	0.0
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260	8/13/2019 12:15:12	0.0	0.0
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262	8/13/2019 12:17:12	0.0	0.0
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264	8/13/2019 12:19:12	0.0	0.0
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266	8/13/2019 12:21:12	0.0	0.0
267	8/13/2019 12:22:12	0.0	0.0
268	8/13/2019 12:23:12	0.0	0.0
269	8/13/2019 12:24:12	0.0	0.0
270	8/13/2019 12:25:12	0.0	0.0
271	8/13/2019 12:26:12	0.0	0.0
272	8/13/2019 12:27:12	0.0	0.0
273	8/13/2019 12:28:12	0.0	0.0
274	8/13/2019 12:29:12	0.0	0.0
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276	8/13/2019 12:31:12	0.0	0.0
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278	8/13/2019 12:33:12	0.0	0.0
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281	8/13/2019 12:36:12	0.0	0.0
282	8/13/2019 12:37:12	0.0	0.0
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284	8/13/2019 12:39:12	0.0	0.0
285	8/13/2019 12:40:12	0.0	0.0
286	8/13/2019 12:41:12	0.0	0.0
287	8/13/2019 12:42:12	0.0	0.0
288	8/13/2019 12:43:12	0.0	0.0
289	8/13/2019 12:44:12	0.0	0.0
290	8/13/2019 12:45:12	0.0	0.0
291	8/13/2019 12:46:12	0.0	0.0
292	8/13/2019 12:47:12	0.0	0.0
293	8/13/2019 12:48:12	0.0	0.0
294	8/13/2019 12:49:12	0.0	0.0
295	8/13/2019 12:50:12	0.0	0.0
296	8/13/2019 12:51:12	0.0	0.0
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298	8/13/2019 12:53:12	0.0	0.0
299	8/13/2019 12:54:12	0.0	0.0
300	8/13/2019 12:55:12	0.0	0.0
301	8/13/2019 12:56:12	0.0	0.0
302	8/13/2019 12:57:12	0.0	0.0
303	8/13/2019 12:58:12	0.0	0.0
304	8/13/2019 12:59:12	0.0	0.0
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549	8/13/2019 17:04:12	0.0	0.0
550	8/13/2019 17:05:12	0.0	0.0
551	8/13/2019 17:06:12	0.0	0.0

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19/08/13 07:59
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Summary

Unit Name MiniRAE 3000(PGM-7320)
Unit SN 592-914273
Unit Firmware Ver V1.20A

Running Mode Hygiene Mode
Measure Type Min; Avg; Max; Real
Datalog Mode Continuous
Datalog Type Manual
Diagnostic Mode No
Stop Reason Power Down

Site ID RAE00005
User ID 00000001

Begin 8/13/2019 07:59:14
End 8/13/2019 16:59:43
Sample Period(s) 60
Number of Records 540

Sensor VOC(ppm)
Span 100.000
Span 2 N/A
Low Alarm 50.000
High Alarm 100.000
Over Alarm 2000.000
STEL Alarm 25.000
TWA Alarm 10.000
Measurement Gas Isobutylene
Calibration Time 8/13/2019 07:48
Peak 0.167
Min 0.000
Average 0.028

****
Datalog

Index	Date/Time	VOC(ppm) (Min)	VOC(ppm) (Avg)	VOC(ppm) (Max)	VOC(ppm) (Real)
001	8/13/2019 08:00:14	0.000	0.000	0.000	0.000
002	8/13/2019 08:01:14	0.000	0.000	0.000	0.000
003	8/13/2019 08:02:14	0.000	0.000	0.000	0.000
004	8/13/2019 08:03:14	0.000	0.000	0.000	0.000
005	8/13/2019 08:04:14	0.000	0.000	0.000	0.000
006	8/13/2019 08:05:14	0.000	0.000	0.000	0.000
007	8/13/2019 08:06:14	0.000	0.000	0.000	0.000
008	8/13/2019 08:07:14	0.000	0.000	0.000	0.000
009	8/13/2019 08:08:14	0.000	0.000	0.000	0.000
010	8/13/2019 08:09:14	0.000	0.000	0.000	0.000
011	8/13/2019 08:10:14	0.000	0.000	0.000	0.000
012	8/13/2019 08:11:14	0.000	0.000	0.000	0.000
013	8/13/2019 08:12:14	0.000	0.000	0.000	0.000
014	8/13/2019 08:13:14	0.000	0.000	0.000	0.000

015	8/13/2019 08:14:14	0.000	0.000	0.000	0.000
016	8/13/2019 08:15:14	0.000	0.000	0.000	0.000
017	8/13/2019 08:16:14	0.000	0.000	0.000	0.000
018	8/13/2019 08:17:14	0.000	0.000	0.000	0.000
019	8/13/2019 08:18:14	0.000	0.000	0.000	0.000
020	8/13/2019 08:19:14	0.000	0.000	0.000	0.000
021	8/13/2019 08:20:14	0.000	0.000	0.000	0.000
022	8/13/2019 08:21:14	0.000	0.000	0.000	0.000
023	8/13/2019 08:22:14	0.000	0.000	0.000	0.000
024	8/13/2019 08:23:14	0.000	0.000	0.000	0.000
025	8/13/2019 08:24:14	0.000	0.000	0.000	0.000
026	8/13/2019 08:25:14	0.000	0.000	0.000	0.000
027	8/13/2019 08:26:14	0.000	0.000	0.000	0.000
028	8/13/2019 08:27:14	0.000	0.000	0.000	0.000
029	8/13/2019 08:28:14	0.000	0.000	0.000	0.000
030	8/13/2019 08:29:14	0.000	0.000	0.000	0.000
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033	8/13/2019 08:32:14	0.000	0.000	0.000	0.000
034	8/13/2019 08:33:14	0.000	0.000	0.000	0.000
035	8/13/2019 08:34:14	0.000	0.000	0.000	0.000
036	8/13/2019 08:35:14	0.000	0.000	0.000	0.000
037	8/13/2019 08:36:14	0.000	0.000	0.000	0.000
038	8/13/2019 08:37:14	0.000	0.000	0.000	0.000
039	8/13/2019 08:38:14	0.000	0.000	0.000	0.000
040	8/13/2019 08:39:14	0.000	0.000	0.000	0.000
041	8/13/2019 08:40:14	0.000	0.000	0.000	0.000
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043	8/13/2019 08:42:14	0.000	0.000	0.000	0.000
044	8/13/2019 08:43:14	0.000	0.000	0.000	0.000
045	8/13/2019 08:44:14	0.000	0.000	0.000	0.000
046	8/13/2019 08:45:14	0.000	0.000	0.000	0.000
047	8/13/2019 08:46:14	0.000	0.000	0.000	0.000
048	8/13/2019 08:47:14	0.000	0.000	0.000	0.000
049	8/13/2019 08:48:14	0.000	0.000	0.000	0.000
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056	8/13/2019 08:55:14	0.000	0.000	0.000	0.000
057	8/13/2019 08:56:14	0.000	0.000	0.000	0.000
058	8/13/2019 08:57:14	0.000	0.009	0.114	0.000
059	8/13/2019 08:58:14	0.000	0.000	0.000	0.000
060	8/13/2019 08:59:14	0.000	0.000	0.000	0.000
061	8/13/2019 09:00:14	0.000	0.000	0.000	0.000
062	8/13/2019 09:01:14	0.000	0.000	0.000	0.000
063	8/13/2019 09:02:14	0.000	0.000	0.000	0.000
064	8/13/2019 09:03:14	0.000	0.000	0.000	0.000
065	8/13/2019 09:04:14	0.000	0.000	0.000	0.000
066	8/13/2019 09:05:14	0.000	0.000	0.000	0.000
067	8/13/2019 09:06:14	0.000	0.000	0.000	0.000
068	8/13/2019 09:07:14	0.000	0.000	0.000	0.000
069	8/13/2019 09:08:14	0.000	0.000	0.000	0.000
070	8/13/2019 09:09:14	0.000	0.000	0.000	0.000
071	8/13/2019 09:10:14	0.000	0.000	0.000	0.000

072	8/13/2019 09:11:14	0.000	0.000	0.000	0.000
073	8/13/2019 09:12:14	0.000	0.000	0.000	0.000
074	8/13/2019 09:13:14	0.000	0.000	0.000	0.000
075	8/13/2019 09:14:14	0.000	0.000	0.000	0.000
076	8/13/2019 09:15:14	0.000	0.000	0.000	0.000
077	8/13/2019 09:16:14	0.000	0.000	0.000	0.000
078	8/13/2019 09:17:14	0.000	0.000	0.000	0.000
079	8/13/2019 09:18:14	0.000	0.000	0.000	0.000
080	8/13/2019 09:19:14	0.000	0.000	0.000	0.000
081	8/13/2019 09:20:14	0.000	0.000	0.000	0.000
082	8/13/2019 09:21:14	0.000	0.000	0.000	0.000
083	8/13/2019 09:22:14	0.000	0.000	0.000	0.000
084	8/13/2019 09:23:14	0.000	0.000	0.000	0.000
085	8/13/2019 09:24:14	0.000	0.001	0.004	0.000
086	8/13/2019 09:25:14	0.000	0.000	0.000	0.000
087	8/13/2019 09:26:14	0.000	0.001	0.005	0.000
088	8/13/2019 09:27:14	0.000	0.000	0.001	0.000
089	8/13/2019 09:28:14	0.000	0.000	0.000	0.000
090	8/13/2019 09:29:14	0.000	0.000	0.000	0.000
091	8/13/2019 09:30:14	0.000	0.000	0.000	0.000
092	8/13/2019 09:31:14	0.000	0.000	0.000	0.000
093	8/13/2019 09:32:14	0.000	0.000	0.000	0.000
094	8/13/2019 09:33:14	0.000	0.000	0.000	0.000
095	8/13/2019 09:34:14	0.000	0.000	0.000	0.000
096	8/13/2019 09:35:14	0.000	0.000	0.000	0.000
097	8/13/2019 09:36:14	0.000	0.000	0.004	0.001
098	8/13/2019 09:37:14	0.000	0.000	0.000	0.000
099	8/13/2019 09:38:14	0.000	0.000	0.003	0.000
100	8/13/2019 09:39:14	0.000	0.001	0.014	0.000
101	8/13/2019 09:40:14	0.000	0.000	0.000	0.000
102	8/13/2019 09:41:14	0.000	0.000	0.000	0.000
103	8/13/2019 09:42:14	0.000	0.000	0.000	0.000
104	8/13/2019 09:43:14	0.000	0.000	0.000	0.000
105	8/13/2019 09:44:14	0.000	0.000	0.000	0.000
106	8/13/2019 09:45:14	0.000	0.000	0.000	0.000
107	8/13/2019 09:46:14	0.000	0.000	0.000	0.000
108	8/13/2019 09:47:14	0.000	0.000	0.000	0.000
109	8/13/2019 09:48:14	0.000	0.000	0.000	0.000
110	8/13/2019 09:49:14	0.000	0.000	0.000	0.000
111	8/13/2019 09:50:14	0.000	0.000	0.000	0.000
112	8/13/2019 09:51:14	0.000	0.000	0.000	0.000
113	8/13/2019 09:52:14	0.000	0.000	0.000	0.000
114	8/13/2019 09:53:14	0.000	0.000	0.000	0.000
115	8/13/2019 09:54:14	0.000	0.000	0.000	0.000
116	8/13/2019 09:55:14	0.000	0.000	0.000	0.000
117	8/13/2019 09:56:14	0.000	0.000	0.000	0.000
118	8/13/2019 09:57:14	0.000	0.000	0.000	0.000
119	8/13/2019 09:58:14	0.000	0.000	0.000	0.000
120	8/13/2019 09:59:14	0.000	0.000	0.000	0.000
121	8/13/2019 10:00:14	0.000	0.000	0.000	0.000
122	8/13/2019 10:01:14	0.000	0.000	0.000	0.000
123	8/13/2019 10:02:14	0.000	0.000	0.000	0.000
124	8/13/2019 10:03:14	0.000	0.000	0.000	0.000
125	8/13/2019 10:04:14	0.000	0.000	0.000	0.000
126	8/13/2019 10:05:14	0.000	0.000	0.000	0.000
127	8/13/2019 10:06:14	0.000	0.000	0.000	0.000
128	8/13/2019 10:07:14	0.000	0.000	0.000	0.000

129	8/13/2019	10:08:14	0.000	0.000	0.000	0.000
130	8/13/2019	10:09:14	0.000	0.000	0.000	0.000
131	8/13/2019	10:10:14	0.000	0.000	0.000	0.000
132	8/13/2019	10:11:14	0.000	0.000	0.005	0.000
133	8/13/2019	10:12:14	0.000	0.000	0.000	0.000
134	8/13/2019	10:13:14	0.000	0.000	0.000	0.000
135	8/13/2019	10:14:14	0.000	0.000	0.000	0.000
136	8/13/2019	10:15:14	0.000	0.000	0.000	0.000
137	8/13/2019	10:16:14	0.000	0.000	0.000	0.000
138	8/13/2019	10:17:14	0.000	0.000	0.000	0.000
139	8/13/2019	10:18:14	0.000	0.000	0.000	0.000
140	8/13/2019	10:19:14	0.000	0.000	0.000	0.000
141	8/13/2019	10:20:14	0.000	0.000	0.000	0.000
142	8/13/2019	10:21:14	0.000	0.000	0.000	0.000
143	8/13/2019	10:22:14	0.000	0.000	0.000	0.000
144	8/13/2019	10:23:14	0.000	0.000	0.000	0.000
145	8/13/2019	10:24:14	0.000	0.000	0.000	0.000
146	8/13/2019	10:25:14	0.000	0.000	0.000	0.000
147	8/13/2019	10:26:14	0.000	0.000	0.006	0.000
148	8/13/2019	10:27:14	0.000	0.000	0.001	0.000
149	8/13/2019	10:28:14	0.000	0.003	0.008	0.002
150	8/13/2019	10:29:14	0.001	0.004	0.007	0.007
151	8/13/2019	10:30:14	0.007	0.009	0.014	0.010
152	8/13/2019	10:31:14	0.006	0.010	0.014	0.006
153	8/13/2019	10:32:14	0.003	0.006	0.012	0.005
154	8/13/2019	10:33:14	0.002	0.007	0.013	0.011
155	8/13/2019	10:34:14	0.000	0.004	0.010	0.004
156	8/13/2019	10:35:14	0.001	0.007	0.014	0.007
157	8/13/2019	10:36:14	0.004	0.009	0.014	0.010
158	8/13/2019	10:37:14	0.007	0.009	0.012	0.011
159	8/13/2019	10:38:14	0.003	0.006	0.010	0.005
160	8/13/2019	10:39:14	0.002	0.007	0.012	0.012
161	8/13/2019	10:40:14	0.001	0.006	0.012	0.002
162	8/13/2019	10:41:14	0.000	0.000	0.004	0.002
163	8/13/2019	10:42:14	0.003	0.007	0.012	0.009
164	8/13/2019	10:43:14	0.000	0.004	0.010	0.007
165	8/13/2019	10:44:14	0.005	0.011	0.015	0.005
166	8/13/2019	10:45:14	0.003	0.009	0.017	0.005
167	8/13/2019	10:46:14	0.000	0.010	0.085	0.085
168	8/13/2019	10:47:14	0.000	0.007	0.072	0.007
169	8/13/2019	10:48:14	0.001	0.007	0.016	0.012
170	8/13/2019	10:49:14	0.007	0.011	0.014	0.011
171	8/13/2019	10:50:14	0.008	0.014	0.022	0.019
172	8/13/2019	10:51:14	0.019	0.023	0.026	0.023
173	8/13/2019	10:52:14	0.016	0.024	0.033	0.024
174	8/13/2019	10:53:14	0.023	0.029	0.035	0.035
175	8/13/2019	10:54:14	0.019	0.026	0.033	0.029
176	8/13/2019	10:55:14	0.016	0.025	0.032	0.026
177	8/13/2019	10:56:14	0.019	0.026	0.039	0.037
178	8/13/2019	10:57:14	0.027	0.032	0.038	0.030
179	8/13/2019	10:58:14	0.019	0.032	0.038	0.038
180	8/13/2019	10:59:14	0.029	0.035	0.043	0.039
181	8/13/2019	11:00:14	0.030	0.038	0.047	0.043
182	8/13/2019	11:01:14	0.041	0.051	0.060	0.045
183	8/13/2019	11:02:14	0.034	0.038	0.044	0.036
184	8/13/2019	11:03:14	0.031	0.037	0.041	0.038
185	8/13/2019	11:04:14	0.026	0.032	0.042	0.034

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198	8/13/2019 11:17:14	0.0490.0510.0550.052
199	8/13/2019 11:18:14	0.0470.0550.0620.047
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203	8/13/2019 11:22:14	0.0490.0530.0580.058
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206	8/13/2019 11:25:14	0.0370.0420.0510.042
207	8/13/2019 11:26:14	0.0410.0460.0500.046
208	8/13/2019 11:27:14	0.0440.0460.0510.049
209	8/13/2019 11:28:14	0.0370.0450.0510.047
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211	8/13/2019 11:30:14	0.0310.0470.0570.052
212	8/13/2019 11:31:14	0.0440.0520.0570.047
213	8/13/2019 11:32:14	0.0450.0480.0540.050
214	8/13/2019 11:33:14	0.0310.0430.0510.049
215	8/13/2019 11:34:14	0.0450.0470.0510.048
216	8/13/2019 11:35:14	0.0330.0460.0510.033
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223	8/13/2019 11:42:14	0.0360.0420.0460.036
224	8/13/2019 11:43:14	0.0310.0380.0420.041
225	8/13/2019 11:44:14	0.0290.0360.0420.030
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227	8/13/2019 11:46:14	0.0480.0500.0530.051
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325	8/13/2019 13:24:14	0.0060.0080.0120.006
326	8/13/2019 13:25:14	0.0010.0050.0090.004
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334	8/13/2019 13:33:14	0.0240.0290.0350.031
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340	8/13/2019 13:39:14	0.0090.0170.0200.016
341	8/13/2019 13:40:14	0.0070.0130.0170.010
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343	8/13/2019 13:42:14	0.0080.0110.0150.014
344	8/13/2019 13:43:14	0.0110.0150.0210.018
345	8/13/2019 13:44:14	0.0070.0160.0230.007
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347	8/13/2019 13:46:14	0.0010.0040.0080.002
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363	8/13/2019 14:02:14	0.0130.0200.0320.030
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535 8/13/2019 16:54:14 0.1300.1390.1500.136
536 8/13/2019 16:55:14 0.1340.1400.1460.145
537 8/13/2019 16:56:14 0.1210.1410.1550.142
538 8/13/2019 16:57:14 0.1220.1370.1540.137
539 8/13/2019 16:58:14 0.1360.1440.1520.148
540 8/13/2019 16:59:14 0.1330.1420.1500.133
Peak 0.1360.1440.2780.167
Min 0.0000.0000.0000.000
Average 0.0210.0280.0370.028

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TWA/STEL

Index	Date/Time	VOC(ppm) (TWA)	VOC(ppm) (STEL)
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005	8/13/2019 08:04:14	0.000	---
006	8/13/2019 08:05:14	0.000	---
007	8/13/2019 08:06:14	0.000	---
008	8/13/2019 08:07:14	0.000	---
009	8/13/2019 08:08:14	0.000	---
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013	8/13/2019 08:12:14	0.000	---
014	8/13/2019 08:13:14	0.000	---
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016	8/13/2019 08:15:14	0.000	0.000
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018	8/13/2019 08:17:14	0.000	0.000
019	8/13/2019 08:18:14	0.000	0.000
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026	8/13/2019 08:25:14	0.000	0.000
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046	8/13/2019 08:45:14	0.0000.000
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183	8/13/2019	11:02:14	0.0010.030
184	8/13/2019	11:03:14	0.0010.032
185	8/13/2019	11:04:14	0.0020.034
186	8/13/2019	11:05:14	0.0020.036
187	8/13/2019	11:06:14	0.0020.037
188	8/13/2019	11:07:14	0.0020.038
189	8/13/2019	11:08:14	0.0020.039
190	8/13/2019	11:09:14	0.0020.039
191	8/13/2019	11:10:14	0.0020.040
192	8/13/2019	11:11:14	0.0020.041
193	8/13/2019	11:12:14	0.0020.041
194	8/13/2019	11:13:14	0.0020.042
195	8/13/2019	11:14:14	0.0020.042
196	8/13/2019	11:15:14	0.0020.043
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200	8/13/2019	11:19:14	0.0030.046
201	8/13/2019	11:20:14	0.0030.046
202	8/13/2019	11:21:14	0.0030.047
203	8/13/2019	11:22:14	0.0030.048
204	8/13/2019	11:23:14	0.0030.049
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219	8/13/2019	11:38:14	0.0050.047
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244	8/13/2019	12:03:14	0.0070.050
245	8/13/2019	12:04:14	0.0070.051
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249	8/13/2019	12:08:14	0.0070.050
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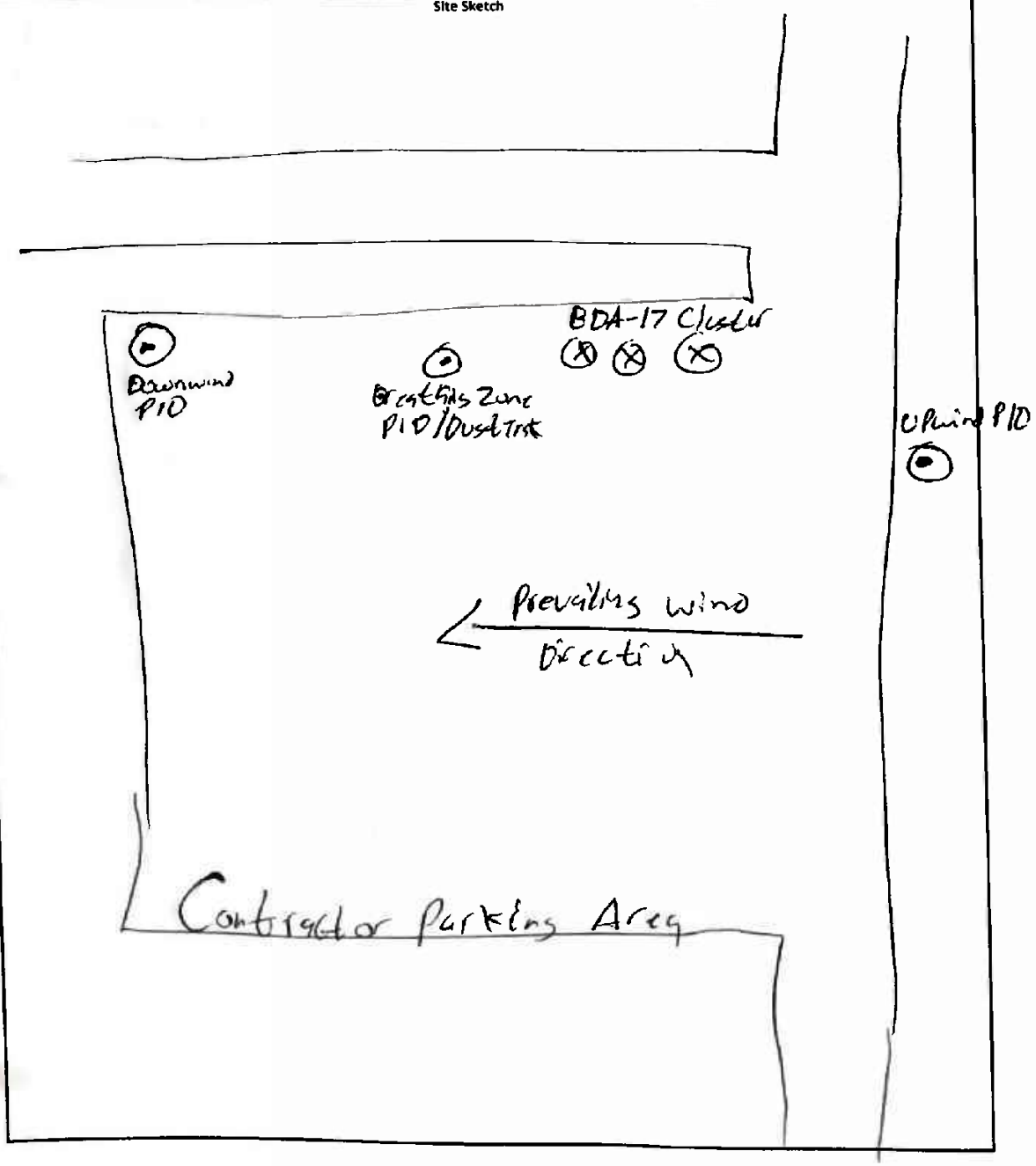
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539	8/13/2019 16:58:14	0.0320.131
540	8/13/2019 16:59:14	0.0320.132

ARCADIS | Design & Consultancy for natural and built assets

Daily CAMP Log

Project	Phase 2 Groundwater RI
Location	East Syracuse, NY
Date	8/13/19
Weather Conditions	70's Light Rain
Upwind Monitor	592-914273
Downwind Monitor	592-903544
Start Time	0730
End Time	

Site Sketch



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Environmental North

Anne Locke
Associate Manager, Environmental Protection
Environmental, Health and Safety Department
Bristol-Myers Squibb
P.O. Box 4755
Syracuse, NY 13221

Date:
August 14, 2019

Contact:
William McCune

Phone:
315-671-9172

Email:
William.McCune@arcadis.com

Our ref:
B0087363.0037

Subject:
Community Air Monitoring During Phase II RI Well Installations Bristol-Myers Squibb Syracuse Facility – East Syracuse, New York 13057

Dear Ms. Locke:

The following is a summary of the community air monitoring plan (CAMP) provided by Arcadis U.S., Inc. (Arcadis) during the Phase II Remedial Investigation (RI) drilling activities conducted at the Bristol-Myers Squibb (BMS) Syracuse North Campus, East Syracuse, NY on August 14, 2019.

August 14, 2019: Parratt-Wolff Inc. (Parratt-Wolff) continued sonic drilling activities at BDA-17RX, drilling from 7:55 AM to 4:30 PM. CAMP monitoring included photo ionization detectors at upwind and downwind locations and a DustTrak at a breathing zone location. The prevailing wind direction was observed originating from the south through the day. Air quality parameters did not exceed CAMP standards at any time during work activities. Table 1 shows the serial numbers and associated CAMP stations locations.

CAMP Station Locations	Serial Number
Breathing Zone DustTrak	#8533151804
Upwind PID	#592-914273
Downwind PID	#592-905549

Anne Locke
Bristol-Myers Squibb
August 13, 2019

Please contact us with any questions or comments pertaining to this project.

Sincerely,

Arcadis U.S., Inc.

William McCune
Principal Geologist

Attachments

1 CAMP Data Logs
2 Site Sketches/Notes

Test 003

Instrument		Data Properties	
Model	DustTrak DRX	Start Date	08/14/2019
Instrument S/N	8533151804	Start Time	07:39:25
		Stop Date	08/14/2019
		Stop Time	16:39:25
		Total Time	0:09:00:00
		Logging Interval	900 seconds

Test Data							
Data Point	**Date**	**Time**	**PM1 mg/m^3**	**PM2.5 mg/m^3**	**RESP mg/m^3**	**PM10 mg/m^3**	**TOTAL mg/m^3**
1	08/14/2019	07:54:25	0.018	0.019	0.020	0.024	0.029
2	08/14/2019	08:09:25	0.018	0.019	0.020	0.024	0.029
3	08/14/2019	08:24:25	0.021	0.022	0.023	0.029	0.035
4	08/14/2019	08:39:25	0.018	0.019	0.020	0.024	0.028
5	08/14/2019	08:54:25	0.021	0.022	0.023	0.029	0.038
6	08/14/2019	09:09:25	0.025	0.026	0.028	0.037	0.048
7	08/14/2019	09:24:25	0.020	0.021	0.022	0.026	0.029
8	08/14/2019	09:39:25	0.020	0.021	0.022	0.026	0.029
9	08/14/2019	09:54:25	0.021	0.021	0.022	0.025	0.029
10	08/14/2019	10:09:25	0.027	0.028	0.029	0.038	0.050
11	08/14/2019	10:24:25	0.023	0.024	0.026	0.032	0.039
12	08/14/2019	10:39:25	0.038	0.039	0.042	0.061	0.095
13	08/14/2019	10:54:25	0.066	0.068	0.073	0.118	0.197
14	08/14/2019	11:09:25	0.025	0.026	0.029	0.038	0.045
15	08/14/2019	11:24:25	0.017	0.018	0.018	0.020	0.023
16	08/14/2019	11:39:25	0.024	0.025	0.027	0.035	0.047
17	08/14/2019	11:54:25	0.017	0.017	0.017	0.019	0.019
18	08/14/2019	12:09:25	0.018	0.018	0.018	0.021	0.023
19	08/14/2019	12:24:25	0.024	0.025	0.026	0.032	0.041
20	08/14/2019	12:39:25	0.024	0.024	0.025	0.032	0.041
21	08/14/2019	12:54:25	0.020	0.021	0.022	0.027	0.032
22	08/14/2019	13:09:25	0.015	0.015	0.015	0.017	0.020
23	08/14/2019	13:24:25	0.041	0.041	0.043	0.059	0.088
24	08/14/2019	13:39:25	0.030	0.030	0.032	0.042	0.058
25	08/14/2019	13:54:25	0.016	0.016	0.016	0.017	0.018
26	08/14/2019	14:09:25	0.019	0.020	0.020	0.024	0.030
27	08/14/2019	14:24:25	0.026	0.026	0.028	0.038	0.054
28	08/14/2019	14:39:25	0.017	0.017	0.018	0.022	0.026
29	08/14/2019	14:54:25	0.015	0.015	0.016	0.017	0.019
30	08/14/2019	15:09:25	0.013	0.014	0.014	0.015	0.016
31	08/14/2019	15:24:25	0.016	0.016	0.017	0.021	0.025
32	08/14/2019	15:39:25	0.026	0.027	0.028	0.044	0.073
33	08/14/2019	15:54:25	0.035	0.036	0.039	0.060	0.095
34	08/14/2019	16:09:25	0.020	0.021	0.022	0.030	0.041
35	08/14/2019	16:24:25	0.033	0.034	0.037	0.060	0.090
36	08/14/2019	16:39:25	0.045	0.046	0.049	0.076	0.114

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19/08/14 07:40
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Summary

Unit Name MiniRAE 3000(PGM-7320)
Unit SN 592-903549
Unit Firmware Ver V2.20A

Running Mode Hygiene Mode
Datalog Mode Auto
Diagnostic Mode No
Stop Reason Power Down

Site ID 00000000
User ID 00000001

Begin 8/14/2019 07:40:37
End 8/14/2019 16:37:37
Sample Period(s) 60
Number of Records 537

Sensor PID(ppm)
Sensor SN S023030154V7
Measure Type Min; Avg; Max; Real
Span 100.0
Span 2 1000.0
Low Alarm 50.0
High Alarm 100.0
Over Alarm 2000.0
STEL Alarm 10025.0
TWA Alarm 10.0
Measurement Gas Isobutylene
Calibration Time 8/14/2019 07:40
Peak 0.0
Min 0.0
Average 0.0

****
Datalog

Index	Date/Time	PID(ppm) (Min)	PID(ppm) (Avg)	PID(ppm) (Max)	PID(ppm) (Real)
001	8/14/2019 07:41:37	0.0	0.0	0.1	0.0
002	8/14/2019 07:42:37	0.0	0.0	0.0	0.0
003	8/14/2019 07:43:37	0.0	0.0	0.1	0.0
004	8/14/2019 07:44:37	0.0	0.0	0.2	0.0
005	8/14/2019 07:45:37	0.0	0.0	0.0	0.0
006	8/14/2019 07:46:37	0.0	0.0	0.0	0.0
007	8/14/2019 07:47:37	0.0	0.0	0.0	0.0
008	8/14/2019 07:48:37	0.0	0.0	0.0	0.0
009	8/14/2019 07:49:37	0.0	0.0	0.0	0.0
010	8/14/2019 07:50:37	0.0	0.0	0.0	0.0
011	8/14/2019 07:51:37	0.0	0.0	0.0	0.0
012	8/14/2019 07:52:37	0.0	0.0	0.0	0.0
013	8/14/2019 07:53:37	0.0	0.0	0.0	0.0
014	8/14/2019 07:54:37	0.0	0.0	0.0	0.0

015	8/14/2019 07:55:37	0.0	0.0	0.0	0.0
016	8/14/2019 07:56:37	0.0	0.0	0.0	0.0
017	8/14/2019 07:57:37	0.0	0.0	0.0	0.0
018	8/14/2019 07:58:37	0.0	0.0	0.0	0.0
019	8/14/2019 07:59:37	0.0	0.0	0.0	0.0
020	8/14/2019 08:00:37	0.0	0.0	0.0	0.0
021	8/14/2019 08:01:37	0.0	0.0	0.0	0.0
022	8/14/2019 08:02:37	0.0	0.0	0.0	0.0
023	8/14/2019 08:03:37	0.0	0.0	0.0	0.0
024	8/14/2019 08:04:37	0.0	0.0	0.0	0.0
025	8/14/2019 08:05:37	0.0	0.0	0.0	0.0
026	8/14/2019 08:06:37	0.0	0.0	0.0	0.0
027	8/14/2019 08:07:37	0.0	0.0	0.0	0.0
028	8/14/2019 08:08:37	0.0	0.0	0.0	0.0
029	8/14/2019 08:09:37	0.0	0.0	0.0	0.0
030	8/14/2019 08:10:37	0.0	0.0	0.0	0.0
031	8/14/2019 08:11:37	0.0	0.0	0.0	0.0
032	8/14/2019 08:12:37	0.0	0.0	0.0	0.0
033	8/14/2019 08:13:37	0.0	0.0	0.0	0.0
034	8/14/2019 08:14:37	0.0	0.0	0.0	0.0
035	8/14/2019 08:15:37	0.0	0.0	0.0	0.0
036	8/14/2019 08:16:37	0.0	0.0	0.0	0.0
037	8/14/2019 08:17:37	0.0	0.0	0.0	0.0
038	8/14/2019 08:18:37	0.0	0.0	0.0	0.0
039	8/14/2019 08:19:37	0.0	0.0	0.0	0.0
040	8/14/2019 08:20:37	0.0	0.0	0.0	0.0
041	8/14/2019 08:21:37	0.0	0.0	0.0	0.0
042	8/14/2019 08:22:37	0.0	0.0	0.0	0.0
043	8/14/2019 08:23:37	0.0	0.0	0.0	0.0
044	8/14/2019 08:24:37	0.0	0.0	0.0	0.0
045	8/14/2019 08:25:37	0.0	0.0	0.0	0.0
046	8/14/2019 08:26:37	0.0	0.0	0.0	0.0
047	8/14/2019 08:27:37	0.0	0.0	0.0	0.0
048	8/14/2019 08:28:37	0.0	0.0	0.0	0.0
049	8/14/2019 08:29:37	0.0	0.0	0.0	0.0
050	8/14/2019 08:30:37	0.0	0.0	0.0	0.0
051	8/14/2019 08:31:37	0.0	0.0	0.0	0.0
052	8/14/2019 08:32:37	0.0	0.0	0.0	0.0
053	8/14/2019 08:33:37	0.0	0.0	0.0	0.0
054	8/14/2019 08:34:37	0.0	0.0	0.0	0.0
055	8/14/2019 08:35:37	0.0	0.0	0.0	0.0
056	8/14/2019 08:36:37	0.0	0.0	0.0	0.0
057	8/14/2019 08:37:37	0.0	0.0	0.0	0.0
058	8/14/2019 08:38:37	0.0	0.0	0.0	0.0
059	8/14/2019 08:39:37	0.0	0.0	0.0	0.0
060	8/14/2019 08:40:37	0.0	0.0	0.0	0.0
061	8/14/2019 08:41:37	0.0	0.0	0.0	0.0
062	8/14/2019 08:42:37	0.0	0.0	0.0	0.0
063	8/14/2019 08:43:37	0.0	0.0	0.0	0.0
064	8/14/2019 08:44:37	0.0	0.0	0.0	0.0
065	8/14/2019 08:45:37	0.0	0.0	0.0	0.0
066	8/14/2019 08:46:37	0.0	0.0	0.0	0.0
067	8/14/2019 08:47:37	0.0	0.0	0.0	0.0
068	8/14/2019 08:48:37	0.0	0.0	0.0	0.0
069	8/14/2019 08:49:37	0.0	0.0	0.0	0.0
070	8/14/2019 08:50:37	0.0	0.0	0.0	0.0
071	8/14/2019 08:51:37	0.0	0.0	0.0	0.0

072	8/14/2019 08:52:37	0.0	0.0	0.0	0.0
073	8/14/2019 08:53:37	0.0	0.0	0.0	0.0
074	8/14/2019 08:54:37	0.0	0.0	0.0	0.0
075	8/14/2019 08:55:37	0.0	0.0	0.0	0.0
076	8/14/2019 08:56:37	0.0	0.0	0.0	0.0
077	8/14/2019 08:57:37	0.0	0.0	0.0	0.0
078	8/14/2019 08:58:37	0.0	0.0	0.0	0.0
079	8/14/2019 08:59:37	0.0	0.0	0.0	0.0
080	8/14/2019 09:00:37	0.0	0.0	0.0	0.0
081	8/14/2019 09:01:37	0.0	0.0	0.0	0.0
082	8/14/2019 09:02:37	0.0	0.0	0.0	0.0
083	8/14/2019 09:03:37	0.0	0.0	0.0	0.0
084	8/14/2019 09:04:37	0.0	0.0	0.0	0.0
085	8/14/2019 09:05:37	0.0	0.0	0.0	0.0
086	8/14/2019 09:06:37	0.0	0.0	0.0	0.0
087	8/14/2019 09:07:37	0.0	0.0	0.0	0.0
088	8/14/2019 09:08:37	0.0	0.0	0.0	0.0
089	8/14/2019 09:09:37	0.0	0.0	0.0	0.0
090	8/14/2019 09:10:37	0.0	0.0	0.0	0.0
091	8/14/2019 09:11:37	0.0	0.0	0.0	0.0
092	8/14/2019 09:12:37	0.0	0.0	0.0	0.0
093	8/14/2019 09:13:37	0.0	0.0	0.0	0.0
094	8/14/2019 09:14:37	0.0	0.0	0.0	0.0
095	8/14/2019 09:15:37	0.0	0.0	0.0	0.0
096	8/14/2019 09:16:37	0.0	0.0	0.0	0.0
097	8/14/2019 09:17:37	0.0	0.0	0.0	0.0
098	8/14/2019 09:18:37	0.0	0.0	0.0	0.0
099	8/14/2019 09:19:37	0.0	0.0	0.0	0.0
100	8/14/2019 09:20:37	0.0	0.0	0.0	0.0
101	8/14/2019 09:21:37	0.0	0.0	0.0	0.0
102	8/14/2019 09:22:37	0.0	0.0	0.0	0.0
103	8/14/2019 09:23:37	0.0	0.0	0.0	0.0
104	8/14/2019 09:24:37	0.0	0.0	0.0	0.0
105	8/14/2019 09:25:37	0.0	0.0	0.0	0.0
106	8/14/2019 09:26:37	0.0	0.0	0.0	0.0
107	8/14/2019 09:27:37	0.0	0.0	0.0	0.0
108	8/14/2019 09:28:37	0.0	0.0	0.0	0.0
109	8/14/2019 09:29:37	0.0	0.0	0.0	0.0
110	8/14/2019 09:30:37	0.0	0.0	0.0	0.0
111	8/14/2019 09:31:37	0.0	0.0	0.0	0.0
112	8/14/2019 09:32:37	0.0	0.0	0.0	0.0
113	8/14/2019 09:33:37	0.0	0.0	0.0	0.0
114	8/14/2019 09:34:37	0.0	0.0	0.0	0.0
115	8/14/2019 09:35:37	0.0	0.0	0.0	0.0
116	8/14/2019 09:36:37	0.0	0.0	0.0	0.0
117	8/14/2019 09:37:37	0.0	0.0	0.0	0.0
118	8/14/2019 09:38:37	0.0	0.0	0.0	0.0
119	8/14/2019 09:39:37	0.0	0.0	0.0	0.0
120	8/14/2019 09:40:37	0.0	0.0	0.0	0.0
121	8/14/2019 09:41:37	0.0	0.0	0.0	0.0
122	8/14/2019 09:42:37	0.0	0.0	0.0	0.0
123	8/14/2019 09:43:37	0.0	0.0	0.0	0.0
124	8/14/2019 09:44:37	0.0	0.0	0.0	0.0
125	8/14/2019 09:45:37	0.0	0.0	0.0	0.0
126	8/14/2019 09:46:37	0.0	0.0	0.0	0.0
127	8/14/2019 09:47:37	0.0	0.0	0.0	0.0
128	8/14/2019 09:48:37	0.0	0.0	0.0	0.0

129	8/14/2019 09:49:37	0.0	0.0	0.0	0.0
130	8/14/2019 09:50:37	0.0	0.0	0.0	0.0
131	8/14/2019 09:51:37	0.0	0.0	0.0	0.0
132	8/14/2019 09:52:37	0.0	0.0	0.0	0.0
133	8/14/2019 09:53:37	0.0	0.0	0.0	0.0
134	8/14/2019 09:54:37	0.0	0.0	0.0	0.0
135	8/14/2019 09:55:37	0.0	0.0	0.0	0.0
136	8/14/2019 09:56:37	0.0	0.0	0.0	0.0
137	8/14/2019 09:57:37	0.0	0.0	0.0	0.0
138	8/14/2019 09:58:37	0.0	0.0	0.0	0.0
139	8/14/2019 09:59:37	0.0	0.0	0.0	0.0
140	8/14/2019 10:00:37	0.0	0.0	0.0	0.0
141	8/14/2019 10:01:37	0.0	0.0	0.0	0.0
142	8/14/2019 10:02:37	0.0	0.0	0.0	0.0
143	8/14/2019 10:03:37	0.0	0.0	0.0	0.0
144	8/14/2019 10:04:37	0.0	0.0	0.0	0.0
145	8/14/2019 10:05:37	0.0	0.0	0.0	0.0
146	8/14/2019 10:06:37	0.0	0.0	0.0	0.0
147	8/14/2019 10:07:37	0.0	0.0	0.0	0.0
148	8/14/2019 10:08:37	0.0	0.0	0.0	0.0
149	8/14/2019 10:09:37	0.0	0.0	0.0	0.0
150	8/14/2019 10:10:37	0.0	0.0	0.0	0.0
151	8/14/2019 10:11:37	0.0	0.0	0.0	0.0
152	8/14/2019 10:12:37	0.0	0.0	0.0	0.0
153	8/14/2019 10:13:37	0.0	0.0	0.0	0.0
154	8/14/2019 10:14:37	0.0	0.0	0.0	0.0
155	8/14/2019 10:15:37	0.0	0.0	0.0	0.0
156	8/14/2019 10:16:37	0.0	0.0	0.0	0.0
157	8/14/2019 10:17:37	0.0	0.0	0.0	0.0
158	8/14/2019 10:18:37	0.0	0.0	0.0	0.0
159	8/14/2019 10:19:37	0.0	0.0	0.0	0.0
160	8/14/2019 10:20:37	0.0	0.0	0.0	0.0
161	8/14/2019 10:21:37	0.0	0.0	0.0	0.0
162	8/14/2019 10:22:37	0.0	0.0	0.0	0.0
163	8/14/2019 10:23:37	0.0	0.0	0.0	0.0
164	8/14/2019 10:24:37	0.0	0.0	0.0	0.0
165	8/14/2019 10:25:37	0.0	0.0	0.0	0.0
166	8/14/2019 10:26:37	0.0	0.0	0.0	0.0
167	8/14/2019 10:27:37	0.0	0.0	0.0	0.0
168	8/14/2019 10:28:37	0.0	0.0	0.0	0.0
169	8/14/2019 10:29:37	0.0	0.0	0.0	0.0
170	8/14/2019 10:30:37	0.0	0.0	0.0	0.0
171	8/14/2019 10:31:37	0.0	0.0	0.0	0.0
172	8/14/2019 10:32:37	0.0	0.0	0.0	0.0
173	8/14/2019 10:33:37	0.0	0.0	0.0	0.0
174	8/14/2019 10:34:37	0.0	0.0	0.0	0.0
175	8/14/2019 10:35:37	0.0	0.0	0.0	0.0
176	8/14/2019 10:36:37	0.0	0.0	0.0	0.0
177	8/14/2019 10:37:37	0.0	0.0	0.0	0.0
178	8/14/2019 10:38:37	0.0	0.0	0.0	0.0
179	8/14/2019 10:39:37	0.0	0.0	0.0	0.0
180	8/14/2019 10:40:37	0.0	0.0	0.0	0.0
181	8/14/2019 10:41:37	0.0	0.0	0.0	0.0
182	8/14/2019 10:42:37	0.0	0.0	0.0	0.0
183	8/14/2019 10:43:37	0.0	0.0	0.0	0.0
184	8/14/2019 10:44:37	0.0	0.0	0.0	0.0
185	8/14/2019 10:45:37	0.0	0.0	0.0	0.0

186	8/14/2019 10:46:37	0.0	0.0	0.0	0.0
187	8/14/2019 10:47:37	0.0	0.0	0.0	0.0
188	8/14/2019 10:48:37	0.0	0.0	0.0	0.0
189	8/14/2019 10:49:37	0.0	0.0	0.0	0.0
190	8/14/2019 10:50:37	0.0	0.0	0.0	0.0
191	8/14/2019 10:51:37	0.0	0.0	0.0	0.0
192	8/14/2019 10:52:37	0.0	0.0	0.0	0.0
193	8/14/2019 10:53:37	0.0	0.0	0.0	0.0
194	8/14/2019 10:54:37	0.0	0.0	0.0	0.0
195	8/14/2019 10:55:37	0.0	0.0	0.0	0.0
196	8/14/2019 10:56:37	0.0	0.0	0.0	0.0
197	8/14/2019 10:57:37	0.0	0.0	0.0	0.0
198	8/14/2019 10:58:37	0.0	0.0	0.0	0.0
199	8/14/2019 10:59:37	0.0	0.0	0.0	0.0
200	8/14/2019 11:00:37	0.0	0.0	0.0	0.0
201	8/14/2019 11:01:37	0.0	0.0	0.0	0.0
202	8/14/2019 11:02:37	0.0	0.0	0.0	0.0
203	8/14/2019 11:03:37	0.0	0.0	0.0	0.0
204	8/14/2019 11:04:37	0.0	0.0	0.0	0.0
205	8/14/2019 11:05:37	0.0	0.0	0.0	0.0
206	8/14/2019 11:06:37	0.0	0.0	0.0	0.0
207	8/14/2019 11:07:37	0.0	0.0	0.0	0.0
208	8/14/2019 11:08:37	0.0	0.0	0.0	0.0
209	8/14/2019 11:09:37	0.0	0.0	0.0	0.0
210	8/14/2019 11:10:37	0.0	0.0	0.0	0.0
211	8/14/2019 11:11:37	0.0	0.0	0.0	0.0
212	8/14/2019 11:12:37	0.0	0.0	0.0	0.0
213	8/14/2019 11:13:37	0.0	0.0	0.0	0.0
214	8/14/2019 11:14:37	0.0	0.0	0.0	0.0
215	8/14/2019 11:15:37	0.0	0.0	0.0	0.0
216	8/14/2019 11:16:37	0.0	0.0	0.0	0.0
217	8/14/2019 11:17:37	0.0	0.0	0.0	0.0
218	8/14/2019 11:18:37	0.0	0.0	0.0	0.0
219	8/14/2019 11:19:37	0.0	0.0	0.0	0.0
220	8/14/2019 11:20:37	0.0	0.0	0.0	0.0
221	8/14/2019 11:21:37	0.0	0.0	0.0	0.0
222	8/14/2019 11:22:37	0.0	0.0	0.0	0.0
223	8/14/2019 11:23:37	0.0	0.0	0.0	0.0
224	8/14/2019 11:24:37	0.0	0.0	0.0	0.0
225	8/14/2019 11:25:37	0.0	0.0	0.0	0.0
226	8/14/2019 11:26:37	0.0	0.0	0.0	0.0
227	8/14/2019 11:27:37	0.0	0.0	0.0	0.0
228	8/14/2019 11:28:37	0.0	0.0	0.0	0.0
229	8/14/2019 11:29:37	0.0	0.0	0.0	0.0
230	8/14/2019 11:30:37	0.0	0.0	0.0	0.0
231	8/14/2019 11:31:37	0.0	0.0	0.0	0.0
232	8/14/2019 11:32:37	0.0	0.0	0.0	0.0
233	8/14/2019 11:33:37	0.0	0.0	0.0	0.0
234	8/14/2019 11:34:37	0.0	0.0	0.0	0.0
235	8/14/2019 11:35:37	0.0	0.0	0.0	0.0
236	8/14/2019 11:36:37	0.0	0.0	0.0	0.0
237	8/14/2019 11:37:37	0.0	0.0	0.0	0.0
238	8/14/2019 11:38:37	0.0	0.0	0.0	0.0
239	8/14/2019 11:39:37	0.0	0.0	0.0	0.0
240	8/14/2019 11:40:37	0.0	0.0	0.0	0.0
241	8/14/2019 11:41:37	0.0	0.0	0.0	0.0
242	8/14/2019 11:42:37	0.0	0.0	0.0	0.0

243	8/14/2019 11:43:37	0.0	0.0	0.0	0.0
244	8/14/2019 11:44:37	0.0	0.0	0.0	0.0
245	8/14/2019 11:45:37	0.0	0.0	0.0	0.0
246	8/14/2019 11:46:37	0.0	0.0	0.0	0.0
247	8/14/2019 11:47:37	0.0	0.0	0.0	0.0
248	8/14/2019 11:48:37	0.0	0.0	0.0	0.0
249	8/14/2019 11:49:37	0.0	0.0	0.0	0.0
250	8/14/2019 11:50:37	0.0	0.0	0.0	0.0
251	8/14/2019 11:51:37	0.0	0.0	0.0	0.0
252	8/14/2019 11:52:37	0.0	0.0	0.0	0.0
253	8/14/2019 11:53:37	0.0	0.0	0.0	0.0
254	8/14/2019 11:54:37	0.0	0.0	0.0	0.0
255	8/14/2019 11:55:37	0.0	0.0	0.0	0.0
256	8/14/2019 11:56:37	0.0	0.0	0.0	0.0
257	8/14/2019 11:57:37	0.0	0.0	0.0	0.0
258	8/14/2019 11:58:37	0.0	0.0	0.0	0.0
259	8/14/2019 11:59:37	0.0	0.0	0.0	0.0
260	8/14/2019 12:00:37	0.0	0.0	0.0	0.0
261	8/14/2019 12:01:37	0.0	0.0	0.0	0.0
262	8/14/2019 12:02:37	0.0	0.0	0.0	0.0
263	8/14/2019 12:03:37	0.0	0.0	0.0	0.0
264	8/14/2019 12:04:37	0.0	0.0	0.0	0.0
265	8/14/2019 12:05:37	0.0	0.0	0.0	0.0
266	8/14/2019 12:06:37	0.0	0.0	0.0	0.0
267	8/14/2019 12:07:37	0.0	0.0	0.0	0.0
268	8/14/2019 12:08:37	0.0	0.0	0.0	0.0
269	8/14/2019 12:09:37	0.0	0.0	0.0	0.0
270	8/14/2019 12:10:37	0.0	0.0	0.0	0.0
271	8/14/2019 12:11:37	0.0	0.0	0.0	0.0
272	8/14/2019 12:12:37	0.0	0.0	0.0	0.0
273	8/14/2019 12:13:37	0.0	0.0	0.0	0.0
274	8/14/2019 12:14:37	0.0	0.0	0.0	0.0
275	8/14/2019 12:15:37	0.0	0.0	0.0	0.0
276	8/14/2019 12:16:37	0.0	0.0	0.0	0.0
277	8/14/2019 12:17:37	0.0	0.0	0.0	0.0
278	8/14/2019 12:18:37	0.0	0.0	0.0	0.0
279	8/14/2019 12:19:37	0.0	0.0	0.0	0.0
280	8/14/2019 12:20:37	0.0	0.0	0.0	0.0
281	8/14/2019 12:21:37	0.0	0.0	0.0	0.0
282	8/14/2019 12:22:37	0.0	0.0	0.0	0.0
283	8/14/2019 12:23:37	0.0	0.0	0.0	0.0
284	8/14/2019 12:24:37	0.0	0.0	0.0	0.0
285	8/14/2019 12:25:37	0.0	0.0	0.0	0.0
286	8/14/2019 12:26:37	0.0	0.0	0.0	0.0
287	8/14/2019 12:27:37	0.0	0.0	0.0	0.0
288	8/14/2019 12:28:37	0.0	0.0	0.0	0.0
289	8/14/2019 12:29:37	0.0	0.0	0.0	0.0
290	8/14/2019 12:30:37	0.0	0.0	0.0	0.0
291	8/14/2019 12:31:37	0.0	0.0	0.0	0.0
292	8/14/2019 12:32:37	0.0	0.0	0.0	0.0
293	8/14/2019 12:33:37	0.0	0.0	0.0	0.0
294	8/14/2019 12:34:37	0.0	0.0	0.0	0.0
295	8/14/2019 12:35:37	0.0	0.0	0.0	0.0
296	8/14/2019 12:36:37	0.0	0.0	0.0	0.0
297	8/14/2019 12:37:37	0.0	0.0	0.0	0.0
298	8/14/2019 12:38:37	0.0	0.0	0.0	0.0
299	8/14/2019 12:39:37	0.0	0.0	0.0	0.0

300	8/14/2019 12:40:37	0.0	0.0	0.0	0.0
301	8/14/2019 12:41:37	0.0	0.0	0.0	0.0
302	8/14/2019 12:42:37	0.0	0.0	0.0	0.0
303	8/14/2019 12:43:37	0.0	0.0	0.0	0.0
304	8/14/2019 12:44:37	0.0	0.0	0.0	0.0
305	8/14/2019 12:45:37	0.0	0.0	0.0	0.0
306	8/14/2019 12:46:37	0.0	0.0	0.0	0.0
307	8/14/2019 12:47:37	0.0	0.0	0.0	0.0
308	8/14/2019 12:48:37	0.0	0.0	0.0	0.0
309	8/14/2019 12:49:37	0.0	0.0	0.0	0.0
310	8/14/2019 12:50:37	0.0	0.0	0.0	0.0
311	8/14/2019 12:51:37	0.0	0.0	0.0	0.0
312	8/14/2019 12:52:37	0.0	0.0	0.0	0.0
313	8/14/2019 12:53:37	0.0	0.0	0.0	0.0
314	8/14/2019 12:54:37	0.0	0.0	0.0	0.0
315	8/14/2019 12:55:37	0.0	0.0	0.0	0.0
316	8/14/2019 12:56:37	0.0	0.0	0.0	0.0
317	8/14/2019 12:57:37	0.0	0.0	0.0	0.0
318	8/14/2019 12:58:37	0.0	0.0	0.0	0.0
319	8/14/2019 12:59:37	0.0	0.0	0.0	0.0
320	8/14/2019 13:00:37	0.0	0.0	0.0	0.0
321	8/14/2019 13:01:37	0.0	0.0	0.0	0.0
322	8/14/2019 13:02:37	0.0	0.0	0.0	0.0
323	8/14/2019 13:03:37	0.0	0.0	0.0	0.0
324	8/14/2019 13:04:37	0.0	0.0	0.0	0.0
325	8/14/2019 13:05:37	0.0	0.0	0.0	0.0
326	8/14/2019 13:06:37	0.0	0.0	0.0	0.0
327	8/14/2019 13:07:37	0.0	0.0	0.0	0.0
328	8/14/2019 13:08:37	0.0	0.0	0.0	0.0
329	8/14/2019 13:09:37	0.0	0.0	0.0	0.0
330	8/14/2019 13:10:37	0.0	0.0	0.0	0.0
331	8/14/2019 13:11:37	0.0	0.0	0.0	0.0
332	8/14/2019 13:12:37	0.0	0.0	0.0	0.0
333	8/14/2019 13:13:37	0.0	0.0	0.0	0.0
334	8/14/2019 13:14:37	0.0	0.0	0.0	0.0
335	8/14/2019 13:15:37	0.0	0.0	0.0	0.0
336	8/14/2019 13:16:37	0.0	0.0	0.0	0.0
337	8/14/2019 13:17:37	0.0	0.0	0.0	0.0
338	8/14/2019 13:18:37	0.0	0.0	0.0	0.0
339	8/14/2019 13:19:37	0.0	0.0	0.0	0.0
340	8/14/2019 13:20:37	0.0	0.0	0.0	0.0
341	8/14/2019 13:21:37	0.0	0.0	0.0	0.0
342	8/14/2019 13:22:37	0.0	0.0	0.0	0.0
343	8/14/2019 13:23:37	0.0	0.0	0.0	0.0
344	8/14/2019 13:24:37	0.0	0.0	0.0	0.0
345	8/14/2019 13:25:37	0.0	0.0	0.0	0.0
346	8/14/2019 13:26:37	0.0	0.0	0.0	0.0
347	8/14/2019 13:27:37	0.0	0.0	0.0	0.0
348	8/14/2019 13:28:37	0.0	0.0	0.0	0.0
349	8/14/2019 13:29:37	0.0	0.0	0.0	0.0
350	8/14/2019 13:30:37	0.0	0.0	0.0	0.0
351	8/14/2019 13:31:37	0.0	0.0	0.0	0.0
352	8/14/2019 13:32:37	0.0	0.0	0.0	0.0
353	8/14/2019 13:33:37	0.0	0.0	0.0	0.0
354	8/14/2019 13:34:37	0.0	0.0	0.0	0.0
355	8/14/2019 13:35:37	0.0	0.0	0.0	0.0
356	8/14/2019 13:36:37	0.0	0.0	0.0	0.0

357	8/14/2019 13:37:37	0.0	0.0	0.0	0.0
358	8/14/2019 13:38:37	0.0	0.0	0.0	0.0
359	8/14/2019 13:39:37	0.0	0.0	0.0	0.0
360	8/14/2019 13:40:37	0.0	0.0	0.0	0.0
361	8/14/2019 13:41:37	0.0	0.0	0.0	0.0
362	8/14/2019 13:42:37	0.0	0.0	0.0	0.0
363	8/14/2019 13:43:37	0.0	0.0	0.0	0.0
364	8/14/2019 13:44:37	0.0	0.0	0.0	0.0
365	8/14/2019 13:45:37	0.0	0.0	0.0	0.0
366	8/14/2019 13:46:37	0.0	0.0	0.0	0.0
367	8/14/2019 13:47:37	0.0	0.0	0.0	0.0
368	8/14/2019 13:48:37	0.0	0.0	0.0	0.0
369	8/14/2019 13:49:37	0.0	0.0	0.0	0.0
370	8/14/2019 13:50:37	0.0	0.0	0.0	0.0
371	8/14/2019 13:51:37	0.0	0.0	0.0	0.0
372	8/14/2019 13:52:37	0.0	0.0	0.0	0.0
373	8/14/2019 13:53:37	0.0	0.0	0.0	0.0
374	8/14/2019 13:54:37	0.0	0.0	0.0	0.0
375	8/14/2019 13:55:37	0.0	0.0	0.0	0.0
376	8/14/2019 13:56:37	0.0	0.0	0.0	0.0
377	8/14/2019 13:57:37	0.0	0.0	0.0	0.0
378	8/14/2019 13:58:37	0.0	0.0	0.0	0.0
379	8/14/2019 13:59:37	0.0	0.0	0.0	0.0
380	8/14/2019 14:00:37	0.0	0.0	0.0	0.0
381	8/14/2019 14:01:37	0.0	0.0	0.0	0.0
382	8/14/2019 14:02:37	0.0	0.0	0.0	0.0
383	8/14/2019 14:03:37	0.0	0.0	0.0	0.0
384	8/14/2019 14:04:37	0.0	0.0	0.0	0.0
385	8/14/2019 14:05:37	0.0	0.0	0.0	0.0
386	8/14/2019 14:06:37	0.0	0.0	0.0	0.0
387	8/14/2019 14:07:37	0.0	0.0	0.0	0.0
388	8/14/2019 14:08:37	0.0	0.0	0.0	0.0
389	8/14/2019 14:09:37	0.0	0.0	0.0	0.0
390	8/14/2019 14:10:37	0.0	0.0	0.0	0.0
391	8/14/2019 14:11:37	0.0	0.0	0.0	0.0
392	8/14/2019 14:12:37	0.0	0.0	0.0	0.0
393	8/14/2019 14:13:37	0.0	0.0	0.0	0.0
394	8/14/2019 14:14:37	0.0	0.0	0.0	0.0
395	8/14/2019 14:15:37	0.0	0.0	0.0	0.0
396	8/14/2019 14:16:37	0.0	0.0	0.0	0.0
397	8/14/2019 14:17:37	0.0	0.0	0.0	0.0
398	8/14/2019 14:18:37	0.0	0.0	0.0	0.0
399	8/14/2019 14:19:37	0.0	0.0	0.0	0.0
400	8/14/2019 14:20:37	0.0	0.0	0.0	0.0
401	8/14/2019 14:21:37	0.0	0.0	0.0	0.0
402	8/14/2019 14:22:37	0.0	0.0	0.0	0.0
403	8/14/2019 14:23:37	0.0	0.0	0.0	0.0
404	8/14/2019 14:24:37	0.0	0.0	0.0	0.0
405	8/14/2019 14:25:37	0.0	0.0	0.0	0.0
406	8/14/2019 14:26:37	0.0	0.0	0.0	0.0
407	8/14/2019 14:27:37	0.0	0.0	0.0	0.0
408	8/14/2019 14:28:37	0.0	0.0	0.0	0.0
409	8/14/2019 14:29:37	0.0	0.0	0.0	0.0
410	8/14/2019 14:30:37	0.0	0.0	0.0	0.0
411	8/14/2019 14:31:37	0.0	0.0	0.0	0.0
412	8/14/2019 14:32:37	0.0	0.0	0.0	0.0
413	8/14/2019 14:33:37	0.0	0.0	0.0	0.0

414	8/14/2019 14:34:37	0.0	0.0	0.0	0.0
415	8/14/2019 14:35:37	0.0	0.0	0.0	0.0
416	8/14/2019 14:36:37	0.0	0.0	0.0	0.0
417	8/14/2019 14:37:37	0.0	0.0	0.0	0.0
418	8/14/2019 14:38:37	0.0	0.0	0.0	0.0
419	8/14/2019 14:39:37	0.0	0.0	0.0	0.0
420	8/14/2019 14:40:37	0.0	0.0	0.0	0.0
421	8/14/2019 14:41:37	0.0	0.0	0.0	0.0
422	8/14/2019 14:42:37	0.0	0.0	0.0	0.0
423	8/14/2019 14:43:37	0.0	0.0	0.0	0.0
424	8/14/2019 14:44:37	0.0	0.0	0.0	0.0
425	8/14/2019 14:45:37	0.0	0.0	0.0	0.0
426	8/14/2019 14:46:37	0.0	0.0	0.0	0.0
427	8/14/2019 14:47:37	0.0	0.0	0.0	0.0
428	8/14/2019 14:48:37	0.0	0.0	0.0	0.0
429	8/14/2019 14:49:37	0.0	0.0	0.0	0.0
430	8/14/2019 14:50:37	0.0	0.0	0.0	0.0
431	8/14/2019 14:51:37	0.0	0.0	0.0	0.0
432	8/14/2019 14:52:37	0.0	0.0	0.0	0.0
433	8/14/2019 14:53:37	0.0	0.0	0.0	0.0
434	8/14/2019 14:54:37	0.0	0.0	0.0	0.0
435	8/14/2019 14:55:37	0.0	0.0	0.0	0.0
436	8/14/2019 14:56:37	0.0	0.0	0.0	0.0
437	8/14/2019 14:57:37	0.0	0.0	0.0	0.0
438	8/14/2019 14:58:37	0.0	0.0	0.0	0.0
439	8/14/2019 14:59:37	0.0	0.0	0.0	0.0
440	8/14/2019 15:00:37	0.0	0.0	0.0	0.0
441	8/14/2019 15:01:37	0.0	0.0	0.0	0.0
442	8/14/2019 15:02:37	0.0	0.0	0.0	0.0
443	8/14/2019 15:03:37	0.0	0.0	0.0	0.0
444	8/14/2019 15:04:37	0.0	0.0	0.0	0.0
445	8/14/2019 15:05:37	0.0	0.0	0.0	0.0
446	8/14/2019 15:06:37	0.0	0.0	0.0	0.0
447	8/14/2019 15:07:37	0.0	0.0	0.0	0.0
448	8/14/2019 15:08:37	0.0	0.0	0.0	0.0
449	8/14/2019 15:09:37	0.0	0.0	0.0	0.0
450	8/14/2019 15:10:37	0.0	0.0	0.0	0.0
451	8/14/2019 15:11:37	0.0	0.0	0.0	0.0
452	8/14/2019 15:12:37	0.0	0.0	0.0	0.0
453	8/14/2019 15:13:37	0.0	0.0	0.0	0.0
454	8/14/2019 15:14:37	0.0	0.0	0.0	0.0
455	8/14/2019 15:15:37	0.0	0.0	0.0	0.0
456	8/14/2019 15:16:37	0.0	0.0	0.0	0.0
457	8/14/2019 15:17:37	0.0	0.0	0.0	0.0
458	8/14/2019 15:18:37	0.0	0.0	0.0	0.0
459	8/14/2019 15:19:37	0.0	0.0	0.0	0.0
460	8/14/2019 15:20:37	0.0	0.0	0.0	0.0
461	8/14/2019 15:21:37	0.0	0.0	0.0	0.0
462	8/14/2019 15:22:37	0.0	0.0	0.0	0.0
463	8/14/2019 15:23:37	0.0	0.0	0.0	0.0
464	8/14/2019 15:24:37	0.0	0.0	0.0	0.0
465	8/14/2019 15:25:37	0.0	0.0	0.0	0.0
466	8/14/2019 15:26:37	0.0	0.0	0.0	0.0
467	8/14/2019 15:27:37	0.0	0.0	0.0	0.0
468	8/14/2019 15:28:37	0.0	0.0	0.0	0.0
469	8/14/2019 15:29:37	0.0	0.0	0.0	0.0
470	8/14/2019 15:30:37	0.0	0.0	0.0	0.0

471	8/14/2019 15:31:37	0.0	0.0	0.0	0.0
472	8/14/2019 15:32:37	0.0	0.0	0.0	0.0
473	8/14/2019 15:33:37	0.0	0.0	0.0	0.0
474	8/14/2019 15:34:37	0.0	0.0	0.0	0.0
475	8/14/2019 15:35:37	0.0	0.0	0.0	0.0
476	8/14/2019 15:36:37	0.0	0.0	0.0	0.0
477	8/14/2019 15:37:37	0.0	0.0	0.0	0.0
478	8/14/2019 15:38:37	0.0	0.0	0.0	0.0
479	8/14/2019 15:39:37	0.0	0.0	0.0	0.0
480	8/14/2019 15:40:37	0.0	0.0	0.0	0.0
481	8/14/2019 15:41:37	0.0	0.0	0.0	0.0
482	8/14/2019 15:42:37	0.0	0.0	0.0	0.0
483	8/14/2019 15:43:37	0.0	0.0	0.0	0.0
484	8/14/2019 15:44:37	0.0	0.0	0.0	0.0
485	8/14/2019 15:45:37	0.0	0.0	0.0	0.0
486	8/14/2019 15:46:37	0.0	0.0	0.0	0.0
487	8/14/2019 15:47:37	0.0	0.0	0.0	0.0
488	8/14/2019 15:48:37	0.0	0.0	0.0	0.0
489	8/14/2019 15:49:37	0.0	0.0	0.0	0.0
490	8/14/2019 15:50:37	0.0	0.0	0.0	0.0
491	8/14/2019 15:51:37	0.0	0.0	0.0	0.0
492	8/14/2019 15:52:37	0.0	0.0	0.0	0.0
493	8/14/2019 15:53:37	0.0	0.0	0.0	0.0
494	8/14/2019 15:54:37	0.0	0.0	0.0	0.0
495	8/14/2019 15:55:37	0.0	0.0	0.0	0.0
496	8/14/2019 15:56:37	0.0	0.0	0.0	0.0
497	8/14/2019 15:57:37	0.0	0.0	0.0	0.0
498	8/14/2019 15:58:37	0.0	0.0	0.0	0.0
499	8/14/2019 15:59:37	0.0	0.0	0.0	0.0
500	8/14/2019 16:00:37	0.0	0.0	0.0	0.0
501	8/14/2019 16:01:37	0.0	0.0	0.0	0.0
502	8/14/2019 16:02:37	0.0	0.0	0.0	0.0
503	8/14/2019 16:03:37	0.0	0.0	0.0	0.0
504	8/14/2019 16:04:37	0.0	0.0	0.0	0.0
505	8/14/2019 16:05:37	0.0	0.0	0.0	0.0
506	8/14/2019 16:06:37	0.0	0.0	0.0	0.0
507	8/14/2019 16:07:37	0.0	0.0	0.0	0.0
508	8/14/2019 16:08:37	0.0	0.0	0.0	0.0
509	8/14/2019 16:09:37	0.0	0.0	0.0	0.0
510	8/14/2019 16:10:37	0.0	0.0	0.0	0.0
511	8/14/2019 16:11:37	0.0	0.0	0.0	0.0
512	8/14/2019 16:12:37	0.0	0.0	0.0	0.0
513	8/14/2019 16:13:37	0.0	0.0	0.0	0.0
514	8/14/2019 16:14:37	0.0	0.0	0.0	0.0
515	8/14/2019 16:15:37	0.0	0.0	0.0	0.0
516	8/14/2019 16:16:37	0.0	0.0	0.0	0.0
517	8/14/2019 16:17:37	0.0	0.0	0.0	0.0
518	8/14/2019 16:18:37	0.0	0.0	0.0	0.0
519	8/14/2019 16:19:37	0.0	0.0	0.0	0.0
520	8/14/2019 16:20:37	0.0	0.0	0.0	0.0
521	8/14/2019 16:21:37	0.0	0.0	0.0	0.0
522	8/14/2019 16:22:37	0.0	0.0	0.0	0.0
523	8/14/2019 16:23:37	0.0	0.0	0.0	0.0
524	8/14/2019 16:24:37	0.0	0.0	0.0	0.0
525	8/14/2019 16:25:37	0.0	0.0	0.0	0.0
526	8/14/2019 16:26:37	0.0	0.0	0.0	0.0
527	8/14/2019 16:27:37	0.0	0.0	0.0	0.0

528	8/14/2019	16:28:37	0.0	0.0	0.0	0.0
529	8/14/2019	16:29:37	0.0	0.0	0.0	0.0
530	8/14/2019	16:30:37	0.0	0.0	0.0	0.0
531	8/14/2019	16:31:37	0.0	0.0	0.0	0.0
532	8/14/2019	16:32:37	0.0	0.0	0.0	0.0
533	8/14/2019	16:33:37	0.0	0.0	0.0	0.0
534	8/14/2019	16:34:37	0.0	0.0	0.0	0.0
535	8/14/2019	16:35:37	0.0	0.0	0.0	0.0
536	8/14/2019	16:36:37	0.0	0.0	0.0	0.0
537	8/14/2019	16:37:37	0.0	0.0	0.0	0.0
Peak			0.0	0.0	0.2	0.0
Min			0.0	0.0	0.0	0.0
Average				0.0	0.0	0.0

****

TWA/STEL

Index		PID(ppm) Date/Time	PID(ppm) (TWA)	(STEL)
001	8/14/2019	07:41:37	0.0	---
002	8/14/2019	07:42:37	0.0	---
003	8/14/2019	07:43:37	0.0	---
004	8/14/2019	07:44:37	0.0	---
005	8/14/2019	07:45:37	0.0	---
006	8/14/2019	07:46:37	0.0	---
007	8/14/2019	07:47:37	0.0	---
008	8/14/2019	07:48:37	0.0	---
009	8/14/2019	07:49:37	0.0	---
010	8/14/2019	07:50:37	0.0	---
011	8/14/2019	07:51:37	0.0	---
012	8/14/2019	07:52:37	0.0	---
013	8/14/2019	07:53:37	0.0	---
014	8/14/2019	07:54:37	0.0	---
015	8/14/2019	07:55:37	0.0	0.0
016	8/14/2019	07:56:37	0.0	0.0
017	8/14/2019	07:57:37	0.0	0.0
018	8/14/2019	07:58:37	0.0	0.0
019	8/14/2019	07:59:37	0.0	0.0
020	8/14/2019	08:00:37	0.0	0.0
021	8/14/2019	08:01:37	0.0	0.0
022	8/14/2019	08:02:37	0.0	0.0
023	8/14/2019	08:03:37	0.0	0.0
024	8/14/2019	08:04:37	0.0	0.0
025	8/14/2019	08:05:37	0.0	0.0
026	8/14/2019	08:06:37	0.0	0.0
027	8/14/2019	08:07:37	0.0	0.0
028	8/14/2019	08:08:37	0.0	0.0
029	8/14/2019	08:09:37	0.0	0.0
030	8/14/2019	08:10:37	0.0	0.0
031	8/14/2019	08:11:37	0.0	0.0
032	8/14/2019	08:12:37	0.0	0.0
033	8/14/2019	08:13:37	0.0	0.0
034	8/14/2019	08:14:37	0.0	0.0
035	8/14/2019	08:15:37	0.0	0.0
036	8/14/2019	08:16:37	0.0	0.0
037	8/14/2019	08:17:37	0.0	0.0
038	8/14/2019	08:18:37	0.0	0.0
039	8/14/2019	08:19:37	0.0	0.0

040	8/14/2019 08:20:37	0.0	0.0
041	8/14/2019 08:21:37	0.0	0.0
042	8/14/2019 08:22:37	0.0	0.0
043	8/14/2019 08:23:37	0.0	0.0
044	8/14/2019 08:24:37	0.0	0.0
045	8/14/2019 08:25:37	0.0	0.0
046	8/14/2019 08:26:37	0.0	0.0
047	8/14/2019 08:27:37	0.0	0.0
048	8/14/2019 08:28:37	0.0	0.0
049	8/14/2019 08:29:37	0.0	0.0
050	8/14/2019 08:30:37	0.0	0.0
051	8/14/2019 08:31:37	0.0	0.0
052	8/14/2019 08:32:37	0.0	0.0
053	8/14/2019 08:33:37	0.0	0.0
054	8/14/2019 08:34:37	0.0	0.0
055	8/14/2019 08:35:37	0.0	0.0
056	8/14/2019 08:36:37	0.0	0.0
057	8/14/2019 08:37:37	0.0	0.0
058	8/14/2019 08:38:37	0.0	0.0
059	8/14/2019 08:39:37	0.0	0.0
060	8/14/2019 08:40:37	0.0	0.0
061	8/14/2019 08:41:37	0.0	0.0
062	8/14/2019 08:42:37	0.0	0.0
063	8/14/2019 08:43:37	0.0	0.0
064	8/14/2019 08:44:37	0.0	0.0
065	8/14/2019 08:45:37	0.0	0.0
066	8/14/2019 08:46:37	0.0	0.0
067	8/14/2019 08:47:37	0.0	0.0
068	8/14/2019 08:48:37	0.0	0.0
069	8/14/2019 08:49:37	0.0	0.0
070	8/14/2019 08:50:37	0.0	0.0
071	8/14/2019 08:51:37	0.0	0.0
072	8/14/2019 08:52:37	0.0	0.0
073	8/14/2019 08:53:37	0.0	0.0
074	8/14/2019 08:54:37	0.0	0.0
075	8/14/2019 08:55:37	0.0	0.0
076	8/14/2019 08:56:37	0.0	0.0
077	8/14/2019 08:57:37	0.0	0.0
078	8/14/2019 08:58:37	0.0	0.0
079	8/14/2019 08:59:37	0.0	0.0
080	8/14/2019 09:00:37	0.0	0.0
081	8/14/2019 09:01:37	0.0	0.0
082	8/14/2019 09:02:37	0.0	0.0
083	8/14/2019 09:03:37	0.0	0.0
084	8/14/2019 09:04:37	0.0	0.0
085	8/14/2019 09:05:37	0.0	0.0
086	8/14/2019 09:06:37	0.0	0.0
087	8/14/2019 09:07:37	0.0	0.0
088	8/14/2019 09:08:37	0.0	0.0
089	8/14/2019 09:09:37	0.0	0.0
090	8/14/2019 09:10:37	0.0	0.0
091	8/14/2019 09:11:37	0.0	0.0
092	8/14/2019 09:12:37	0.0	0.0
093	8/14/2019 09:13:37	0.0	0.0
094	8/14/2019 09:14:37	0.0	0.0
095	8/14/2019 09:15:37	0.0	0.0
096	8/14/2019 09:16:37	0.0	0.0

097	8/14/2019 09:17:37	0.0	0.0
098	8/14/2019 09:18:37	0.0	0.0
099	8/14/2019 09:19:37	0.0	0.0
100	8/14/2019 09:20:37	0.0	0.0
101	8/14/2019 09:21:37	0.0	0.0
102	8/14/2019 09:22:37	0.0	0.0
103	8/14/2019 09:23:37	0.0	0.0
104	8/14/2019 09:24:37	0.0	0.0
105	8/14/2019 09:25:37	0.0	0.0
106	8/14/2019 09:26:37	0.0	0.0
107	8/14/2019 09:27:37	0.0	0.0
108	8/14/2019 09:28:37	0.0	0.0
109	8/14/2019 09:29:37	0.0	0.0
110	8/14/2019 09:30:37	0.0	0.0
111	8/14/2019 09:31:37	0.0	0.0
112	8/14/2019 09:32:37	0.0	0.0
113	8/14/2019 09:33:37	0.0	0.0
114	8/14/2019 09:34:37	0.0	0.0
115	8/14/2019 09:35:37	0.0	0.0
116	8/14/2019 09:36:37	0.0	0.0
117	8/14/2019 09:37:37	0.0	0.0
118	8/14/2019 09:38:37	0.0	0.0
119	8/14/2019 09:39:37	0.0	0.0
120	8/14/2019 09:40:37	0.0	0.0
121	8/14/2019 09:41:37	0.0	0.0
122	8/14/2019 09:42:37	0.0	0.0
123	8/14/2019 09:43:37	0.0	0.0
124	8/14/2019 09:44:37	0.0	0.0
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126	8/14/2019 09:46:37	0.0	0.0
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130	8/14/2019 09:50:37	0.0	0.0
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132	8/14/2019 09:52:37	0.0	0.0
133	8/14/2019 09:53:37	0.0	0.0
134	8/14/2019 09:54:37	0.0	0.0
135	8/14/2019 09:55:37	0.0	0.0
136	8/14/2019 09:56:37	0.0	0.0
137	8/14/2019 09:57:37	0.0	0.0
138	8/14/2019 09:58:37	0.0	0.0
139	8/14/2019 09:59:37	0.0	0.0
140	8/14/2019 10:00:37	0.0	0.0
141	8/14/2019 10:01:37	0.0	0.0
142	8/14/2019 10:02:37	0.0	0.0
143	8/14/2019 10:03:37	0.0	0.0
144	8/14/2019 10:04:37	0.0	0.0
145	8/14/2019 10:05:37	0.0	0.0
146	8/14/2019 10:06:37	0.0	0.0
147	8/14/2019 10:07:37	0.0	0.0
148	8/14/2019 10:08:37	0.0	0.0
149	8/14/2019 10:09:37	0.0	0.0
150	8/14/2019 10:10:37	0.0	0.0
151	8/14/2019 10:11:37	0.0	0.0
152	8/14/2019 10:12:37	0.0	0.0
153	8/14/2019 10:13:37	0.0	0.0

154	8/14/2019 10:14:37	0.0	0.0
155	8/14/2019 10:15:37	0.0	0.0
156	8/14/2019 10:16:37	0.0	0.0
157	8/14/2019 10:17:37	0.0	0.0
158	8/14/2019 10:18:37	0.0	0.0
159	8/14/2019 10:19:37	0.0	0.0
160	8/14/2019 10:20:37	0.0	0.0
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162	8/14/2019 10:22:37	0.0	0.0
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164	8/14/2019 10:24:37	0.0	0.0
165	8/14/2019 10:25:37	0.0	0.0
166	8/14/2019 10:26:37	0.0	0.0
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168	8/14/2019 10:28:37	0.0	0.0
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170	8/14/2019 10:30:37	0.0	0.0
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172	8/14/2019 10:32:37	0.0	0.0
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174	8/14/2019 10:34:37	0.0	0.0
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176	8/14/2019 10:36:37	0.0	0.0
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178	8/14/2019 10:38:37	0.0	0.0
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182	8/14/2019 10:42:37	0.0	0.0
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184	8/14/2019 10:44:37	0.0	0.0
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186	8/14/2019 10:46:37	0.0	0.0
187	8/14/2019 10:47:37	0.0	0.0
188	8/14/2019 10:48:37	0.0	0.0
189	8/14/2019 10:49:37	0.0	0.0
190	8/14/2019 10:50:37	0.0	0.0
191	8/14/2019 10:51:37	0.0	0.0
192	8/14/2019 10:52:37	0.0	0.0
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194	8/14/2019 10:54:37	0.0	0.0
195	8/14/2019 10:55:37	0.0	0.0
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197	8/14/2019 10:57:37	0.0	0.0
198	8/14/2019 10:58:37	0.0	0.0
199	8/14/2019 10:59:37	0.0	0.0
200	8/14/2019 11:00:37	0.0	0.0
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202	8/14/2019 11:02:37	0.0	0.0
203	8/14/2019 11:03:37	0.0	0.0
204	8/14/2019 11:04:37	0.0	0.0
205	8/14/2019 11:05:37	0.0	0.0
206	8/14/2019 11:06:37	0.0	0.0
207	8/14/2019 11:07:37	0.0	0.0
208	8/14/2019 11:08:37	0.0	0.0
209	8/14/2019 11:09:37	0.0	0.0
210	8/14/2019 11:10:37	0.0	0.0

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212	8/14/2019 11:12:37	0.0	0.0
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218	8/14/2019 11:18:37	0.0	0.0
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226	8/14/2019 11:26:37	0.0	0.0
227	8/14/2019 11:27:37	0.0	0.0
228	8/14/2019 11:28:37	0.0	0.0
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234	8/14/2019 11:34:37	0.0	0.0
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240	8/14/2019 11:40:37	0.0	0.0
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244	8/14/2019 11:44:37	0.0	0.0
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248	8/14/2019 11:48:37	0.0	0.0
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250	8/14/2019 11:50:37	0.0	0.0
251	8/14/2019 11:51:37	0.0	0.0
252	8/14/2019 11:52:37	0.0	0.0
253	8/14/2019 11:53:37	0.0	0.0
254	8/14/2019 11:54:37	0.0	0.0
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256	8/14/2019 11:56:37	0.0	0.0
257	8/14/2019 11:57:37	0.0	0.0
258	8/14/2019 11:58:37	0.0	0.0
259	8/14/2019 11:59:37	0.0	0.0
260	8/14/2019 12:00:37	0.0	0.0
261	8/14/2019 12:01:37	0.0	0.0
262	8/14/2019 12:02:37	0.0	0.0
263	8/14/2019 12:03:37	0.0	0.0
264	8/14/2019 12:04:37	0.0	0.0
265	8/14/2019 12:05:37	0.0	0.0
266	8/14/2019 12:06:37	0.0	0.0
267	8/14/2019 12:07:37	0.0	0.0

268	8/14/2019 12:08:37	0.0	0.0
269	8/14/2019 12:09:37	0.0	0.0
270	8/14/2019 12:10:37	0.0	0.0
271	8/14/2019 12:11:37	0.0	0.0
272	8/14/2019 12:12:37	0.0	0.0
273	8/14/2019 12:13:37	0.0	0.0
274	8/14/2019 12:14:37	0.0	0.0
275	8/14/2019 12:15:37	0.0	0.0
276	8/14/2019 12:16:37	0.0	0.0
277	8/14/2019 12:17:37	0.0	0.0
278	8/14/2019 12:18:37	0.0	0.0
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536	8/14/2019 16:36:37	0.0	0.0
537	8/14/2019 16:37:37	0.0	0.0

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19/08/14 07:39
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Summary

Unit Name MiniRAE 3000(PGM-7320)
Unit SN 592-914273
Unit Firmware Ver V1.20A

Running Mode Hygiene Mode
Measure Type Min; Avg; Max; Real
Datalog Mode Continuous
Datalog Type Manual
Diagnostic Mode No
Stop Reason Power Down

Site ID RAE00005
User ID 00000001

Begin 8/14/2019 07:39:34
End 8/14/2019 16:31:38
Sample Period(s) 60
Number of Records 532

Sensor VOC(ppm)
Span 100.000
Span 2 N/A
Low Alarm 50.000
High Alarm 100.000
Over Alarm 2000.000
STEL Alarm 25.000
TWA Alarm 10.000
Measurement Gas Isobutylene
Calibration Time 8/14/2019 07:38
Peak 0.022
Min 0.000
Average 0.000

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Datalog

Index	Date/Time	VOC(ppm) (Min)	VOC(ppm) (Avg)	VOC(ppm) (Max)	VOC(ppm) (Real)
001	8/14/2019 07:40:34	0.000	0.000	0.012	0.000
002	8/14/2019 07:41:34	0.000	0.000	0.000	0.000
003	8/14/2019 07:42:34	0.000	0.000	0.002	0.000
004	8/14/2019 07:43:34	0.000	0.000	0.000	0.000
005	8/14/2019 07:44:34	0.000	0.000	0.000	0.000
006	8/14/2019 07:45:34	0.000	0.000	0.000	0.000
007	8/14/2019 07:46:34	0.000	0.000	0.000	0.000
008	8/14/2019 07:47:34	0.000	0.000	0.000	0.000
009	8/14/2019 07:48:34	0.000	0.000	0.000	0.000
010	8/14/2019 07:49:34	0.000	0.000	0.000	0.000
011	8/14/2019 07:50:34	0.000	0.000	0.000	0.000
012	8/14/2019 07:51:34	0.000	0.000	0.000	0.000
013	8/14/2019 07:52:34	0.000	0.000	0.000	0.000
014	8/14/2019 07:53:34	0.000	0.000	0.000	0.000

015	8/14/2019 07:54:34	0.000	0.000	0.000	0.000
016	8/14/2019 07:55:34	0.000	0.000	0.000	0.000
017	8/14/2019 07:56:34	0.000	0.000	0.000	0.000
018	8/14/2019 07:57:34	0.000	0.000	0.000	0.000
019	8/14/2019 07:58:34	0.000	0.000	0.000	0.000
020	8/14/2019 07:59:34	0.000	0.000	0.000	0.000
021	8/14/2019 08:00:34	0.000	0.000	0.000	0.000
022	8/14/2019 08:01:34	0.000	0.000	0.000	0.000
023	8/14/2019 08:02:34	0.000	0.000	0.000	0.000
024	8/14/2019 08:03:34	0.000	0.000	0.000	0.000
025	8/14/2019 08:04:34	0.000	0.000	0.012	0.000
026	8/14/2019 08:05:34	0.000	0.000	0.000	0.000
027	8/14/2019 08:06:34	0.000	0.006	0.047	0.000
028	8/14/2019 08:07:34	0.000	0.000	0.000	0.000
029	8/14/2019 08:08:34	0.000	0.000	0.000	0.000
030	8/14/2019 08:09:34	0.000	0.000	0.000	0.000
031	8/14/2019 08:10:34	0.000	0.000	0.000	0.000
032	8/14/2019 08:11:34	0.000	0.000	0.000	0.000
033	8/14/2019 08:12:34	0.000	0.000	0.000	0.000
034	8/14/2019 08:13:34	0.000	0.000	0.000	0.000
035	8/14/2019 08:14:34	0.000	0.000	0.000	0.000
036	8/14/2019 08:15:34	0.000	0.000	0.000	0.000
037	8/14/2019 08:16:34	0.000	0.000	0.000	0.000
038	8/14/2019 08:17:34	0.000	0.000	0.000	0.000
039	8/14/2019 08:18:34	0.000	0.000	0.000	0.000
040	8/14/2019 08:19:34	0.000	0.000	0.000	0.000
041	8/14/2019 08:20:34	0.000	0.000	0.000	0.000
042	8/14/2019 08:21:34	0.000	0.000	0.000	0.000
043	8/14/2019 08:22:34	0.000	0.003	0.006	0.005
044	8/14/2019 08:23:34	0.004	0.005	0.007	0.007
045	8/14/2019 08:24:34	0.005	0.006	0.009	0.008
046	8/14/2019 08:25:34	0.003	0.004	0.009	0.006
047	8/14/2019 08:26:34	0.003	0.006	0.017	0.006
048	8/14/2019 08:27:34	0.000	0.001	0.006	0.000
049	8/14/2019 08:28:34	0.000	0.000	0.002	0.001
050	8/14/2019 08:29:34	0.000	0.000	0.003	0.002
051	8/14/2019 08:30:34	0.000	0.000	0.001	0.000
052	8/14/2019 08:31:34	0.000	0.001	0.009	0.000
053	8/14/2019 08:32:34	0.000	0.000	0.000	0.000
054	8/14/2019 08:33:34	0.000	0.000	0.000	0.000
055	8/14/2019 08:34:34	0.000	0.000	0.000	0.000
056	8/14/2019 08:35:34	0.000	0.000	0.000	0.000
057	8/14/2019 08:36:34	0.000	0.000	0.000	0.000
058	8/14/2019 08:37:34	0.000	0.000	0.000	0.000
059	8/14/2019 08:38:34	0.000	0.149	0.727	0.014
060	8/14/2019 08:39:34	0.000	0.004	0.019	0.000
061	8/14/2019 08:40:34	0.000	0.000	0.000	0.000
062	8/14/2019 08:41:34	0.000	0.000	0.000	0.000
063	8/14/2019 08:42:34	0.000	0.000	0.000	0.000
064	8/14/2019 08:43:34	0.000	0.000	0.001	0.000
065	8/14/2019 08:44:34	0.000	0.000	0.000	0.000
066	8/14/2019 08:45:34	0.000	0.000	0.002	0.001
067	8/14/2019 08:46:34	0.000	0.000	0.002	0.000
068	8/14/2019 08:47:34	0.000	0.000	0.008	0.008
069	8/14/2019 08:48:34	0.000	0.002	0.006	0.003
070	8/14/2019 08:49:34	0.003	0.010	0.014	0.010
071	8/14/2019 08:50:34	0.009	0.012	0.017	0.017

072	8/14/2019 08:51:34	0.014	0.015	0.019	0.018
073	8/14/2019 08:52:34	0.014	0.017	0.021	0.018
074	8/14/2019 08:53:34	0.016	0.018	0.022	0.022
075	8/14/2019 08:54:34	0.015	0.017	0.021	0.018
076	8/14/2019 08:55:34	0.012	0.014	0.019	0.012
077	8/14/2019 08:56:34	0.011	0.013	0.016	0.015
078	8/14/2019 08:57:34	0.011	0.014	0.018	0.012
079	8/14/2019 08:58:34	0.010	0.011	0.014	0.011
080	8/14/2019 08:59:34	0.004	0.007	0.011	0.006
081	8/14/2019 09:00:34	0.003	0.005	0.009	0.005
082	8/14/2019 09:01:34	0.001	0.003	0.006	0.003
083	8/14/2019 09:02:34	0.000	0.003	0.005	0.003
084	8/14/2019 09:03:34	0.000	0.002	0.004	0.000
085	8/14/2019 09:04:34	0.000	0.004	0.009	0.004
086	8/14/2019 09:05:34	0.000	0.002	0.006	0.001
087	8/14/2019 09:06:34	0.000	0.002	0.004	0.001
088	8/14/2019 09:07:34	0.001	0.003	0.005	0.002
089	8/14/2019 09:08:34	0.000	0.001	0.004	0.000
090	8/14/2019 09:09:34	0.000	0.000	0.002	0.001
091	8/14/2019 09:10:34	0.000	0.000	0.002	0.000
092	8/14/2019 09:11:34	0.000	0.000	0.000	0.000
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096	8/14/2019 09:15:34	0.000	0.000	0.000	0.000
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102	8/14/2019 09:21:34	0.000	0.000	0.000	0.000
103	8/14/2019 09:22:34	0.000	0.000	0.000	0.000
104	8/14/2019 09:23:34	0.000	0.000	0.000	0.000
105	8/14/2019 09:24:34	0.000	0.000	0.000	0.000
106	8/14/2019 09:25:34	0.000	0.000	0.000	0.000
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113	8/14/2019 09:32:34	0.000	0.000	0.000	0.000
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117	8/14/2019 09:36:34	0.000	0.000	0.000	0.000
118	8/14/2019 09:37:34	0.000	0.000	0.000	0.000
119	8/14/2019 09:38:34	0.000	0.000	0.000	0.000
120	8/14/2019 09:39:34	0.000	0.000	0.000	0.000
121	8/14/2019 09:40:34	0.000	0.000	0.000	0.000
122	8/14/2019 09:41:34	0.000	0.000	0.000	0.000
123	8/14/2019 09:42:34	0.000	0.000	0.000	0.000
124	8/14/2019 09:43:34	0.000	0.000	0.000	0.000
125	8/14/2019 09:44:34	0.000	0.000	0.012	0.000
126	8/14/2019 09:45:34	0.000	0.000	0.000	0.000
127	8/14/2019 09:46:34	0.000	0.000	0.000	0.000
128	8/14/2019 09:47:34	0.000	0.000	0.000	0.000

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133	8/14/2019 09:52:34	0.000	0.000	0.000	0.000
134	8/14/2019 09:53:34	0.000	0.000	0.000	0.000
135	8/14/2019 09:54:34	0.000	0.000	0.000	0.000
136	8/14/2019 09:55:34	0.000	0.000	0.000	0.000
137	8/14/2019 09:56:34	0.000	0.000	0.000	0.000
138	8/14/2019 09:57:34	0.000	0.000	0.000	0.000
139	8/14/2019 09:58:34	0.000	0.000	0.000	0.000
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143	8/14/2019 10:02:34	0.000	0.000	0.000	0.000
144	8/14/2019 10:03:34	0.000	0.000	0.000	0.000
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526	8/14/2019 16:25:34	0.0000.0000.0000.000
527	8/14/2019 16:26:34	0.0000.0000.0000.000

528 8/14/2019 16:27:34 0.0000.0000.0000.000
529 8/14/2019 16:28:34 0.0000.0000.0000.000
530 8/14/2019 16:29:34 0.0000.0000.0000.000
531 8/14/2019 16:30:34 0.0000.0000.0000.000
532 8/14/2019 16:31:34 0.0000.0000.0000.000
Peak 0.0160.1490.7270.022
Min 0.0000.0000.0000.000
Average 0.0000.0010.0020.000

****

TWA/STEL

Index	Date/Time	VOC(ppm) (TWA)	VOC(ppm) (STEL)
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002	8/14/2019 07:41:34	0.000	---
003	8/14/2019 07:42:34	0.000	---
004	8/14/2019 07:43:34	0.000	---
005	8/14/2019 07:44:34	0.000	---
006	8/14/2019 07:45:34	0.000	---
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008	8/14/2019 07:47:34	0.000	---
009	8/14/2019 07:48:34	0.000	---
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013	8/14/2019 07:52:34	0.000	---
014	8/14/2019 07:53:34	0.000	---
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016	8/14/2019 07:55:34	0.000	0.000
017	8/14/2019 07:56:34	0.000	0.000
018	8/14/2019 07:57:34	0.000	0.000
019	8/14/2019 07:58:34	0.000	0.000
020	8/14/2019 07:59:34	0.000	0.000
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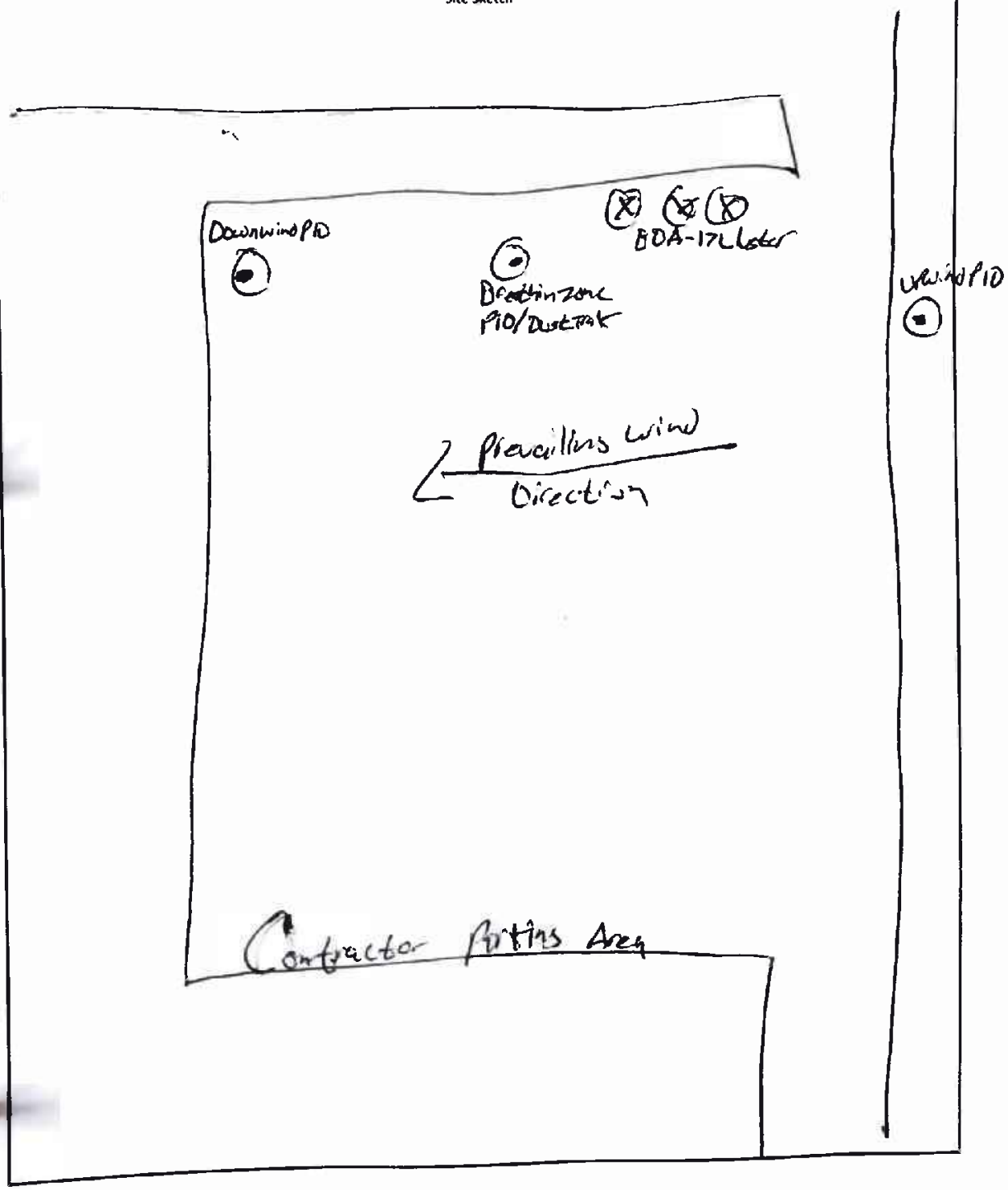
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532	8/14/2019 16:31:34	0.0000.000

ARCADIS | Design & Consultancy for natural and built assets

Daily CAMP Log

Project	Phase 2 Groundwater RI
Location	East Syracuse, NY
Date	8/14/19
Weather Conditions	80s sunny
Upwind Monitor	592-914273
Downwind Monitor	592-903549
Start Time	0800
End Time	1640

Site Sketch



Anne Locke
Associate Manager, Environmental Protection
Environmental, Health and Safety Department
Bristol-Myers Squibb
P.O. Box 4755
Syracuse, NY 13221

Arcadis U.S., Inc.
One Lincoln Center
110 West Fayette Street
Suite 300
Syracuse
New York 13202
Tel 315 446 9120
Fax 315 449 0017
www.arcadis.com

Environmental North

Subject:
Community Air Monitoring During Phase II RI Well Installations Bristol-Myers Squibb Syracuse Facility – East Syracuse, New York 13057

Date:
August 15, 2019

Contact:
William McCune

Phone:
315-671-9172

Email:
William.McCune@arcadis.com

Our ref:
B0087363.0037

Dear Ms. Locke:

The following is a summary of the community air monitoring plan (CAMP) provided by Arcadis U.S., Inc. (Arcadis) during the Phase II Remedial Investigation (RI) drilling activities conducted at the Bristol-Myers Squibb (BMS) Syracuse North Campus, East Syracuse, NY on August 15, 2019.

August 15, 2019: Parratt-Wolff Inc. (Parratt-Wolff) continued sonic drilling activities at BDA-17RX, drilling from 8:05 AM to 10:45 PM. CAMP monitoring included photo ionization detectors at upwind and downwind locations and a DustTrak at a breathing zone location. The prevailing wind direction was observed originating from the south through the day. Air quality parameters did not exceed CAMP standards at any time during work activities. Table 1 shows the serial numbers and associated CAMP stations locations.

CAMP Station Locations	Serial Number
Breathing Zone DustTrak	#8533151804
Upwind PID	#592-914273
Downwind PID	#592-905549

Anne Locke
Bristol-Myers Squibb
August 13, 2019

Please contact us with any questions or comments pertaining to this project.

Sincerely,

Arcadis U.S., Inc.

William McCune
Principal Geologist

Attachments

1 CAMP Data Logs
2 Site Sketches/Notes

Test 004

Instrument		Data Properties	
Model	DustTrak DRX	Start Date	08/15/2019
Instrument S/N	8533151804	Start Time	08:57:45
		Stop Date	08/15/2019
		Stop Time	10:42:45
		Total Time	0:01:45:00
		Logging Interval	900 seconds

Test Data

Data Point	Date	Time	PM1 mg/m^3	PM2.5 mg/m^3	RESP mg/m^3	PM10 mg/m^3	TOTAL mg/m^3
1	08/15/2019	09:12:45	0.012	0.012	0.013	0.016	0.019
2	08/15/2019	09:27:45	0.016	0.017	0.019	0.025	0.033
3	08/15/2019	09:42:45	0.015	0.015	0.016	0.021	0.028
4	08/15/2019	09:57:45	0.012	0.012	0.013	0.015	0.017
5	08/15/2019	10:12:45	0.011	0.012	0.012	0.013	0.015
6	08/15/2019	10:27:45	0.044	0.046	0.049	0.075	0.123
7	08/15/2019	10:42:45	0.012	0.012	0.012	0.014	0.015

==========
19/08/15 07:37
****
Summary

Unit Name MiniRAE 3000(PGM-7320)
Unit SN 592-903549
Unit Firmware Ver V2.20A

Running Mode Hygiene Mode
Datalog Mode Auto
Diagnostic Mode No
Stop Reason Power Down

Site ID 00000000
User ID 00000001

Begin 8/15/2019 07:37:12
End 8/15/2019 11:02:01
Sample Period(s) 60
Number of Records 204

Sensor PID(ppm)
Sensor SN S023030154V7
Measure Type Min; Avg; Max; Real
Span 100.0
Span 2 1000.0
Low Alarm 50.0
High Alarm 100.0
Over Alarm 2000.0
STEL Alarm 10025.0
TWA Alarm 10.0
Measurement Gas Isobutylene
Calibration Time 8/15/2019 07:36
Peak 0.0
Min 0.0
Average 0.0

****
Datalog

Index	Date/Time	PID(ppm) (Min)	PID(ppm) (Avg)	PID(ppm) (Max)	PID(ppm) (Real)
001	8/15/2019 07:38:12	0.0	0.0	0.0	0.0
002	8/15/2019 07:39:12	0.0	0.0	0.0	0.0
003	8/15/2019 07:40:12	0.0	0.0	0.0	0.0
004	8/15/2019 07:41:12	0.0	0.0	0.0	0.0
005	8/15/2019 07:42:12	0.0	0.0	0.0	0.0
006	8/15/2019 07:43:12	0.0	0.0	0.0	0.0
007	8/15/2019 07:44:12	0.0	0.0	0.0	0.0
008	8/15/2019 07:45:12	0.0	0.0	0.0	0.0
009	8/15/2019 07:46:12	0.0	0.0	0.0	0.0
010	8/15/2019 07:47:12	0.0	0.0	0.0	0.0
011	8/15/2019 07:48:12	0.0	0.0	0.0	0.0
012	8/15/2019 07:49:12	0.0	0.0	0.0	0.0
013	8/15/2019 07:50:12	0.0	0.0	0.0	0.0
014	8/15/2019 07:51:12	0.0	0.0	0.0	0.0

015	8/15/2019 07:52:12	0.0	0.0	0.0	0.0
016	8/15/2019 07:53:12	0.0	0.0	0.0	0.0
017	8/15/2019 07:54:12	0.0	0.0	0.0	0.0
018	8/15/2019 07:55:12	0.0	0.0	0.0	0.0
019	8/15/2019 07:56:12	0.0	0.0	0.0	0.0
020	8/15/2019 07:57:12	0.0	0.0	0.0	0.0
021	8/15/2019 07:58:12	0.0	0.0	0.0	0.0
022	8/15/2019 07:59:12	0.0	0.0	0.0	0.0
023	8/15/2019 08:00:12	0.0	0.0	0.0	0.0
024	8/15/2019 08:01:12	0.0	0.0	0.0	0.0
025	8/15/2019 08:02:12	0.0	0.0	0.0	0.0
026	8/15/2019 08:03:12	0.0	0.0	0.0	0.0
027	8/15/2019 08:04:12	0.0	0.0	0.0	0.0
028	8/15/2019 08:05:12	0.0	0.0	0.0	0.0
029	8/15/2019 08:06:12	0.0	0.0	0.0	0.0
030	8/15/2019 08:07:12	0.0	0.0	0.0	0.0
031	8/15/2019 08:08:12	0.0	0.0	0.0	0.0
032	8/15/2019 08:09:12	0.0	0.0	0.0	0.0
033	8/15/2019 08:10:12	0.0	0.0	0.0	0.0
034	8/15/2019 08:11:12	0.0	0.0	0.0	0.0
035	8/15/2019 08:12:12	0.0	0.0	0.0	0.0
036	8/15/2019 08:13:12	0.0	0.0	0.0	0.0
037	8/15/2019 08:14:12	0.0	0.0	0.0	0.0
038	8/15/2019 08:15:12	0.0	0.0	0.0	0.0
039	8/15/2019 08:16:12	0.0	0.0	0.0	0.0
040	8/15/2019 08:17:12	0.0	0.0	0.0	0.0
041	8/15/2019 08:18:12	0.0	0.0	0.0	0.0
042	8/15/2019 08:19:12	0.0	0.0	0.0	0.0
043	8/15/2019 08:20:12	0.0	0.0	0.0	0.0
044	8/15/2019 08:21:12	0.0	0.0	0.0	0.0
045	8/15/2019 08:22:12	0.0	0.0	0.0	0.0
046	8/15/2019 08:23:12	0.0	0.0	0.0	0.0
047	8/15/2019 08:24:12	0.0	0.0	0.0	0.0
048	8/15/2019 08:25:12	0.0	0.0	0.0	0.0
049	8/15/2019 08:26:12	0.0	0.0	0.0	0.0
050	8/15/2019 08:27:12	0.0	0.0	0.0	0.0
051	8/15/2019 08:28:12	0.0	0.0	0.0	0.0
052	8/15/2019 08:29:12	0.0	0.0	0.0	0.0
053	8/15/2019 08:30:12	0.0	0.0	0.0	0.0
054	8/15/2019 08:31:12	0.0	0.0	0.0	0.0
055	8/15/2019 08:32:12	0.0	0.0	0.0	0.0
056	8/15/2019 08:33:12	0.0	0.0	0.0	0.0
057	8/15/2019 08:34:12	0.0	0.0	0.0	0.0
058	8/15/2019 08:35:12	0.0	0.0	0.0	0.0
059	8/15/2019 08:36:12	0.0	0.0	0.0	0.0
060	8/15/2019 08:37:12	0.0	0.0	0.0	0.0
061	8/15/2019 08:38:12	0.0	0.0	0.0	0.0
062	8/15/2019 08:39:12	0.0	0.0	0.0	0.0
063	8/15/2019 08:40:12	0.0	0.0	0.0	0.0
064	8/15/2019 08:41:12	0.0	0.0	0.0	0.0
065	8/15/2019 08:42:12	0.0	0.0	0.0	0.0
066	8/15/2019 08:43:12	0.0	0.0	0.0	0.0
067	8/15/2019 08:44:12	0.0	0.0	0.0	0.0
068	8/15/2019 08:45:12	0.0	0.0	0.0	0.0
069	8/15/2019 08:46:12	0.0	0.0	0.0	0.0
070	8/15/2019 08:47:12	0.0	0.0	0.0	0.0
071	8/15/2019 08:48:12	0.0	0.0	0.0	0.0

072	8/15/2019 08:49:12	0.0	0.0	0.0	0.0
073	8/15/2019 08:50:12	0.0	0.0	0.0	0.0
074	8/15/2019 08:51:12	0.0	0.0	0.0	0.0
075	8/15/2019 08:52:12	0.0	0.0	0.0	0.0
076	8/15/2019 08:53:12	0.0	0.0	0.0	0.0
077	8/15/2019 08:54:12	0.0	0.0	0.0	0.0
078	8/15/2019 08:55:12	0.0	0.0	0.0	0.0
079	8/15/2019 08:56:12	0.0	0.0	0.0	0.0
080	8/15/2019 08:57:12	0.0	0.0	0.0	0.0
081	8/15/2019 08:58:12	0.0	0.0	0.0	0.0
082	8/15/2019 08:59:12	0.0	0.0	0.0	0.0
083	8/15/2019 09:00:12	0.0	0.0	0.0	0.0
084	8/15/2019 09:01:12	0.0	0.0	0.0	0.0
085	8/15/2019 09:02:12	0.0	0.0	0.0	0.0
086	8/15/2019 09:03:12	0.0	0.0	0.0	0.0
087	8/15/2019 09:04:12	0.0	0.0	0.0	0.0
088	8/15/2019 09:05:12	0.0	0.0	0.0	0.0
089	8/15/2019 09:06:12	0.0	0.0	0.0	0.0
090	8/15/2019 09:07:12	0.0	0.0	0.0	0.0
091	8/15/2019 09:08:12	0.0	0.0	0.0	0.0
092	8/15/2019 09:09:12	0.0	0.0	0.0	0.0
093	8/15/2019 09:10:12	0.0	0.0	0.0	0.0
094	8/15/2019 09:11:12	0.0	0.0	0.0	0.0
095	8/15/2019 09:12:12	0.0	0.0	0.0	0.0
096	8/15/2019 09:13:12	0.0	0.0	0.0	0.0
097	8/15/2019 09:14:12	0.0	0.0	0.0	0.0
098	8/15/2019 09:15:12	0.0	0.0	0.0	0.0
099	8/15/2019 09:16:12	0.0	0.0	0.0	0.0
100	8/15/2019 09:17:12	0.0	0.0	0.0	0.0
101	8/15/2019 09:18:12	0.0	0.0	0.0	0.0
102	8/15/2019 09:19:12	0.0	0.0	0.0	0.0
103	8/15/2019 09:20:12	0.0	0.0	0.0	0.0
104	8/15/2019 09:21:12	0.0	0.0	0.0	0.0
105	8/15/2019 09:22:12	0.0	0.0	0.0	0.0
106	8/15/2019 09:23:12	0.0	0.0	0.0	0.0
107	8/15/2019 09:24:12	0.0	0.0	0.0	0.0
108	8/15/2019 09:25:12	0.0	0.0	0.0	0.0
109	8/15/2019 09:26:12	0.0	0.0	0.0	0.0
110	8/15/2019 09:27:12	0.0	0.0	0.0	0.0
111	8/15/2019 09:28:12	0.0	0.0	0.0	0.0
112	8/15/2019 09:29:12	0.0	0.0	0.0	0.0
113	8/15/2019 09:30:12	0.0	0.0	0.0	0.0
114	8/15/2019 09:31:12	0.0	0.0	0.0	0.0
115	8/15/2019 09:32:12	0.0	0.0	0.0	0.0
116	8/15/2019 09:33:12	0.0	0.0	0.0	0.0
117	8/15/2019 09:34:12	0.0	0.0	0.0	0.0
118	8/15/2019 09:35:12	0.0	0.0	0.0	0.0
119	8/15/2019 09:36:12	0.0	0.0	0.0	0.0
120	8/15/2019 09:37:12	0.0	0.0	0.0	0.0
121	8/15/2019 09:38:12	0.0	0.0	0.0	0.0
122	8/15/2019 09:39:12	0.0	0.0	0.0	0.0
123	8/15/2019 09:40:12	0.0	0.0	0.0	0.0
124	8/15/2019 09:41:12	0.0	0.0	0.0	0.0
125	8/15/2019 09:42:12	0.0	0.0	0.0	0.0
126	8/15/2019 09:43:12	0.0	0.0	0.0	0.0
127	8/15/2019 09:44:12	0.0	0.0	0.0	0.0
128	8/15/2019 09:45:12	0.0	0.0	0.0	0.0

129	8/15/2019 09:46:12	0.0	0.0	0.0	0.0
130	8/15/2019 09:47:12	0.0	0.0	0.0	0.0
131	8/15/2019 09:48:12	0.0	0.0	0.0	0.0
132	8/15/2019 09:49:12	0.0	0.0	0.0	0.0
133	8/15/2019 09:50:12	0.0	0.0	0.0	0.0
134	8/15/2019 09:51:12	0.0	0.0	0.0	0.0
135	8/15/2019 09:52:12	0.0	0.0	0.0	0.0
136	8/15/2019 09:53:12	0.0	0.0	0.0	0.0
137	8/15/2019 09:54:12	0.0	0.0	0.0	0.0
138	8/15/2019 09:55:12	0.0	0.0	0.0	0.0
139	8/15/2019 09:56:12	0.0	0.0	0.0	0.0
140	8/15/2019 09:57:12	0.0	0.0	0.0	0.0
141	8/15/2019 09:58:12	0.0	0.0	0.0	0.0
142	8/15/2019 09:59:12	0.0	0.0	0.0	0.0
143	8/15/2019 10:00:12	0.0	0.0	0.0	0.0
144	8/15/2019 10:01:12	0.0	0.0	0.0	0.0
145	8/15/2019 10:02:12	0.0	0.0	0.0	0.0
146	8/15/2019 10:03:12	0.0	0.0	0.0	0.0
147	8/15/2019 10:04:12	0.0	0.0	0.0	0.0
148	8/15/2019 10:05:12	0.0	0.0	0.0	0.0
149	8/15/2019 10:06:12	0.0	0.0	0.0	0.0
150	8/15/2019 10:07:12	0.0	0.0	0.0	0.0
151	8/15/2019 10:08:12	0.0	0.0	0.0	0.0
152	8/15/2019 10:09:12	0.0	0.0	0.0	0.0
153	8/15/2019 10:10:12	0.0	0.0	0.0	0.0
154	8/15/2019 10:11:12	0.0	0.0	0.0	0.0
155	8/15/2019 10:12:12	0.0	0.0	0.0	0.0
156	8/15/2019 10:13:12	0.0	0.0	0.0	0.0
157	8/15/2019 10:14:12	0.0	0.0	0.0	0.0
158	8/15/2019 10:15:12	0.0	0.0	0.0	0.0
159	8/15/2019 10:16:12	0.0	0.0	0.0	0.0
160	8/15/2019 10:17:12	0.0	0.0	0.0	0.0
161	8/15/2019 10:18:12	0.0	0.0	0.0	0.0
162	8/15/2019 10:19:12	0.0	0.0	0.0	0.0
163	8/15/2019 10:20:12	0.0	0.0	0.0	0.0
164	8/15/2019 10:21:12	0.0	0.0	0.0	0.0
165	8/15/2019 10:22:12	0.0	0.0	0.0	0.0
166	8/15/2019 10:23:12	0.0	0.0	0.0	0.0
167	8/15/2019 10:24:12	0.0	0.0	0.0	0.0
168	8/15/2019 10:25:12	0.0	0.0	0.0	0.0
169	8/15/2019 10:26:12	0.0	0.0	0.0	0.0
170	8/15/2019 10:27:12	0.0	0.0	0.0	0.0
171	8/15/2019 10:28:12	0.0	0.0	0.0	0.0
172	8/15/2019 10:29:12	0.0	0.0	0.0	0.0
173	8/15/2019 10:30:12	0.0	0.0	0.0	0.0
174	8/15/2019 10:31:12	0.0	0.0	0.0	0.0
175	8/15/2019 10:32:12	0.0	0.0	0.0	0.0
176	8/15/2019 10:33:12	0.0	0.0	0.0	0.0
177	8/15/2019 10:34:12	0.0	0.0	0.0	0.0
178	8/15/2019 10:35:12	0.0	0.0	0.0	0.0
179	8/15/2019 10:36:12	0.0	0.0	0.0	0.0
180	8/15/2019 10:37:12	0.0	0.0	0.0	0.0
181	8/15/2019 10:38:12	0.0	0.0	0.0	0.0
182	8/15/2019 10:39:12	0.0	0.0	0.0	0.0
183	8/15/2019 10:40:12	0.0	0.0	0.0	0.0
184	8/15/2019 10:41:12	0.0	0.0	0.0	0.0
185	8/15/2019 10:42:12	0.0	0.0	0.0	0.0

186	8/15/2019	10:43:12	0.0	0.0	0.0	0.0
187	8/15/2019	10:44:12	0.0	0.0	0.0	0.0
188	8/15/2019	10:45:12	0.0	0.0	0.0	0.0
189	8/15/2019	10:46:12	0.0	0.0	0.0	0.0
190	8/15/2019	10:47:12	0.0	0.0	0.0	0.0
191	8/15/2019	10:48:12	0.0	0.0	0.0	0.0
192	8/15/2019	10:49:12	0.0	0.0	0.0	0.0
193	8/15/2019	10:50:12	0.0	0.0	0.0	0.0
194	8/15/2019	10:51:12	0.0	0.0	0.0	0.0
195	8/15/2019	10:52:12	0.0	0.0	0.0	0.0
196	8/15/2019	10:53:12	0.0	0.0	0.0	0.0
197	8/15/2019	10:54:12	0.0	0.0	0.0	0.0
198	8/15/2019	10:55:12	0.0	0.0	0.0	0.0
199	8/15/2019	10:56:12	0.0	0.0	0.0	0.0
200	8/15/2019	10:57:12	0.0	0.0	0.0	0.0
201	8/15/2019	10:58:12	0.0	0.0	0.0	0.0
202	8/15/2019	10:59:12	0.0	0.0	0.0	0.0
203	8/15/2019	11:00:12	0.0	0.0	0.0	0.0
204	8/15/2019	11:01:12	0.0	0.0	0.0	0.0
Peak			0.0	0.0	0.0	0.0
Min			0.0	0.0	0.0	0.0
Average				0.0	0.0	0.0

****

TWA/STEL

Index		PID(ppm) Date/Time	PID(ppm) (TWA)	(STEL)
001	8/15/2019	07:38:12	0.0	---
002	8/15/2019	07:39:12	0.0	---
003	8/15/2019	07:40:12	0.0	---
004	8/15/2019	07:41:12	0.0	---
005	8/15/2019	07:42:12	0.0	---
006	8/15/2019	07:43:12	0.0	---
007	8/15/2019	07:44:12	0.0	---
008	8/15/2019	07:45:12	0.0	---
009	8/15/2019	07:46:12	0.0	---
010	8/15/2019	07:47:12	0.0	---
011	8/15/2019	07:48:12	0.0	---
012	8/15/2019	07:49:12	0.0	---
013	8/15/2019	07:50:12	0.0	---
014	8/15/2019	07:51:12	0.0	---
015	8/15/2019	07:52:12	0.0	0.0
016	8/15/2019	07:53:12	0.0	0.0
017	8/15/2019	07:54:12	0.0	0.0
018	8/15/2019	07:55:12	0.0	0.0
019	8/15/2019	07:56:12	0.0	0.0
020	8/15/2019	07:57:12	0.0	0.0
021	8/15/2019	07:58:12	0.0	0.0
022	8/15/2019	07:59:12	0.0	0.0
023	8/15/2019	08:00:12	0.0	0.0
024	8/15/2019	08:01:12	0.0	0.0
025	8/15/2019	08:02:12	0.0	0.0
026	8/15/2019	08:03:12	0.0	0.0
027	8/15/2019	08:04:12	0.0	0.0
028	8/15/2019	08:05:12	0.0	0.0
029	8/15/2019	08:06:12	0.0	0.0
030	8/15/2019	08:07:12	0.0	0.0

031	8/15/2019 08:08:12	0.0	0.0
032	8/15/2019 08:09:12	0.0	0.0
033	8/15/2019 08:10:12	0.0	0.0
034	8/15/2019 08:11:12	0.0	0.0
035	8/15/2019 08:12:12	0.0	0.0
036	8/15/2019 08:13:12	0.0	0.0
037	8/15/2019 08:14:12	0.0	0.0
038	8/15/2019 08:15:12	0.0	0.0
039	8/15/2019 08:16:12	0.0	0.0
040	8/15/2019 08:17:12	0.0	0.0
041	8/15/2019 08:18:12	0.0	0.0
042	8/15/2019 08:19:12	0.0	0.0
043	8/15/2019 08:20:12	0.0	0.0
044	8/15/2019 08:21:12	0.0	0.0
045	8/15/2019 08:22:12	0.0	0.0
046	8/15/2019 08:23:12	0.0	0.0
047	8/15/2019 08:24:12	0.0	0.0
048	8/15/2019 08:25:12	0.0	0.0
049	8/15/2019 08:26:12	0.0	0.0
050	8/15/2019 08:27:12	0.0	0.0
051	8/15/2019 08:28:12	0.0	0.0
052	8/15/2019 08:29:12	0.0	0.0
053	8/15/2019 08:30:12	0.0	0.0
054	8/15/2019 08:31:12	0.0	0.0
055	8/15/2019 08:32:12	0.0	0.0
056	8/15/2019 08:33:12	0.0	0.0
057	8/15/2019 08:34:12	0.0	0.0
058	8/15/2019 08:35:12	0.0	0.0
059	8/15/2019 08:36:12	0.0	0.0
060	8/15/2019 08:37:12	0.0	0.0
061	8/15/2019 08:38:12	0.0	0.0
062	8/15/2019 08:39:12	0.0	0.0
063	8/15/2019 08:40:12	0.0	0.0
064	8/15/2019 08:41:12	0.0	0.0
065	8/15/2019 08:42:12	0.0	0.0
066	8/15/2019 08:43:12	0.0	0.0
067	8/15/2019 08:44:12	0.0	0.0
068	8/15/2019 08:45:12	0.0	0.0
069	8/15/2019 08:46:12	0.0	0.0
070	8/15/2019 08:47:12	0.0	0.0
071	8/15/2019 08:48:12	0.0	0.0
072	8/15/2019 08:49:12	0.0	0.0
073	8/15/2019 08:50:12	0.0	0.0
074	8/15/2019 08:51:12	0.0	0.0
075	8/15/2019 08:52:12	0.0	0.0
076	8/15/2019 08:53:12	0.0	0.0
077	8/15/2019 08:54:12	0.0	0.0
078	8/15/2019 08:55:12	0.0	0.0
079	8/15/2019 08:56:12	0.0	0.0
080	8/15/2019 08:57:12	0.0	0.0
081	8/15/2019 08:58:12	0.0	0.0
082	8/15/2019 08:59:12	0.0	0.0
083	8/15/2019 09:00:12	0.0	0.0
084	8/15/2019 09:01:12	0.0	0.0
085	8/15/2019 09:02:12	0.0	0.0
086	8/15/2019 09:03:12	0.0	0.0
087	8/15/2019 09:04:12	0.0	0.0

088	8/15/2019 09:05:12	0.0	0.0
089	8/15/2019 09:06:12	0.0	0.0
090	8/15/2019 09:07:12	0.0	0.0
091	8/15/2019 09:08:12	0.0	0.0
092	8/15/2019 09:09:12	0.0	0.0
093	8/15/2019 09:10:12	0.0	0.0
094	8/15/2019 09:11:12	0.0	0.0
095	8/15/2019 09:12:12	0.0	0.0
096	8/15/2019 09:13:12	0.0	0.0
097	8/15/2019 09:14:12	0.0	0.0
098	8/15/2019 09:15:12	0.0	0.0
099	8/15/2019 09:16:12	0.0	0.0
100	8/15/2019 09:17:12	0.0	0.0
101	8/15/2019 09:18:12	0.0	0.0
102	8/15/2019 09:19:12	0.0	0.0
103	8/15/2019 09:20:12	0.0	0.0
104	8/15/2019 09:21:12	0.0	0.0
105	8/15/2019 09:22:12	0.0	0.0
106	8/15/2019 09:23:12	0.0	0.0
107	8/15/2019 09:24:12	0.0	0.0
108	8/15/2019 09:25:12	0.0	0.0
109	8/15/2019 09:26:12	0.0	0.0
110	8/15/2019 09:27:12	0.0	0.0
111	8/15/2019 09:28:12	0.0	0.0
112	8/15/2019 09:29:12	0.0	0.0
113	8/15/2019 09:30:12	0.0	0.0
114	8/15/2019 09:31:12	0.0	0.0
115	8/15/2019 09:32:12	0.0	0.0
116	8/15/2019 09:33:12	0.0	0.0
117	8/15/2019 09:34:12	0.0	0.0
118	8/15/2019 09:35:12	0.0	0.0
119	8/15/2019 09:36:12	0.0	0.0
120	8/15/2019 09:37:12	0.0	0.0
121	8/15/2019 09:38:12	0.0	0.0
122	8/15/2019 09:39:12	0.0	0.0
123	8/15/2019 09:40:12	0.0	0.0
124	8/15/2019 09:41:12	0.0	0.0
125	8/15/2019 09:42:12	0.0	0.0
126	8/15/2019 09:43:12	0.0	0.0
127	8/15/2019 09:44:12	0.0	0.0
128	8/15/2019 09:45:12	0.0	0.0
129	8/15/2019 09:46:12	0.0	0.0
130	8/15/2019 09:47:12	0.0	0.0
131	8/15/2019 09:48:12	0.0	0.0
132	8/15/2019 09:49:12	0.0	0.0
133	8/15/2019 09:50:12	0.0	0.0
134	8/15/2019 09:51:12	0.0	0.0
135	8/15/2019 09:52:12	0.0	0.0
136	8/15/2019 09:53:12	0.0	0.0
137	8/15/2019 09:54:12	0.0	0.0
138	8/15/2019 09:55:12	0.0	0.0
139	8/15/2019 09:56:12	0.0	0.0
140	8/15/2019 09:57:12	0.0	0.0
141	8/15/2019 09:58:12	0.0	0.0
142	8/15/2019 09:59:12	0.0	0.0
143	8/15/2019 10:00:12	0.0	0.0
144	8/15/2019 10:01:12	0.0	0.0

145	8/15/2019	10:02:12	0.0	0.0
146	8/15/2019	10:03:12	0.0	0.0
147	8/15/2019	10:04:12	0.0	0.0
148	8/15/2019	10:05:12	0.0	0.0
149	8/15/2019	10:06:12	0.0	0.0
150	8/15/2019	10:07:12	0.0	0.0
151	8/15/2019	10:08:12	0.0	0.0
152	8/15/2019	10:09:12	0.0	0.0
153	8/15/2019	10:10:12	0.0	0.0
154	8/15/2019	10:11:12	0.0	0.0
155	8/15/2019	10:12:12	0.0	0.0
156	8/15/2019	10:13:12	0.0	0.0
157	8/15/2019	10:14:12	0.0	0.0
158	8/15/2019	10:15:12	0.0	0.0
159	8/15/2019	10:16:12	0.0	0.0
160	8/15/2019	10:17:12	0.0	0.0
161	8/15/2019	10:18:12	0.0	0.0
162	8/15/2019	10:19:12	0.0	0.0
163	8/15/2019	10:20:12	0.0	0.0
164	8/15/2019	10:21:12	0.0	0.0
165	8/15/2019	10:22:12	0.0	0.0
166	8/15/2019	10:23:12	0.0	0.0
167	8/15/2019	10:24:12	0.0	0.0
168	8/15/2019	10:25:12	0.0	0.0
169	8/15/2019	10:26:12	0.0	0.0
170	8/15/2019	10:27:12	0.0	0.0
171	8/15/2019	10:28:12	0.0	0.0
172	8/15/2019	10:29:12	0.0	0.0
173	8/15/2019	10:30:12	0.0	0.0
174	8/15/2019	10:31:12	0.0	0.0
175	8/15/2019	10:32:12	0.0	0.0
176	8/15/2019	10:33:12	0.0	0.0
177	8/15/2019	10:34:12	0.0	0.0
178	8/15/2019	10:35:12	0.0	0.0
179	8/15/2019	10:36:12	0.0	0.0
180	8/15/2019	10:37:12	0.0	0.0
181	8/15/2019	10:38:12	0.0	0.0
182	8/15/2019	10:39:12	0.0	0.0
183	8/15/2019	10:40:12	0.0	0.0
184	8/15/2019	10:41:12	0.0	0.0
185	8/15/2019	10:42:12	0.0	0.0
186	8/15/2019	10:43:12	0.0	0.0
187	8/15/2019	10:44:12	0.0	0.0
188	8/15/2019	10:45:12	0.0	0.0
189	8/15/2019	10:46:12	0.0	0.0
190	8/15/2019	10:47:12	0.0	0.0
191	8/15/2019	10:48:12	0.0	0.0
192	8/15/2019	10:49:12	0.0	0.0
193	8/15/2019	10:50:12	0.0	0.0
194	8/15/2019	10:51:12	0.0	0.0
195	8/15/2019	10:52:12	0.0	0.0
196	8/15/2019	10:53:12	0.0	0.0
197	8/15/2019	10:54:12	0.0	0.0
198	8/15/2019	10:55:12	0.0	0.0
199	8/15/2019	10:56:12	0.0	0.0
200	8/15/2019	10:57:12	0.0	0.0
201	8/15/2019	10:58:12	0.0	0.0

202	8/15/2019 10:59:12	0.0	0.0
203	8/15/2019 11:00:12	0.0	0.0
204	8/15/2019 11:01:12	0.0	0.0

==========
19/08/15 08:33
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Summary

Unit Name MiniRAE 3000(PGM-7320)
Unit SN 592-914273
Unit Firmware Ver V1.20A

Running Mode Hygiene Mode
Measure Type Min; Avg; Max; Real
Datalog Mode Continuous
Datalog Type Manual
Diagnostic Mode No
Stop Reason Power Down

Site ID RAE00005
User ID 00000001

Begin 8/15/2019 08:33:58
End 8/15/2019 11:00:18
Sample Period(s) 60
Number of Records 146

Sensor VOC(ppm)
Span 100.000
Span 2 N/A
Low Alarm 50.000
High Alarm 100.000
Over Alarm 2000.000
STEL Alarm 25.000
TWA Alarm 10.000
Measurement Gas Isobutylene
Calibration Time 8/15/2019 07:35
Peak 0.000
Min 0.000
Average 0.000

****
Datalog

Index	Date/Time	VOC(ppm) (Min)	VOC(ppm) (Avg)	VOC(ppm) (Max)	VOC(ppm) (Real)
001	8/15/2019 08:34:58	0.000	0.000	0.000	0.000
002	8/15/2019 08:35:58	0.000	0.000	0.000	0.000
003	8/15/2019 08:36:58	0.000	0.000	0.000	0.000
004	8/15/2019 08:37:58	0.000	0.000	0.000	0.000
005	8/15/2019 08:38:58	0.000	0.000	0.000	0.000
006	8/15/2019 08:39:58	0.000	0.000	0.000	0.000
007	8/15/2019 08:40:58	0.000	0.000	0.000	0.000
008	8/15/2019 08:41:58	0.000	0.000	0.000	0.000
009	8/15/2019 08:42:58	0.000	0.000	0.000	0.000
010	8/15/2019 08:43:58	0.000	0.000	0.000	0.000
011	8/15/2019 08:44:58	0.000	0.000	0.000	0.000
012	8/15/2019 08:45:58	0.000	0.000	0.000	0.000
013	8/15/2019 08:46:58	0.000	0.000	0.000	0.000
014	8/15/2019 08:47:58	0.000	0.000	0.000	0.000

015	8/15/2019 08:48:58	0.000	0.000	0.000	0.000
016	8/15/2019 08:49:58	0.000	0.000	0.000	0.000
017	8/15/2019 08:50:58	0.000	0.000	0.000	0.000
018	8/15/2019 08:51:58	0.000	0.000	0.000	0.000
019	8/15/2019 08:52:58	0.000	0.000	0.000	0.000
020	8/15/2019 08:53:58	0.000	0.000	0.000	0.000
021	8/15/2019 08:54:58	0.000	0.000	0.000	0.000
022	8/15/2019 08:55:58	0.000	0.000	0.000	0.000
023	8/15/2019 08:56:58	0.000	0.000	0.000	0.000
024	8/15/2019 08:57:58	0.000	0.000	0.000	0.000
025	8/15/2019 08:58:58	0.000	0.000	0.000	0.000
026	8/15/2019 08:59:58	0.000	0.000	0.000	0.000
027	8/15/2019 09:00:58	0.000	0.000	0.000	0.000
028	8/15/2019 09:01:58	0.000	0.000	0.000	0.000
029	8/15/2019 09:02:58	0.000	0.000	0.000	0.000
030	8/15/2019 09:03:58	0.000	0.000	0.000	0.000
031	8/15/2019 09:04:58	0.000	0.000	0.000	0.000
032	8/15/2019 09:05:58	0.000	0.000	0.000	0.000
033	8/15/2019 09:06:58	0.000	0.000	0.000	0.000
034	8/15/2019 09:07:58	0.000	0.000	0.000	0.000
035	8/15/2019 09:08:58	0.000	0.000	0.000	0.000
036	8/15/2019 09:09:58	0.000	0.000	0.000	0.000
037	8/15/2019 09:10:58	0.000	0.000	0.000	0.000
038	8/15/2019 09:11:58	0.000	0.000	0.000	0.000
039	8/15/2019 09:12:58	0.000	0.000	0.000	0.000
040	8/15/2019 09:13:58	0.000	0.000	0.000	0.000
041	8/15/2019 09:14:58	0.000	0.000	0.000	0.000
042	8/15/2019 09:15:58	0.000	0.000	0.000	0.000
043	8/15/2019 09:16:58	0.000	0.000	0.000	0.000
044	8/15/2019 09:17:58	0.000	0.000	0.000	0.000
045	8/15/2019 09:18:58	0.000	0.000	0.000	0.000
046	8/15/2019 09:19:58	0.000	0.000	0.000	0.000
047	8/15/2019 09:20:58	0.000	0.000	0.000	0.000
048	8/15/2019 09:21:58	0.000	0.000	0.000	0.000
049	8/15/2019 09:22:58	0.000	0.000	0.000	0.000
050	8/15/2019 09:23:58	0.000	0.000	0.000	0.000
051	8/15/2019 09:24:58	0.000	0.000	0.000	0.000
052	8/15/2019 09:25:58	0.000	0.000	0.000	0.000
053	8/15/2019 09:26:58	0.000	0.000	0.000	0.000
054	8/15/2019 09:27:58	0.000	0.000	0.000	0.000
055	8/15/2019 09:28:58	0.000	0.000	0.000	0.000
056	8/15/2019 09:29:58	0.000	0.000	0.000	0.000
057	8/15/2019 09:30:58	0.000	0.000	0.000	0.000
058	8/15/2019 09:31:58	0.000	0.000	0.000	0.000
059	8/15/2019 09:32:58	0.000	0.000	0.000	0.000
060	8/15/2019 09:33:58	0.000	0.000	0.000	0.000
061	8/15/2019 09:34:58	0.000	0.000	0.000	0.000
062	8/15/2019 09:35:58	0.000	0.000	0.000	0.000
063	8/15/2019 09:36:58	0.000	0.000	0.000	0.000
064	8/15/2019 09:37:58	0.000	0.000	0.000	0.000
065	8/15/2019 09:38:58	0.000	0.000	0.000	0.000
066	8/15/2019 09:39:58	0.000	0.000	0.000	0.000
067	8/15/2019 09:40:58	0.000	0.000	0.000	0.000
068	8/15/2019 09:41:58	0.000	0.000	0.000	0.000
069	8/15/2019 09:42:58	0.000	0.000	0.000	0.000
070	8/15/2019 09:43:58	0.000	0.000	0.000	0.000
071	8/15/2019 09:44:58	0.000	0.000	0.000	0.000

072	8/15/2019 09:45:58	0.000	0.000	0.000	0.000
073	8/15/2019 09:46:58	0.000	0.000	0.000	0.000
074	8/15/2019 09:47:58	0.000	0.000	0.000	0.000
075	8/15/2019 09:48:58	0.000	0.000	0.000	0.000
076	8/15/2019 09:49:58	0.000	0.000	0.000	0.000
077	8/15/2019 09:50:58	0.000	0.000	0.000	0.000
078	8/15/2019 09:51:58	0.000	0.000	0.000	0.000
079	8/15/2019 09:52:58	0.000	0.000	0.000	0.000
080	8/15/2019 09:53:58	0.000	0.000	0.000	0.000
081	8/15/2019 09:54:58	0.000	0.000	0.000	0.000
082	8/15/2019 09:55:58	0.000	0.000	0.000	0.000
083	8/15/2019 09:56:58	0.000	0.000	0.000	0.000
084	8/15/2019 09:57:58	0.000	0.000	0.000	0.000
085	8/15/2019 09:58:58	0.000	0.000	0.000	0.000
086	8/15/2019 09:59:58	0.000	0.000	0.000	0.000
087	8/15/2019 10:00:58	0.000	0.000	0.000	0.000
088	8/15/2019 10:01:58	0.000	0.000	0.000	0.000
089	8/15/2019 10:02:58	0.000	0.000	0.000	0.000
090	8/15/2019 10:03:58	0.000	0.000	0.000	0.000
091	8/15/2019 10:04:58	0.000	0.000	0.000	0.000
092	8/15/2019 10:05:58	0.000	0.000	0.000	0.000
093	8/15/2019 10:06:58	0.000	0.000	0.000	0.000
094	8/15/2019 10:07:58	0.000	0.000	0.000	0.000
095	8/15/2019 10:08:58	0.000	0.000	0.000	0.000
096	8/15/2019 10:09:58	0.000	0.000	0.000	0.000
097	8/15/2019 10:10:58	0.000	0.000	0.000	0.000
098	8/15/2019 10:11:58	0.000	0.000	0.000	0.000
099	8/15/2019 10:12:58	0.000	0.000	0.000	0.000
100	8/15/2019 10:13:58	0.000	0.000	0.000	0.000
101	8/15/2019 10:14:58	0.000	0.000	0.000	0.000
102	8/15/2019 10:15:58	0.000	0.000	0.000	0.000
103	8/15/2019 10:16:58	0.000	0.000	0.000	0.000
104	8/15/2019 10:17:58	0.000	0.000	0.000	0.000
105	8/15/2019 10:18:58	0.000	0.000	0.000	0.000
106	8/15/2019 10:19:58	0.000	0.000	0.000	0.000
107	8/15/2019 10:20:58	0.000	0.000	0.000	0.000
108	8/15/2019 10:21:58	0.000	0.000	0.000	0.000
109	8/15/2019 10:22:58	0.000	0.000	0.000	0.000
110	8/15/2019 10:23:58	0.000	0.000	0.000	0.000
111	8/15/2019 10:24:58	0.000	0.000	0.000	0.000
112	8/15/2019 10:25:58	0.000	0.000	0.000	0.000
113	8/15/2019 10:26:58	0.000	0.000	0.000	0.000
114	8/15/2019 10:27:58	0.000	0.000	0.000	0.000
115	8/15/2019 10:28:58	0.000	0.000	0.000	0.000
116	8/15/2019 10:29:58	0.000	0.000	0.000	0.000
117	8/15/2019 10:30:58	0.000	0.000	0.000	0.000
118	8/15/2019 10:31:58	0.000	0.000	0.000	0.000
119	8/15/2019 10:32:58	0.000	0.000	0.000	0.000
120	8/15/2019 10:33:58	0.000	0.000	0.000	0.000
121	8/15/2019 10:34:58	0.000	0.000	0.000	0.000
122	8/15/2019 10:35:58	0.000	0.000	0.000	0.000
123	8/15/2019 10:36:58	0.000	0.000	0.000	0.000
124	8/15/2019 10:37:58	0.000	0.000	0.000	0.000
125	8/15/2019 10:38:58	0.000	0.000	0.000	0.000
126	8/15/2019 10:39:58	0.000	0.000	0.000	0.000
127	8/15/2019 10:40:58	0.000	0.000	0.000	0.000
128	8/15/2019 10:41:58	0.000	0.000	0.000	0.000

129	8/15/2019	10:42:58	0.000	0.000	0.000	0.000
130	8/15/2019	10:43:58	0.000	0.000	0.000	0.000
131	8/15/2019	10:44:58	0.000	0.000	0.000	0.000
132	8/15/2019	10:45:58	0.000	0.000	0.000	0.000
133	8/15/2019	10:46:58	0.000	0.000	0.000	0.000
134	8/15/2019	10:47:58	0.000	0.000	0.000	0.000
135	8/15/2019	10:48:58	0.000	0.000	0.000	0.000
136	8/15/2019	10:49:58	0.000	0.000	0.000	0.000
137	8/15/2019	10:50:58	0.000	0.000	0.000	0.000
138	8/15/2019	10:51:58	0.000	0.000	0.000	0.000
139	8/15/2019	10:52:58	0.000	0.000	0.000	0.000
140	8/15/2019	10:53:58	0.000	0.000	0.000	0.000
141	8/15/2019	10:54:58	0.000	0.000	0.000	0.000
142	8/15/2019	10:55:58	0.000	0.000	0.000	0.000
143	8/15/2019	10:56:58	0.000	0.000	0.000	0.000
144	8/15/2019	10:57:58	0.000	0.000	0.000	0.000
145	8/15/2019	10:58:58	0.000	0.000	0.000	0.000
146	8/15/2019	10:59:58	0.0000.0000.0000.000			
Peak			0.0000.0000.0000.000			
Min			0.0000.0000.0000.000			
Average			0.0000.0000.0000.000			

****

TWA/STEL

Index	Date/Time	VOC(ppm) (TWA)	VOC(ppm) (STEL)
001	8/15/2019 08:34:58	0.000	---
002	8/15/2019 08:35:58	0.000	---
003	8/15/2019 08:36:58	0.000	---
004	8/15/2019 08:37:58	0.000	---
005	8/15/2019 08:38:58	0.000	---
006	8/15/2019 08:39:58	0.000	---
007	8/15/2019 08:40:58	0.000	---
008	8/15/2019 08:41:58	0.000	---
009	8/15/2019 08:42:58	0.000	---
010	8/15/2019 08:43:58	0.000	---
011	8/15/2019 08:44:58	0.000	---
012	8/15/2019 08:45:58	0.000	---
013	8/15/2019 08:46:58	0.000	---
014	8/15/2019 08:47:58	0.000	---
015	8/15/2019 08:48:58	0.0000	0.000
016	8/15/2019 08:49:58	0.0000	0.000
017	8/15/2019 08:50:58	0.0000	0.000
018	8/15/2019 08:51:58	0.0000	0.000
019	8/15/2019 08:52:58	0.0000	0.000
020	8/15/2019 08:53:58	0.0000	0.000
021	8/15/2019 08:54:58	0.0000	0.000
022	8/15/2019 08:55:58	0.0000	0.000
023	8/15/2019 08:56:58	0.0000	0.000
024	8/15/2019 08:57:58	0.0000	0.000
025	8/15/2019 08:58:58	0.0000	0.000
026	8/15/2019 08:59:58	0.0000	0.000
027	8/15/2019 09:00:58	0.0000	0.000
028	8/15/2019 09:01:58	0.0000	0.000
029	8/15/2019 09:02:58	0.0000	0.000
030	8/15/2019 09:03:58	0.0000	0.000
031	8/15/2019 09:04:58	0.0000	0.000

032	8/15/2019 09:05:58	0.0000.000
033	8/15/2019 09:06:58	0.0000.000
034	8/15/2019 09:07:58	0.0000.000
035	8/15/2019 09:08:58	0.0000.000
036	8/15/2019 09:09:58	0.0000.000
037	8/15/2019 09:10:58	0.0000.000
038	8/15/2019 09:11:58	0.0000.000
039	8/15/2019 09:12:58	0.0000.000
040	8/15/2019 09:13:58	0.0000.000
041	8/15/2019 09:14:58	0.0000.000
042	8/15/2019 09:15:58	0.0000.000
043	8/15/2019 09:16:58	0.0000.000
044	8/15/2019 09:17:58	0.0000.000
045	8/15/2019 09:18:58	0.0000.000
046	8/15/2019 09:19:58	0.0000.000
047	8/15/2019 09:20:58	0.0000.000
048	8/15/2019 09:21:58	0.0000.000
049	8/15/2019 09:22:58	0.0000.000
050	8/15/2019 09:23:58	0.0000.000
051	8/15/2019 09:24:58	0.0000.000
052	8/15/2019 09:25:58	0.0000.000
053	8/15/2019 09:26:58	0.0000.000
054	8/15/2019 09:27:58	0.0000.000
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064	8/15/2019 09:37:58	0.0000.000
065	8/15/2019 09:38:58	0.0000.000
066	8/15/2019 09:39:58	0.0000.000
067	8/15/2019 09:40:58	0.0000.000
068	8/15/2019 09:41:58	0.0000.000
069	8/15/2019 09:42:58	0.0000.000
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071	8/15/2019 09:44:58	0.0000.000
072	8/15/2019 09:45:58	0.0000.000
073	8/15/2019 09:46:58	0.0000.000
074	8/15/2019 09:47:58	0.0000.000
075	8/15/2019 09:48:58	0.0000.000
076	8/15/2019 09:49:58	0.0000.000
077	8/15/2019 09:50:58	0.0000.000
078	8/15/2019 09:51:58	0.0000.000
079	8/15/2019 09:52:58	0.0000.000
080	8/15/2019 09:53:58	0.0000.000
081	8/15/2019 09:54:58	0.0000.000
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083	8/15/2019 09:56:58	0.0000.000
084	8/15/2019 09:57:58	0.0000.000
085	8/15/2019 09:58:58	0.0000.000
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088	8/15/2019 10:01:58	0.0000.000

089	8/15/2019 10:02:58	0.0000.000
090	8/15/2019 10:03:58	0.0000.000
091	8/15/2019 10:04:58	0.0000.000
092	8/15/2019 10:05:58	0.0000.000
093	8/15/2019 10:06:58	0.0000.000
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095	8/15/2019 10:08:58	0.0000.000
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098	8/15/2019 10:11:58	0.0000.000
099	8/15/2019 10:12:58	0.0000.000
100	8/15/2019 10:13:58	0.0000.000
101	8/15/2019 10:14:58	0.0000.000
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103	8/15/2019 10:16:58	0.0000.000
104	8/15/2019 10:17:58	0.0000.000
105	8/15/2019 10:18:58	0.0000.000
106	8/15/2019 10:19:58	0.0000.000
107	8/15/2019 10:20:58	0.0000.000
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134	8/15/2019 10:47:58	0.0000.000
135	8/15/2019 10:48:58	0.0000.000
136	8/15/2019 10:49:58	0.0000.000
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145	8/15/2019 10:58:58	0.0000.000

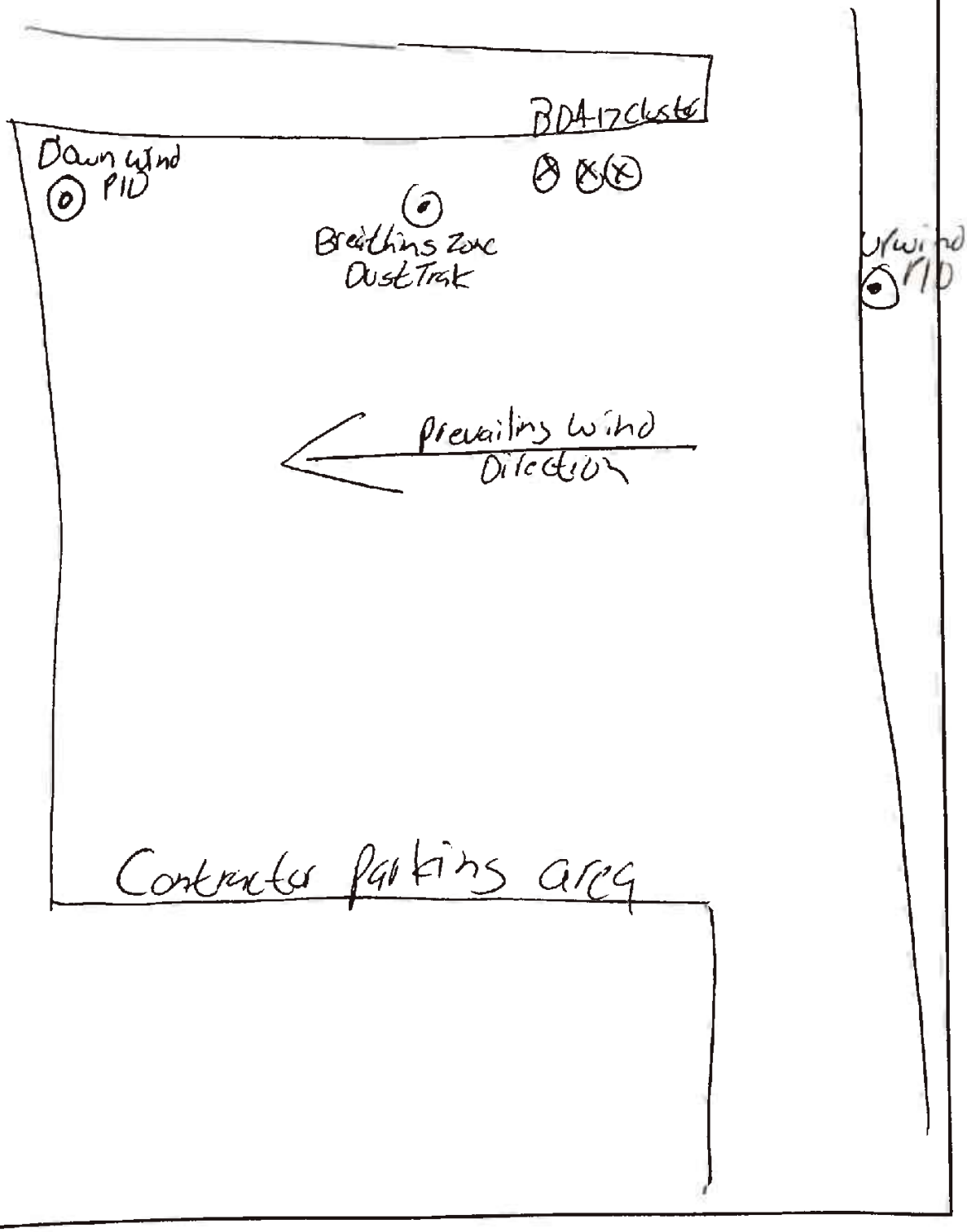
146 8/15/2019 10:59:58 0.0000.000

ARCADIS | Design & Consultancy for natural and built assets

Daily CAMP Log

Project	Phase 2 Groundwater RI
Location	East Syracuse, NY
Date	8/15/14
Weather Conditions	70's Sunny
Upwind Monitor	512-914773
Downwind Monitor	512-962405
Start Time	0830
End Time	1130

Site Sketch



Arcadis U.S., Inc.
One Lincoln Center
110 West Fayette Street
Suite 300
Syracuse
New York 13202
Tel 315 446 9120
Fax 315 449 0017
www.arcadis.com

Environmental North

Anne Locke
Associate Manager, Environmental Protection
Environmental, Health and Safety Department
Bristol-Myers Squibb
P.O. Box 4755
Syracuse, NY 13221

Date:
August 16, 2019

Contact:
William McCune

Phone:
315-671-9172

Email:
William.McCune@arcadis.com

Our ref:
B0087363.0037

Subject:
Community Air Monitoring During Phase II RI Well Installations Bristol-Myers Squibb Syracuse Facility – East Syracuse, New York 13057

Dear Ms. Locke:

The following is a summary of the community air monitoring plan (CAMP) provided by Arcadis U.S., Inc. (Arcadis) during the Phase II Remedial Investigation (RI) drilling activities conducted at the Bristol-Myers Squibb (BMS) Syracuse North Campus, East Syracuse, NY on August 16, 2019.

August 16, 2019: Parratt-Wolff Inc. (Parratt-Wolff) continued sonic drilling activities at BDA-17RX, drilling from 8:00 AM to 2:00 PM. CAMP monitoring included photo ionization detectors at upwind and downwind locations and a DustTrak at a breathing zone location. The prevailing wind direction was observed originating from the south through the day. Air quality parameters did not exceed CAMP standards at any time during work activities. Table 1 shows the serial numbers and associated CAMP stations locations.

CAMP Station Locations	Serial Number
Breathing Zone DustTrak	#8533151804
Upwind PID	#592-914273
Downwind PID	#592-905549

Please contact us with any questions or comments pertaining to this project.

Sincerely,

Arcadis U.S., Inc.

William McCune
Principal Geologist

Attachments

1 CAMP Data Logs
2 Site Sketches/Notes

Test 005

Instrument		Data Properties	
Model	DustTrak DRX	Start Date	08/16/2019
Instrument S/N	8533151804	Start Time	07:42:12
		Stop Date	08/16/2019
		Stop Time	14:12:12
		Total Time	0:06:30:00
		Logging Interval	900 seconds

Test Data

Data Point	Date	Time	PM1 mg/m^3	PM2.5 mg/m^3	RESP mg/m^3	PM10 mg/m^3	TOTAL mg/m^3
1	08/16/2019	07:57:12	0.024	0.024	0.025	0.027	0.027
2	08/16/2019	08:12:12	0.026	0.026	0.027	0.029	0.030
3	08/16/2019	08:27:12	0.026	0.027	0.028	0.030	0.031
4	08/16/2019	08:42:12	0.027	0.028	0.029	0.032	0.034
5	08/16/2019	08:57:12	0.025	0.026	0.027	0.029	0.031
6	08/16/2019	09:12:12	0.024	0.025	0.025	0.027	0.028
7	08/16/2019	09:27:12	0.023	0.024	0.024	0.025	0.026
8	08/16/2019	09:42:12	0.026	0.027	0.027	0.028	0.029
9	08/16/2019	09:57:12	0.029	0.030	0.030	0.031	0.031
10	08/16/2019	10:12:12	0.028	0.028	0.029	0.030	0.030
11	08/16/2019	10:27:12	0.030	0.031	0.031	0.033	0.034
12	08/16/2019	10:42:12	0.031	0.031	0.032	0.033	0.034
13	08/16/2019	10:57:12	0.033	0.034	0.034	0.036	0.040
14	08/16/2019	11:12:12	0.034	0.034	0.035	0.036	0.036
15	08/16/2019	11:27:12	0.034	0.034	0.034	0.035	0.036
16	08/16/2019	11:42:12	0.033	0.034	0.034	0.035	0.036
17	08/16/2019	11:57:12	0.034	0.034	0.034	0.035	0.036
18	08/16/2019	12:12:12	0.035	0.036	0.036	0.037	0.037
19	08/16/2019	12:27:12	0.033	0.034	0.034	0.035	0.036
20	08/16/2019	12:42:12	0.035	0.035	0.036	0.038	0.040
21	08/16/2019	12:57:12	0.036	0.037	0.037	0.039	0.040
22	08/16/2019	13:12:12	0.032	0.032	0.033	0.034	0.034
23	08/16/2019	13:27:12	0.035	0.035	0.035	0.036	0.037
24	08/16/2019	13:42:12	0.035	0.035	0.036	0.037	0.038
25	08/16/2019	13:57:12	0.038	0.039	0.039	0.040	0.042
26	08/16/2019	14:12:12	0.037	0.038	0.038	0.040	0.040

==========
19/08/16 07:48
****
Summary

Unit Name MiniRAE 3000(PGM-7320)
Unit SN 592-903549
Unit Firmware Ver V2.20A

Running Mode Hygiene Mode
Datalog Mode Auto
Diagnostic Mode No
Stop Reason Power Down

Site ID 00000000
User ID 00000001

Begin 8/16/2019 07:48:23
End 8/16/2019 15:10:42
Sample Period(s) 60
Number of Records 442

Sensor PID(ppm)
Sensor SN S023030154V7
Measure Type Min; Avg; Max; Real
Span 100.0
Span 2 1000.0
Low Alarm 50.0
High Alarm 100.0
Over Alarm 2000.0
STEL Alarm 10025.0
TWA Alarm 10.0
Measurement Gas Isobutylene
Calibration Time 8/16/2019 07:47
Peak 0.0
Min 0.0
Average 0.0

****
Datalog

Index	Date/Time	PID(ppm) (Min)	PID(ppm) (Avg)	PID(ppm) (Max)	PID(ppm) (Real)
001	8/16/2019 07:49:23	0.0	0.0	0.0	0.0
002	8/16/2019 07:50:23	0.0	0.0	0.0	0.0
003	8/16/2019 07:51:23	0.0	0.0	0.0	0.0
004	8/16/2019 07:52:23	0.0	0.0	0.0	0.0
005	8/16/2019 07:53:23	0.0	0.0	0.0	0.0
006	8/16/2019 07:54:23	0.0	0.0	0.0	0.0
007	8/16/2019 07:55:23	0.0	0.0	0.0	0.0
008	8/16/2019 07:56:23	0.0	0.0	0.0	0.0
009	8/16/2019 07:57:23	0.0	0.0	0.0	0.0
010	8/16/2019 07:58:23	0.0	0.0	0.0	0.0
011	8/16/2019 07:59:23	0.0	0.0	0.0	0.0
012	8/16/2019 08:00:23	0.0	0.0	0.0	0.0
013	8/16/2019 08:01:23	0.0	0.0	0.0	0.0
014	8/16/2019 08:02:23	0.0	0.0	0.0	0.0

015	8/16/2019 08:03:23	0.0	0.0	0.0	0.0
016	8/16/2019 08:04:23	0.0	0.0	0.0	0.0
017	8/16/2019 08:05:23	0.0	0.0	0.0	0.0
018	8/16/2019 08:06:23	0.0	0.0	0.0	0.0
019	8/16/2019 08:07:23	0.0	0.0	0.0	0.0
020	8/16/2019 08:08:23	0.0	0.0	0.0	0.0
021	8/16/2019 08:09:23	0.0	0.0	0.0	0.0
022	8/16/2019 08:10:23	0.0	0.0	0.0	0.0
023	8/16/2019 08:11:23	0.0	0.0	0.0	0.0
024	8/16/2019 08:12:23	0.0	0.0	0.0	0.0
025	8/16/2019 08:13:23	0.0	0.0	0.0	0.0
026	8/16/2019 08:14:23	0.0	0.0	0.0	0.0
027	8/16/2019 08:15:23	0.0	0.0	0.0	0.0
028	8/16/2019 08:16:23	0.0	0.0	0.0	0.0
029	8/16/2019 08:17:23	0.0	0.0	0.0	0.0
030	8/16/2019 08:18:23	0.0	0.0	0.0	0.0
031	8/16/2019 08:19:23	0.0	0.0	0.0	0.0
032	8/16/2019 08:20:23	0.0	0.0	0.0	0.0
033	8/16/2019 08:21:23	0.0	0.0	0.0	0.0
034	8/16/2019 08:22:23	0.0	0.0	0.0	0.0
035	8/16/2019 08:23:23	0.0	0.0	0.0	0.0
036	8/16/2019 08:24:23	0.0	0.0	0.0	0.0
037	8/16/2019 08:25:23	0.0	0.0	0.0	0.0
038	8/16/2019 08:26:23	0.0	0.0	0.0	0.0
039	8/16/2019 08:27:23	0.0	0.0	0.0	0.0
040	8/16/2019 08:28:23	0.0	0.0	0.0	0.0
041	8/16/2019 08:29:23	0.0	0.0	0.0	0.0
042	8/16/2019 08:30:23	0.0	0.0	0.0	0.0
043	8/16/2019 08:31:23	0.0	0.0	0.0	0.0
044	8/16/2019 08:32:23	0.0	0.0	0.0	0.0
045	8/16/2019 08:33:23	0.0	0.0	0.0	0.0
046	8/16/2019 08:34:23	0.0	0.0	0.0	0.0
047	8/16/2019 08:35:23	0.0	0.0	0.0	0.0
048	8/16/2019 08:36:23	0.0	0.0	0.0	0.0
049	8/16/2019 08:37:23	0.0	0.0	0.0	0.0
050	8/16/2019 08:38:23	0.0	0.0	0.0	0.0
051	8/16/2019 08:39:23	0.0	0.0	0.0	0.0
052	8/16/2019 08:40:23	0.0	0.0	0.0	0.0
053	8/16/2019 08:41:23	0.0	0.0	0.0	0.0
054	8/16/2019 08:42:23	0.0	0.0	0.0	0.0
055	8/16/2019 08:43:23	0.0	0.0	0.0	0.0
056	8/16/2019 08:44:23	0.0	0.0	0.0	0.0
057	8/16/2019 08:45:23	0.0	0.0	0.0	0.0
058	8/16/2019 08:46:23	0.0	0.0	0.0	0.0
059	8/16/2019 08:47:23	0.0	0.0	0.0	0.0
060	8/16/2019 08:48:23	0.0	0.0	0.0	0.0
061	8/16/2019 08:49:23	0.0	0.0	0.0	0.0
062	8/16/2019 08:50:23	0.0	0.0	0.0	0.0
063	8/16/2019 08:51:23	0.0	0.0	0.0	0.0
064	8/16/2019 08:52:23	0.0	0.0	0.0	0.0
065	8/16/2019 08:53:23	0.0	0.0	0.0	0.0
066	8/16/2019 08:54:23	0.0	0.0	0.0	0.0
067	8/16/2019 08:55:23	0.0	0.0	0.0	0.0
068	8/16/2019 08:56:23	0.0	0.0	0.0	0.0
069	8/16/2019 08:57:23	0.0	0.0	0.0	0.0
070	8/16/2019 08:58:23	0.0	0.0	0.0	0.0
071	8/16/2019 08:59:23	0.0	0.0	0.0	0.0

072	8/16/2019 09:00:23	0.0	0.0	0.0	0.0
073	8/16/2019 09:01:23	0.0	0.0	0.0	0.0
074	8/16/2019 09:02:23	0.0	0.0	0.0	0.0
075	8/16/2019 09:03:23	0.0	0.0	0.0	0.0
076	8/16/2019 09:04:23	0.0	0.0	0.0	0.0
077	8/16/2019 09:05:23	0.0	0.0	0.0	0.0
078	8/16/2019 09:06:23	0.0	0.0	0.0	0.0
079	8/16/2019 09:07:23	0.0	0.0	0.0	0.0
080	8/16/2019 09:08:23	0.0	0.0	0.0	0.0
081	8/16/2019 09:09:23	0.0	0.0	0.0	0.0
082	8/16/2019 09:10:23	0.0	0.0	0.0	0.0
083	8/16/2019 09:11:23	0.0	0.0	0.0	0.0
084	8/16/2019 09:12:23	0.0	0.0	0.0	0.0
085	8/16/2019 09:13:23	0.0	0.0	0.0	0.0
086	8/16/2019 09:14:23	0.0	0.0	0.0	0.0
087	8/16/2019 09:15:23	0.0	0.0	0.0	0.0
088	8/16/2019 09:16:23	0.0	0.0	0.0	0.0
089	8/16/2019 09:17:23	0.0	0.0	0.0	0.0
090	8/16/2019 09:18:23	0.0	0.0	0.0	0.0
091	8/16/2019 09:19:23	0.0	0.0	0.0	0.0
092	8/16/2019 09:20:23	0.0	0.0	0.0	0.0
093	8/16/2019 09:21:23	0.0	0.0	0.0	0.0
094	8/16/2019 09:22:23	0.0	0.0	0.0	0.0
095	8/16/2019 09:23:23	0.0	0.0	0.0	0.0
096	8/16/2019 09:24:23	0.0	0.0	0.0	0.0
097	8/16/2019 09:25:23	0.0	0.0	0.0	0.0
098	8/16/2019 09:26:23	0.0	0.0	0.0	0.0
099	8/16/2019 09:27:23	0.0	0.0	0.0	0.0
100	8/16/2019 09:28:23	0.0	0.0	0.0	0.0
101	8/16/2019 09:29:23	0.0	0.0	0.0	0.0
102	8/16/2019 09:30:23	0.0	0.0	0.0	0.0
103	8/16/2019 09:31:23	0.0	0.0	0.0	0.0
104	8/16/2019 09:32:23	0.0	0.0	0.0	0.0
105	8/16/2019 09:33:23	0.0	0.0	0.0	0.0
106	8/16/2019 09:34:23	0.0	0.0	0.0	0.0
107	8/16/2019 09:35:23	0.0	0.0	0.0	0.0
108	8/16/2019 09:36:23	0.0	0.0	0.0	0.0
109	8/16/2019 09:37:23	0.0	0.0	0.0	0.0
110	8/16/2019 09:38:23	0.0	0.0	0.0	0.0
111	8/16/2019 09:39:23	0.0	0.0	0.0	0.0
112	8/16/2019 09:40:23	0.0	0.0	0.0	0.0
113	8/16/2019 09:41:23	0.0	0.0	0.0	0.0
114	8/16/2019 09:42:23	0.0	0.0	0.0	0.0
115	8/16/2019 09:43:23	0.0	0.0	0.0	0.0
116	8/16/2019 09:44:23	0.0	0.0	0.0	0.0
117	8/16/2019 09:45:23	0.0	0.0	0.0	0.0
118	8/16/2019 09:46:23	0.0	0.0	0.0	0.0
119	8/16/2019 09:47:23	0.0	0.0	0.0	0.0
120	8/16/2019 09:48:23	0.0	0.0	0.0	0.0
121	8/16/2019 09:49:23	0.0	0.0	0.0	0.0
122	8/16/2019 09:50:23	0.0	0.0	0.0	0.0
123	8/16/2019 09:51:23	0.0	0.0	0.0	0.0
124	8/16/2019 09:52:23	0.0	0.0	0.0	0.0
125	8/16/2019 09:53:23	0.0	0.0	0.0	0.0
126	8/16/2019 09:54:23	0.0	0.0	0.0	0.0
127	8/16/2019 09:55:23	0.0	0.0	0.0	0.0
128	8/16/2019 09:56:23	0.0	0.0	0.0	0.0

129	8/16/2019	09:57:23	0.0	0.0	0.0	0.0
130	8/16/2019	09:58:23	0.0	0.0	0.0	0.0
131	8/16/2019	09:59:23	0.0	0.0	0.0	0.0
132	8/16/2019	10:00:23	0.0	0.0	0.0	0.0
133	8/16/2019	10:01:23	0.0	0.0	0.0	0.0
134	8/16/2019	10:02:23	0.0	0.0	0.0	0.0
135	8/16/2019	10:03:23	0.0	0.0	0.0	0.0
136	8/16/2019	10:04:23	0.0	0.0	0.0	0.0
137	8/16/2019	10:05:23	0.0	0.0	0.0	0.0
138	8/16/2019	10:06:23	0.0	0.0	0.0	0.0
139	8/16/2019	10:07:23	0.0	0.0	0.0	0.0
140	8/16/2019	10:08:23	0.0	0.0	0.0	0.0
141	8/16/2019	10:09:23	0.0	0.0	0.0	0.0
142	8/16/2019	10:10:23	0.0	0.0	0.0	0.0
143	8/16/2019	10:11:23	0.0	0.0	0.0	0.0
144	8/16/2019	10:12:23	0.0	0.0	0.0	0.0
145	8/16/2019	10:13:23	0.0	0.0	0.0	0.0
146	8/16/2019	10:14:23	0.0	0.0	0.0	0.0
147	8/16/2019	10:15:23	0.0	0.0	0.0	0.0
148	8/16/2019	10:16:23	0.0	0.0	0.0	0.0
149	8/16/2019	10:17:23	0.0	0.0	0.0	0.0
150	8/16/2019	10:18:23	0.0	0.0	0.0	0.0
151	8/16/2019	10:19:23	0.0	0.0	0.0	0.0
152	8/16/2019	10:20:23	0.0	0.0	0.0	0.0
153	8/16/2019	10:21:23	0.0	0.0	0.0	0.0
154	8/16/2019	10:22:23	0.0	0.0	0.0	0.0
155	8/16/2019	10:23:23	0.0	0.0	0.0	0.0
156	8/16/2019	10:24:23	0.0	0.0	0.0	0.0
157	8/16/2019	10:25:23	0.0	0.0	0.0	0.0
158	8/16/2019	10:26:23	0.0	0.0	0.0	0.0
159	8/16/2019	10:27:23	0.0	0.0	0.0	0.0
160	8/16/2019	10:28:23	0.0	0.0	0.0	0.0
161	8/16/2019	10:29:23	0.0	0.0	0.0	0.0
162	8/16/2019	10:30:23	0.0	0.0	0.0	0.0
163	8/16/2019	10:31:23	0.0	0.0	0.0	0.0
164	8/16/2019	10:32:23	0.0	0.0	0.0	0.0
165	8/16/2019	10:33:23	0.0	0.0	0.0	0.0
166	8/16/2019	10:34:23	0.0	0.0	0.0	0.0
167	8/16/2019	10:35:23	0.0	0.0	0.0	0.0
168	8/16/2019	10:36:23	0.0	0.0	0.0	0.0
169	8/16/2019	10:37:23	0.0	0.0	0.0	0.0
170	8/16/2019	10:38:23	0.0	0.0	0.0	0.0
171	8/16/2019	10:39:23	0.0	0.0	0.0	0.0
172	8/16/2019	10:40:23	0.0	0.0	0.0	0.0
173	8/16/2019	10:41:23	0.0	0.0	0.0	0.0
174	8/16/2019	10:42:23	0.0	0.0	0.0	0.0
175	8/16/2019	10:43:23	0.0	0.0	0.0	0.0
176	8/16/2019	10:44:23	0.0	0.0	0.0	0.0
177	8/16/2019	10:45:23	0.0	0.0	0.0	0.0
178	8/16/2019	10:46:23	0.0	0.0	0.0	0.0
179	8/16/2019	10:47:23	0.0	0.0	0.0	0.0
180	8/16/2019	10:48:23	0.0	0.0	0.0	0.0
181	8/16/2019	10:49:23	0.0	0.0	0.0	0.0
182	8/16/2019	10:50:23	0.0	0.0	0.0	0.0
183	8/16/2019	10:51:23	0.0	0.0	0.0	0.0
184	8/16/2019	10:52:23	0.0	0.0	0.0	0.0
185	8/16/2019	10:53:23	0.0	0.0	0.0	0.0

186	8/16/2019	10:54:23	0.0	0.0	0.0	0.0
187	8/16/2019	10:55:23	0.0	0.0	0.0	0.0
188	8/16/2019	10:56:23	0.0	0.0	0.0	0.0
189	8/16/2019	10:57:23	0.0	0.0	0.0	0.0
190	8/16/2019	10:58:23	0.0	0.0	0.0	0.0
191	8/16/2019	10:59:23	0.0	0.0	0.0	0.0
192	8/16/2019	11:00:23	0.0	0.0	0.0	0.0
193	8/16/2019	11:01:23	0.0	0.0	0.0	0.0
194	8/16/2019	11:02:23	0.0	0.0	0.0	0.0
195	8/16/2019	11:03:23	0.0	0.0	0.0	0.0
196	8/16/2019	11:04:23	0.0	0.0	0.0	0.0
197	8/16/2019	11:05:23	0.0	0.0	0.0	0.0
198	8/16/2019	11:06:23	0.0	0.0	0.0	0.0
199	8/16/2019	11:07:23	0.0	0.0	0.0	0.0
200	8/16/2019	11:08:23	0.0	0.0	0.0	0.0
201	8/16/2019	11:09:23	0.0	0.0	0.0	0.0
202	8/16/2019	11:10:23	0.0	0.0	0.0	0.0
203	8/16/2019	11:11:23	0.0	0.0	0.0	0.0
204	8/16/2019	11:12:23	0.0	0.0	0.0	0.0
205	8/16/2019	11:13:23	0.0	0.0	0.0	0.0
206	8/16/2019	11:14:23	0.0	0.0	0.0	0.0
207	8/16/2019	11:15:23	0.0	0.0	0.0	0.0
208	8/16/2019	11:16:23	0.0	0.0	0.0	0.0
209	8/16/2019	11:17:23	0.0	0.0	0.0	0.0
210	8/16/2019	11:18:23	0.0	0.0	0.0	0.0
211	8/16/2019	11:19:23	0.0	0.0	0.0	0.0
212	8/16/2019	11:20:23	0.0	0.0	0.0	0.0
213	8/16/2019	11:21:23	0.0	0.0	0.0	0.0
214	8/16/2019	11:22:23	0.0	0.0	0.0	0.0
215	8/16/2019	11:23:23	0.0	0.0	0.0	0.0
216	8/16/2019	11:24:23	0.0	0.0	0.0	0.0
217	8/16/2019	11:25:23	0.0	0.0	0.0	0.0
218	8/16/2019	11:26:23	0.0	0.0	0.0	0.0
219	8/16/2019	11:27:23	0.0	0.0	0.0	0.0
220	8/16/2019	11:28:23	0.0	0.0	0.0	0.0
221	8/16/2019	11:29:23	0.0	0.0	0.0	0.0
222	8/16/2019	11:30:23	0.0	0.0	0.0	0.0
223	8/16/2019	11:31:23	0.0	0.0	0.0	0.0
224	8/16/2019	11:32:23	0.0	0.0	0.0	0.0
225	8/16/2019	11:33:23	0.0	0.0	0.0	0.0
226	8/16/2019	11:34:23	0.0	0.0	0.0	0.0
227	8/16/2019	11:35:23	0.0	0.0	0.0	0.0
228	8/16/2019	11:36:23	0.0	0.0	0.0	0.0
229	8/16/2019	11:37:23	0.0	0.0	0.0	0.0
230	8/16/2019	11:38:23	0.0	0.0	0.0	0.0
231	8/16/2019	11:39:23	0.0	0.0	0.0	0.0
232	8/16/2019	11:40:23	0.0	0.0	0.0	0.0
233	8/16/2019	11:41:23	0.0	0.0	0.0	0.0
234	8/16/2019	11:42:23	0.0	0.0	0.0	0.0
235	8/16/2019	11:43:23	0.0	0.0	0.0	0.0
236	8/16/2019	11:44:23	0.0	0.0	0.0	0.0
237	8/16/2019	11:45:23	0.0	0.0	0.0	0.0
238	8/16/2019	11:46:23	0.0	0.0	0.0	0.0
239	8/16/2019	11:47:23	0.0	0.0	0.0	0.0
240	8/16/2019	11:48:23	0.0	0.0	0.0	0.0
241	8/16/2019	11:49:23	0.0	0.0	0.0	0.0
242	8/16/2019	11:50:23	0.0	0.0	0.0	0.0

243	8/16/2019	11:51:23	0.0	0.0	0.0	0.0
244	8/16/2019	11:52:23	0.0	0.0	0.0	0.0
245	8/16/2019	11:53:23	0.0	0.0	0.0	0.0
246	8/16/2019	11:54:23	0.0	0.0	0.0	0.0
247	8/16/2019	11:55:23	0.0	0.0	0.0	0.0
248	8/16/2019	11:56:23	0.0	0.0	0.0	0.0
249	8/16/2019	11:57:23	0.0	0.0	0.0	0.0
250	8/16/2019	11:58:23	0.0	0.0	0.0	0.0
251	8/16/2019	11:59:23	0.0	0.0	0.0	0.0
252	8/16/2019	12:00:23	0.0	0.0	0.0	0.0
253	8/16/2019	12:01:23	0.0	0.0	0.0	0.0
254	8/16/2019	12:02:23	0.0	0.0	0.0	0.0
255	8/16/2019	12:03:23	0.0	0.0	0.0	0.0
256	8/16/2019	12:04:23	0.0	0.0	0.0	0.0
257	8/16/2019	12:05:23	0.0	0.0	0.0	0.0
258	8/16/2019	12:06:23	0.0	0.0	0.0	0.0
259	8/16/2019	12:07:23	0.0	0.0	0.0	0.0
260	8/16/2019	12:08:23	0.0	0.0	0.0	0.0
261	8/16/2019	12:09:23	0.0	0.0	0.0	0.0
262	8/16/2019	12:10:23	0.0	0.0	0.0	0.0
263	8/16/2019	12:11:23	0.0	0.0	0.0	0.0
264	8/16/2019	12:12:23	0.0	0.0	0.0	0.0
265	8/16/2019	12:13:23	0.0	0.0	0.0	0.0
266	8/16/2019	12:14:23	0.0	0.0	0.0	0.0
267	8/16/2019	12:15:23	0.0	0.0	0.0	0.0
268	8/16/2019	12:16:23	0.0	0.0	0.0	0.0
269	8/16/2019	12:17:23	0.0	0.0	0.0	0.0
270	8/16/2019	12:18:23	0.0	0.0	0.0	0.0
271	8/16/2019	12:19:23	0.0	0.0	0.0	0.0
272	8/16/2019	12:20:23	0.0	0.0	0.0	0.0
273	8/16/2019	12:21:23	0.0	0.0	0.0	0.0
274	8/16/2019	12:22:23	0.0	0.0	0.0	0.0
275	8/16/2019	12:23:23	0.0	0.0	0.0	0.0
276	8/16/2019	12:24:23	0.0	0.0	0.0	0.0
277	8/16/2019	12:25:23	0.0	0.0	0.0	0.0
278	8/16/2019	12:26:23	0.0	0.0	0.0	0.0
279	8/16/2019	12:27:23	0.0	0.0	0.0	0.0
280	8/16/2019	12:28:23	0.0	0.0	0.0	0.0
281	8/16/2019	12:29:23	0.0	0.0	0.0	0.0
282	8/16/2019	12:30:23	0.0	0.0	0.0	0.0
283	8/16/2019	12:31:23	0.0	0.0	0.0	0.0
284	8/16/2019	12:32:23	0.0	0.0	0.0	0.0
285	8/16/2019	12:33:23	0.0	0.0	0.0	0.0
286	8/16/2019	12:34:23	0.0	0.0	0.0	0.0
287	8/16/2019	12:35:23	0.0	0.0	0.0	0.0
288	8/16/2019	12:36:23	0.0	0.0	0.0	0.0
289	8/16/2019	12:37:23	0.0	0.0	0.0	0.0
290	8/16/2019	12:38:23	0.0	0.0	0.0	0.0
291	8/16/2019	12:39:23	0.0	0.0	0.0	0.0
292	8/16/2019	12:40:23	0.0	0.0	0.0	0.0
293	8/16/2019	12:41:23	0.0	0.0	0.0	0.0
294	8/16/2019	12:42:23	0.0	0.0	0.0	0.0
295	8/16/2019	12:43:23	0.0	0.0	0.0	0.0
296	8/16/2019	12:44:23	0.0	0.0	0.0	0.0
297	8/16/2019	12:45:23	0.0	0.0	0.0	0.0
298	8/16/2019	12:46:23	0.0	0.0	0.0	0.0
299	8/16/2019	12:47:23	0.0	0.0	0.0	0.0

300	8/16/2019	12:48:23	0.0	0.0	0.0	0.0
301	8/16/2019	12:49:23	0.0	0.0	0.0	0.0
302	8/16/2019	12:50:23	0.0	0.0	0.0	0.0
303	8/16/2019	12:51:23	0.0	0.0	0.0	0.0
304	8/16/2019	12:52:23	0.0	0.0	0.0	0.0
305	8/16/2019	12:53:23	0.0	0.0	0.0	0.0
306	8/16/2019	12:54:23	0.0	0.0	0.0	0.0
307	8/16/2019	12:55:23	0.0	0.0	0.0	0.0
308	8/16/2019	12:56:23	0.0	0.0	0.0	0.0
309	8/16/2019	12:57:23	0.0	0.0	0.0	0.0
310	8/16/2019	12:58:23	0.0	0.0	0.0	0.0
311	8/16/2019	12:59:23	0.0	0.0	0.0	0.0
312	8/16/2019	13:00:23	0.0	0.0	0.0	0.0
313	8/16/2019	13:01:23	0.0	0.0	0.0	0.0
314	8/16/2019	13:02:23	0.0	0.0	0.0	0.0
315	8/16/2019	13:03:23	0.0	0.0	0.0	0.0
316	8/16/2019	13:04:23	0.0	0.0	0.0	0.0
317	8/16/2019	13:05:23	0.0	0.0	0.0	0.0
318	8/16/2019	13:06:23	0.0	0.0	0.0	0.0
319	8/16/2019	13:07:23	0.0	0.0	0.0	0.0
320	8/16/2019	13:08:23	0.0	0.0	0.0	0.0
321	8/16/2019	13:09:23	0.0	0.0	0.0	0.0
322	8/16/2019	13:10:23	0.0	0.0	0.0	0.0
323	8/16/2019	13:11:23	0.0	0.0	0.0	0.0
324	8/16/2019	13:12:23	0.0	0.0	0.0	0.0
325	8/16/2019	13:13:23	0.0	0.0	0.0	0.0
326	8/16/2019	13:14:23	0.0	0.0	0.0	0.0
327	8/16/2019	13:15:23	0.0	0.0	0.0	0.0
328	8/16/2019	13:16:23	0.0	0.0	0.0	0.0
329	8/16/2019	13:17:23	0.0	0.0	0.0	0.0
330	8/16/2019	13:18:23	0.0	0.0	0.0	0.0
331	8/16/2019	13:19:23	0.0	0.0	0.0	0.0
332	8/16/2019	13:20:23	0.0	0.0	0.0	0.0
333	8/16/2019	13:21:23	0.0	0.0	0.0	0.0
334	8/16/2019	13:22:23	0.0	0.0	0.0	0.0
335	8/16/2019	13:23:23	0.0	0.0	0.0	0.0
336	8/16/2019	13:24:23	0.0	0.0	0.0	0.0
337	8/16/2019	13:25:23	0.0	0.0	0.0	0.0
338	8/16/2019	13:26:23	0.0	0.0	0.0	0.0
339	8/16/2019	13:27:23	0.0	0.0	0.0	0.0
340	8/16/2019	13:28:23	0.0	0.0	0.0	0.0
341	8/16/2019	13:29:23	0.0	0.0	0.0	0.0
342	8/16/2019	13:30:23	0.0	0.0	0.0	0.0
343	8/16/2019	13:31:23	0.0	0.0	0.0	0.0
344	8/16/2019	13:32:23	0.0	0.0	0.0	0.0
345	8/16/2019	13:33:23	0.0	0.0	0.0	0.0
346	8/16/2019	13:34:23	0.0	0.0	0.0	0.0
347	8/16/2019	13:35:23	0.0	0.0	0.0	0.0
348	8/16/2019	13:36:23	0.0	0.0	0.0	0.0
349	8/16/2019	13:37:23	0.0	0.0	0.0	0.0
350	8/16/2019	13:38:23	0.0	0.0	0.0	0.0
351	8/16/2019	13:39:23	0.0	0.0	0.0	0.0
352	8/16/2019	13:40:23	0.0	0.0	0.0	0.0
353	8/16/2019	13:41:23	0.0	0.0	0.0	0.0
354	8/16/2019	13:42:23	0.0	0.0	0.0	0.0
355	8/16/2019	13:43:23	0.0	0.0	0.0	0.0
356	8/16/2019	13:44:23	0.0	0.0	0.0	0.0

357	8/16/2019	13:45:23	0.0	0.0	0.0	0.0
358	8/16/2019	13:46:23	0.0	0.0	0.0	0.0
359	8/16/2019	13:47:23	0.0	0.0	0.0	0.0
360	8/16/2019	13:48:23	0.0	0.0	0.0	0.0
361	8/16/2019	13:49:23	0.0	0.0	0.0	0.0
362	8/16/2019	13:50:23	0.0	0.0	0.0	0.0
363	8/16/2019	13:51:23	0.0	0.0	0.0	0.0
364	8/16/2019	13:52:23	0.0	0.0	0.0	0.0
365	8/16/2019	13:53:23	0.0	0.0	0.0	0.0
366	8/16/2019	13:54:23	0.0	0.0	0.0	0.0
367	8/16/2019	13:55:23	0.0	0.0	0.0	0.0
368	8/16/2019	13:56:23	0.0	0.0	0.0	0.0
369	8/16/2019	13:57:23	0.0	0.0	0.0	0.0
370	8/16/2019	13:58:23	0.0	0.0	0.0	0.0
371	8/16/2019	13:59:23	0.0	0.0	0.0	0.0
372	8/16/2019	14:00:23	0.0	0.0	0.0	0.0
373	8/16/2019	14:01:23	0.0	0.0	0.0	0.0
374	8/16/2019	14:02:23	0.0	0.0	0.0	0.0
375	8/16/2019	14:03:23	0.0	0.0	0.0	0.0
376	8/16/2019	14:04:23	0.0	0.0	0.0	0.0
377	8/16/2019	14:05:23	0.0	0.0	0.0	0.0
378	8/16/2019	14:06:23	0.0	0.0	0.0	0.0
379	8/16/2019	14:07:23	0.0	0.0	0.0	0.0
380	8/16/2019	14:08:23	0.0	0.0	0.0	0.0
381	8/16/2019	14:09:23	0.0	0.0	0.0	0.0
382	8/16/2019	14:10:23	0.0	0.0	0.0	0.0
383	8/16/2019	14:11:23	0.0	0.0	0.0	0.0
384	8/16/2019	14:12:23	0.0	0.0	0.0	0.0
385	8/16/2019	14:13:23	0.0	0.0	0.0	0.0
386	8/16/2019	14:14:23	0.0	0.0	0.0	0.0
387	8/16/2019	14:15:23	0.0	0.0	0.0	0.0
388	8/16/2019	14:16:23	0.0	0.0	0.0	0.0
389	8/16/2019	14:17:23	0.0	0.0	0.0	0.0
390	8/16/2019	14:18:23	0.0	0.0	0.0	0.0
391	8/16/2019	14:19:23	0.0	0.0	0.0	0.0
392	8/16/2019	14:20:23	0.0	0.0	0.0	0.0
393	8/16/2019	14:21:23	0.0	0.0	0.0	0.0
394	8/16/2019	14:22:23	0.0	0.0	0.0	0.0
395	8/16/2019	14:23:23	0.0	0.0	0.0	0.0
396	8/16/2019	14:24:23	0.0	0.0	0.0	0.0
397	8/16/2019	14:25:23	0.0	0.0	0.0	0.0
398	8/16/2019	14:26:23	0.0	0.0	0.0	0.0
399	8/16/2019	14:27:23	0.0	0.0	0.0	0.0
400	8/16/2019	14:28:23	0.0	0.0	0.0	0.0
401	8/16/2019	14:29:23	0.0	0.0	0.0	0.0
402	8/16/2019	14:30:23	0.0	0.0	0.0	0.0
403	8/16/2019	14:31:23	0.0	0.0	0.0	0.0
404	8/16/2019	14:32:23	0.0	0.0	0.0	0.0
405	8/16/2019	14:33:23	0.0	0.0	0.0	0.0
406	8/16/2019	14:34:23	0.0	0.0	0.0	0.0
407	8/16/2019	14:35:23	0.0	0.0	0.0	0.0
408	8/16/2019	14:36:23	0.0	0.0	0.0	0.0
409	8/16/2019	14:37:23	0.0	0.0	0.0	0.0
410	8/16/2019	14:38:23	0.0	0.0	0.0	0.0
411	8/16/2019	14:39:23	0.0	0.0	0.0	0.0
412	8/16/2019	14:40:23	0.0	0.0	0.0	0.0
413	8/16/2019	14:41:23	0.0	0.0	0.0	0.0

414	8/16/2019	14:42:23	0.0	0.0	0.0	0.0
415	8/16/2019	14:43:23	0.0	0.0	0.0	0.0
416	8/16/2019	14:44:23	0.0	0.0	0.0	0.0
417	8/16/2019	14:45:23	0.0	0.0	0.0	0.0
418	8/16/2019	14:46:23	0.0	0.0	0.0	0.0
419	8/16/2019	14:47:23	0.0	0.0	0.0	0.0
420	8/16/2019	14:48:23	0.0	0.0	0.0	0.0
421	8/16/2019	14:49:23	0.0	0.0	0.0	0.0
422	8/16/2019	14:50:23	0.0	0.0	0.0	0.0
423	8/16/2019	14:51:23	0.0	0.0	0.0	0.0
424	8/16/2019	14:52:23	0.0	0.0	0.0	0.0
425	8/16/2019	14:53:23	0.0	0.0	0.0	0.0
426	8/16/2019	14:54:23	0.0	0.0	0.0	0.0
427	8/16/2019	14:55:23	0.0	0.0	0.0	0.0
428	8/16/2019	14:56:23	0.0	0.0	0.0	0.0
429	8/16/2019	14:57:23	0.0	0.0	0.0	0.0
430	8/16/2019	14:58:23	0.0	0.0	0.0	0.0
431	8/16/2019	14:59:23	0.0	0.0	0.0	0.0
432	8/16/2019	15:00:23	0.0	0.0	0.0	0.0
433	8/16/2019	15:01:23	0.0	0.0	0.0	0.0
434	8/16/2019	15:02:23	0.0	0.0	0.0	0.0
435	8/16/2019	15:03:23	0.0	0.0	0.0	0.0
436	8/16/2019	15:04:23	0.0	0.0	0.0	0.0
437	8/16/2019	15:05:23	0.0	0.0	0.0	0.0
438	8/16/2019	15:06:23	0.0	0.0	0.0	0.0
439	8/16/2019	15:07:23	0.0	0.0	0.0	0.0
440	8/16/2019	15:08:23	0.0	0.0	0.0	0.0
441	8/16/2019	15:09:23	0.0	0.0	0.0	0.0
442	8/16/2019	15:10:23	0.0	0.0	0.0	0.0
Peak			0.0	0.0	0.0	0.0
Min			0.0	0.0	0.0	0.0
Average				0.0	0.0	0.0

****

TWA/STEL

Index		PID(ppm) Date/Time	PID(ppm) (TWA)	(STEL)
001	8/16/2019	07:49:23	0.0	---
002	8/16/2019	07:50:23	0.0	---
003	8/16/2019	07:51:23	0.0	---
004	8/16/2019	07:52:23	0.0	---
005	8/16/2019	07:53:23	0.0	---
006	8/16/2019	07:54:23	0.0	---
007	8/16/2019	07:55:23	0.0	---
008	8/16/2019	07:56:23	0.0	---
009	8/16/2019	07:57:23	0.0	---
010	8/16/2019	07:58:23	0.0	---
011	8/16/2019	07:59:23	0.0	---
012	8/16/2019	08:00:23	0.0	---
013	8/16/2019	08:01:23	0.0	---
014	8/16/2019	08:02:23	0.0	---
015	8/16/2019	08:03:23	0.0	0.0
016	8/16/2019	08:04:23	0.0	0.0
017	8/16/2019	08:05:23	0.0	0.0
018	8/16/2019	08:06:23	0.0	0.0
019	8/16/2019	08:07:23	0.0	0.0
020	8/16/2019	08:08:23	0.0	0.0

021	8/16/2019 08:09:23	0.0	0.0
022	8/16/2019 08:10:23	0.0	0.0
023	8/16/2019 08:11:23	0.0	0.0
024	8/16/2019 08:12:23	0.0	0.0
025	8/16/2019 08:13:23	0.0	0.0
026	8/16/2019 08:14:23	0.0	0.0
027	8/16/2019 08:15:23	0.0	0.0
028	8/16/2019 08:16:23	0.0	0.0
029	8/16/2019 08:17:23	0.0	0.0
030	8/16/2019 08:18:23	0.0	0.0
031	8/16/2019 08:19:23	0.0	0.0
032	8/16/2019 08:20:23	0.0	0.0
033	8/16/2019 08:21:23	0.0	0.0
034	8/16/2019 08:22:23	0.0	0.0
035	8/16/2019 08:23:23	0.0	0.0
036	8/16/2019 08:24:23	0.0	0.0
037	8/16/2019 08:25:23	0.0	0.0
038	8/16/2019 08:26:23	0.0	0.0
039	8/16/2019 08:27:23	0.0	0.0
040	8/16/2019 08:28:23	0.0	0.0
041	8/16/2019 08:29:23	0.0	0.0
042	8/16/2019 08:30:23	0.0	0.0
043	8/16/2019 08:31:23	0.0	0.0
044	8/16/2019 08:32:23	0.0	0.0
045	8/16/2019 08:33:23	0.0	0.0
046	8/16/2019 08:34:23	0.0	0.0
047	8/16/2019 08:35:23	0.0	0.0
048	8/16/2019 08:36:23	0.0	0.0
049	8/16/2019 08:37:23	0.0	0.0
050	8/16/2019 08:38:23	0.0	0.0
051	8/16/2019 08:39:23	0.0	0.0
052	8/16/2019 08:40:23	0.0	0.0
053	8/16/2019 08:41:23	0.0	0.0
054	8/16/2019 08:42:23	0.0	0.0
055	8/16/2019 08:43:23	0.0	0.0
056	8/16/2019 08:44:23	0.0	0.0
057	8/16/2019 08:45:23	0.0	0.0
058	8/16/2019 08:46:23	0.0	0.0
059	8/16/2019 08:47:23	0.0	0.0
060	8/16/2019 08:48:23	0.0	0.0
061	8/16/2019 08:49:23	0.0	0.0
062	8/16/2019 08:50:23	0.0	0.0
063	8/16/2019 08:51:23	0.0	0.0
064	8/16/2019 08:52:23	0.0	0.0
065	8/16/2019 08:53:23	0.0	0.0
066	8/16/2019 08:54:23	0.0	0.0
067	8/16/2019 08:55:23	0.0	0.0
068	8/16/2019 08:56:23	0.0	0.0
069	8/16/2019 08:57:23	0.0	0.0
070	8/16/2019 08:58:23	0.0	0.0
071	8/16/2019 08:59:23	0.0	0.0
072	8/16/2019 09:00:23	0.0	0.0
073	8/16/2019 09:01:23	0.0	0.0
074	8/16/2019 09:02:23	0.0	0.0
075	8/16/2019 09:03:23	0.0	0.0
076	8/16/2019 09:04:23	0.0	0.0
077	8/16/2019 09:05:23	0.0	0.0

078	8/16/2019 09:06:23	0.0	0.0
079	8/16/2019 09:07:23	0.0	0.0
080	8/16/2019 09:08:23	0.0	0.0
081	8/16/2019 09:09:23	0.0	0.0
082	8/16/2019 09:10:23	0.0	0.0
083	8/16/2019 09:11:23	0.0	0.0
084	8/16/2019 09:12:23	0.0	0.0
085	8/16/2019 09:13:23	0.0	0.0
086	8/16/2019 09:14:23	0.0	0.0
087	8/16/2019 09:15:23	0.0	0.0
088	8/16/2019 09:16:23	0.0	0.0
089	8/16/2019 09:17:23	0.0	0.0
090	8/16/2019 09:18:23	0.0	0.0
091	8/16/2019 09:19:23	0.0	0.0
092	8/16/2019 09:20:23	0.0	0.0
093	8/16/2019 09:21:23	0.0	0.0
094	8/16/2019 09:22:23	0.0	0.0
095	8/16/2019 09:23:23	0.0	0.0
096	8/16/2019 09:24:23	0.0	0.0
097	8/16/2019 09:25:23	0.0	0.0
098	8/16/2019 09:26:23	0.0	0.0
099	8/16/2019 09:27:23	0.0	0.0
100	8/16/2019 09:28:23	0.0	0.0
101	8/16/2019 09:29:23	0.0	0.0
102	8/16/2019 09:30:23	0.0	0.0
103	8/16/2019 09:31:23	0.0	0.0
104	8/16/2019 09:32:23	0.0	0.0
105	8/16/2019 09:33:23	0.0	0.0
106	8/16/2019 09:34:23	0.0	0.0
107	8/16/2019 09:35:23	0.0	0.0
108	8/16/2019 09:36:23	0.0	0.0
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110	8/16/2019 09:38:23	0.0	0.0
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112	8/16/2019 09:40:23	0.0	0.0
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132	8/16/2019 10:00:23	0.0	0.0
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134	8/16/2019 10:02:23	0.0	0.0

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136	8/16/2019 10:04:23	0.0	0.0
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190	8/16/2019 10:58:23	0.0	0.0
191	8/16/2019 10:59:23	0.0	0.0

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193	8/16/2019 11:01:23	0.0	0.0
194	8/16/2019 11:02:23	0.0	0.0
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196	8/16/2019 11:04:23	0.0	0.0
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199	8/16/2019 11:07:23	0.0	0.0
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294	8/16/2019 12:42:23	0.0	0.0
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311	8/16/2019 12:59:23	0.0	0.0
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313	8/16/2019 13:01:23	0.0	0.0
314	8/16/2019 13:02:23	0.0	0.0
315	8/16/2019 13:03:23	0.0	0.0
316	8/16/2019 13:04:23	0.0	0.0
317	8/16/2019 13:05:23	0.0	0.0
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319	8/16/2019 13:07:23	0.0	0.0
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341	8/16/2019 13:29:23	0.0	0.0
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344	8/16/2019 13:32:23	0.0	0.0
345	8/16/2019 13:33:23	0.0	0.0
346	8/16/2019 13:34:23	0.0	0.0
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348	8/16/2019 13:36:23	0.0	0.0
349	8/16/2019 13:37:23	0.0	0.0
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353	8/16/2019 13:41:23	0.0	0.0
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364	8/16/2019 13:52:23	0.0	0.0
365	8/16/2019 13:53:23	0.0	0.0
366	8/16/2019 13:54:23	0.0	0.0
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369	8/16/2019 13:57:23	0.0	0.0
370	8/16/2019 13:58:23	0.0	0.0
371	8/16/2019 13:59:23	0.0	0.0
372	8/16/2019 14:00:23	0.0	0.0
373	8/16/2019 14:01:23	0.0	0.0
374	8/16/2019 14:02:23	0.0	0.0
375	8/16/2019 14:03:23	0.0	0.0
376	8/16/2019 14:04:23	0.0	0.0
377	8/16/2019 14:05:23	0.0	0.0
378	8/16/2019 14:06:23	0.0	0.0
379	8/16/2019 14:07:23	0.0	0.0
380	8/16/2019 14:08:23	0.0	0.0
381	8/16/2019 14:09:23	0.0	0.0
382	8/16/2019 14:10:23	0.0	0.0
383	8/16/2019 14:11:23	0.0	0.0
384	8/16/2019 14:12:23	0.0	0.0
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390	8/16/2019 14:18:23	0.0	0.0
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392	8/16/2019 14:20:23	0.0	0.0
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394	8/16/2019 14:22:23	0.0	0.0
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412	8/16/2019 14:40:23	0.0	0.0
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414	8/16/2019 14:42:23	0.0	0.0
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416	8/16/2019 14:44:23	0.0	0.0
417	8/16/2019 14:45:23	0.0	0.0
418	8/16/2019 14:46:23	0.0	0.0
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421	8/16/2019 14:49:23	0.0	0.0
422	8/16/2019 14:50:23	0.0	0.0
423	8/16/2019 14:51:23	0.0	0.0
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429	8/16/2019 14:57:23	0.0	0.0
430	8/16/2019 14:58:23	0.0	0.0
431	8/16/2019 14:59:23	0.0	0.0
432	8/16/2019 15:00:23	0.0	0.0
433	8/16/2019 15:01:23	0.0	0.0
434	8/16/2019 15:02:23	0.0	0.0
435	8/16/2019 15:03:23	0.0	0.0
436	8/16/2019 15:04:23	0.0	0.0
437	8/16/2019 15:05:23	0.0	0.0
438	8/16/2019 15:06:23	0.0	0.0
439	8/16/2019 15:07:23	0.0	0.0
440	8/16/2019 15:08:23	0.0	0.0
441	8/16/2019 15:09:23	0.0	0.0
442	8/16/2019 15:10:23	0.0	0.0

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19/08/16 07:46
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Summary

Unit Name MiniRAE 3000(PGM-7320)
Unit SN 592-914273
Unit Firmware Ver V1.20A

Running Mode Hygiene Mode
Measure Type Min; Avg; Max; Real
Datalog Mode Continuous
Datalog Type Manual
Diagnostic Mode No
Stop Reason Power Down

Site ID RAE00005
User ID 00000001

Begin 8/16/2019 07:46:35
End 8/16/2019 15:05:44
Sample Period(s) 60
Number of Records 439

Sensor VOC(ppm)
Span 100.000
Span 2 N/A
Low Alarm 50.000
High Alarm 100.000
Over Alarm 2000.000
STEL Alarm 25.000
TWA Alarm 10.000
Measurement Gas Isobutylene
Calibration Time 8/16/2019 07:43
Peak 0.003
Min 0.000
Average 0.000

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Datalog

Index	Date/Time	VOC(ppm) (Min)	VOC(ppm) (Avg)	VOC(ppm) (Max)	VOC(ppm) (Real)
001	8/16/2019 07:47:35	0.003	0.006	0.013	0.003
002	8/16/2019 07:48:35	0.000	0.000	0.004	0.000
003	8/16/2019 07:49:35	0.000	0.000	0.000	0.000
004	8/16/2019 07:50:35	0.000	0.000	0.000	0.000
005	8/16/2019 07:51:35	0.000	0.052	0.234	0.000
006	8/16/2019 07:52:35	0.000	0.000	0.000	0.000
007	8/16/2019 07:53:35	0.000	0.000	0.000	0.000
008	8/16/2019 07:54:35	0.000	0.000	0.000	0.000
009	8/16/2019 07:55:35	0.000	0.000	0.000	0.000
010	8/16/2019 07:56:35	0.000	0.000	0.000	0.000
011	8/16/2019 07:57:35	0.000	0.000	0.000	0.000
012	8/16/2019 07:58:35	0.000	0.000	0.000	0.000
013	8/16/2019 07:59:35	0.000	0.000	0.000	0.000
014	8/16/2019 08:00:35	0.000	0.000	0.000	0.000

015	8/16/2019 08:01:35	0.000	0.000	0.000	0.000
016	8/16/2019 08:02:35	0.000	0.000	0.000	0.000
017	8/16/2019 08:03:35	0.000	0.000	0.000	0.000
018	8/16/2019 08:04:35	0.000	0.000	0.000	0.000
019	8/16/2019 08:05:35	0.000	0.000	0.000	0.000
020	8/16/2019 08:06:35	0.000	0.000	0.000	0.000
021	8/16/2019 08:07:35	0.000	0.000	0.000	0.000
022	8/16/2019 08:08:35	0.000	0.000	0.000	0.000
023	8/16/2019 08:09:35	0.000	0.000	0.000	0.000
024	8/16/2019 08:10:35	0.000	0.000	0.000	0.000
025	8/16/2019 08:11:35	0.000	0.000	0.000	0.000
026	8/16/2019 08:12:35	0.000	0.000	0.000	0.000
027	8/16/2019 08:13:35	0.000	0.000	0.000	0.000
028	8/16/2019 08:14:35	0.000	0.000	0.000	0.000
029	8/16/2019 08:15:35	0.000	0.000	0.000	0.000
030	8/16/2019 08:16:35	0.000	0.000	0.000	0.000
031	8/16/2019 08:17:35	0.000	0.000	0.000	0.000
032	8/16/2019 08:18:35	0.000	0.000	0.001	0.001
033	8/16/2019 08:19:35	0.000	0.000	0.004	0.000
034	8/16/2019 08:20:35	0.000	0.000	0.000	0.000
035	8/16/2019 08:21:35	0.000	0.000	0.000	0.000
036	8/16/2019 08:22:35	0.000	0.000	0.000	0.000
037	8/16/2019 08:23:35	0.000	0.000	0.000	0.000
038	8/16/2019 08:24:35	0.000	0.000	0.000	0.000
039	8/16/2019 08:25:35	0.000	0.000	0.000	0.000
040	8/16/2019 08:26:35	0.000	0.000	0.000	0.000
041	8/16/2019 08:27:35	0.000	0.000	0.000	0.000
042	8/16/2019 08:28:35	0.000	0.000	0.000	0.000
043	8/16/2019 08:29:35	0.000	0.000	0.000	0.000
044	8/16/2019 08:30:35	0.000	0.000	0.000	0.000
045	8/16/2019 08:31:35	0.000	0.000	0.000	0.000
046	8/16/2019 08:32:35	0.000	0.000	0.000	0.000
047	8/16/2019 08:33:35	0.000	0.000	0.000	0.000
048	8/16/2019 08:34:35	0.000	0.000	0.000	0.000
049	8/16/2019 08:35:35	0.000	0.000	0.000	0.000
050	8/16/2019 08:36:35	0.000	0.000	0.000	0.000
051	8/16/2019 08:37:35	0.000	0.000	0.000	0.000
052	8/16/2019 08:38:35	0.000	0.000	0.000	0.000
053	8/16/2019 08:39:35	0.000	0.000	0.000	0.000
054	8/16/2019 08:40:35	0.000	0.000	0.000	0.000
055	8/16/2019 08:41:35	0.000	0.000	0.000	0.000
056	8/16/2019 08:42:35	0.000	0.000	0.000	0.000
057	8/16/2019 08:43:35	0.000	0.000	0.000	0.000
058	8/16/2019 08:44:35	0.000	0.000	0.000	0.000
059	8/16/2019 08:45:35	0.000	0.000	0.000	0.000
060	8/16/2019 08:46:35	0.000	0.000	0.000	0.000
061	8/16/2019 08:47:35	0.000	0.000	0.000	0.000
062	8/16/2019 08:48:35	0.000	0.000	0.000	0.000
063	8/16/2019 08:49:35	0.000	0.000	0.000	0.000
064	8/16/2019 08:50:35	0.000	0.000	0.000	0.000
065	8/16/2019 08:51:35	0.000	0.000	0.000	0.000
066	8/16/2019 08:52:35	0.000	0.000	0.000	0.000
067	8/16/2019 08:53:35	0.000	0.000	0.000	0.000
068	8/16/2019 08:54:35	0.000	0.000	0.000	0.000
069	8/16/2019 08:55:35	0.000	0.000	0.000	0.000
070	8/16/2019 08:56:35	0.000	0.000	0.000	0.000
071	8/16/2019 08:57:35	0.000	0.000	0.000	0.000

072	8/16/2019 08:58:35	0.000	0.000	0.000	0.000
073	8/16/2019 08:59:35	0.000	0.000	0.000	0.000
074	8/16/2019 09:00:35	0.000	0.000	0.000	0.000
075	8/16/2019 09:01:35	0.000	0.000	0.000	0.000
076	8/16/2019 09:02:35	0.000	0.000	0.000	0.000
077	8/16/2019 09:03:35	0.000	0.000	0.000	0.000
078	8/16/2019 09:04:35	0.000	0.000	0.000	0.000
079	8/16/2019 09:05:35	0.000	0.000	0.000	0.000
080	8/16/2019 09:06:35	0.000	0.000	0.000	0.000
081	8/16/2019 09:07:35	0.000	0.000	0.000	0.000
082	8/16/2019 09:08:35	0.000	0.000	0.000	0.000
083	8/16/2019 09:09:35	0.000	0.000	0.009	0.000
084	8/16/2019 09:10:35	0.000	0.000	0.000	0.000
085	8/16/2019 09:11:35	0.000	0.000	0.000	0.000
086	8/16/2019 09:12:35	0.000	0.000	0.000	0.000
087	8/16/2019 09:13:35	0.000	0.000	0.000	0.000
088	8/16/2019 09:14:35	0.000	0.000	0.002	0.000
089	8/16/2019 09:15:35	0.000	0.000	0.000	0.000
090	8/16/2019 09:16:35	0.000	0.000	0.000	0.000
091	8/16/2019 09:17:35	0.000	0.000	0.000	0.000
092	8/16/2019 09:18:35	0.000	0.000	0.000	0.000
093	8/16/2019 09:19:35	0.000	0.000	0.000	0.000
094	8/16/2019 09:20:35	0.000	0.000	0.000	0.000
095	8/16/2019 09:21:35	0.000	0.001	0.022	0.000
096	8/16/2019 09:22:35	0.000	0.000	0.004	0.000
097	8/16/2019 09:23:35	0.000	0.000	0.000	0.000
098	8/16/2019 09:24:35	0.000	0.000	0.000	0.000
099	8/16/2019 09:25:35	0.000	0.000	0.000	0.000
100	8/16/2019 09:26:35	0.000	0.000	0.008	0.000
101	8/16/2019 09:27:35	0.000	0.002	0.028	0.000
102	8/16/2019 09:28:35	0.000	0.000	0.000	0.000
103	8/16/2019 09:29:35	0.000	0.000	0.000	0.000
104	8/16/2019 09:30:35	0.000	0.000	0.000	0.000
105	8/16/2019 09:31:35	0.000	0.000	0.000	0.000
106	8/16/2019 09:32:35	0.000	0.000	0.000	0.000
107	8/16/2019 09:33:35	0.000	0.000	0.000	0.000
108	8/16/2019 09:34:35	0.000	0.000	0.000	0.000
109	8/16/2019 09:35:35	0.000	0.000	0.000	0.000
110	8/16/2019 09:36:35	0.000	0.000	0.000	0.000
111	8/16/2019 09:37:35	0.000	0.000	0.000	0.000
112	8/16/2019 09:38:35	0.000	0.000	0.000	0.000
113	8/16/2019 09:39:35	0.000	0.000	0.000	0.000
114	8/16/2019 09:40:35	0.000	0.000	0.000	0.000
115	8/16/2019 09:41:35	0.000	0.000	0.000	0.000
116	8/16/2019 09:42:35	0.000	0.000	0.000	0.000
117	8/16/2019 09:43:35	0.000	0.000	0.000	0.000
118	8/16/2019 09:44:35	0.000	0.000	0.000	0.000
119	8/16/2019 09:45:35	0.000	0.000	0.000	0.000
120	8/16/2019 09:46:35	0.000	0.000	0.000	0.000
121	8/16/2019 09:47:35	0.000	0.000	0.000	0.000
122	8/16/2019 09:48:35	0.000	0.000	0.000	0.000
123	8/16/2019 09:49:35	0.000	0.000	0.000	0.000
124	8/16/2019 09:50:35	0.000	0.000	0.000	0.000
125	8/16/2019 09:51:35	0.000	0.000	0.000	0.000
126	8/16/2019 09:52:35	0.000	0.004	0.050	0.000
127	8/16/2019 09:53:35	0.000	0.000	0.000	0.000
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132	8/16/2019 09:58:35	0.000	0.000	0.000	0.000
133	8/16/2019 09:59:35	0.000	0.000	0.000	0.000
134	8/16/2019 10:00:35	0.000	0.000	0.000	0.000
135	8/16/2019 10:01:35	0.000	0.000	0.000	0.000
136	8/16/2019 10:02:35	0.000	0.000	0.000	0.000
137	8/16/2019 10:03:35	0.000	0.000	0.000	0.000
138	8/16/2019 10:04:35	0.000	0.000	0.000	0.000
139	8/16/2019 10:05:35	0.000	0.000	0.000	0.000
140	8/16/2019 10:06:35	0.000	0.000	0.000	0.000
141	8/16/2019 10:07:35	0.000	0.000	0.000	0.000
142	8/16/2019 10:08:35	0.000	0.000	0.000	0.000
143	8/16/2019 10:09:35	0.000	0.000	0.000	0.000
144	8/16/2019 10:10:35	0.000	0.000	0.000	0.000
145	8/16/2019 10:11:35	0.000	0.000	0.000	0.000
146	8/16/2019 10:12:35	0.0000.0000.0000.000			
147	8/16/2019 10:13:35	0.0000.0000.0000.000			
148	8/16/2019 10:14:35	0.0000.0000.0000.000			
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160	8/16/2019 10:26:35	0.0000.0000.0000.000			
161	8/16/2019 10:27:35	0.0000.0000.0000.000			
162	8/16/2019 10:28:35	0.0000.0000.0000.000			
163	8/16/2019 10:29:35	0.0000.0000.0000.000			
164	8/16/2019 10:30:35	0.0000.0000.0000.000			
165	8/16/2019 10:31:35	0.0000.0000.0000.000			
166	8/16/2019 10:32:35	0.0000.0000.0000.000			
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168	8/16/2019 10:34:35	0.0000.0000.0000.000			
169	8/16/2019 10:35:35	0.0000.0000.0000.000			
170	8/16/2019 10:36:35	0.0000.0000.0000.000			
171	8/16/2019 10:37:35	0.0000.0000.0000.000			
172	8/16/2019 10:38:35	0.0000.0000.0000.000			
173	8/16/2019 10:39:35	0.0000.0000.0000.000			
174	8/16/2019 10:40:35	0.0000.0000.0000.000			
175	8/16/2019 10:41:35	0.0000.0000.0000.000			
176	8/16/2019 10:42:35	0.0000.0000.0000.000			
177	8/16/2019 10:43:35	0.0000.0000.0000.000			
178	8/16/2019 10:44:35	0.0000.0000.0000.000			
179	8/16/2019 10:45:35	0.0000.0000.0000.000			
180	8/16/2019 10:46:35	0.0000.0000.0000.000			
181	8/16/2019 10:47:35	0.0000.0000.0000.000			
182	8/16/2019 10:48:35	0.0000.0000.0000.000			
183	8/16/2019 10:49:35	0.0000.0000.0000.000			
184	8/16/2019 10:50:35	0.0000.0000.0000.000			
185	8/16/2019 10:51:35	0.0000.0000.0000.000			

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190	8/16/2019 10:56:35	0.0000.0000.0000.000
191	8/16/2019 10:57:35	0.0000.0000.0000.000
192	8/16/2019 10:58:35	0.0000.0000.0000.000
193	8/16/2019 10:59:35	0.0000.0000.0000.000
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195	8/16/2019 11:01:35	0.0000.0000.0000.000
196	8/16/2019 11:02:35	0.0000.0000.0000.000
197	8/16/2019 11:03:35	0.0000.0000.0000.000
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234	8/16/2019 11:40:35	0.0000.0000.0000.000
235	8/16/2019 11:41:35	0.0000.0000.0000.000
236	8/16/2019 11:42:35	0.0000.0000.0000.000
237	8/16/2019 11:43:35	0.0000.0000.0000.000
238	8/16/2019 11:44:35	0.0000.0000.0000.000
239	8/16/2019 11:45:35	0.0000.0000.0000.000
240	8/16/2019 11:46:35	0.0000.0000.0000.000
241	8/16/2019 11:47:35	0.0000.0000.0000.000
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252	8/16/2019 11:58:35	0.0000.0000.0000.000
253	8/16/2019 11:59:35	0.0000.0000.0000.000
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255	8/16/2019 12:01:35	0.0000.0000.0000.000
256	8/16/2019 12:02:35	0.0000.0000.0000.000
257	8/16/2019 12:03:35	0.0000.0000.0000.000
258	8/16/2019 12:04:35	0.0000.0000.0000.000
259	8/16/2019 12:05:35	0.0000.0000.0000.000
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261	8/16/2019 12:07:35	0.0000.0000.0000.000
262	8/16/2019 12:08:35	0.0000.0000.0000.000
263	8/16/2019 12:09:35	0.0000.0000.0000.000
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266	8/16/2019 12:12:35	0.0000.0000.0000.000
267	8/16/2019 12:13:35	0.0000.0000.0000.000
268	8/16/2019 12:14:35	0.0000.0000.0000.000
269	8/16/2019 12:15:35	0.0000.0000.0000.000
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273	8/16/2019 12:19:35	0.0000.0000.0000.000
274	8/16/2019 12:20:35	0.0000.0000.0000.000
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278	8/16/2019 12:24:35	0.0000.0000.0000.000
279	8/16/2019 12:25:35	0.0000.0000.0000.000
280	8/16/2019 12:26:35	0.0000.0000.0000.000
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291	8/16/2019 12:37:35	0.0000.0000.0000.000
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294	8/16/2019 12:40:35	0.0000.0000.0000.000
295	8/16/2019 12:41:35	0.0000.0000.0000.000
296	8/16/2019 12:42:35	0.0000.0000.0000.000
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302	8/16/2019 12:48:35	0.0000.0000.0000.000
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311	8/16/2019 12:57:35	0.0000.0000.0000.000
312	8/16/2019 12:58:35	0.0000.0000.0000.000
313	8/16/2019 12:59:35	0.0000.0000.0000.000
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315	8/16/2019 13:01:35	0.0000.0000.0000.000
316	8/16/2019 13:02:35	0.0000.0000.0000.000
317	8/16/2019 13:03:35	0.0000.0000.0000.000
318	8/16/2019 13:04:35	0.0000.0000.0000.000
319	8/16/2019 13:05:35	0.0000.0000.0000.000
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322	8/16/2019 13:08:35	0.0000.0000.0000.000
323	8/16/2019 13:09:35	0.0000.0000.0000.000
324	8/16/2019 13:10:35	0.0000.0000.0000.000
325	8/16/2019 13:11:35	0.0000.0000.0000.000
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328	8/16/2019 13:14:35	0.0000.0000.0000.000
329	8/16/2019 13:15:35	0.0000.0000.0000.000
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332	8/16/2019 13:18:35	0.0000.0000.0000.000
333	8/16/2019 13:19:35	0.0000.0000.0000.000
334	8/16/2019 13:20:35	0.0000.0000.0000.000
335	8/16/2019 13:21:35	0.0000.0000.0000.000
336	8/16/2019 13:22:35	0.0000.0000.0000.000
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340	8/16/2019 13:26:35	0.0000.0000.0000.000
341	8/16/2019 13:27:35	0.0000.0000.0000.000
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345	8/16/2019 13:31:35	0.0000.0000.0000.000
346	8/16/2019 13:32:35	0.0000.0000.0000.000
347	8/16/2019 13:33:35	0.0000.0000.0000.000
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349	8/16/2019 13:35:35	0.0000.0000.0000.000
350	8/16/2019 13:36:35	0.0000.0000.0000.000
351	8/16/2019 13:37:35	0.0000.0000.0000.000
352	8/16/2019 13:38:35	0.0000.0010.0220.000
353	8/16/2019 13:39:35	0.0000.0000.0000.000
354	8/16/2019 13:40:35	0.0000.0000.0000.000
355	8/16/2019 13:41:35	0.0000.0000.0000.000
356	8/16/2019 13:42:35	0.0000.0000.0000.000

357	8/16/2019 13:43:35	0.0000.0000.0000.000
358	8/16/2019 13:44:35	0.0000.0000.0000.000
359	8/16/2019 13:45:35	0.0000.0040.0610.000
360	8/16/2019 13:46:35	0.0000.0000.0000.000
361	8/16/2019 13:47:35	0.0000.0000.0000.000
362	8/16/2019 13:48:35	0.0000.0000.0000.000
363	8/16/2019 13:49:35	0.0000.0000.0000.000
364	8/16/2019 13:50:35	0.0000.0000.0000.000
365	8/16/2019 13:51:35	0.0000.0000.0000.000
366	8/16/2019 13:52:35	0.0000.0000.0000.000
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369	8/16/2019 13:55:35	0.0000.0000.0000.000
370	8/16/2019 13:56:35	0.0000.0000.0000.000
371	8/16/2019 13:57:35	0.0000.0000.0000.000
372	8/16/2019 13:58:35	0.0000.0000.0000.000
373	8/16/2019 13:59:35	0.0000.0000.0000.000
374	8/16/2019 14:00:35	0.0000.0000.0000.000
375	8/16/2019 14:01:35	0.0000.0000.0000.000
376	8/16/2019 14:02:35	0.0000.0000.0000.000
377	8/16/2019 14:03:35	0.0000.0000.0000.000
378	8/16/2019 14:04:35	0.0000.0000.0000.000
379	8/16/2019 14:05:35	0.0000.0000.0000.000
380	8/16/2019 14:06:35	0.0000.0000.0000.000
381	8/16/2019 14:07:35	0.0000.0000.0000.000
382	8/16/2019 14:08:35	0.0000.0000.0000.000
383	8/16/2019 14:09:35	0.0000.0000.0000.000
384	8/16/2019 14:10:35	0.0000.0000.0110.000
385	8/16/2019 14:11:35	0.0000.0000.0000.000
386	8/16/2019 14:12:35	0.0000.0000.0000.000
387	8/16/2019 14:13:35	0.0000.0000.0000.000
388	8/16/2019 14:14:35	0.0000.0000.0000.000
389	8/16/2019 14:15:35	0.0000.0000.0000.000
390	8/16/2019 14:16:35	0.0000.0000.0000.000
391	8/16/2019 14:17:35	0.0000.0000.0020.000
392	8/16/2019 14:18:35	0.0000.0000.0000.000
393	8/16/2019 14:19:35	0.0000.0000.0000.000
394	8/16/2019 14:20:35	0.0000.0000.0000.000
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396	8/16/2019 14:22:35	0.0000.0000.0000.000
397	8/16/2019 14:23:35	0.0000.0000.0000.000
398	8/16/2019 14:24:35	0.0000.0010.0300.000
399	8/16/2019 14:25:35	0.0000.0000.0000.000
400	8/16/2019 14:26:35	0.0000.0000.0000.000
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402	8/16/2019 14:28:35	0.0000.0000.0000.000
403	8/16/2019 14:29:35	0.0000.0000.0000.000
404	8/16/2019 14:30:35	0.0000.0000.0000.000
405	8/16/2019 14:31:35	0.0000.0000.0000.000
406	8/16/2019 14:32:35	0.0000.0000.0000.000
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409	8/16/2019 14:35:35	0.0000.0000.0000.000
410	8/16/2019 14:36:35	0.0000.0000.0000.000
411	8/16/2019 14:37:35	0.0000.0000.0000.000
412	8/16/2019 14:38:35	0.0000.0000.0000.000
413	8/16/2019 14:39:35	0.0000.0000.0000.000

414	8/16/2019 14:40:35	0.0000.0000.0000.000
415	8/16/2019 14:41:35	0.0000.0000.0000.000
416	8/16/2019 14:42:35	0.0000.0000.0000.000
417	8/16/2019 14:43:35	0.0000.0000.0000.000
418	8/16/2019 14:44:35	0.0000.0000.0000.000
419	8/16/2019 14:45:35	0.0000.0000.0000.000
420	8/16/2019 14:46:35	0.0000.0000.0000.000
421	8/16/2019 14:47:35	0.0000.0000.0000.000
422	8/16/2019 14:48:35	0.0000.0000.0000.000
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426	8/16/2019 14:52:35	0.0000.0000.0000.000
427	8/16/2019 14:53:35	0.0000.0000.0000.000
428	8/16/2019 14:54:35	0.0000.0000.0000.000
429	8/16/2019 14:55:35	0.0000.0000.0000.000
430	8/16/2019 14:56:35	0.0000.0000.0000.000
431	8/16/2019 14:57:35	0.0000.0000.0000.000
432	8/16/2019 14:58:35	0.0000.0000.0000.000
433	8/16/2019 14:59:35	0.0000.0000.0000.000
434	8/16/2019 15:00:35	0.0000.0000.0000.000
435	8/16/2019 15:01:35	0.0000.0000.0000.000
436	8/16/2019 15:02:35	0.0000.0000.0000.000
437	8/16/2019 15:03:35	0.0000.0000.0000.000
438	8/16/2019 15:04:35	0.0000.0000.0000.000
439	8/16/2019 15:05:35	0.0000.0000.0000.000
Peak	0.0030.0520.2340.003	
Min	0.0000.0000.0000.000	
Average	0.0000.0000.0010.000	

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TWA/STEL

Index	Date/Time	VOC(ppm) (TWA)	VOC(ppm) (STEL)
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002	8/16/2019 07:48:35	0.000	---
003	8/16/2019 07:49:35	0.000	---
004	8/16/2019 07:50:35	0.000	---
005	8/16/2019 07:51:35	0.000	---
006	8/16/2019 07:52:35	0.000	---
007	8/16/2019 07:53:35	0.000	---
008	8/16/2019 07:54:35	0.000	---
009	8/16/2019 07:55:35	0.000	---
010	8/16/2019 07:56:35	0.000	---
011	8/16/2019 07:57:35	0.000	---
012	8/16/2019 07:58:35	0.000	---
013	8/16/2019 07:59:35	0.000	---
014	8/16/2019 08:00:35	0.000	---
015	8/16/2019 08:01:35	0.0000.000	
016	8/16/2019 08:02:35	0.0000.000	
017	8/16/2019 08:03:35	0.0000.000	
018	8/16/2019 08:04:35	0.0000.000	
019	8/16/2019 08:05:35	0.0000.000	
020	8/16/2019 08:06:35	0.0000.000	
021	8/16/2019 08:07:35	0.0000.000	
022	8/16/2019 08:08:35	0.0000.000	
023	8/16/2019 08:09:35	0.0000.000	

024	8/16/2019 08:10:35	0.0000.000
025	8/16/2019 08:11:35	0.0000.000
026	8/16/2019 08:12:35	0.0000.000
027	8/16/2019 08:13:35	0.0000.000
028	8/16/2019 08:14:35	0.0000.000
029	8/16/2019 08:15:35	0.0000.000
030	8/16/2019 08:16:35	0.0000.000
031	8/16/2019 08:17:35	0.0000.000
032	8/16/2019 08:18:35	0.0000.000
033	8/16/2019 08:19:35	0.0000.000
034	8/16/2019 08:20:35	0.0000.000
035	8/16/2019 08:21:35	0.0000.000
036	8/16/2019 08:22:35	0.0000.000
037	8/16/2019 08:23:35	0.0000.000
038	8/16/2019 08:24:35	0.0000.000
039	8/16/2019 08:25:35	0.0000.000
040	8/16/2019 08:26:35	0.0000.000
041	8/16/2019 08:27:35	0.0000.000
042	8/16/2019 08:28:35	0.0000.000
043	8/16/2019 08:29:35	0.0000.000
044	8/16/2019 08:30:35	0.0000.000
045	8/16/2019 08:31:35	0.0000.000
046	8/16/2019 08:32:35	0.0000.000
047	8/16/2019 08:33:35	0.0000.000
048	8/16/2019 08:34:35	0.0000.000
049	8/16/2019 08:35:35	0.0000.000
050	8/16/2019 08:36:35	0.0000.000
051	8/16/2019 08:37:35	0.0000.000
052	8/16/2019 08:38:35	0.0000.000
053	8/16/2019 08:39:35	0.0000.000
054	8/16/2019 08:40:35	0.0000.000
055	8/16/2019 08:41:35	0.0000.000
056	8/16/2019 08:42:35	0.0000.000
057	8/16/2019 08:43:35	0.0000.000
058	8/16/2019 08:44:35	0.0000.000
059	8/16/2019 08:45:35	0.0000.000
060	8/16/2019 08:46:35	0.0000.000
061	8/16/2019 08:47:35	0.0000.000
062	8/16/2019 08:48:35	0.0000.000
063	8/16/2019 08:49:35	0.0000.000
064	8/16/2019 08:50:35	0.0000.000
065	8/16/2019 08:51:35	0.0000.000
066	8/16/2019 08:52:35	0.0000.000
067	8/16/2019 08:53:35	0.0000.000
068	8/16/2019 08:54:35	0.0000.000
069	8/16/2019 08:55:35	0.0000.000
070	8/16/2019 08:56:35	0.0000.000
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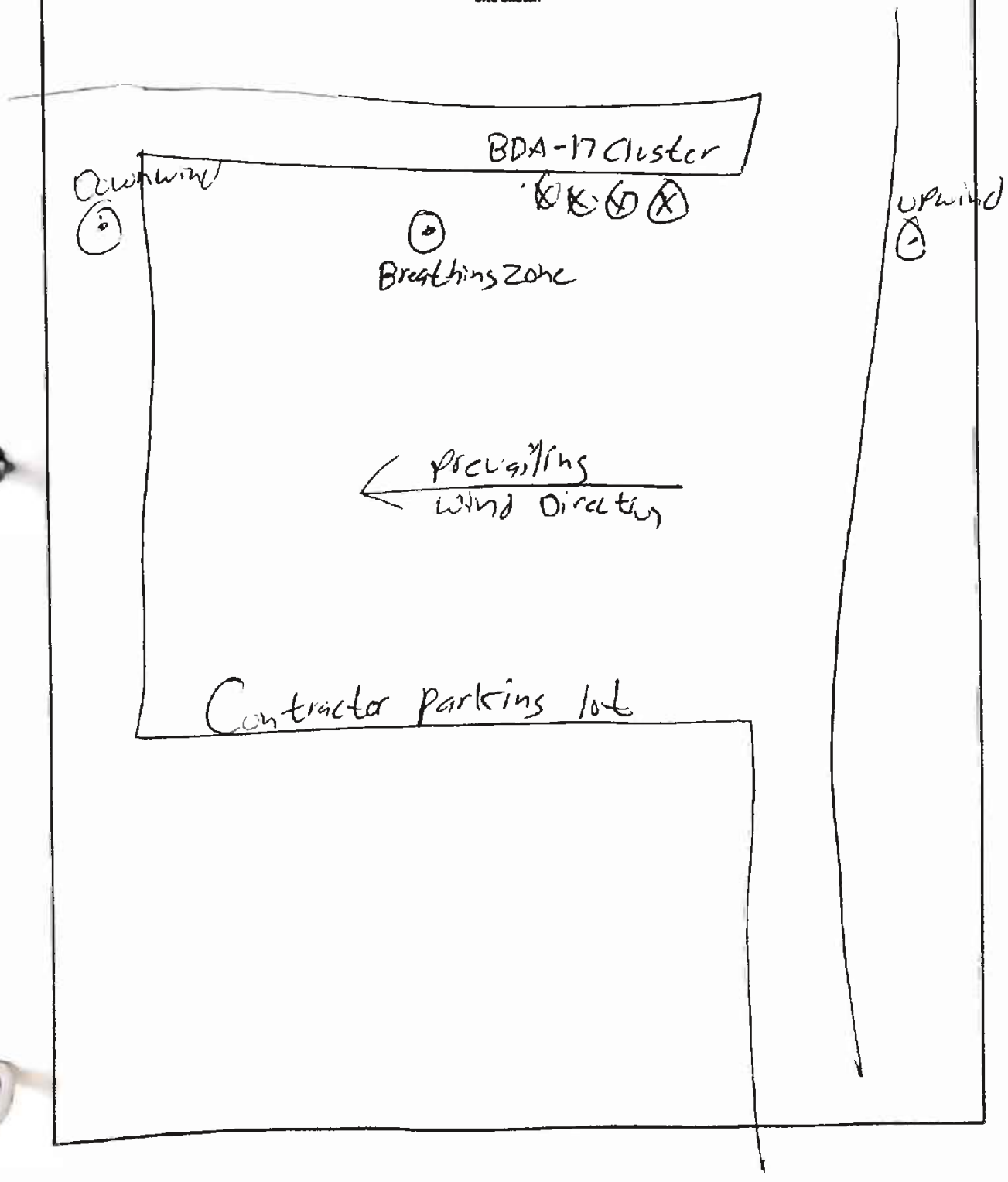
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ARCADIS | Design & Consultancy for natural and built assets

Daily CAMP Log

Project	Phase 2 Groundwater RI
Location	East Syracuse, NY
Date	8/16/19
Weather Conditions	70's Cloudy
Upwind Monitor	592-91[illegible]73
Downwind Monitor	592-90 3545
Start Time	0800
End Time	1510

Site Sketch



Anne Locke
Associate Manager, Environmental Protection
Environmental, Health and Safety Department
Bristol-Myers Squibb
P.O. Box 4755
Syracuse, NY 13221

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One Lincoln Center
110 West Fayette Street
Suite 300
Syracuse
New York 13202
Tel 315 446 9120
Fax 315 449 0017
www.arcadis.com

Environmental North

Subject:
Community Air Monitoring During Phase II RI Well Installations Bristol-Myers Squibb Syracuse Facility – East Syracuse, New York 13057

Date:
August 19, 2019

Contact:
William McCune

Phone:
315-671-9172

Email:
William.McCune@arcadis.com

Our ref:
B0087363.0037

Dear Ms. Locke:

The following is a summary of the community air monitoring plan (CAMP) provided by Arcadis U.S., Inc. (Arcadis) during the Phase II Remedial Investigation (RI) drilling activities conducted at the Bristol-Myers Squibb (BMS) Syracuse North Campus, East Syracuse, NY on August 19, 2019.

August 19, 2019: Parratt-Wolff Inc. (Parratt-Wolff) continued sonic drilling activities at BDA-17RX, drilling from 7:30 AM to 5:15 PM. CAMP monitoring included photo ionization detectors at upwind and downwind locations and a DustTrak at a breathing zone location. The prevailing wind direction was observed originating from the south through the day. Air quality parameters did not exceed CAMP standards at any time during work activities. Table 1 shows the serial numbers and associated CAMP stations locations.

CAMP Station Locations	Serial Number
Breathing Zone DustTrak	#8533151804
Upwind PID	#592-914273
Downwind PID	#592-905549

Please contact us with any questions or comments pertaining to this project.

Sincerely,

Arcadis U.S., Inc.

William McCune
Principal Geologist

Attachments

1 CAMP Data Logs
2 Site Sketches/Notes

Test 006

Instrument		Data Properties	
Model	DustTrak DRX	Start Date	08/19/2019
Instrument S/N	8533151804	Start Time	07:33:04
		Stop Date	08/19/2019
		Stop Time	16:48:04
		Total Time	0:09:15:00
		Logging Interval	900 seconds

Test Data

Data Point	Date	Time	PM1 mg/m^3	PM2.5 mg/m^3	RESP mg/m^3	PM10 mg/m^3	TOTAL mg/m^3
1	08/19/2019	07:48:04	0.015	0.016	0.017	0.019	0.021
2	08/19/2019	08:03:04	0.016	0.017	0.018	0.020	0.022
3	08/19/2019	08:18:04	0.019	0.020	0.022	0.027	0.031
4	08/19/2019	08:33:04	0.017	0.018	0.019	0.022	0.025
5	08/19/2019	08:48:04	0.018	0.019	0.020	0.023	0.026
6	08/19/2019	09:03:04	0.016	0.016	0.017	0.019	0.021
7	08/19/2019	09:18:04	0.019	0.020	0.020	0.023	0.024
8	08/19/2019	09:33:04	0.020	0.021	0.022	0.025	0.028
9	08/19/2019	09:48:04	0.026	0.027	0.027	0.030	0.033
10	08/19/2019	10:03:04	0.014	0.014	0.015	0.016	0.017
11	08/19/2019	10:18:04	0.011	0.012	0.012	0.013	0.013
12	08/19/2019	10:33:04	0.012	0.012	0.012	0.013	0.013
13	08/19/2019	10:48:04	0.011	0.011	0.011	0.012	0.012
14	08/19/2019	11:03:04	0.011	0.011	0.012	0.012	0.012
15	08/19/2019	11:18:04	0.012	0.013	0.013	0.014	0.014
16	08/19/2019	11:33:04	0.012	0.013	0.013	0.014	0.014
17	08/19/2019	11:48:04	0.012	0.013	0.013	0.013	0.014
18	08/19/2019	12:03:04	0.013	0.013	0.013	0.014	0.014
19	08/19/2019	12:18:04	0.012	0.013	0.013	0.014	0.014
20	08/19/2019	12:33:04	0.015	0.016	0.016	0.017	0.017
21	08/19/2019	12:48:04	0.019	0.019	0.019	0.020	0.021
22	08/19/2019	13:03:04	0.012	0.013	0.013	0.015	0.017
23	08/19/2019	13:18:04	0.012	0.013	0.013	0.014	0.014
24	08/19/2019	13:33:04	0.011	0.011	0.012	0.012	0.013
25	08/19/2019	13:48:04	0.017	0.017	0.018	0.022	0.026
26	08/19/2019	14:03:04	0.012	0.012	0.012	0.013	0.013
27	08/19/2019	14:18:04	0.015	0.015	0.016	0.017	0.019
28	08/19/2019	14:33:04	0.011	0.011	0.012	0.012	0.013
29	08/19/2019	14:48:04	0.012	0.012	0.012	0.013	0.013
30	08/19/2019	15:03:04	0.012	0.013	0.013	0.014	0.015
31	08/19/2019	15:18:04	0.013	0.013	0.013	0.014	0.015
32	08/19/2019	15:33:04	0.012	0.012	0.012	0.013	0.013
33	08/19/2019	15:48:04	0.013	0.013	0.013	0.014	0.014
34	08/19/2019	16:03:04	0.012	0.012	0.012	0.013	0.013
35	08/19/2019	16:18:04	0.012	0.012	0.012	0.013	0.013

Test Data							
Data Point	**Date**	**Time**	**PM1 mg/m^3**	**PM2.5 mg/m^3**	**RESP mg/m^3**	**PM10 mg/m^3**	**TOTAL mg/m^3**
36	08/19/2019	16:33:04	0.014	0.014	0.014	0.016	0.017
37	08/19/2019	16:48:04	0.013	0.013	0.014	0.015	0.016

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19/08/19 07:41
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Summary

Unit Name MiniRAE 3000(PGM-7320)
Unit SN 592-903549
Unit Firmware Ver V2.20A

Running Mode Hygiene Mode
Datalog Mode Auto
Diagnostic Mode No
Stop Reason Power Down

Site ID 00000000
User ID 00000001

Begin 8/19/2019 07:41:00
End 8/19/2019 16:57:59
Sample Period(s) 60
Number of Records 556

Sensor PID(ppm)
Sensor SN S023030154V7
Measure Type Min; Avg; Max; Real
Span 100.0
Span 2 1000.0
Low Alarm 50.0
High Alarm 100.0
Over Alarm 2000.0
STEL Alarm 10025.0
TWA Alarm 10.0
Measurement Gas Isobutylene
Calibration Time 8/16/2019 07:47
Peak 0.1
Min 0.0
Average 0.0

****
Datalog

Index	Date/Time	PID(ppm) (Min)	PID(ppm) (Avg)	PID(ppm) (Max)	PID(ppm) (Real)
001	8/19/2019 07:42:00	0.0	0.0	0.0	0.0
002	8/19/2019 07:43:00	0.0	0.1	0.2	0.1
003	8/19/2019 07:44:00	0.0	0.0	0.1	0.0
004	8/19/2019 07:45:00	0.0	0.0	0.0	0.0
005	8/19/2019 07:46:00	0.0	0.0	0.0	0.0
006	8/19/2019 07:47:00	0.0	0.0	0.0	0.0
007	8/19/2019 07:48:00	0.0	0.0	0.0	0.0
008	8/19/2019 07:49:00	0.0	0.0	0.0	0.0
009	8/19/2019 07:50:00	0.0	0.0	0.0	0.0
010	8/19/2019 07:51:00	0.0	0.0	0.0	0.0
011	8/19/2019 07:52:00	0.0	0.0	0.0	0.0
012	8/19/2019 07:53:00	0.0	0.0	0.0	0.0
013	8/19/2019 07:54:00	0.0	0.0	0.0	0.0
014	8/19/2019 07:55:00	0.0	0.0	0.0	0.0

015	8/19/2019 07:56:00	0.0	0.0	0.0	0.0
016	8/19/2019 07:57:00	0.0	0.0	0.0	0.0
017	8/19/2019 07:58:00	0.0	0.0	0.0	0.0
018	8/19/2019 07:59:00	0.0	0.0	0.0	0.0
019	8/19/2019 08:00:00	0.0	0.0	0.0	0.0
020	8/19/2019 08:01:00	0.0	0.0	0.0	0.0
021	8/19/2019 08:02:00	0.0	0.0	0.0	0.0
022	8/19/2019 08:03:00	0.0	0.0	0.0	0.0
023	8/19/2019 08:04:00	0.0	0.0	0.0	0.0
024	8/19/2019 08:05:00	0.0	0.0	0.0	0.0
025	8/19/2019 08:06:00	0.0	0.0	0.0	0.0
026	8/19/2019 08:07:00	0.0	0.0	0.0	0.0
027	8/19/2019 08:08:00	0.0	0.0	0.0	0.0
028	8/19/2019 08:09:00	0.0	0.0	0.0	0.0
029	8/19/2019 08:10:00	0.0	0.0	0.0	0.0
030	8/19/2019 08:11:00	0.0	0.0	0.0	0.0
031	8/19/2019 08:12:00	0.0	0.0	0.0	0.0
032	8/19/2019 08:13:00	0.0	0.0	0.0	0.0
033	8/19/2019 08:14:00	0.0	0.0	0.0	0.0
034	8/19/2019 08:15:00	0.0	0.0	0.0	0.0
035	8/19/2019 08:16:00	0.0	0.0	0.0	0.0
036	8/19/2019 08:17:00	0.0	0.0	0.0	0.0
037	8/19/2019 08:18:00	0.0	0.0	0.0	0.0
038	8/19/2019 08:19:00	0.0	0.0	0.0	0.0
039	8/19/2019 08:20:00	0.0	0.0	0.0	0.0
040	8/19/2019 08:21:00	0.0	0.0	0.0	0.0
041	8/19/2019 08:22:00	0.0	0.0	0.0	0.0
042	8/19/2019 08:23:00	0.0	0.0	0.0	0.0
043	8/19/2019 08:24:00	0.0	0.0	0.0	0.0
044	8/19/2019 08:25:00	0.0	0.0	0.0	0.0
045	8/19/2019 08:26:00	0.0	0.0	0.0	0.0
046	8/19/2019 08:27:00	0.0	0.0	0.0	0.0
047	8/19/2019 08:28:00	0.0	0.0	0.0	0.0
048	8/19/2019 08:29:00	0.0	0.0	0.0	0.0
049	8/19/2019 08:30:00	0.0	0.0	0.0	0.0
050	8/19/2019 08:31:00	0.0	0.0	0.0	0.0
051	8/19/2019 08:32:00	0.0	0.0	0.0	0.0
052	8/19/2019 08:33:00	0.0	0.0	0.0	0.0
053	8/19/2019 08:34:00	0.0	0.0	0.0	0.0
054	8/19/2019 08:35:00	0.0	0.0	0.0	0.0
055	8/19/2019 08:36:00	0.0	0.0	0.0	0.0
056	8/19/2019 08:37:00	0.0	0.0	0.0	0.0
057	8/19/2019 08:38:00	0.0	0.0	0.0	0.0
058	8/19/2019 08:39:00	0.0	0.0	0.0	0.0
059	8/19/2019 08:40:00	0.0	0.0	0.0	0.0
060	8/19/2019 08:41:00	0.0	0.0	0.0	0.0
061	8/19/2019 08:42:00	0.0	0.0	0.0	0.0
062	8/19/2019 08:43:00	0.0	0.0	0.0	0.0
063	8/19/2019 08:44:00	0.0	0.0	0.0	0.0
064	8/19/2019 08:45:00	0.0	0.0	0.0	0.0
065	8/19/2019 08:46:00	0.0	0.0	0.0	0.0
066	8/19/2019 08:47:00	0.0	0.0	0.0	0.0
067	8/19/2019 08:48:00	0.0	0.0	0.0	0.0
068	8/19/2019 08:49:00	0.0	0.0	0.0	0.0
069	8/19/2019 08:50:00	0.0	0.0	0.0	0.0
070	8/19/2019 08:51:00	0.0	0.0	0.0	0.0
071	8/19/2019 08:52:00	0.0	0.0	0.0	0.0

072	8/19/2019 08:53:00	0.0	0.0	0.0	0.0
073	8/19/2019 08:54:00	0.0	0.0	0.0	0.0
074	8/19/2019 08:55:00	0.0	0.0	0.0	0.0
075	8/19/2019 08:56:00	0.0	0.0	0.0	0.0
076	8/19/2019 08:57:00	0.0	0.0	0.0	0.0
077	8/19/2019 08:58:00	0.0	0.0	0.0	0.0
078	8/19/2019 08:59:00	0.0	0.0	0.0	0.0
079	8/19/2019 09:00:00	0.0	0.0	0.0	0.0
080	8/19/2019 09:01:00	0.0	0.0	0.0	0.0
081	8/19/2019 09:02:00	0.0	0.0	0.0	0.0
082	8/19/2019 09:03:00	0.0	0.0	0.0	0.0
083	8/19/2019 09:04:00	0.0	0.0	0.0	0.0
084	8/19/2019 09:05:00	0.0	0.0	0.0	0.0
085	8/19/2019 09:06:00	0.0	0.0	0.0	0.0
086	8/19/2019 09:07:00	0.0	0.0	0.0	0.0
087	8/19/2019 09:08:00	0.0	0.0	0.0	0.0
088	8/19/2019 09:09:00	0.0	0.0	0.0	0.0
089	8/19/2019 09:10:00	0.0	0.0	0.0	0.0
090	8/19/2019 09:11:00	0.0	0.0	0.0	0.0
091	8/19/2019 09:12:00	0.0	0.0	0.0	0.0
092	8/19/2019 09:13:00	0.0	0.0	0.0	0.0
093	8/19/2019 09:14:00	0.0	0.0	0.0	0.0
094	8/19/2019 09:15:00	0.0	0.0	0.0	0.0
095	8/19/2019 09:16:00	0.0	0.0	0.0	0.0
096	8/19/2019 09:17:00	0.0	0.0	0.0	0.0
097	8/19/2019 09:18:00	0.0	0.0	0.0	0.0
098	8/19/2019 09:19:00	0.0	0.0	0.0	0.0
099	8/19/2019 09:20:00	0.0	0.0	0.0	0.0
100	8/19/2019 09:21:00	0.0	0.0	0.0	0.0
101	8/19/2019 09:22:00	0.0	0.0	0.0	0.0
102	8/19/2019 09:23:00	0.0	0.0	0.0	0.0
103	8/19/2019 09:24:00	0.0	0.0	0.0	0.0
104	8/19/2019 09:25:00	0.0	0.0	0.0	0.0
105	8/19/2019 09:26:00	0.0	0.0	0.0	0.0
106	8/19/2019 09:27:00	0.0	0.0	0.0	0.0
107	8/19/2019 09:28:00	0.0	0.0	0.0	0.0
108	8/19/2019 09:29:00	0.0	0.0	0.0	0.0
109	8/19/2019 09:30:00	0.0	0.0	0.0	0.0
110	8/19/2019 09:31:00	0.0	0.0	0.0	0.0
111	8/19/2019 09:32:00	0.0	0.0	0.0	0.0
112	8/19/2019 09:33:00	0.0	0.0	0.0	0.0
113	8/19/2019 09:34:00	0.0	0.0	0.0	0.0
114	8/19/2019 09:35:00	0.0	0.0	0.0	0.0
115	8/19/2019 09:36:00	0.0	0.0	0.0	0.0
116	8/19/2019 09:37:00	0.0	0.0	0.0	0.0
117	8/19/2019 09:38:00	0.0	0.0	0.0	0.0
118	8/19/2019 09:39:00	0.0	0.0	0.0	0.0
119	8/19/2019 09:40:00	0.0	0.0	0.0	0.0
120	8/19/2019 09:41:00	0.0	0.0	0.0	0.0
121	8/19/2019 09:42:00	0.0	0.0	0.0	0.0
122	8/19/2019 09:43:00	0.0	0.0	0.0	0.0
123	8/19/2019 09:44:00	0.0	0.0	0.0	0.0
124	8/19/2019 09:45:00	0.0	0.0	0.0	0.0
125	8/19/2019 09:46:00	0.0	0.0	0.0	0.0
126	8/19/2019 09:47:00	0.0	0.0	0.0	0.0
127	8/19/2019 09:48:00	0.0	0.0	0.0	0.0
128	8/19/2019 09:49:00	0.0	0.0	0.0	0.0

129	8/19/2019 09:50:00	0.0	0.0	0.0	0.0
130	8/19/2019 09:51:00	0.0	0.0	0.0	0.0
131	8/19/2019 09:52:00	0.0	0.0	0.0	0.0
132	8/19/2019 09:53:00	0.0	0.0	0.0	0.0
133	8/19/2019 09:54:00	0.0	0.0	0.0	0.0
134	8/19/2019 09:55:00	0.0	0.0	0.0	0.0
135	8/19/2019 09:56:00	0.0	0.0	0.0	0.0
136	8/19/2019 09:57:00	0.0	0.0	0.0	0.0
137	8/19/2019 09:58:00	0.0	0.0	0.0	0.0
138	8/19/2019 09:59:00	0.0	0.0	0.0	0.0
139	8/19/2019 10:00:00	0.0	0.0	0.0	0.0
140	8/19/2019 10:01:00	0.0	0.0	0.0	0.0
141	8/19/2019 10:02:00	0.0	0.0	0.0	0.0
142	8/19/2019 10:03:00	0.0	0.0	0.0	0.0
143	8/19/2019 10:04:00	0.0	0.0	0.0	0.0
144	8/19/2019 10:05:00	0.0	0.0	0.0	0.0
145	8/19/2019 10:06:00	0.0	0.0	0.0	0.0
146	8/19/2019 10:07:00	0.0	0.0	0.0	0.0
147	8/19/2019 10:08:00	0.0	0.0	0.0	0.0
148	8/19/2019 10:09:00	0.0	0.0	0.0	0.0
149	8/19/2019 10:10:00	0.0	0.0	0.0	0.0
150	8/19/2019 10:11:00	0.0	0.0	0.0	0.0
151	8/19/2019 10:12:00	0.0	0.0	0.0	0.0
152	8/19/2019 10:13:00	0.0	0.0	0.0	0.0
153	8/19/2019 10:14:00	0.0	0.0	0.0	0.0
154	8/19/2019 10:15:00	0.0	0.0	0.0	0.0
155	8/19/2019 10:16:00	0.0	0.0	0.0	0.0
156	8/19/2019 10:17:00	0.0	0.0	0.0	0.0
157	8/19/2019 10:18:00	0.0	0.0	0.0	0.0
158	8/19/2019 10:19:00	0.0	0.0	0.0	0.0
159	8/19/2019 10:20:00	0.0	0.0	0.0	0.0
160	8/19/2019 10:21:00	0.0	0.0	0.0	0.0
161	8/19/2019 10:22:00	0.0	0.0	0.0	0.0
162	8/19/2019 10:23:00	0.0	0.0	0.0	0.0
163	8/19/2019 10:24:00	0.0	0.0	0.0	0.0
164	8/19/2019 10:25:00	0.0	0.0	0.0	0.0
165	8/19/2019 10:26:00	0.0	0.0	0.0	0.0
166	8/19/2019 10:27:00	0.0	0.0	0.0	0.0
167	8/19/2019 10:28:00	0.0	0.0	0.0	0.0
168	8/19/2019 10:29:00	0.0	0.0	0.0	0.0
169	8/19/2019 10:30:00	0.0	0.0	0.0	0.0
170	8/19/2019 10:31:00	0.0	0.0	0.0	0.0
171	8/19/2019 10:32:00	0.0	0.0	0.0	0.0
172	8/19/2019 10:33:00	0.0	0.0	0.0	0.0
173	8/19/2019 10:34:00	0.0	0.0	0.0	0.0
174	8/19/2019 10:35:00	0.0	0.0	0.0	0.0
175	8/19/2019 10:36:00	0.0	0.0	0.0	0.0
176	8/19/2019 10:37:00	0.0	0.0	0.0	0.0
177	8/19/2019 10:38:00	0.0	0.0	0.0	0.0
178	8/19/2019 10:39:00	0.0	0.0	0.0	0.0
179	8/19/2019 10:40:00	0.0	0.0	0.0	0.0
180	8/19/2019 10:41:00	0.0	0.0	0.0	0.0
181	8/19/2019 10:42:00	0.0	0.0	0.0	0.0
182	8/19/2019 10:43:00	0.0	0.0	0.0	0.0
183	8/19/2019 10:44:00	0.0	0.0	0.0	0.0
184	8/19/2019 10:45:00	0.0	0.0	0.0	0.0
185	8/19/2019 10:46:00	0.0	0.0	0.0	0.0

186	8/19/2019	10:47:00	0.0	0.0	0.0	0.0
187	8/19/2019	10:48:00	0.0	0.0	0.0	0.0
188	8/19/2019	10:49:00	0.0	0.0	0.0	0.0
189	8/19/2019	10:50:00	0.0	0.0	0.0	0.0
190	8/19/2019	10:51:00	0.0	0.0	0.0	0.0
191	8/19/2019	10:52:00	0.0	0.0	0.0	0.0
192	8/19/2019	10:53:00	0.0	0.0	0.0	0.0
193	8/19/2019	10:54:00	0.0	0.0	0.0	0.0
194	8/19/2019	10:55:00	0.0	0.0	0.0	0.0
195	8/19/2019	10:56:00	0.0	0.0	0.0	0.0
196	8/19/2019	10:57:00	0.0	0.0	0.0	0.0
197	8/19/2019	10:58:00	0.0	0.0	0.0	0.0
198	8/19/2019	10:59:00	0.0	0.0	0.0	0.0
199	8/19/2019	11:00:00	0.0	0.0	0.0	0.0
200	8/19/2019	11:01:00	0.0	0.0	0.0	0.0
201	8/19/2019	11:02:00	0.0	0.0	0.0	0.0
202	8/19/2019	11:03:00	0.0	0.0	0.0	0.0
203	8/19/2019	11:04:00	0.0	0.0	0.0	0.0
204	8/19/2019	11:05:00	0.0	0.0	0.0	0.0
205	8/19/2019	11:06:00	0.0	0.0	0.0	0.0
206	8/19/2019	11:07:00	0.0	0.0	0.0	0.0
207	8/19/2019	11:08:00	0.0	0.0	0.0	0.0
208	8/19/2019	11:09:00	0.0	0.0	0.0	0.0
209	8/19/2019	11:10:00	0.0	0.0	0.0	0.0
210	8/19/2019	11:11:00	0.0	0.0	0.0	0.0
211	8/19/2019	11:12:00	0.0	0.0	0.0	0.0
212	8/19/2019	11:13:00	0.0	0.0	0.0	0.0
213	8/19/2019	11:14:00	0.0	0.0	0.0	0.0
214	8/19/2019	11:15:00	0.0	0.0	0.0	0.0
215	8/19/2019	11:16:00	0.0	0.0	0.0	0.0
216	8/19/2019	11:17:00	0.0	0.0	0.0	0.0
217	8/19/2019	11:18:00	0.0	0.0	0.0	0.0
218	8/19/2019	11:19:00	0.0	0.0	0.0	0.0
219	8/19/2019	11:20:00	0.0	0.0	0.0	0.0
220	8/19/2019	11:21:00	0.0	0.0	0.0	0.0
221	8/19/2019	11:22:00	0.0	0.0	0.0	0.0
222	8/19/2019	11:23:00	0.0	0.0	0.0	0.0
223	8/19/2019	11:24:00	0.0	0.0	0.0	0.0
224	8/19/2019	11:25:00	0.0	0.0	0.0	0.0
225	8/19/2019	11:26:00	0.0	0.0	0.0	0.0
226	8/19/2019	11:27:00	0.0	0.0	0.0	0.0
227	8/19/2019	11:28:00	0.0	0.0	0.0	0.0
228	8/19/2019	11:29:00	0.0	0.0	0.0	0.0
229	8/19/2019	11:30:00	0.0	0.0	0.0	0.0
230	8/19/2019	11:31:00	0.0	0.0	0.0	0.0
231	8/19/2019	11:32:00	0.0	0.0	0.0	0.0
232	8/19/2019	11:33:00	0.0	0.0	0.0	0.0
233	8/19/2019	11:34:00	0.0	0.0	0.0	0.0
234	8/19/2019	11:35:00	0.0	0.0	0.0	0.0
235	8/19/2019	11:36:00	0.0	0.0	0.0	0.0
236	8/19/2019	11:37:00	0.0	0.0	0.0	0.0
237	8/19/2019	11:38:00	0.0	0.0	0.0	0.0
238	8/19/2019	11:39:00	0.0	0.0	0.0	0.0
239	8/19/2019	11:40:00	0.0	0.0	0.0	0.0
240	8/19/2019	11:41:00	0.0	0.0	0.0	0.0
241	8/19/2019	11:42:00	0.0	0.0	0.0	0.0
242	8/19/2019	11:43:00	0.0	0.0	0.0	0.0

243	8/19/2019	11:44:00	0.0	0.0	0.0	0.0
244	8/19/2019	11:45:00	0.0	0.0	0.0	0.0
245	8/19/2019	11:46:00	0.0	0.0	0.0	0.0
246	8/19/2019	11:47:00	0.0	0.0	0.0	0.0
247	8/19/2019	11:48:00	0.0	0.0	0.0	0.0
248	8/19/2019	11:49:00	0.0	0.0	0.0	0.0
249	8/19/2019	11:50:00	0.0	0.0	0.0	0.0
250	8/19/2019	11:51:00	0.0	0.0	0.0	0.0
251	8/19/2019	11:52:00	0.0	0.0	0.0	0.0
252	8/19/2019	11:53:00	0.0	0.0	0.0	0.0
253	8/19/2019	11:54:00	0.0	0.0	0.0	0.0
254	8/19/2019	11:55:00	0.0	0.0	0.0	0.0
255	8/19/2019	11:56:00	0.0	0.0	0.0	0.0
256	8/19/2019	11:57:00	0.0	0.0	0.0	0.0
257	8/19/2019	11:58:00	0.0	0.0	0.0	0.0
258	8/19/2019	11:59:00	0.0	0.0	0.0	0.0
259	8/19/2019	12:00:00	0.0	0.0	0.0	0.0
260	8/19/2019	12:01:00	0.0	0.0	0.0	0.0
261	8/19/2019	12:02:00	0.0	0.0	0.0	0.0
262	8/19/2019	12:03:00	0.0	0.0	0.0	0.0
263	8/19/2019	12:04:00	0.0	0.0	0.0	0.0
264	8/19/2019	12:05:00	0.0	0.0	0.0	0.0
265	8/19/2019	12:06:00	0.0	0.0	0.0	0.0
266	8/19/2019	12:07:00	0.0	0.0	0.0	0.0
267	8/19/2019	12:08:00	0.0	0.0	0.0	0.0
268	8/19/2019	12:09:00	0.0	0.0	0.0	0.0
269	8/19/2019	12:10:00	0.0	0.0	0.0	0.0
270	8/19/2019	12:11:00	0.0	0.0	0.0	0.0
271	8/19/2019	12:12:00	0.0	0.0	0.0	0.0
272	8/19/2019	12:13:00	0.0	0.0	0.0	0.0
273	8/19/2019	12:14:00	0.0	0.0	0.0	0.0
274	8/19/2019	12:15:00	0.0	0.0	0.0	0.0
275	8/19/2019	12:16:00	0.0	0.0	0.0	0.0
276	8/19/2019	12:17:00	0.0	0.0	0.0	0.0
277	8/19/2019	12:18:00	0.0	0.0	0.0	0.0
278	8/19/2019	12:19:00	0.0	0.0	0.0	0.0
279	8/19/2019	12:20:00	0.0	0.0	0.0	0.0
280	8/19/2019	12:21:00	0.0	0.0	0.0	0.0
281	8/19/2019	12:22:00	0.0	0.0	0.0	0.0
282	8/19/2019	12:23:00	0.0	0.0	0.0	0.0
283	8/19/2019	12:24:00	0.0	0.0	0.0	0.0
284	8/19/2019	12:25:00	0.0	0.0	0.0	0.0
285	8/19/2019	12:26:00	0.0	0.0	0.0	0.0
286	8/19/2019	12:27:00	0.0	0.0	0.0	0.0
287	8/19/2019	12:28:00	0.0	0.0	0.0	0.0
288	8/19/2019	12:29:00	0.0	0.0	0.0	0.0
289	8/19/2019	12:30:00	0.0	0.0	0.0	0.0
290	8/19/2019	12:31:00	0.0	0.0	0.0	0.0
291	8/19/2019	12:32:00	0.0	0.0	0.0	0.0
292	8/19/2019	12:33:00	0.0	0.0	0.0	0.0
293	8/19/2019	12:34:00	0.0	0.0	0.0	0.0
294	8/19/2019	12:35:00	0.0	0.0	0.0	0.0
295	8/19/2019	12:36:00	0.0	0.0	0.0	0.0
296	8/19/2019	12:37:00	0.0	0.0	0.0	0.0
297	8/19/2019	12:38:00	0.0	0.0	0.0	0.0
298	8/19/2019	12:39:00	0.0	0.0	0.0	0.0
299	8/19/2019	12:40:00	0.0	0.0	0.0	0.0

300	8/19/2019	12:41:00	0.0	0.0	0.0	0.0
301	8/19/2019	12:42:00	0.0	0.0	0.0	0.0
302	8/19/2019	12:43:00	0.0	0.0	0.0	0.0
303	8/19/2019	12:44:00	0.0	0.0	0.0	0.0
304	8/19/2019	12:45:00	0.0	0.0	0.0	0.0
305	8/19/2019	12:46:00	0.0	0.0	0.0	0.0
306	8/19/2019	12:47:00	0.0	0.0	0.0	0.0
307	8/19/2019	12:48:00	0.0	0.0	0.0	0.0
308	8/19/2019	12:49:00	0.0	0.0	0.0	0.0
309	8/19/2019	12:50:00	0.0	0.0	0.0	0.0
310	8/19/2019	12:51:00	0.0	0.0	0.0	0.0
311	8/19/2019	12:52:00	0.0	0.0	0.0	0.0
312	8/19/2019	12:53:00	0.0	0.0	0.0	0.0
313	8/19/2019	12:54:00	0.0	0.0	0.0	0.0
314	8/19/2019	12:55:00	0.0	0.0	0.0	0.0
315	8/19/2019	12:56:00	0.0	0.0	0.0	0.0
316	8/19/2019	12:57:00	0.0	0.0	0.0	0.0
317	8/19/2019	12:58:00	0.0	0.0	0.0	0.0
318	8/19/2019	12:59:00	0.0	0.0	0.0	0.0
319	8/19/2019	13:00:00	0.0	0.0	0.0	0.0
320	8/19/2019	13:01:00	0.0	0.0	0.0	0.0
321	8/19/2019	13:02:00	0.0	0.0	0.0	0.0
322	8/19/2019	13:03:00	0.0	0.0	0.0	0.0
323	8/19/2019	13:04:00	0.0	0.0	0.0	0.0
324	8/19/2019	13:05:00	0.0	0.0	0.0	0.0
325	8/19/2019	13:06:00	0.0	0.0	0.0	0.0
326	8/19/2019	13:07:00	0.0	0.0	0.0	0.0
327	8/19/2019	13:08:00	0.0	0.0	0.0	0.0
328	8/19/2019	13:09:00	0.0	0.0	0.0	0.0
329	8/19/2019	13:10:00	0.0	0.0	0.0	0.0
330	8/19/2019	13:11:00	0.0	0.0	0.0	0.0
331	8/19/2019	13:12:00	0.0	0.0	0.0	0.0
332	8/19/2019	13:13:00	0.0	0.0	0.0	0.0
333	8/19/2019	13:14:00	0.0	0.0	0.0	0.0
334	8/19/2019	13:15:00	0.0	0.0	0.0	0.0
335	8/19/2019	13:16:00	0.0	0.0	0.0	0.0
336	8/19/2019	13:17:00	0.0	0.0	0.0	0.0
337	8/19/2019	13:18:00	0.0	0.0	0.0	0.0
338	8/19/2019	13:19:00	0.0	0.0	0.0	0.0
339	8/19/2019	13:20:00	0.0	0.0	0.0	0.0
340	8/19/2019	13:21:00	0.0	0.0	0.0	0.0
341	8/19/2019	13:22:00	0.0	0.0	0.0	0.0
342	8/19/2019	13:23:00	0.0	0.0	0.0	0.0
343	8/19/2019	13:24:00	0.0	0.0	0.0	0.0
344	8/19/2019	13:25:00	0.0	0.0	0.0	0.0
345	8/19/2019	13:26:00	0.0	0.0	0.0	0.0
346	8/19/2019	13:27:00	0.0	0.0	0.0	0.0
347	8/19/2019	13:28:00	0.0	0.0	0.0	0.0
348	8/19/2019	13:29:00	0.0	0.0	0.0	0.0
349	8/19/2019	13:30:00	0.0	0.0	0.0	0.0
350	8/19/2019	13:31:00	0.0	0.0	0.0	0.0
351	8/19/2019	13:32:00	0.0	0.0	0.0	0.0
352	8/19/2019	13:33:00	0.0	0.0	0.0	0.0
353	8/19/2019	13:34:00	0.0	0.0	0.0	0.0
354	8/19/2019	13:35:00	0.0	0.0	0.0	0.0
355	8/19/2019	13:36:00	0.0	0.0	0.0	0.0
356	8/19/2019	13:37:00	0.0	0.0	0.0	0.0

357	8/19/2019	13:38:00	0.0	0.0	0.0	0.0
358	8/19/2019	13:39:00	0.0	0.0	0.0	0.0
359	8/19/2019	13:40:00	0.0	0.0	0.0	0.0
360	8/19/2019	13:41:00	0.0	0.0	0.0	0.0
361	8/19/2019	13:42:00	0.0	0.0	0.0	0.0
362	8/19/2019	13:43:00	0.0	0.0	0.0	0.0
363	8/19/2019	13:44:00	0.0	0.0	0.0	0.0
364	8/19/2019	13:45:00	0.0	0.0	0.0	0.0
365	8/19/2019	13:46:00	0.0	0.0	0.0	0.0
366	8/19/2019	13:47:00	0.0	0.0	0.0	0.0
367	8/19/2019	13:48:00	0.0	0.0	0.0	0.0
368	8/19/2019	13:49:00	0.0	0.0	0.0	0.0
369	8/19/2019	13:50:00	0.0	0.0	0.0	0.0
370	8/19/2019	13:51:00	0.0	0.0	0.0	0.0
371	8/19/2019	13:52:00	0.0	0.0	0.0	0.0
372	8/19/2019	13:53:00	0.0	0.0	0.0	0.0
373	8/19/2019	13:54:00	0.0	0.0	0.0	0.0
374	8/19/2019	13:55:00	0.0	0.0	0.0	0.0
375	8/19/2019	13:56:00	0.0	0.0	0.0	0.0
376	8/19/2019	13:57:00	0.0	0.0	0.0	0.0
377	8/19/2019	13:58:00	0.0	0.0	0.0	0.0
378	8/19/2019	13:59:00	0.0	0.0	0.0	0.0
379	8/19/2019	14:00:00	0.0	0.0	0.0	0.0
380	8/19/2019	14:01:00	0.0	0.0	0.0	0.0
381	8/19/2019	14:02:00	0.0	0.0	0.0	0.0
382	8/19/2019	14:03:00	0.0	0.0	0.0	0.0
383	8/19/2019	14:04:00	0.0	0.0	0.0	0.0
384	8/19/2019	14:05:00	0.0	0.0	0.0	0.0
385	8/19/2019	14:06:00	0.0	0.0	0.0	0.0
386	8/19/2019	14:07:00	0.0	0.0	0.0	0.0
387	8/19/2019	14:08:00	0.0	0.0	0.0	0.0
388	8/19/2019	14:09:00	0.0	0.0	0.0	0.0
389	8/19/2019	14:10:00	0.0	0.0	0.0	0.0
390	8/19/2019	14:11:00	0.0	0.0	0.0	0.0
391	8/19/2019	14:12:00	0.0	0.0	0.0	0.0
392	8/19/2019	14:13:00	0.0	0.0	0.0	0.0
393	8/19/2019	14:14:00	0.0	0.0	0.0	0.0
394	8/19/2019	14:15:00	0.0	0.0	0.0	0.0
395	8/19/2019	14:16:00	0.0	0.0	0.0	0.0
396	8/19/2019	14:17:00	0.0	0.0	0.0	0.0
397	8/19/2019	14:18:00	0.0	0.0	0.0	0.0
398	8/19/2019	14:19:00	0.0	0.0	0.0	0.0
399	8/19/2019	14:20:00	0.0	0.0	0.0	0.0
400	8/19/2019	14:21:00	0.0	0.0	0.0	0.0
401	8/19/2019	14:22:00	0.0	0.0	0.0	0.0
402	8/19/2019	14:23:00	0.0	0.0	0.0	0.0
403	8/19/2019	14:24:00	0.0	0.0	0.0	0.0
404	8/19/2019	14:25:00	0.0	0.0	0.0	0.0
405	8/19/2019	14:26:00	0.0	0.0	0.0	0.0
406	8/19/2019	14:27:00	0.0	0.0	0.0	0.0
407	8/19/2019	14:28:00	0.0	0.0	0.0	0.0
408	8/19/2019	14:29:00	0.0	0.0	0.0	0.0
409	8/19/2019	14:30:00	0.0	0.0	0.0	0.0
410	8/19/2019	14:31:00	0.0	0.0	0.0	0.0
411	8/19/2019	14:32:00	0.0	0.0	0.0	0.0
412	8/19/2019	14:33:00	0.0	0.0	0.0	0.0
413	8/19/2019	14:34:00	0.0	0.0	0.0	0.0

414	8/19/2019	14:35:00	0.0	0.0	0.0	0.0
415	8/19/2019	14:36:00	0.0	0.0	0.0	0.0
416	8/19/2019	14:37:00	0.0	0.0	0.0	0.0
417	8/19/2019	14:38:00	0.0	0.0	0.0	0.0
418	8/19/2019	14:39:00	0.0	0.0	0.0	0.0
419	8/19/2019	14:40:00	0.0	0.0	0.0	0.0
420	8/19/2019	14:41:00	0.0	0.0	0.0	0.0
421	8/19/2019	14:42:00	0.0	0.0	0.0	0.0
422	8/19/2019	14:43:00	0.0	0.0	0.0	0.0
423	8/19/2019	14:44:00	0.0	0.0	0.0	0.0
424	8/19/2019	14:45:00	0.0	0.0	0.0	0.0
425	8/19/2019	14:46:00	0.0	0.0	0.0	0.0
426	8/19/2019	14:47:00	0.0	0.0	0.0	0.0
427	8/19/2019	14:48:00	0.0	0.0	0.0	0.0
428	8/19/2019	14:49:00	0.0	0.0	0.0	0.0
429	8/19/2019	14:50:00	0.0	0.0	0.0	0.0
430	8/19/2019	14:51:00	0.0	0.0	0.0	0.0
431	8/19/2019	14:52:00	0.0	0.0	0.0	0.0
432	8/19/2019	14:53:00	0.0	0.0	0.0	0.0
433	8/19/2019	14:54:00	0.0	0.0	0.0	0.0
434	8/19/2019	14:55:00	0.0	0.0	0.0	0.0
435	8/19/2019	14:56:00	0.0	0.0	0.0	0.0
436	8/19/2019	14:57:00	0.0	0.0	0.0	0.0
437	8/19/2019	14:58:00	0.0	0.0	0.0	0.0
438	8/19/2019	14:59:00	0.0	0.0	0.0	0.0
439	8/19/2019	15:00:00	0.0	0.0	0.0	0.0
440	8/19/2019	15:01:00	0.0	0.0	0.0	0.0
441	8/19/2019	15:02:00	0.0	0.0	0.0	0.0
442	8/19/2019	15:03:00	0.0	0.0	0.0	0.0
443	8/19/2019	15:04:00	0.0	0.0	0.0	0.0
444	8/19/2019	15:05:00	0.0	0.0	0.0	0.0
445	8/19/2019	15:06:00	0.0	0.0	0.0	0.0
446	8/19/2019	15:07:00	0.0	0.0	0.0	0.0
447	8/19/2019	15:08:00	0.0	0.0	0.0	0.0
448	8/19/2019	15:09:00	0.0	0.0	0.0	0.0
449	8/19/2019	15:10:00	0.0	0.0	0.0	0.0
450	8/19/2019	15:11:00	0.0	0.0	0.0	0.0
451	8/19/2019	15:12:00	0.0	0.0	0.0	0.0
452	8/19/2019	15:13:00	0.0	0.0	0.0	0.0
453	8/19/2019	15:14:00	0.0	0.0	0.0	0.0
454	8/19/2019	15:15:00	0.0	0.0	0.0	0.0
455	8/19/2019	15:16:00	0.0	0.0	0.0	0.0
456	8/19/2019	15:17:00	0.0	0.0	0.0	0.0
457	8/19/2019	15:18:00	0.0	0.0	0.0	0.0
458	8/19/2019	15:19:00	0.0	0.0	0.0	0.0
459	8/19/2019	15:20:00	0.0	0.0	0.0	0.0
460	8/19/2019	15:21:00	0.0	0.0	0.0	0.0
461	8/19/2019	15:22:00	0.0	0.0	0.0	0.0
462	8/19/2019	15:23:00	0.0	0.0	0.0	0.0
463	8/19/2019	15:24:00	0.0	0.0	0.0	0.0
464	8/19/2019	15:25:00	0.0	0.0	0.0	0.0
465	8/19/2019	15:26:00	0.0	0.0	0.0	0.0
466	8/19/2019	15:27:00	0.0	0.0	0.0	0.0
467	8/19/2019	15:28:00	0.0	0.0	0.0	0.0
468	8/19/2019	15:29:00	0.0	0.0	0.0	0.0
469	8/19/2019	15:30:00	0.0	0.0	0.0	0.0
470	8/19/2019	15:31:00	0.0	0.0	0.0	0.0

471	8/19/2019	15:32:00	0.0	0.0	0.0	0.0
472	8/19/2019	15:33:00	0.0	0.0	0.0	0.0
473	8/19/2019	15:34:00	0.0	0.0	0.0	0.0
474	8/19/2019	15:35:00	0.0	0.0	0.0	0.0
475	8/19/2019	15:36:00	0.0	0.0	0.0	0.0
476	8/19/2019	15:37:00	0.0	0.0	0.0	0.0
477	8/19/2019	15:38:00	0.0	0.0	0.0	0.0
478	8/19/2019	15:39:00	0.0	0.0	0.0	0.0
479	8/19/2019	15:40:00	0.0	0.0	0.0	0.0
480	8/19/2019	15:41:00	0.0	0.0	0.0	0.0
481	8/19/2019	15:42:00	0.0	0.0	0.0	0.0
482	8/19/2019	15:43:00	0.0	0.0	0.0	0.0
483	8/19/2019	15:44:00	0.0	0.0	0.0	0.0
484	8/19/2019	15:45:00	0.0	0.0	0.0	0.0
485	8/19/2019	15:46:00	0.0	0.0	0.0	0.0
486	8/19/2019	15:47:00	0.0	0.0	0.0	0.0
487	8/19/2019	15:48:00	0.0	0.0	0.0	0.0
488	8/19/2019	15:49:00	0.0	0.0	0.0	0.0
489	8/19/2019	15:50:00	0.0	0.0	0.0	0.0
490	8/19/2019	15:51:00	0.0	0.0	0.0	0.0
491	8/19/2019	15:52:00	0.0	0.0	0.0	0.0
492	8/19/2019	15:53:00	0.0	0.0	0.0	0.0
493	8/19/2019	15:54:00	0.0	0.0	0.0	0.0
494	8/19/2019	15:55:00	0.0	0.0	0.0	0.0
495	8/19/2019	15:56:00	0.0	0.0	0.0	0.0
496	8/19/2019	15:57:00	0.0	0.0	0.0	0.0
497	8/19/2019	15:58:00	0.0	0.0	0.0	0.0
498	8/19/2019	15:59:00	0.0	0.0	0.0	0.0
499	8/19/2019	16:00:00	0.0	0.0	0.0	0.0
500	8/19/2019	16:01:00	0.0	0.0	0.0	0.0
501	8/19/2019	16:02:00	0.0	0.0	0.0	0.0
502	8/19/2019	16:03:00	0.0	0.0	0.0	0.0
503	8/19/2019	16:04:00	0.0	0.0	0.0	0.0
504	8/19/2019	16:05:00	0.0	0.0	0.0	0.0
505	8/19/2019	16:06:00	0.0	0.0	0.0	0.0
506	8/19/2019	16:07:00	0.0	0.0	0.0	0.0
507	8/19/2019	16:08:00	0.0	0.0	0.0	0.0
508	8/19/2019	16:09:00	0.0	0.0	0.0	0.0
509	8/19/2019	16:10:00	0.0	0.0	0.0	0.0
510	8/19/2019	16:11:00	0.0	0.0	0.0	0.0
511	8/19/2019	16:12:00	0.0	0.0	0.0	0.0
512	8/19/2019	16:13:00	0.0	0.0	0.0	0.0
513	8/19/2019	16:14:00	0.0	0.0	0.0	0.0
514	8/19/2019	16:15:00	0.0	0.0	0.0	0.0
515	8/19/2019	16:16:00	0.0	0.0	0.0	0.0
516	8/19/2019	16:17:00	0.0	0.0	0.0	0.0
517	8/19/2019	16:18:00	0.0	0.0	0.0	0.0
518	8/19/2019	16:19:00	0.0	0.0	0.0	0.0
519	8/19/2019	16:20:00	0.0	0.0	0.0	0.0
520	8/19/2019	16:21:00	0.0	0.0	0.0	0.0
521	8/19/2019	16:22:00	0.0	0.0	0.0	0.0
522	8/19/2019	16:23:00	0.0	0.0	0.0	0.0
523	8/19/2019	16:24:00	0.0	0.0	0.0	0.0
524	8/19/2019	16:25:00	0.0	0.0	0.0	0.0
525	8/19/2019	16:26:00	0.0	0.0	0.0	0.0
526	8/19/2019	16:27:00	0.0	0.0	0.0	0.0
527	8/19/2019	16:28:00	0.0	0.0	0.0	0.0

528	8/19/2019	16:29:00	0.0	0.0	0.0	0.0
529	8/19/2019	16:30:00	0.0	0.0	0.0	0.0
530	8/19/2019	16:31:00	0.0	0.0	0.0	0.0
531	8/19/2019	16:32:00	0.0	0.0	0.0	0.0
532	8/19/2019	16:33:00	0.0	0.0	0.0	0.0
533	8/19/2019	16:34:00	0.0	0.0	0.0	0.0
534	8/19/2019	16:35:00	0.0	0.0	0.0	0.0
535	8/19/2019	16:36:00	0.0	0.0	0.0	0.0
536	8/19/2019	16:37:00	0.0	0.0	0.0	0.0
537	8/19/2019	16:38:00	0.0	0.0	0.0	0.0
538	8/19/2019	16:39:00	0.0	0.0	0.0	0.0
539	8/19/2019	16:40:00	0.0	0.0	0.0	0.0
540	8/19/2019	16:41:00	0.0	0.0	0.0	0.0
541	8/19/2019	16:42:00	0.0	0.0	0.0	0.0
542	8/19/2019	16:43:00	0.0	0.0	0.0	0.0
543	8/19/2019	16:44:00	0.0	0.0	0.0	0.0
544	8/19/2019	16:45:00	0.0	0.0	0.0	0.0
545	8/19/2019	16:46:00	0.0	0.0	0.0	0.0
546	8/19/2019	16:47:00	0.0	0.0	0.0	0.0
547	8/19/2019	16:48:00	0.0	0.0	0.0	0.0
548	8/19/2019	16:49:00	0.0	0.0	0.0	0.0
549	8/19/2019	16:50:00	0.0	0.0	0.0	0.0
550	8/19/2019	16:51:00	0.0	0.0	0.0	0.0
551	8/19/2019	16:52:00	0.0	0.0	0.0	0.0
552	8/19/2019	16:53:00	0.0	0.0	0.0	0.0
553	8/19/2019	16:54:00	0.0	0.0	0.0	0.0
554	8/19/2019	16:55:00	0.0	0.0	0.0	0.0
555	8/19/2019	16:56:00	0.0	0.0	0.0	0.0
556	8/19/2019	16:57:00	0.0	0.0	0.0	0.0
Peak			0.0	0.1	0.2	0.1
Min			0.0	0.0	0.0	0.0
Average				0.0	0.0	0.0

****

TWA/STEL

Index	PID(ppm) Date/Time		PID(ppm) (TWA)	(STEL)
001	8/19/2019	07:42:00	0.0	---
002	8/19/2019	07:43:00	0.0	---
003	8/19/2019	07:44:00	0.0	---
004	8/19/2019	07:45:00	0.0	---
005	8/19/2019	07:46:00	0.0	---
006	8/19/2019	07:47:00	0.0	---
007	8/19/2019	07:48:00	0.0	---
008	8/19/2019	07:49:00	0.0	---
009	8/19/2019	07:50:00	0.0	---
010	8/19/2019	07:51:00	0.0	---
011	8/19/2019	07:52:00	0.0	---
012	8/19/2019	07:53:00	0.0	---
013	8/19/2019	07:54:00	0.0	---
014	8/19/2019	07:55:00	0.0	---
015	8/19/2019	07:56:00	0.0	0.0
016	8/19/2019	07:57:00	0.0	0.0
017	8/19/2019	07:58:00	0.0	0.0
018	8/19/2019	07:59:00	0.0	0.0
019	8/19/2019	08:00:00	0.0	0.0
020	8/19/2019	08:01:00	0.0	0.0

021	8/19/2019 08:02:00	0.0	0.0
022	8/19/2019 08:03:00	0.0	0.0
023	8/19/2019 08:04:00	0.0	0.0
024	8/19/2019 08:05:00	0.0	0.0
025	8/19/2019 08:06:00	0.0	0.0
026	8/19/2019 08:07:00	0.0	0.0
027	8/19/2019 08:08:00	0.0	0.0
028	8/19/2019 08:09:00	0.0	0.0
029	8/19/2019 08:10:00	0.0	0.0
030	8/19/2019 08:11:00	0.0	0.0
031	8/19/2019 08:12:00	0.0	0.0
032	8/19/2019 08:13:00	0.0	0.0
033	8/19/2019 08:14:00	0.0	0.0
034	8/19/2019 08:15:00	0.0	0.0
035	8/19/2019 08:16:00	0.0	0.0
036	8/19/2019 08:17:00	0.0	0.0
037	8/19/2019 08:18:00	0.0	0.0
038	8/19/2019 08:19:00	0.0	0.0
039	8/19/2019 08:20:00	0.0	0.0
040	8/19/2019 08:21:00	0.0	0.0
041	8/19/2019 08:22:00	0.0	0.0
042	8/19/2019 08:23:00	0.0	0.0
043	8/19/2019 08:24:00	0.0	0.0
044	8/19/2019 08:25:00	0.0	0.0
045	8/19/2019 08:26:00	0.0	0.0
046	8/19/2019 08:27:00	0.0	0.0
047	8/19/2019 08:28:00	0.0	0.0
048	8/19/2019 08:29:00	0.0	0.0
049	8/19/2019 08:30:00	0.0	0.0
050	8/19/2019 08:31:00	0.0	0.0
051	8/19/2019 08:32:00	0.0	0.0
052	8/19/2019 08:33:00	0.0	0.0
053	8/19/2019 08:34:00	0.0	0.0
054	8/19/2019 08:35:00	0.0	0.0
055	8/19/2019 08:36:00	0.0	0.0
056	8/19/2019 08:37:00	0.0	0.0
057	8/19/2019 08:38:00	0.0	0.0
058	8/19/2019 08:39:00	0.0	0.0
059	8/19/2019 08:40:00	0.0	0.0
060	8/19/2019 08:41:00	0.0	0.0
061	8/19/2019 08:42:00	0.0	0.0
062	8/19/2019 08:43:00	0.0	0.0
063	8/19/2019 08:44:00	0.0	0.0
064	8/19/2019 08:45:00	0.0	0.0
065	8/19/2019 08:46:00	0.0	0.0
066	8/19/2019 08:47:00	0.0	0.0
067	8/19/2019 08:48:00	0.0	0.0
068	8/19/2019 08:49:00	0.0	0.0
069	8/19/2019 08:50:00	0.0	0.0
070	8/19/2019 08:51:00	0.0	0.0
071	8/19/2019 08:52:00	0.0	0.0
072	8/19/2019 08:53:00	0.0	0.0
073	8/19/2019 08:54:00	0.0	0.0
074	8/19/2019 08:55:00	0.0	0.0
075	8/19/2019 08:56:00	0.0	0.0
076	8/19/2019 08:57:00	0.0	0.0
077	8/19/2019 08:58:00	0.0	0.0

078	8/19/2019 08:59:00	0.0	0.0
079	8/19/2019 09:00:00	0.0	0.0
080	8/19/2019 09:01:00	0.0	0.0
081	8/19/2019 09:02:00	0.0	0.0
082	8/19/2019 09:03:00	0.0	0.0
083	8/19/2019 09:04:00	0.0	0.0
084	8/19/2019 09:05:00	0.0	0.0
085	8/19/2019 09:06:00	0.0	0.0
086	8/19/2019 09:07:00	0.0	0.0
087	8/19/2019 09:08:00	0.0	0.0
088	8/19/2019 09:09:00	0.0	0.0
089	8/19/2019 09:10:00	0.0	0.0
090	8/19/2019 09:11:00	0.0	0.0
091	8/19/2019 09:12:00	0.0	0.0
092	8/19/2019 09:13:00	0.0	0.0
093	8/19/2019 09:14:00	0.0	0.0
094	8/19/2019 09:15:00	0.0	0.0
095	8/19/2019 09:16:00	0.0	0.0
096	8/19/2019 09:17:00	0.0	0.0
097	8/19/2019 09:18:00	0.0	0.0
098	8/19/2019 09:19:00	0.0	0.0
099	8/19/2019 09:20:00	0.0	0.0
100	8/19/2019 09:21:00	0.0	0.0
101	8/19/2019 09:22:00	0.0	0.0
102	8/19/2019 09:23:00	0.0	0.0
103	8/19/2019 09:24:00	0.0	0.0
104	8/19/2019 09:25:00	0.0	0.0
105	8/19/2019 09:26:00	0.0	0.0
106	8/19/2019 09:27:00	0.0	0.0
107	8/19/2019 09:28:00	0.0	0.0
108	8/19/2019 09:29:00	0.0	0.0
109	8/19/2019 09:30:00	0.0	0.0
110	8/19/2019 09:31:00	0.0	0.0
111	8/19/2019 09:32:00	0.0	0.0
112	8/19/2019 09:33:00	0.0	0.0
113	8/19/2019 09:34:00	0.0	0.0
114	8/19/2019 09:35:00	0.0	0.0
115	8/19/2019 09:36:00	0.0	0.0
116	8/19/2019 09:37:00	0.0	0.0
117	8/19/2019 09:38:00	0.0	0.0
118	8/19/2019 09:39:00	0.0	0.0
119	8/19/2019 09:40:00	0.0	0.0
120	8/19/2019 09:41:00	0.0	0.0
121	8/19/2019 09:42:00	0.0	0.0
122	8/19/2019 09:43:00	0.0	0.0
123	8/19/2019 09:44:00	0.0	0.0
124	8/19/2019 09:45:00	0.0	0.0
125	8/19/2019 09:46:00	0.0	0.0
126	8/19/2019 09:47:00	0.0	0.0
127	8/19/2019 09:48:00	0.0	0.0
128	8/19/2019 09:49:00	0.0	0.0
129	8/19/2019 09:50:00	0.0	0.0
130	8/19/2019 09:51:00	0.0	0.0
131	8/19/2019 09:52:00	0.0	0.0
132	8/19/2019 09:53:00	0.0	0.0
133	8/19/2019 09:54:00	0.0	0.0
134	8/19/2019 09:55:00	0.0	0.0

135	8/19/2019 09:56:00	0.0	0.0
136	8/19/2019 09:57:00	0.0	0.0
137	8/19/2019 09:58:00	0.0	0.0
138	8/19/2019 09:59:00	0.0	0.0
139	8/19/2019 10:00:00	0.0	0.0
140	8/19/2019 10:01:00	0.0	0.0
141	8/19/2019 10:02:00	0.0	0.0
142	8/19/2019 10:03:00	0.0	0.0
143	8/19/2019 10:04:00	0.0	0.0
144	8/19/2019 10:05:00	0.0	0.0
145	8/19/2019 10:06:00	0.0	0.0
146	8/19/2019 10:07:00	0.0	0.0
147	8/19/2019 10:08:00	0.0	0.0
148	8/19/2019 10:09:00	0.0	0.0
149	8/19/2019 10:10:00	0.0	0.0
150	8/19/2019 10:11:00	0.0	0.0
151	8/19/2019 10:12:00	0.0	0.0
152	8/19/2019 10:13:00	0.0	0.0
153	8/19/2019 10:14:00	0.0	0.0
154	8/19/2019 10:15:00	0.0	0.0
155	8/19/2019 10:16:00	0.0	0.0
156	8/19/2019 10:17:00	0.0	0.0
157	8/19/2019 10:18:00	0.0	0.0
158	8/19/2019 10:19:00	0.0	0.0
159	8/19/2019 10:20:00	0.0	0.0
160	8/19/2019 10:21:00	0.0	0.0
161	8/19/2019 10:22:00	0.0	0.0
162	8/19/2019 10:23:00	0.0	0.0
163	8/19/2019 10:24:00	0.0	0.0
164	8/19/2019 10:25:00	0.0	0.0
165	8/19/2019 10:26:00	0.0	0.0
166	8/19/2019 10:27:00	0.0	0.0
167	8/19/2019 10:28:00	0.0	0.0
168	8/19/2019 10:29:00	0.0	0.0
169	8/19/2019 10:30:00	0.0	0.0
170	8/19/2019 10:31:00	0.0	0.0
171	8/19/2019 10:32:00	0.0	0.0
172	8/19/2019 10:33:00	0.0	0.0
173	8/19/2019 10:34:00	0.0	0.0
174	8/19/2019 10:35:00	0.0	0.0
175	8/19/2019 10:36:00	0.0	0.0
176	8/19/2019 10:37:00	0.0	0.0
177	8/19/2019 10:38:00	0.0	0.0
178	8/19/2019 10:39:00	0.0	0.0
179	8/19/2019 10:40:00	0.0	0.0
180	8/19/2019 10:41:00	0.0	0.0
181	8/19/2019 10:42:00	0.0	0.0
182	8/19/2019 10:43:00	0.0	0.0
183	8/19/2019 10:44:00	0.0	0.0
184	8/19/2019 10:45:00	0.0	0.0
185	8/19/2019 10:46:00	0.0	0.0
186	8/19/2019 10:47:00	0.0	0.0
187	8/19/2019 10:48:00	0.0	0.0
188	8/19/2019 10:49:00	0.0	0.0
189	8/19/2019 10:50:00	0.0	0.0
190	8/19/2019 10:51:00	0.0	0.0
191	8/19/2019 10:52:00	0.0	0.0

192	8/19/2019	10:53:00	0.0	0.0
193	8/19/2019	10:54:00	0.0	0.0
194	8/19/2019	10:55:00	0.0	0.0
195	8/19/2019	10:56:00	0.0	0.0
196	8/19/2019	10:57:00	0.0	0.0
197	8/19/2019	10:58:00	0.0	0.0
198	8/19/2019	10:59:00	0.0	0.0
199	8/19/2019	11:00:00	0.0	0.0
200	8/19/2019	11:01:00	0.0	0.0
201	8/19/2019	11:02:00	0.0	0.0
202	8/19/2019	11:03:00	0.0	0.0
203	8/19/2019	11:04:00	0.0	0.0
204	8/19/2019	11:05:00	0.0	0.0
205	8/19/2019	11:06:00	0.0	0.0
206	8/19/2019	11:07:00	0.0	0.0
207	8/19/2019	11:08:00	0.0	0.0
208	8/19/2019	11:09:00	0.0	0.0
209	8/19/2019	11:10:00	0.0	0.0
210	8/19/2019	11:11:00	0.0	0.0
211	8/19/2019	11:12:00	0.0	0.0
212	8/19/2019	11:13:00	0.0	0.0
213	8/19/2019	11:14:00	0.0	0.0
214	8/19/2019	11:15:00	0.0	0.0
215	8/19/2019	11:16:00	0.0	0.0
216	8/19/2019	11:17:00	0.0	0.0
217	8/19/2019	11:18:00	0.0	0.0
218	8/19/2019	11:19:00	0.0	0.0
219	8/19/2019	11:20:00	0.0	0.0
220	8/19/2019	11:21:00	0.0	0.0
221	8/19/2019	11:22:00	0.0	0.0
222	8/19/2019	11:23:00	0.0	0.0
223	8/19/2019	11:24:00	0.0	0.0
224	8/19/2019	11:25:00	0.0	0.0
225	8/19/2019	11:26:00	0.0	0.0
226	8/19/2019	11:27:00	0.0	0.0
227	8/19/2019	11:28:00	0.0	0.0
228	8/19/2019	11:29:00	0.0	0.0
229	8/19/2019	11:30:00	0.0	0.0
230	8/19/2019	11:31:00	0.0	0.0
231	8/19/2019	11:32:00	0.0	0.0
232	8/19/2019	11:33:00	0.0	0.0
233	8/19/2019	11:34:00	0.0	0.0
234	8/19/2019	11:35:00	0.0	0.0
235	8/19/2019	11:36:00	0.0	0.0
236	8/19/2019	11:37:00	0.0	0.0
237	8/19/2019	11:38:00	0.0	0.0
238	8/19/2019	11:39:00	0.0	0.0
239	8/19/2019	11:40:00	0.0	0.0
240	8/19/2019	11:41:00	0.0	0.0
241	8/19/2019	11:42:00	0.0	0.0
242	8/19/2019	11:43:00	0.0	0.0
243	8/19/2019	11:44:00	0.0	0.0
244	8/19/2019	11:45:00	0.0	0.0
245	8/19/2019	11:46:00	0.0	0.0
246	8/19/2019	11:47:00	0.0	0.0
247	8/19/2019	11:48:00	0.0	0.0
248	8/19/2019	11:49:00	0.0	0.0

249	8/19/2019	11:50:00	0.0	0.0
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252	8/19/2019	11:53:00	0.0	0.0
253	8/19/2019	11:54:00	0.0	0.0
254	8/19/2019	11:55:00	0.0	0.0
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257	8/19/2019	11:58:00	0.0	0.0
258	8/19/2019	11:59:00	0.0	0.0
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260	8/19/2019	12:01:00	0.0	0.0
261	8/19/2019	12:02:00	0.0	0.0
262	8/19/2019	12:03:00	0.0	0.0
263	8/19/2019	12:04:00	0.0	0.0
264	8/19/2019	12:05:00	0.0	0.0
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266	8/19/2019	12:07:00	0.0	0.0
267	8/19/2019	12:08:00	0.0	0.0
268	8/19/2019	12:09:00	0.0	0.0
269	8/19/2019	12:10:00	0.0	0.0
270	8/19/2019	12:11:00	0.0	0.0
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273	8/19/2019	12:14:00	0.0	0.0
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275	8/19/2019	12:16:00	0.0	0.0
276	8/19/2019	12:17:00	0.0	0.0
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278	8/19/2019	12:19:00	0.0	0.0
279	8/19/2019	12:20:00	0.0	0.0
280	8/19/2019	12:21:00	0.0	0.0
281	8/19/2019	12:22:00	0.0	0.0
282	8/19/2019	12:23:00	0.0	0.0
283	8/19/2019	12:24:00	0.0	0.0
284	8/19/2019	12:25:00	0.0	0.0
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287	8/19/2019	12:28:00	0.0	0.0
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290	8/19/2019	12:31:00	0.0	0.0
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302	8/19/2019	12:43:00	0.0	0.0
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325	8/19/2019 13:06:00	0.0	0.0
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337	8/19/2019 13:18:00	0.0	0.0
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349	8/19/2019 13:30:00	0.0	0.0
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357	8/19/2019 13:38:00	0.0	0.0
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359	8/19/2019 13:40:00	0.0	0.0
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380	8/19/2019 14:01:00	0.0	0.0
381	8/19/2019 14:02:00	0.0	0.0
382	8/19/2019 14:03:00	0.0	0.0
383	8/19/2019 14:04:00	0.0	0.0
384	8/19/2019 14:05:00	0.0	0.0
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386	8/19/2019 14:07:00	0.0	0.0
387	8/19/2019 14:08:00	0.0	0.0
388	8/19/2019 14:09:00	0.0	0.0
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392	8/19/2019 14:13:00	0.0	0.0
393	8/19/2019 14:14:00	0.0	0.0
394	8/19/2019 14:15:00	0.0	0.0
395	8/19/2019 14:16:00	0.0	0.0
396	8/19/2019 14:17:00	0.0	0.0
397	8/19/2019 14:18:00	0.0	0.0
398	8/19/2019 14:19:00	0.0	0.0
399	8/19/2019 14:20:00	0.0	0.0
400	8/19/2019 14:21:00	0.0	0.0
401	8/19/2019 14:22:00	0.0	0.0
402	8/19/2019 14:23:00	0.0	0.0
403	8/19/2019 14:24:00	0.0	0.0
404	8/19/2019 14:25:00	0.0	0.0
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406	8/19/2019 14:27:00	0.0	0.0
407	8/19/2019 14:28:00	0.0	0.0
408	8/19/2019 14:29:00	0.0	0.0
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410	8/19/2019 14:31:00	0.0	0.0
411	8/19/2019 14:32:00	0.0	0.0
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416	8/19/2019 14:37:00	0.0	0.0
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438	8/19/2019 14:59:00	0.0	0.0
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443	8/19/2019 15:04:00	0.0	0.0
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446	8/19/2019 15:07:00	0.0	0.0
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451	8/19/2019 15:12:00	0.0	0.0
452	8/19/2019 15:13:00	0.0	0.0
453	8/19/2019 15:14:00	0.0	0.0
454	8/19/2019 15:15:00	0.0	0.0
455	8/19/2019 15:16:00	0.0	0.0
456	8/19/2019 15:17:00	0.0	0.0
457	8/19/2019 15:18:00	0.0	0.0
458	8/19/2019 15:19:00	0.0	0.0
459	8/19/2019 15:20:00	0.0	0.0
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462	8/19/2019 15:23:00	0.0	0.0
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465	8/19/2019 15:26:00	0.0	0.0
466	8/19/2019 15:27:00	0.0	0.0
467	8/19/2019 15:28:00	0.0	0.0
468	8/19/2019 15:29:00	0.0	0.0
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476	8/19/2019 15:37:00	0.0	0.0

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479	8/19/2019 15:40:00	0.0	0.0
480	8/19/2019 15:41:00	0.0	0.0
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484	8/19/2019 15:45:00	0.0	0.0
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486	8/19/2019 15:47:00	0.0	0.0
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496	8/19/2019 15:57:00	0.0	0.0
497	8/19/2019 15:58:00	0.0	0.0
498	8/19/2019 15:59:00	0.0	0.0
499	8/19/2019 16:00:00	0.0	0.0
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501	8/19/2019 16:02:00	0.0	0.0
502	8/19/2019 16:03:00	0.0	0.0
503	8/19/2019 16:04:00	0.0	0.0
504	8/19/2019 16:05:00	0.0	0.0
505	8/19/2019 16:06:00	0.0	0.0
506	8/19/2019 16:07:00	0.0	0.0
507	8/19/2019 16:08:00	0.0	0.0
508	8/19/2019 16:09:00	0.0	0.0
509	8/19/2019 16:10:00	0.0	0.0
510	8/19/2019 16:11:00	0.0	0.0
511	8/19/2019 16:12:00	0.0	0.0
512	8/19/2019 16:13:00	0.0	0.0
513	8/19/2019 16:14:00	0.0	0.0
514	8/19/2019 16:15:00	0.0	0.0
515	8/19/2019 16:16:00	0.0	0.0
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517	8/19/2019 16:18:00	0.0	0.0
518	8/19/2019 16:19:00	0.0	0.0
519	8/19/2019 16:20:00	0.0	0.0
520	8/19/2019 16:21:00	0.0	0.0
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522	8/19/2019 16:23:00	0.0	0.0
523	8/19/2019 16:24:00	0.0	0.0
524	8/19/2019 16:25:00	0.0	0.0
525	8/19/2019 16:26:00	0.0	0.0
526	8/19/2019 16:27:00	0.0	0.0
527	8/19/2019 16:28:00	0.0	0.0
528	8/19/2019 16:29:00	0.0	0.0
529	8/19/2019 16:30:00	0.0	0.0
530	8/19/2019 16:31:00	0.0	0.0
531	8/19/2019 16:32:00	0.0	0.0
532	8/19/2019 16:33:00	0.0	0.0
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536	8/19/2019 16:37:00	0.0	0.0
537	8/19/2019 16:38:00	0.0	0.0
538	8/19/2019 16:39:00	0.0	0.0
539	8/19/2019 16:40:00	0.0	0.0
540	8/19/2019 16:41:00	0.0	0.0
541	8/19/2019 16:42:00	0.0	0.0
542	8/19/2019 16:43:00	0.0	0.0
543	8/19/2019 16:44:00	0.0	0.0
544	8/19/2019 16:45:00	0.0	0.0
545	8/19/2019 16:46:00	0.0	0.0
546	8/19/2019 16:47:00	0.0	0.0
547	8/19/2019 16:48:00	0.0	0.0
548	8/19/2019 16:49:00	0.0	0.0
549	8/19/2019 16:50:00	0.0	0.0
550	8/19/2019 16:51:00	0.0	0.0
551	8/19/2019 16:52:00	0.0	0.0
552	8/19/2019 16:53:00	0.0	0.0
553	8/19/2019 16:54:00	0.0	0.0
554	8/19/2019 16:55:00	0.0	0.0
555	8/19/2019 16:56:00	0.0	0.0
556	8/19/2019 16:57:00	0.0	0.0

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19/08/19 07:43
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Summary

Unit Name MiniRAE 3000(PGM-7320)
Unit SN 592-914273
Unit Firmware Ver V1.20A

Running Mode Hygiene Mode
Measure Type Min; Avg; Max; Real
Datalog Mode Continuous
Datalog Type Manual
Diagnostic Mode No
Stop Reason Power Down

Site ID RAE00005
User ID 00000001

Begin 8/19/2019 07:43:05
End 8/19/2019 16:58:13
Sample Period(s) 60
Number of Records 555

Sensor VOC(ppm)
Span 100.000
Span 2 N/A
Low Alarm 50.000
High Alarm 100.000
Over Alarm 2000.000
STEL Alarm 25.000
TWA Alarm 10.000
Measurement Gas Isobutylene
Calibration Time 8/16/2019 07:43
Peak 0.061
Min 0.000
Average 0.005

****
Datalog

Index	Date/Time	VOC(ppm) (Min)	VOC(ppm) (Avg)	VOC(ppm) (Max)	VOC(ppm) (Real)
001	8/19/2019 07:44:05	0.024	0.026	0.030	0.030
002	8/19/2019 07:45:05	0.023	0.028	0.037	0.036
003	8/19/2019 07:46:05	0.031	0.034	0.039	0.031
004	8/19/2019 07:47:05	0.028	0.034	0.039	0.034
005	8/19/2019 07:48:05	0.032	0.034	0.038	0.032
006	8/19/2019 07:49:05	0.031	0.034	0.038	0.036
007	8/19/2019 07:50:05	0.034	0.036	0.044	0.037
008	8/19/2019 07:51:05	0.037	0.040	0.044	0.043
009	8/19/2019 07:52:05	0.038	0.042	0.046	0.042
010	8/19/2019 07:53:05	0.042	0.045	0.049	0.043
011	8/19/2019 07:54:05	0.041	0.044	0.048	0.043
012	8/19/2019 07:55:05	0.043	0.045	0.049	0.045
013	8/19/2019 07:56:05	0.044	0.047	0.051	0.051
014	8/19/2019 07:57:05	0.048	0.051	0.054	0.053

015	8/19/2019 07:58:05	0.052	0.053	0.057	0.055
016	8/19/2019 07:59:05	0.050	0.052	0.055	0.053
017	8/19/2019 08:00:05	0.049	0.052	0.055	0.051
018	8/19/2019 08:01:05	0.045	0.050	0.056	0.055
019	8/19/2019 08:02:05	0.051	0.052	0.057	0.053
020	8/19/2019 08:03:05	0.050	0.054	0.060	0.051
021	8/19/2019 08:04:05	0.051	0.054	0.060	0.055
022	8/19/2019 08:05:05	0.050	0.055	0.061	0.061
023	8/19/2019 08:06:05	0.050	0.056	0.080	0.055
024	8/19/2019 08:07:05	0.047	0.051	0.055	0.052
025	8/19/2019 08:08:05	0.049	0.051	0.056	0.053
026	8/19/2019 08:09:05	0.046	0.050	0.054	0.050
027	8/19/2019 08:10:05	0.047	0.050	0.054	0.050
028	8/19/2019 08:11:05	0.045	0.048	0.052	0.051
029	8/19/2019 08:12:05	0.050	0.052	0.056	0.050
030	8/19/2019 08:13:05	0.046	0.050	0.055	0.049
031	8/19/2019 08:14:05	0.045	0.048	0.052	0.048
032	8/19/2019 08:15:05	0.047	0.049	0.052	0.051
033	8/19/2019 08:16:05	0.048	0.051	0.056	0.050
034	8/19/2019 08:17:05	0.000	0.044	0.054	0.007
035	8/19/2019 08:18:05	0.000	0.032	0.045	0.039
036	8/19/2019 08:19:05	0.035	0.037	0.042	0.041
037	8/19/2019 08:20:05	0.035	0.038	0.041	0.041
038	8/19/2019 08:21:05	0.034	0.038	0.042	0.041
039	8/19/2019 08:22:05	0.038	0.039	0.042	0.039
040	8/19/2019 08:23:05	0.038	0.039	0.041	0.040
041	8/19/2019 08:24:05	0.033	0.039	0.042	0.033
042	8/19/2019 08:25:05	0.031	0.037	0.042	0.042
043	8/19/2019 08:26:05	0.038	0.042	0.046	0.045
044	8/19/2019 08:27:05	0.040	0.042	0.046	0.042
045	8/19/2019 08:28:05	0.000	0.039	0.046	0.046
046	8/19/2019 08:29:05	0.015	0.039	0.048	0.015
047	8/19/2019 08:30:05	0.000	0.032	0.041	0.031
048	8/19/2019 08:31:05	0.000	0.031	0.039	0.034
049	8/19/2019 08:32:05	0.000	0.030	0.039	0.030
050	8/19/2019 08:33:05	0.000	0.028	0.038	0.028
051	8/19/2019 08:34:05	0.000	0.026	0.035	0.019
052	8/19/2019 08:35:05	0.000	0.020	0.030	0.019
053	8/19/2019 08:36:05	0.000	0.024	0.034	0.031
054	8/19/2019 08:37:05	0.000	0.024	0.037	0.024
055	8/19/2019 08:38:05	0.000	0.020	0.030	0.006
056	8/19/2019 08:39:05	0.000	0.017	0.026	0.025
057	8/19/2019 08:40:05	0.000	0.018	0.030	0.021
058	8/19/2019 08:41:05	0.000	0.014	0.026	0.019
059	8/19/2019 08:42:05	0.000	0.017	0.025	0.022
060	8/19/2019 08:43:05	0.000	0.015	0.028	0.014
061	8/19/2019 08:44:05	0.000	0.019	0.028	0.019
062	8/19/2019 08:45:05	0.000	0.015	0.028	0.005
063	8/19/2019 08:46:05	0.000	0.036	0.088	0.022
064	8/19/2019 08:47:05	0.000	0.015	0.026	0.019
065	8/19/2019 08:48:05	0.000	0.017	0.030	0.015
066	8/19/2019 08:49:05	0.000	0.014	0.024	0.024
067	8/19/2019 08:50:05	0.000	0.015	0.025	0.000
068	8/19/2019 08:51:05	0.000	0.015	0.026	0.020
069	8/19/2019 08:52:05	0.000	0.014	0.025	0.013
070	8/19/2019 08:53:05	0.000	0.016	0.036	0.008
071	8/19/2019 08:54:05	0.000	0.011	0.020	0.017

072	8/19/2019 08:55:05	0.000	0.010	0.021	0.017
073	8/19/2019 08:56:05	0.000	0.012	0.021	0.000
074	8/19/2019 08:57:05	0.000	0.012	0.019	0.017
075	8/19/2019 08:58:05	0.000	0.009	0.019	0.012
076	8/19/2019 08:59:05	0.000	0.011	0.021	0.021
077	8/19/2019 09:00:05	0.000	0.012	0.022	0.002
078	8/19/2019 09:01:05	0.000	0.014	0.019	0.000
079	8/19/2019 09:02:05	0.000	0.013	0.022	0.015
080	8/19/2019 09:03:05	0.000	0.010	0.022	0.021
081	8/19/2019 09:04:05	0.000	0.010	0.026	0.026
082	8/19/2019 09:05:05	0.000	0.014	0.025	0.000
083	8/19/2019 09:06:05	0.000	0.015	0.028	0.015
084	8/19/2019 09:07:05	0.000	0.005	0.015	0.011
085	8/19/2019 09:08:05	0.000	0.006	0.017	0.017
086	8/19/2019 09:09:05	0.000	0.007	0.022	0.021
087	8/19/2019 09:10:05	0.000	0.007	0.021	0.016
088	8/19/2019 09:11:05	0.000	0.009	0.022	0.000
089	8/19/2019 09:12:05	0.000	0.019	0.030	0.010
090	8/19/2019 09:13:05	0.000	0.003	0.025	0.022
091	8/19/2019 09:14:05	0.000	0.005	0.022	0.000
092	8/19/2019 09:15:05	0.000	0.003	0.013	0.000
093	8/19/2019 09:16:05	0.000	0.000	0.000	0.000
094	8/19/2019 09:17:05	0.000	0.000	0.000	0.000
095	8/19/2019 09:18:05	0.000	0.000	0.000	0.000
096	8/19/2019 09:19:05	0.000	0.000	0.000	0.000
097	8/19/2019 09:20:05	0.000	0.000	0.000	0.000
098	8/19/2019 09:21:05	0.000	0.000	0.000	0.000
099	8/19/2019 09:22:05	0.000	0.000	0.000	0.000
100	8/19/2019 09:23:05	0.000	0.000	0.000	0.000
101	8/19/2019 09:24:05	0.000	0.000	0.000	0.000
102	8/19/2019 09:25:05	0.000	0.000	0.000	0.000
103	8/19/2019 09:26:05	0.000	0.000	0.000	0.000
104	8/19/2019 09:27:05	0.000	0.000	0.000	0.000
105	8/19/2019 09:28:05	0.000	0.000	0.000	0.000
106	8/19/2019 09:29:05	0.000	0.000	0.000	0.000
107	8/19/2019 09:30:05	0.000	0.000	0.000	0.000
108	8/19/2019 09:31:05	0.000	0.000	0.000	0.000
109	8/19/2019 09:32:05	0.000	0.000	0.000	0.000
110	8/19/2019 09:33:05	0.000	0.000	0.000	0.000
111	8/19/2019 09:34:05	0.000	0.000	0.000	0.000
112	8/19/2019 09:35:05	0.000	0.000	0.000	0.000
113	8/19/2019 09:36:05	0.000	0.000	0.000	0.000
114	8/19/2019 09:37:05	0.000	0.000	0.005	0.000
115	8/19/2019 09:38:05	0.000	0.000	0.000	0.000
116	8/19/2019 09:39:05	0.000	0.000	0.000	0.000
117	8/19/2019 09:40:05	0.000	0.000	0.000	0.000
118	8/19/2019 09:41:05	0.000	0.000	0.000	0.000
119	8/19/2019 09:42:05	0.000	0.000	0.000	0.000
120	8/19/2019 09:43:05	0.000	0.000	0.000	0.000
121	8/19/2019 09:44:05	0.000	0.000	0.000	0.000
122	8/19/2019 09:45:05	0.000	0.000	0.000	0.000
123	8/19/2019 09:46:05	0.000	0.000	0.000	0.000
124	8/19/2019 09:47:05	0.000	0.000	0.000	0.000
125	8/19/2019 09:48:05	0.000	0.000	0.000	0.000
126	8/19/2019 09:49:05	0.000	0.000	0.000	0.000
127	8/19/2019 09:50:05	0.000	0.000	0.000	0.000
128	8/19/2019 09:51:05	0.000	0.000	0.000	0.000

129	8/19/2019 09:52:05	0.000	0.000	0.000	0.000
130	8/19/2019 09:53:05	0.000	0.000	0.000	0.000
131	8/19/2019 09:54:05	0.000	0.000	0.000	0.000
132	8/19/2019 09:55:05	0.000	0.000	0.000	0.000
133	8/19/2019 09:56:05	0.000	0.000	0.000	0.000
134	8/19/2019 09:57:05	0.000	0.000	0.000	0.000
135	8/19/2019 09:58:05	0.000	0.000	0.000	0.000
136	8/19/2019 09:59:05	0.000	0.000	0.000	0.000
137	8/19/2019 10:00:05	0.000	0.000	0.000	0.000
138	8/19/2019 10:01:05	0.000	0.000	0.000	0.000
139	8/19/2019 10:02:05	0.000	0.000	0.000	0.000
140	8/19/2019 10:03:05	0.000	0.000	0.000	0.000
141	8/19/2019 10:04:05	0.000	0.000	0.000	0.000
142	8/19/2019 10:05:05	0.000	0.000	0.000	0.000
143	8/19/2019 10:06:05	0.000	0.000	0.000	0.000
144	8/19/2019 10:07:05	0.000	0.000	0.000	0.000
145	8/19/2019 10:08:05	0.000	0.000	0.000	0.000
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217	8/19/2019 11:20:05	0.0000.0000.0000.000
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337	8/19/2019 13:20:05	0.0000.0000.0000.000
338	8/19/2019 13:21:05	0.0000.0000.0000.000
339	8/19/2019 13:22:05	0.0000.0000.0000.000
340	8/19/2019 13:23:05	0.0000.0000.0000.000
341	8/19/2019 13:24:05	0.0000.0000.0000.000
342	8/19/2019 13:25:05	0.0000.0000.0000.000
343	8/19/2019 13:26:05	0.0000.0000.0000.000
344	8/19/2019 13:27:05	0.0000.0000.0000.000
345	8/19/2019 13:28:05	0.0000.0000.0000.000
346	8/19/2019 13:29:05	0.0000.0000.0000.000
347	8/19/2019 13:30:05	0.0000.0000.0000.000
348	8/19/2019 13:31:05	0.0000.0000.0000.000
349	8/19/2019 13:32:05	0.0000.0000.0000.000
350	8/19/2019 13:33:05	0.0000.0000.0000.000
351	8/19/2019 13:34:05	0.0000.0000.0000.000
352	8/19/2019 13:35:05	0.0000.0000.0000.000
353	8/19/2019 13:36:05	0.0000.0000.0000.000
354	8/19/2019 13:37:05	0.0000.0000.0000.000
355	8/19/2019 13:38:05	0.0000.0000.0000.000
356	8/19/2019 13:39:05	0.0000.0000.0000.000

357	8/19/2019 13:40:05	0.0000.0000.0000.000
358	8/19/2019 13:41:05	0.0000.0000.0000.000
359	8/19/2019 13:42:05	0.0000.0000.0000.000
360	8/19/2019 13:43:05	0.0000.0000.0000.000
361	8/19/2019 13:44:05	0.0000.0000.0000.000
362	8/19/2019 13:45:05	0.0000.0000.0000.000
363	8/19/2019 13:46:05	0.0000.0000.0000.000
364	8/19/2019 13:47:05	0.0000.0000.0000.000
365	8/19/2019 13:48:05	0.0000.0000.0000.000
366	8/19/2019 13:49:05	0.0000.0000.0000.000
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368	8/19/2019 13:51:05	0.0000.0000.0000.000
369	8/19/2019 13:52:05	0.0000.0000.0000.000
370	8/19/2019 13:53:05	0.0000.0000.0000.000
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374	8/19/2019 13:57:05	0.0000.0000.0000.000
375	8/19/2019 13:58:05	0.0000.0000.0000.000
376	8/19/2019 13:59:05	0.0000.0000.0000.000
377	8/19/2019 14:00:05	0.0000.0000.0000.000
378	8/19/2019 14:01:05	0.0000.0000.0000.000
379	8/19/2019 14:02:05	0.0000.0000.0000.000
380	8/19/2019 14:03:05	0.0000.0000.0100.000
381	8/19/2019 14:04:05	0.0000.0000.0000.000
382	8/19/2019 14:05:05	0.0000.0000.0000.000
383	8/19/2019 14:06:05	0.0000.0000.0000.000
384	8/19/2019 14:07:05	0.0000.0000.0000.000
385	8/19/2019 14:08:05	0.0000.0000.0000.000
386	8/19/2019 14:09:05	0.0000.0000.0000.000
387	8/19/2019 14:10:05	0.0000.0000.0000.000
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389	8/19/2019 14:12:05	0.0000.0000.0000.000
390	8/19/2019 14:13:05	0.0000.0000.0000.000
391	8/19/2019 14:14:05	0.0000.0000.0000.000
392	8/19/2019 14:15:05	0.0000.0000.0000.000
393	8/19/2019 14:16:05	0.0000.0000.0000.000
394	8/19/2019 14:17:05	0.0000.0000.0000.000
395	8/19/2019 14:18:05	0.0000.0000.0000.000
396	8/19/2019 14:19:05	0.0000.0000.0000.000
397	8/19/2019 14:20:05	0.0000.0000.0000.000
398	8/19/2019 14:21:05	0.0000.0000.0000.000
399	8/19/2019 14:22:05	0.0000.0000.0000.000
400	8/19/2019 14:23:05	0.0000.0000.0000.000
401	8/19/2019 14:24:05	0.0000.0000.0000.000
402	8/19/2019 14:25:05	0.0000.0000.0000.000
403	8/19/2019 14:26:05	0.0000.0000.0000.000
404	8/19/2019 14:27:05	0.0000.0020.0340.000
405	8/19/2019 14:28:05	0.0000.0000.0000.000
406	8/19/2019 14:29:05	0.0000.0000.0000.000
407	8/19/2019 14:30:05	0.0000.0000.0000.000
408	8/19/2019 14:31:05	0.0000.0000.0000.000
409	8/19/2019 14:32:05	0.0000.0000.0000.000
410	8/19/2019 14:33:05	0.0000.0000.0000.000
411	8/19/2019 14:34:05	0.0000.0000.0000.000
412	8/19/2019 14:35:05	0.0000.0000.0000.000
413	8/19/2019 14:36:05	0.0000.0000.0000.000

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415	8/19/2019 14:38:05	0.0000.0020.0360.000
416	8/19/2019 14:39:05	0.0000.0000.0000.000
417	8/19/2019 14:40:05	0.0000.0000.0000.000
418	8/19/2019 14:41:05	0.0000.0000.0000.000
419	8/19/2019 14:42:05	0.0000.0000.0000.000
420	8/19/2019 14:43:05	0.0000.0000.0000.000
421	8/19/2019 14:44:05	0.0000.0000.0000.000
422	8/19/2019 14:45:05	0.0000.0000.0000.000
423	8/19/2019 14:46:05	0.0000.0000.0000.000
424	8/19/2019 14:47:05	0.0000.0000.0000.000
425	8/19/2019 14:48:05	0.0000.0000.0000.000
426	8/19/2019 14:49:05	0.0000.0000.0000.000
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428	8/19/2019 14:51:05	0.0000.0000.0000.000
429	8/19/2019 14:52:05	0.0000.0000.0000.000
430	8/19/2019 14:53:05	0.0000.0000.0000.000
431	8/19/2019 14:54:05	0.0000.0000.0000.000
432	8/19/2019 14:55:05	0.0000.0000.0000.000
433	8/19/2019 14:56:05	0.0000.0000.0000.000
434	8/19/2019 14:57:05	0.0000.0000.0000.000
435	8/19/2019 14:58:05	0.0000.0000.0000.000
436	8/19/2019 14:59:05	0.0000.0000.0000.000
437	8/19/2019 15:00:05	0.0000.0000.0000.000
438	8/19/2019 15:01:05	0.0000.0000.0000.000
439	8/19/2019 15:02:05	0.0000.0000.0000.000
440	8/19/2019 15:03:05	0.0000.0000.0000.000
441	8/19/2019 15:04:05	0.0000.0000.0000.000
442	8/19/2019 15:05:05	0.0000.0000.0000.000
443	8/19/2019 15:06:05	0.0000.0000.0000.000
444	8/19/2019 15:07:05	0.0000.0000.0000.000
445	8/19/2019 15:08:05	0.0000.0000.0000.000
446	8/19/2019 15:09:05	0.0000.0000.0000.000
447	8/19/2019 15:10:05	0.0000.0000.0000.000
448	8/19/2019 15:11:05	0.0000.0000.0000.000
449	8/19/2019 15:12:05	0.0000.0000.0000.000
450	8/19/2019 15:13:05	0.0000.0000.0000.000
451	8/19/2019 15:14:05	0.0000.0000.0000.000
452	8/19/2019 15:15:05	0.0000.0000.0000.000
453	8/19/2019 15:16:05	0.0000.0000.0000.000
454	8/19/2019 15:17:05	0.0000.0000.0000.000
455	8/19/2019 15:18:05	0.0000.0000.0000.000
456	8/19/2019 15:19:05	0.0000.0000.0000.000
457	8/19/2019 15:20:05	0.0000.0000.0000.000
458	8/19/2019 15:21:05	0.0000.0000.0000.000
459	8/19/2019 15:22:05	0.0000.0000.0050.000
460	8/19/2019 15:23:05	0.0000.0030.0410.000
461	8/19/2019 15:24:05	0.0000.0000.0000.000
462	8/19/2019 15:25:05	0.0000.0000.0000.000
463	8/19/2019 15:26:05	0.0000.0000.0000.000
464	8/19/2019 15:27:05	0.0000.0000.0000.000
465	8/19/2019 15:28:05	0.0000.0000.0000.000
466	8/19/2019 15:29:05	0.0000.0000.0000.000
467	8/19/2019 15:30:05	0.0000.0000.0000.000
468	8/19/2019 15:31:05	0.0000.0000.0000.000
469	8/19/2019 15:32:05	0.0000.0000.0000.000
470	8/19/2019 15:33:05	0.0000.0000.0000.000

471	8/19/2019 15:34:05	0.0000.0000.0000.000
472	8/19/2019 15:35:05	0.0000.0000.0000.000
473	8/19/2019 15:36:05	0.0000.0010.0190.000
474	8/19/2019 15:37:05	0.0000.0000.0000.000
475	8/19/2019 15:38:05	0.0000.0000.0000.000
476	8/19/2019 15:39:05	0.0000.0000.0000.000
477	8/19/2019 15:40:05	0.0000.0000.0000.000
478	8/19/2019 15:41:05	0.0000.0000.0000.000
479	8/19/2019 15:42:05	0.0000.0000.0000.000
480	8/19/2019 15:43:05	0.0000.0000.0000.000
481	8/19/2019 15:44:05	0.0000.0000.0000.000
482	8/19/2019 15:45:05	0.0000.0000.0000.000
483	8/19/2019 15:46:05	0.0000.0000.0000.000
484	8/19/2019 15:47:05	0.0000.0000.0000.000
485	8/19/2019 15:48:05	0.0000.0000.0000.000
486	8/19/2019 15:49:05	0.0000.0000.0000.000
487	8/19/2019 15:50:05	0.0000.0000.0000.000
488	8/19/2019 15:51:05	0.0000.0000.0000.000
489	8/19/2019 15:52:05	0.0000.0000.0000.000
490	8/19/2019 15:53:05	0.0000.0000.0000.000
491	8/19/2019 15:54:05	0.0000.0000.0000.000
492	8/19/2019 15:55:05	0.0000.0000.0000.000
493	8/19/2019 15:56:05	0.0000.0000.0000.000
494	8/19/2019 15:57:05	0.0000.0000.0000.000
495	8/19/2019 15:58:05	0.0000.0000.0000.000
496	8/19/2019 15:59:05	0.0000.0000.0000.000
497	8/19/2019 16:00:05	0.0000.0000.0000.000
498	8/19/2019 16:01:05	0.0000.0000.0000.000
499	8/19/2019 16:02:05	0.0000.0000.0000.000
500	8/19/2019 16:03:05	0.0000.0000.0000.000
501	8/19/2019 16:04:05	0.0000.0000.0000.000
502	8/19/2019 16:05:05	0.0000.0000.0000.000
503	8/19/2019 16:06:05	0.0000.0000.0000.000
504	8/19/2019 16:07:05	0.0000.0000.0000.000
505	8/19/2019 16:08:05	0.0000.0010.0170.000
506	8/19/2019 16:09:05	0.0000.0000.0000.000
507	8/19/2019 16:10:05	0.0000.0000.0000.000
508	8/19/2019 16:11:05	0.0000.0000.0000.000
509	8/19/2019 16:12:05	0.0000.0000.0000.000
510	8/19/2019 16:13:05	0.0000.0000.0000.000
511	8/19/2019 16:14:05	0.0000.0000.0000.000
512	8/19/2019 16:15:05	0.0000.0000.0000.000
513	8/19/2019 16:16:05	0.0000.0000.0000.000
514	8/19/2019 16:17:05	0.0000.0000.0000.000
515	8/19/2019 16:18:05	0.0000.0000.0000.000
516	8/19/2019 16:19:05	0.0000.0000.0000.000
517	8/19/2019 16:20:05	0.0000.0000.0000.000
518	8/19/2019 16:21:05	0.0000.0000.0000.000
519	8/19/2019 16:22:05	0.0000.0000.0000.000
520	8/19/2019 16:23:05	0.0000.0000.0000.000
521	8/19/2019 16:24:05	0.0000.0000.0000.000
522	8/19/2019 16:25:05	0.0000.0000.0000.000
523	8/19/2019 16:26:05	0.0000.0000.0000.000
524	8/19/2019 16:27:05	0.0000.0000.0000.000
525	8/19/2019 16:28:05	0.0000.0000.0000.000
526	8/19/2019 16:29:05	0.0000.0000.0000.000
527	8/19/2019 16:30:05	0.0000.0000.0000.000

528	8/19/2019 16:31:05	0.0000.0000.0000.000
529	8/19/2019 16:32:05	0.0000.0000.0000.000
530	8/19/2019 16:33:05	0.0000.0000.0000.000
531	8/19/2019 16:34:05	0.0000.0000.0000.000
532	8/19/2019 16:35:05	0.0000.0000.0000.000
533	8/19/2019 16:36:05	0.0000.0000.0000.000
534	8/19/2019 16:37:05	0.0000.0000.0000.000
535	8/19/2019 16:38:05	0.0000.0000.0000.000
536	8/19/2019 16:39:05	0.0000.0000.0000.000
537	8/19/2019 16:40:05	0.0000.0000.0000.000
538	8/19/2019 16:41:05	0.0000.0000.0000.000
539	8/19/2019 16:42:05	0.0000.0000.0000.000
540	8/19/2019 16:43:05	0.0000.0000.0000.000
541	8/19/2019 16:44:05	0.0000.0000.0000.000
542	8/19/2019 16:45:05	0.0000.0000.0000.000
543	8/19/2019 16:46:05	0.0000.0000.0000.000
544	8/19/2019 16:47:05	0.0000.0000.0000.000
545	8/19/2019 16:48:05	0.0000.0000.0000.000
546	8/19/2019 16:49:05	0.0000.0000.0000.000
547	8/19/2019 16:50:05	0.0000.0000.0000.000
548	8/19/2019 16:51:05	0.0000.0000.0000.000
549	8/19/2019 16:52:05	0.0000.0000.0000.000
550	8/19/2019 16:53:05	0.0000.0000.0000.000
551	8/19/2019 16:54:05	0.0000.0000.0000.000
552	8/19/2019 16:55:05	0.0000.0000.0000.000
553	8/19/2019 16:56:05	0.0000.0000.0000.000
554	8/19/2019 16:57:05	0.0000.0000.0000.000
555	8/19/2019 16:58:05	0.0000.0000.0000.000
Peak	0.0520.0560.0880.061	
Min	0.0000.0000.0000.000	
Average	0.0030.0050.0070.005	

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TWA/STEL

Index	Date/Time	VOC(ppm) (TWA)	VOC(ppm) (STEL)
001	8/19/2019 07:44:05	0.000	---
002	8/19/2019 07:45:05	0.000	---
003	8/19/2019 07:46:05	0.000	---
004	8/19/2019 07:47:05	0.000	---
005	8/19/2019 07:48:05	0.000	---
006	8/19/2019 07:49:05	0.000	---
007	8/19/2019 07:50:05	0.000	---
008	8/19/2019 07:51:05	0.001	---
009	8/19/2019 07:52:05	0.001	---
010	8/19/2019 07:53:05	0.001	---
011	8/19/2019 07:54:05	0.001	---
012	8/19/2019 07:55:05	0.001	---
013	8/19/2019 07:56:05	0.001	---
014	8/19/2019 07:57:05	0.001	---
015	8/19/2019 07:58:05	0.001	0.041
016	8/19/2019 07:59:05	0.001	0.044
017	8/19/2019 08:00:05	0.001	0.046
018	8/19/2019 08:01:05	0.002	0.047
019	8/19/2019 08:02:05	0.002	0.048
020	8/19/2019 08:03:05	0.002	0.050
021	8/19/2019 08:04:05	0.002	0.051

022	8/19/2019 08:05:05	0.0020.053
023	8/19/2019 08:06:05	0.0020.054
024	8/19/2019 08:07:05	0.0020.055
025	8/19/2019 08:08:05	0.0020.055
026	8/19/2019 08:09:05	0.0020.056
027	8/19/2019 08:10:05	0.0030.056
028	8/19/2019 08:11:05	0.0030.057
029	8/19/2019 08:12:05	0.0030.057
030	8/19/2019 08:13:05	0.0030.056
031	8/19/2019 08:14:05	0.0030.056
032	8/19/2019 08:15:05	0.0030.056
033	8/19/2019 08:16:05	0.0030.056
034	8/19/2019 08:17:05	0.0030.052
035	8/19/2019 08:18:05	0.0030.051
036	8/19/2019 08:19:05	0.0030.051
037	8/19/2019 08:20:05	0.0030.050
038	8/19/2019 08:21:05	0.0040.049
039	8/19/2019 08:22:05	0.0040.047
040	8/19/2019 08:23:05	0.0040.047
041	8/19/2019 08:24:05	0.0040.045
042	8/19/2019 08:25:05	0.0040.045
043	8/19/2019 08:26:05	0.0040.044
044	8/19/2019 08:27:05	0.0040.044
045	8/19/2019 08:28:05	0.0040.044
046	8/19/2019 08:29:05	0.0040.041
047	8/19/2019 08:30:05	0.0040.040
048	8/19/2019 08:31:05	0.0040.039
049	8/19/2019 08:32:05	0.0040.038
050	8/19/2019 08:33:05	0.0040.039
051	8/19/2019 08:34:05	0.0050.038
052	8/19/2019 08:35:05	0.0050.036
053	8/19/2019 08:36:05	0.0050.036
054	8/19/2019 08:37:05	0.0050.035
055	8/19/2019 08:38:05	0.0050.032
056	8/19/2019 08:39:05	0.0050.031
057	8/19/2019 08:40:05	0.0050.031
058	8/19/2019 08:41:05	0.0050.029
059	8/19/2019 08:42:05	0.0050.027
060	8/19/2019 08:43:05	0.0050.026
061	8/19/2019 08:44:05	0.0050.024
062	8/19/2019 08:45:05	0.0050.023
063	8/19/2019 08:46:05	0.0050.023
064	8/19/2019 08:47:05	0.0050.022
065	8/19/2019 08:48:05	0.0050.021
066	8/19/2019 08:49:05	0.0050.020
067	8/19/2019 08:50:05	0.0050.019
068	8/19/2019 08:51:05	0.0050.019
069	8/19/2019 08:52:05	0.0050.018
070	8/19/2019 08:53:05	0.0050.017
071	8/19/2019 08:54:05	0.0050.018
072	8/19/2019 08:55:05	0.0050.017
073	8/19/2019 08:56:05	0.0050.016
074	8/19/2019 08:57:05	0.0050.015
075	8/19/2019 08:58:05	0.0050.015
076	8/19/2019 08:59:05	0.0050.015
077	8/19/2019 09:00:05	0.0050.014
078	8/19/2019 09:01:05	0.0050.014

079	8/19/2019 09:02:05	0.0050.013
080	8/19/2019 09:03:05	0.0050.013
081	8/19/2019 09:04:05	0.0050.014
082	8/19/2019 09:05:05	0.0050.013
083	8/19/2019 09:06:05	0.0060.014
084	8/19/2019 09:07:05	0.0060.013
085	8/19/2019 09:08:05	0.0060.013
086	8/19/2019 09:09:05	0.0060.014
087	8/19/2019 09:10:05	0.0060.014
088	8/19/2019 09:11:05	0.0060.013
089	8/19/2019 09:12:05	0.0060.014
090	8/19/2019 09:13:05	0.0060.014
091	8/19/2019 09:14:05	0.0060.013
092	8/19/2019 09:15:05	0.0060.012
093	8/19/2019 09:16:05	0.0060.012
094	8/19/2019 09:17:05	0.0060.012
095	8/19/2019 09:18:05	0.0060.011
096	8/19/2019 09:19:05	0.0060.009
097	8/19/2019 09:20:05	0.0060.007
098	8/19/2019 09:21:05	0.0060.007
099	8/19/2019 09:22:05	0.0060.006
100	8/19/2019 09:23:05	0.0060.006
101	8/19/2019 09:24:05	0.0060.005
102	8/19/2019 09:25:05	0.0060.003
103	8/19/2019 09:26:05	0.0060.002
104	8/19/2019 09:27:05	0.0060.002
105	8/19/2019 09:28:05	0.0060.001
106	8/19/2019 09:29:05	0.0060.000
107	8/19/2019 09:30:05	0.0060.000
108	8/19/2019 09:31:05	0.0060.000
109	8/19/2019 09:32:05	0.0060.000
110	8/19/2019 09:33:05	0.0060.000
111	8/19/2019 09:34:05	0.0060.000
112	8/19/2019 09:35:05	0.0060.000
113	8/19/2019 09:36:05	0.0060.000
114	8/19/2019 09:37:05	0.0060.000
115	8/19/2019 09:38:05	0.0060.000
116	8/19/2019 09:39:05	0.0060.000
117	8/19/2019 09:40:05	0.0060.000
118	8/19/2019 09:41:05	0.0060.000
119	8/19/2019 09:42:05	0.0060.000
120	8/19/2019 09:43:05	0.0060.000
121	8/19/2019 09:44:05	0.0060.000
122	8/19/2019 09:45:05	0.0060.000
123	8/19/2019 09:46:05	0.0060.000
124	8/19/2019 09:47:05	0.0060.000
125	8/19/2019 09:48:05	0.0060.000
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127	8/19/2019 09:50:05	0.0060.000
128	8/19/2019 09:51:05	0.0060.000
129	8/19/2019 09:52:05	0.0060.000
130	8/19/2019 09:53:05	0.0060.000
131	8/19/2019 09:54:05	0.0060.000
132	8/19/2019 09:55:05	0.0060.000
133	8/19/2019 09:56:05	0.0060.000
134	8/19/2019 09:57:05	0.0060.000
135	8/19/2019 09:58:05	0.0060.000

136	8/19/2019 09:59:05	0.0060.000
137	8/19/2019 10:00:05	0.0060.000
138	8/19/2019 10:01:05	0.0060.000
139	8/19/2019 10:02:05	0.0060.000
140	8/19/2019 10:03:05	0.0060.000
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531	8/19/2019	16:34:05	0.0060.000
532	8/19/2019	16:35:05	0.0060.000
533	8/19/2019	16:36:05	0.0060.000
534	8/19/2019	16:37:05	0.0060.000

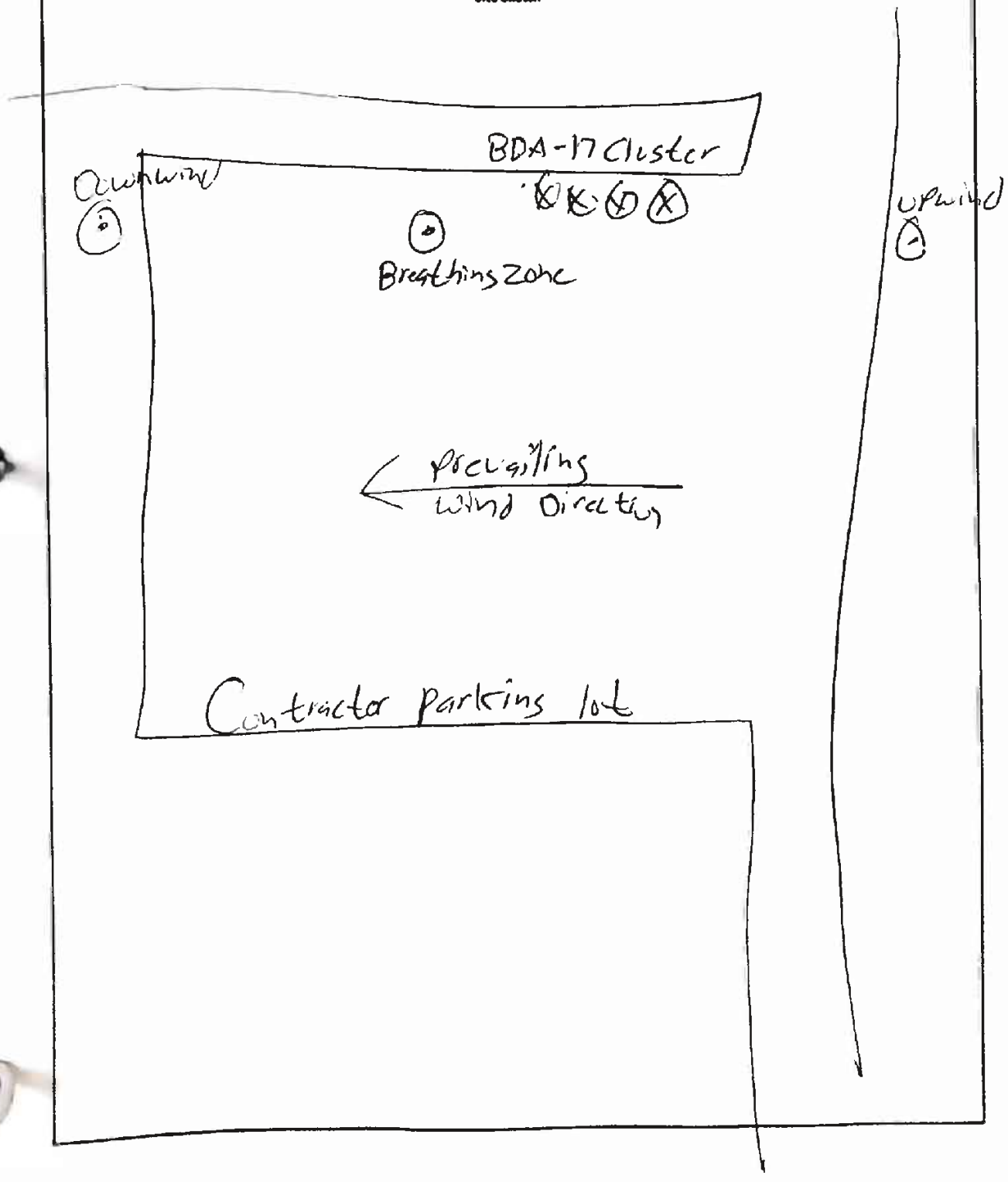
535	8/19/2019 16:38:05	0.0060.000
536	8/19/2019 16:39:05	0.0060.000
537	8/19/2019 16:40:05	0.0060.000
538	8/19/2019 16:41:05	0.0060.000
539	8/19/2019 16:42:05	0.0060.000
540	8/19/2019 16:43:05	0.0060.000
541	8/19/2019 16:44:05	0.0060.000
542	8/19/2019 16:45:05	0.0060.000
543	8/19/2019 16:46:05	0.0060.000
544	8/19/2019 16:47:05	0.0060.000
545	8/19/2019 16:48:05	0.0060.000
546	8/19/2019 16:49:05	0.0060.000
547	8/19/2019 16:50:05	0.0060.000
548	8/19/2019 16:51:05	0.0060.000
549	8/19/2019 16:52:05	0.0060.000
550	8/19/2019 16:53:05	0.0060.000
551	8/19/2019 16:54:05	0.0060.000
552	8/19/2019 16:55:05	0.0060.000
553	8/19/2019 16:56:05	0.0060.000
554	8/19/2019 16:57:05	0.0060.000
555	8/19/2019 16:58:05	0.0060.000

ARCADIS | Design & Consultancy for natural and built assets

Daily CAMP Log

Project	Phase 2 Groundwater RI
Location	East Syracuse, NY
Date	8/16/19
Weather Conditions	70's Cloudy
Upwind Monitor	592-91[illegible]73
Downwind Monitor	592-90 3545
Start Time	0800
End Time	1510

Site Sketch



Arcadis U.S., Inc.
One Lincoln Center
110 West Fayette Street
Suite 300
Syracuse
New York 13202
Tel 315 446 9120
Fax 315 449 0017
www.arcadis.com

Environmental North

Anne Locke
Associate Manager, Environmental Protection
Environmental, Health and Safety Department
Bristol-Myers Squibb
P.O. Box 4755
Syracuse, NY 13221

Date:
August 20, 2019

Contact:
William McCune

Phone:
315-671-9172

Email:
William.McCune@arcadis.com

Our ref:
B0087363.0037

Subject:
Community Air Monitoring During Phase II RI Well Installations Bristol-Myers Squibb Syracuse Facility – East Syracuse, New York 13057

Dear Ms. Locke:

The following is a summary of the community air monitoring plan (CAMP) provided by Arcadis U.S., Inc. (Arcadis) during the Phase II Remedial Investigation (RI) drilling activities conducted at the Bristol-Myers Squibb (BMS) Syracuse North Campus, East Syracuse, NY on August 20, 2019.

August 20, 2019: Parratt-Wolff Inc. (Parratt-Wolff) continued sonic drilling activities at BDA-17RX, drilling from 7:30 AM to 10:20 PM. CAMP monitoring included photo ionization detectors at upwind and downwind locations and a DustTrak at a breathing zone location. The prevailing wind direction was observed originating from the south through the day. Air quality parameters did not exceed CAMP standards at any time during work activities. Table 1 shows the serial numbers and associated CAMP stations locations.

CAMP Station Locations	Serial Number
Breathing Zone DustTrak	#8533151804
Upwind PID	#592-914273
Downwind PID	#592-905549

Anne Locke
Bristol-Myers Squibb
August 20, 2019

Please contact us with any questions or comments pertaining to this project.

Sincerely,

Arcadis U.S., Inc.

William McCune
Principal Geologist

Attachments

1 CAMP Data Logs
2 Site Sketches/Notes

Test 007

Instrument		Data Properties	
Model	DustTrak DRX	Start Date	08/20/2019
Instrument S/N	8533151804	Start Time	07:21:02
		Stop Date	08/20/2019
		Stop Time	09:36:02
		Total Time	0:02:15:00
		Logging Interval	900 seconds

Test Data

Data Point	Date	Time	PM1 mg/m^3	PM2.5 mg/m^3	RESP mg/m^3	PM10 mg/m^3	TOTAL mg/m^3
1	08/20/2019	07:36:02	0.017	0.018	0.019	0.021	0.022
2	08/20/2019	07:51:02	0.017	0.018	0.019	0.021	0.022
3	08/20/2019	08:06:02	0.021	0.022	0.024	0.027	0.030
4	08/20/2019	08:21:02	0.023	0.024	0.025	0.028	0.030
5	08/20/2019	08:36:02	0.035	0.037	0.038	0.052	0.076
6	08/20/2019	08:51:02	0.026	0.027	0.027	0.029	0.030
7	08/20/2019	09:06:02	0.023	0.024	0.024	0.026	0.029
8	08/20/2019	09:21:02	0.021	0.021	0.022	0.023	0.025
9	08/20/2019	09:36:02	0.020	0.020	0.021	0.024	0.027

==========
19/08/20 07:28
****
Summary

Unit Name MiniRAE 3000(PGM-7320)
Unit SN 592-903549
Unit Firmware Ver V2.20A

Running Mode Hygiene Mode
Datalog Mode Auto
Diagnostic Mode No
Stop Reason Power Down

Site ID 00000000
User ID 00000001

Begin 8/20/2019 07:28:35
End 8/20/2019 09:54:04
Sample Period(s) 60
Number of Records 145

Sensor PID(ppm)
Sensor SN S023030154V7
Measure Type Min; Avg; Max; Real
Span 100.0
Span 2 1000.0
Low Alarm 50.0
High Alarm 100.0
Over Alarm 2000.0
STEL Alarm 10025.0
TWA Alarm 10.0
Measurement Gas Isobutylene
Calibration Time 8/20/2019 07:28
Peak 0.0
Min 0.0
Average 0.0

****
Datalog

Index	Date/Time	PID(ppm) (Min)	PID(ppm) (Avg)	PID(ppm) (Max)	PID(ppm) (Real)
001	8/20/2019 07:29:35	0.0	0.0	0.4	0.0
002	8/20/2019 07:30:35	0.0	0.0	0.0	0.0
003	8/20/2019 07:31:35	0.0	0.0	0.0	0.0
004	8/20/2019 07:32:35	0.0	0.0	0.0	0.0
005	8/20/2019 07:33:35	0.0	0.0	0.0	0.0
006	8/20/2019 07:34:35	0.0	0.0	0.0	0.0
007	8/20/2019 07:35:35	0.0	0.0	0.0	0.0
008	8/20/2019 07:36:35	0.0	0.0	0.0	0.0
009	8/20/2019 07:37:35	0.0	0.0	0.0	0.0
010	8/20/2019 07:38:35	0.0	0.0	0.0	0.0
011	8/20/2019 07:39:35	0.0	0.0	0.0	0.0
012	8/20/2019 07:40:35	0.0	0.0	0.0	0.0
013	8/20/2019 07:41:35	0.0	0.0	0.0	0.0
014	8/20/2019 07:42:35	0.0	0.0	0.0	0.0

015	8/20/2019 07:43:35	0.0	0.0	0.0	0.0
016	8/20/2019 07:44:35	0.0	0.0	0.0	0.0
017	8/20/2019 07:45:35	0.0	0.0	0.0	0.0
018	8/20/2019 07:46:35	0.0	0.0	0.0	0.0
019	8/20/2019 07:47:35	0.0	0.0	0.0	0.0
020	8/20/2019 07:48:35	0.0	0.0	0.0	0.0
021	8/20/2019 07:49:35	0.0	0.0	0.0	0.0
022	8/20/2019 07:50:35	0.0	0.0	0.0	0.0
023	8/20/2019 07:51:35	0.0	0.0	0.0	0.0
024	8/20/2019 07:52:35	0.0	0.0	0.0	0.0
025	8/20/2019 07:53:35	0.0	0.0	0.0	0.0
026	8/20/2019 07:54:35	0.0	0.0	0.0	0.0
027	8/20/2019 07:55:35	0.0	0.0	0.0	0.0
028	8/20/2019 07:56:35	0.0	0.0	0.0	0.0
029	8/20/2019 07:57:35	0.0	0.0	0.0	0.0
030	8/20/2019 07:58:35	0.0	0.0	0.0	0.0
031	8/20/2019 07:59:35	0.0	0.0	0.0	0.0
032	8/20/2019 08:00:35	0.0	0.0	0.0	0.0
033	8/20/2019 08:01:35	0.0	0.0	0.0	0.0
034	8/20/2019 08:02:35	0.0	0.0	0.0	0.0
035	8/20/2019 08:03:35	0.0	0.0	0.0	0.0
036	8/20/2019 08:04:35	0.0	0.0	0.0	0.0
037	8/20/2019 08:05:35	0.0	0.0	0.0	0.0
038	8/20/2019 08:06:35	0.0	0.0	0.0	0.0
039	8/20/2019 08:07:35	0.0	0.0	0.0	0.0
040	8/20/2019 08:08:35	0.0	0.0	0.0	0.0
041	8/20/2019 08:09:35	0.0	0.0	0.0	0.0
042	8/20/2019 08:10:35	0.0	0.0	0.0	0.0
043	8/20/2019 08:11:35	0.0	0.0	0.0	0.0
044	8/20/2019 08:12:35	0.0	0.0	0.0	0.0
045	8/20/2019 08:13:35	0.0	0.0	0.0	0.0
046	8/20/2019 08:14:35	0.0	0.0	0.0	0.0
047	8/20/2019 08:15:35	0.0	0.0	0.0	0.0
048	8/20/2019 08:16:35	0.0	0.0	0.0	0.0
049	8/20/2019 08:17:35	0.0	0.0	0.0	0.0
050	8/20/2019 08:18:35	0.0	0.0	0.0	0.0
051	8/20/2019 08:19:35	0.0	0.0	0.0	0.0
052	8/20/2019 08:20:35	0.0	0.0	0.0	0.0
053	8/20/2019 08:21:35	0.0	0.0	0.0	0.0
054	8/20/2019 08:22:35	0.0	0.0	0.0	0.0
055	8/20/2019 08:23:35	0.0	0.0	0.0	0.0
056	8/20/2019 08:24:35	0.0	0.0	0.0	0.0
057	8/20/2019 08:25:35	0.0	0.0	0.0	0.0
058	8/20/2019 08:26:35	0.0	0.0	0.0	0.0
059	8/20/2019 08:27:35	0.0	0.0	0.0	0.0
060	8/20/2019 08:28:35	0.0	0.0	0.0	0.0
061	8/20/2019 08:29:35	0.0	0.0	0.0	0.0
062	8/20/2019 08:30:35	0.0	0.0	0.0	0.0
063	8/20/2019 08:31:35	0.0	0.0	0.0	0.0
064	8/20/2019 08:32:35	0.0	0.0	0.0	0.0
065	8/20/2019 08:33:35	0.0	0.0	0.0	0.0
066	8/20/2019 08:34:35	0.0	0.0	0.0	0.0
067	8/20/2019 08:35:35	0.0	0.0	0.0	0.0
068	8/20/2019 08:36:35	0.0	0.0	0.0	0.0
069	8/20/2019 08:37:35	0.0	0.0	0.0	0.0
070	8/20/2019 08:38:35	0.0	0.0	0.0	0.0
071	8/20/2019 08:39:35	0.0	0.0	0.0	0.0

072	8/20/2019 08:40:35	0.0	0.0	0.0	0.0
073	8/20/2019 08:41:35	0.0	0.0	0.0	0.0
074	8/20/2019 08:42:35	0.0	0.0	0.0	0.0
075	8/20/2019 08:43:35	0.0	0.0	0.0	0.0
076	8/20/2019 08:44:35	0.0	0.0	0.0	0.0
077	8/20/2019 08:45:35	0.0	0.0	0.0	0.0
078	8/20/2019 08:46:35	0.0	0.0	0.0	0.0
079	8/20/2019 08:47:35	0.0	0.0	0.0	0.0
080	8/20/2019 08:48:35	0.0	0.0	0.0	0.0
081	8/20/2019 08:49:35	0.0	0.0	0.0	0.0
082	8/20/2019 08:50:35	0.0	0.0	0.0	0.0
083	8/20/2019 08:51:35	0.0	0.0	0.0	0.0
084	8/20/2019 08:52:35	0.0	0.0	0.0	0.0
085	8/20/2019 08:53:35	0.0	0.0	0.0	0.0
086	8/20/2019 08:54:35	0.0	0.0	0.0	0.0
087	8/20/2019 08:55:35	0.0	0.0	0.0	0.0
088	8/20/2019 08:56:35	0.0	0.0	0.0	0.0
089	8/20/2019 08:57:35	0.0	0.0	0.0	0.0
090	8/20/2019 08:58:35	0.0	0.0	0.0	0.0
091	8/20/2019 08:59:35	0.0	0.0	0.0	0.0
092	8/20/2019 09:00:35	0.0	0.0	0.0	0.0
093	8/20/2019 09:01:35	0.0	0.0	0.0	0.0
094	8/20/2019 09:02:35	0.0	0.0	0.0	0.0
095	8/20/2019 09:03:35	0.0	0.0	0.0	0.0
096	8/20/2019 09:04:35	0.0	0.0	0.0	0.0
097	8/20/2019 09:05:35	0.0	0.0	0.0	0.0
098	8/20/2019 09:06:35	0.0	0.0	0.0	0.0
099	8/20/2019 09:07:35	0.0	0.0	0.0	0.0
100	8/20/2019 09:08:35	0.0	0.0	0.0	0.0
101	8/20/2019 09:09:35	0.0	0.0	0.0	0.0
102	8/20/2019 09:10:35	0.0	0.0	0.0	0.0
103	8/20/2019 09:11:35	0.0	0.0	0.0	0.0
104	8/20/2019 09:12:35	0.0	0.0	0.0	0.0
105	8/20/2019 09:13:35	0.0	0.0	0.0	0.0
106	8/20/2019 09:14:35	0.0	0.0	0.0	0.0
107	8/20/2019 09:15:35	0.0	0.0	0.0	0.0
108	8/20/2019 09:16:35	0.0	0.0	0.0	0.0
109	8/20/2019 09:17:35	0.0	0.0	0.0	0.0
110	8/20/2019 09:18:35	0.0	0.0	0.0	0.0
111	8/20/2019 09:19:35	0.0	0.0	0.0	0.0
112	8/20/2019 09:20:35	0.0	0.0	0.0	0.0
113	8/20/2019 09:21:35	0.0	0.0	0.0	0.0
114	8/20/2019 09:22:35	0.0	0.0	0.0	0.0
115	8/20/2019 09:23:35	0.0	0.0	0.0	0.0
116	8/20/2019 09:24:35	0.0	0.0	0.0	0.0
117	8/20/2019 09:25:35	0.0	0.0	0.0	0.0
118	8/20/2019 09:26:35	0.0	0.0	0.0	0.0
119	8/20/2019 09:27:35	0.0	0.0	0.0	0.0
120	8/20/2019 09:28:35	0.0	0.0	0.0	0.0
121	8/20/2019 09:29:35	0.0	0.0	0.0	0.0
122	8/20/2019 09:30:35	0.0	0.0	0.0	0.0
123	8/20/2019 09:31:35	0.0	0.0	0.0	0.0
124	8/20/2019 09:32:35	0.0	0.0	0.0	0.0
125	8/20/2019 09:33:35	0.0	0.0	0.0	0.0
126	8/20/2019 09:34:35	0.0	0.0	0.0	0.0
127	8/20/2019 09:35:35	0.0	0.0	0.0	0.0
128	8/20/2019 09:36:35	0.0	0.0	0.0	0.0

129	8/20/2019	09:37:35	0.0	0.0	0.0	0.0
130	8/20/2019	09:38:35	0.0	0.0	0.0	0.0
131	8/20/2019	09:39:35	0.0	0.0	0.0	0.0
132	8/20/2019	09:40:35	0.0	0.0	0.0	0.0
133	8/20/2019	09:41:35	0.0	0.0	0.0	0.0
134	8/20/2019	09:42:35	0.0	0.0	0.0	0.0
135	8/20/2019	09:43:35	0.0	0.0	0.0	0.0
136	8/20/2019	09:44:35	0.0	0.0	0.0	0.0
137	8/20/2019	09:45:35	0.0	0.0	0.0	0.0
138	8/20/2019	09:46:35	0.0	0.0	0.0	0.0
139	8/20/2019	09:47:35	0.0	0.0	0.0	0.0
140	8/20/2019	09:48:35	0.0	0.0	0.0	0.0
141	8/20/2019	09:49:35	0.0	0.0	0.0	0.0
142	8/20/2019	09:50:35	0.0	0.0	0.0	0.0
143	8/20/2019	09:51:35	0.0	0.0	0.0	0.0
144	8/20/2019	09:52:35	0.0	0.0	0.0	0.0
145	8/20/2019	09:53:35	0.0	0.0	0.0	0.0
Peak			0.0	0.0	0.4	0.0
Min			0.0	0.0	0.0	0.0
Average			0.0	0.0	0.0	0.0

****

TWA/STEL

Index	Date/Time	PID(ppm) (TWA)	PID(ppm) (STEL)
001	8/20/2019 07:29:35	0.0	---
002	8/20/2019 07:30:35	0.0	---
003	8/20/2019 07:31:35	0.0	---
004	8/20/2019 07:32:35	0.0	---
005	8/20/2019 07:33:35	0.0	---
006	8/20/2019 07:34:35	0.0	---
007	8/20/2019 07:35:35	0.0	---
008	8/20/2019 07:36:35	0.0	---
009	8/20/2019 07:37:35	0.0	---
010	8/20/2019 07:38:35	0.0	---
011	8/20/2019 07:39:35	0.0	---
012	8/20/2019 07:40:35	0.0	---
013	8/20/2019 07:41:35	0.0	---
014	8/20/2019 07:42:35	0.0	---
015	8/20/2019 07:43:35	0.0	0.0
016	8/20/2019 07:44:35	0.0	0.0
017	8/20/2019 07:45:35	0.0	0.0
018	8/20/2019 07:46:35	0.0	0.0
019	8/20/2019 07:47:35	0.0	0.0
020	8/20/2019 07:48:35	0.0	0.0
021	8/20/2019 07:49:35	0.0	0.0
022	8/20/2019 07:50:35	0.0	0.0
023	8/20/2019 07:51:35	0.0	0.0
024	8/20/2019 07:52:35	0.0	0.0
025	8/20/2019 07:53:35	0.0	0.0
026	8/20/2019 07:54:35	0.0	0.0
027	8/20/2019 07:55:35	0.0	0.0
028	8/20/2019 07:56:35	0.0	0.0
029	8/20/2019 07:57:35	0.0	0.0
030	8/20/2019 07:58:35	0.0	0.0
031	8/20/2019 07:59:35	0.0	0.0
032	8/20/2019 08:00:35	0.0	0.0

033	8/20/2019 08:01:35	0.0	0.0
034	8/20/2019 08:02:35	0.0	0.0
035	8/20/2019 08:03:35	0.0	0.0
036	8/20/2019 08:04:35	0.0	0.0
037	8/20/2019 08:05:35	0.0	0.0
038	8/20/2019 08:06:35	0.0	0.0
039	8/20/2019 08:07:35	0.0	0.0
040	8/20/2019 08:08:35	0.0	0.0
041	8/20/2019 08:09:35	0.0	0.0
042	8/20/2019 08:10:35	0.0	0.0
043	8/20/2019 08:11:35	0.0	0.0
044	8/20/2019 08:12:35	0.0	0.0
045	8/20/2019 08:13:35	0.0	0.0
046	8/20/2019 08:14:35	0.0	0.0
047	8/20/2019 08:15:35	0.0	0.0
048	8/20/2019 08:16:35	0.0	0.0
049	8/20/2019 08:17:35	0.0	0.0
050	8/20/2019 08:18:35	0.0	0.0
051	8/20/2019 08:19:35	0.0	0.0
052	8/20/2019 08:20:35	0.0	0.0
053	8/20/2019 08:21:35	0.0	0.0
054	8/20/2019 08:22:35	0.0	0.0
055	8/20/2019 08:23:35	0.0	0.0
056	8/20/2019 08:24:35	0.0	0.0
057	8/20/2019 08:25:35	0.0	0.0
058	8/20/2019 08:26:35	0.0	0.0
059	8/20/2019 08:27:35	0.0	0.0
060	8/20/2019 08:28:35	0.0	0.0
061	8/20/2019 08:29:35	0.0	0.0
062	8/20/2019 08:30:35	0.0	0.0
063	8/20/2019 08:31:35	0.0	0.0
064	8/20/2019 08:32:35	0.0	0.0
065	8/20/2019 08:33:35	0.0	0.0
066	8/20/2019 08:34:35	0.0	0.0
067	8/20/2019 08:35:35	0.0	0.0
068	8/20/2019 08:36:35	0.0	0.0
069	8/20/2019 08:37:35	0.0	0.0
070	8/20/2019 08:38:35	0.0	0.0
071	8/20/2019 08:39:35	0.0	0.0
072	8/20/2019 08:40:35	0.0	0.0
073	8/20/2019 08:41:35	0.0	0.0
074	8/20/2019 08:42:35	0.0	0.0
075	8/20/2019 08:43:35	0.0	0.0
076	8/20/2019 08:44:35	0.0	0.0
077	8/20/2019 08:45:35	0.0	0.0
078	8/20/2019 08:46:35	0.0	0.0
079	8/20/2019 08:47:35	0.0	0.0
080	8/20/2019 08:48:35	0.0	0.0
081	8/20/2019 08:49:35	0.0	0.0
082	8/20/2019 08:50:35	0.0	0.0
083	8/20/2019 08:51:35	0.0	0.0
084	8/20/2019 08:52:35	0.0	0.0
085	8/20/2019 08:53:35	0.0	0.0
086	8/20/2019 08:54:35	0.0	0.0
087	8/20/2019 08:55:35	0.0	0.0
088	8/20/2019 08:56:35	0.0	0.0
089	8/20/2019 08:57:35	0.0	0.0

090	8/20/2019 08:58:35	0.0	0.0
091	8/20/2019 08:59:35	0.0	0.0
092	8/20/2019 09:00:35	0.0	0.0
093	8/20/2019 09:01:35	0.0	0.0
094	8/20/2019 09:02:35	0.0	0.0
095	8/20/2019 09:03:35	0.0	0.0
096	8/20/2019 09:04:35	0.0	0.0
097	8/20/2019 09:05:35	0.0	0.0
098	8/20/2019 09:06:35	0.0	0.0
099	8/20/2019 09:07:35	0.0	0.0
100	8/20/2019 09:08:35	0.0	0.0
101	8/20/2019 09:09:35	0.0	0.0
102	8/20/2019 09:10:35	0.0	0.0
103	8/20/2019 09:11:35	0.0	0.0
104	8/20/2019 09:12:35	0.0	0.0
105	8/20/2019 09:13:35	0.0	0.0
106	8/20/2019 09:14:35	0.0	0.0
107	8/20/2019 09:15:35	0.0	0.0
108	8/20/2019 09:16:35	0.0	0.0
109	8/20/2019 09:17:35	0.0	0.0
110	8/20/2019 09:18:35	0.0	0.0
111	8/20/2019 09:19:35	0.0	0.0
112	8/20/2019 09:20:35	0.0	0.0
113	8/20/2019 09:21:35	0.0	0.0
114	8/20/2019 09:22:35	0.0	0.0
115	8/20/2019 09:23:35	0.0	0.0
116	8/20/2019 09:24:35	0.0	0.0
117	8/20/2019 09:25:35	0.0	0.0
118	8/20/2019 09:26:35	0.0	0.0
119	8/20/2019 09:27:35	0.0	0.0
120	8/20/2019 09:28:35	0.0	0.0
121	8/20/2019 09:29:35	0.0	0.0
122	8/20/2019 09:30:35	0.0	0.0
123	8/20/2019 09:31:35	0.0	0.0
124	8/20/2019 09:32:35	0.0	0.0
125	8/20/2019 09:33:35	0.0	0.0
126	8/20/2019 09:34:35	0.0	0.0
127	8/20/2019 09:35:35	0.0	0.0
128	8/20/2019 09:36:35	0.0	0.0
129	8/20/2019 09:37:35	0.0	0.0
130	8/20/2019 09:38:35	0.0	0.0
131	8/20/2019 09:39:35	0.0	0.0
132	8/20/2019 09:40:35	0.0	0.0
133	8/20/2019 09:41:35	0.0	0.0
134	8/20/2019 09:42:35	0.0	0.0
135	8/20/2019 09:43:35	0.0	0.0
136	8/20/2019 09:44:35	0.0	0.0
137	8/20/2019 09:45:35	0.0	0.0
138	8/20/2019 09:46:35	0.0	0.0
139	8/20/2019 09:47:35	0.0	0.0
140	8/20/2019 09:48:35	0.0	0.0
141	8/20/2019 09:49:35	0.0	0.0
142	8/20/2019 09:50:35	0.0	0.0
143	8/20/2019 09:51:35	0.0	0.0
144	8/20/2019 09:52:35	0.0	0.0
145	8/20/2019 09:53:35	0.0	0.0

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19/08/20 07:36
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Summary

Unit Name MiniRAE 3000(PGM-7320)
Unit SN 592-914273
Unit Firmware Ver V1.20A

Running Mode Hygiene Mode
Measure Type Min; Avg; Max; Real
Datalog Mode Continuous
Datalog Type Manual
Diagnostic Mode No
Stop Reason Power Down

Site ID RAE00005
User ID 00000001

Begin 8/20/2019 07:36:34
End 8/20/2019 09:54:23
Sample Period(s) 60
Number of Records 137

Sensor VOC(ppm)
Span 100.000
Span 2 N/A
Low Alarm 50.000
High Alarm 100.000
Over Alarm 2000.000
STEL Alarm 25.000
TWA Alarm 10.000
Measurement Gas Isobutylene
Calibration Time 8/20/2019 07:24
Peak 0.064
Min 0.000
Average 0.027

****
Datalog

Index	Date/Time	VOC(ppm) (Min)	VOC(ppm) (Avg)	VOC(ppm) (Max)	VOC(ppm) (Real)
001	8/20/2019 07:37:34	0.025	0.027	0.031	0.031
002	8/20/2019 07:38:34	0.029	0.030	0.033	0.033
003	8/20/2019 07:39:34	0.032	0.034	0.036	0.035
004	8/20/2019 07:40:34	0.034	0.036	0.039	0.038
005	8/20/2019 07:41:34	0.038	0.040	0.043	0.042
006	8/20/2019 07:42:34	0.040	0.041	0.043	0.042
007	8/20/2019 07:43:34	0.042	0.044	0.046	0.046
008	8/20/2019 07:44:34	0.044	0.045	0.047	0.046
009	8/20/2019 07:45:34	0.045	0.046	0.048	0.047
010	8/20/2019 07:46:34	0.047	0.048	0.051	0.048
011	8/20/2019 07:47:34	0.048	0.051	0.055	0.052
012	8/20/2019 07:48:34	0.051	0.053	0.059	0.053
013	8/20/2019 07:49:34	0.052	0.053	0.055	0.054
014	8/20/2019 07:50:34	0.053	0.054	0.055	0.053

015	8/20/2019 07:51:34	0.051	0.052	0.054	0.052
016	8/20/2019 07:52:34	0.049	0.050	0.053	0.050
017	8/20/2019 07:53:34	0.049	0.050	0.054	0.051
018	8/20/2019 07:54:34	0.050	0.052	0.054	0.053
019	8/20/2019 07:55:34	0.051	0.052	0.054	0.054
020	8/20/2019 07:56:34	0.051	0.053	0.055	0.054
021	8/20/2019 07:57:34	0.052	0.053	0.055	0.055
022	8/20/2019 07:58:34	0.050	0.052	0.055	0.052
023	8/20/2019 07:59:34	0.052	0.055	0.069	0.058
024	8/20/2019 08:00:34	0.054	0.055	0.059	0.055
025	8/20/2019 08:01:34	0.055	0.057	0.064	0.064
026	8/20/2019 08:02:34	0.054	0.056	0.065	0.056
027	8/20/2019 08:03:34	0.054	0.057	0.060	0.057
028	8/20/2019 08:04:34	0.057	0.059	0.067	0.059
029	8/20/2019 08:05:34	0.058	0.060	0.064	0.060
030	8/20/2019 08:06:34	0.059	0.060	0.062	0.061
031	8/20/2019 08:07:34	0.060	0.060	0.062	0.061
032	8/20/2019 08:08:34	0.059	0.061	0.063	0.062
033	8/20/2019 08:09:34	0.058	0.061	0.066	0.063
034	8/20/2019 08:10:34	0.056	0.063	0.068	0.056
035	8/20/2019 08:11:34	0.056	0.061	0.065	0.060
036	8/20/2019 08:12:34	0.060	0.063	0.067	0.062
037	8/20/2019 08:13:34	0.002	0.054	0.064	0.059
038	8/20/2019 08:14:34	0.055	0.058	0.061	0.055
039	8/20/2019 08:15:34	0.054	0.056	0.058	0.056
040	8/20/2019 08:16:34	0.054	0.056	0.059	0.057
041	8/20/2019 08:17:34	0.056	0.057	0.059	0.056
042	8/20/2019 08:18:34	0.056	0.058	0.060	0.059
043	8/20/2019 08:19:34	0.001	0.040	0.060	0.057
044	8/20/2019 08:20:34	0.054	0.055	0.057	0.054
045	8/20/2019 08:21:34	0.053	0.055	0.056	0.056
046	8/20/2019 08:22:34	0.014	0.052	0.057	0.014
047	8/20/2019 08:23:34	0.001	0.025	0.057	0.054
048	8/20/2019 08:24:34	0.049	0.050	0.054	0.051
049	8/20/2019 08:25:34	0.045	0.048	0.052	0.046
050	8/20/2019 08:26:34	0.044	0.046	0.049	0.047
051	8/20/2019 08:27:34	0.042	0.045	0.048	0.043
052	8/20/2019 08:28:34	0.040	0.042	0.045	0.041
053	8/20/2019 08:29:34	0.037	0.039	0.042	0.037
054	8/20/2019 08:30:34	0.034	0.036	0.040	0.040
055	8/20/2019 08:31:34	0.036	0.038	0.042	0.037
056	8/20/2019 08:32:34	0.033	0.034	0.037	0.035
057	8/20/2019 08:33:34	0.034	0.039	0.042	0.038
058	8/20/2019 08:34:34	0.030	0.033	0.038	0.031
059	8/20/2019 08:35:34	0.030	0.034	0.040	0.040
060	8/20/2019 08:36:34	0.030	0.036	0.040	0.030
061	8/20/2019 08:37:34	0.026	0.030	0.034	0.034
062	8/20/2019 08:38:34	0.034	0.037	0.040	0.038
063	8/20/2019 08:39:34	0.000	0.030	0.038	0.002
064	8/20/2019 08:40:34	0.000	0.031	0.037	0.033
065	8/20/2019 08:41:34	0.029	0.031	0.033	0.031
066	8/20/2019 08:42:34	0.030	0.032	0.035	0.031
067	8/20/2019 08:43:34	0.026	0.028	0.031	0.029
068	8/20/2019 08:44:34	0.020	0.024	0.030	0.020
069	8/20/2019 08:45:34	0.000	0.021	0.031	0.025
070	8/20/2019 08:46:34	0.025	0.026	0.028	0.027
071	8/20/2019 08:47:34	0.026	0.027	0.029	0.026

072	8/20/2019 08:48:34	0.021	0.024	0.028	0.022
073	8/20/2019 08:49:34	0.000	0.015	0.027	0.024
074	8/20/2019 08:50:34	0.019	0.022	0.024	0.021
075	8/20/2019 08:51:34	0.020	0.022	0.025	0.023
076	8/20/2019 08:52:34	0.017	0.021	0.024	0.017
077	8/20/2019 08:53:34	0.000	0.014	0.026	0.023
078	8/20/2019 08:54:34	0.020	0.022	0.024	0.022
079	8/20/2019 08:55:34	0.017	0.020	0.023	0.017
080	8/20/2019 08:56:34	0.000	0.009	0.018	0.018
081	8/20/2019 08:57:34	0.018	0.020	0.023	0.020
082	8/20/2019 08:58:34	0.017	0.019	0.021	0.019
083	8/20/2019 08:59:34	0.014	0.016	0.019	0.015
084	8/20/2019 09:00:34	0.000	0.010	0.022	0.020
085	8/20/2019 09:01:34	0.018	0.019	0.021	0.018
086	8/20/2019 09:02:34	0.017	0.019	0.021	0.018
087	8/20/2019 09:03:34	0.016	0.018	0.020	0.016
088	8/20/2019 09:04:34	0.000	0.009	0.021	0.020
089	8/20/2019 09:05:34	0.015	0.017	0.020	0.017
090	8/20/2019 09:06:34	0.013	0.015	0.018	0.013
091	8/20/2019 09:07:34	0.000	0.007	0.013	0.000
092	8/20/2019 09:08:34	0.000	0.012	0.018	0.014
093	8/20/2019 09:09:34	0.010	0.012	0.015	0.014
094	8/20/2019 09:10:34	0.000	0.007	0.013	0.000
095	8/20/2019 09:11:34	0.000	0.007	0.015	0.008
096	8/20/2019 09:12:34	0.008	0.010	0.012	0.009
097	8/20/2019 09:13:34	0.003	0.006	0.010	0.003
098	8/20/2019 09:14:34	0.000	0.000	0.009	0.009
099	8/20/2019 09:15:34	0.009	0.011	0.015	0.010
100	8/20/2019 09:16:34	0.003	0.006	0.010	0.003
101	8/20/2019 09:17:34	0.000	0.000	0.004	0.000
102	8/20/2019 09:18:34	0.000	0.005	0.011	0.005
103	8/20/2019 09:19:34	0.000	0.002	0.006	0.000
104	8/20/2019 09:20:34	0.000	0.000	0.000	0.000
105	8/20/2019 09:21:34	0.000	0.002	0.007	0.001
106	8/20/2019 09:22:34	0.000	0.000	0.002	0.000
107	8/20/2019 09:23:34	0.000	0.000	0.000	0.000
108	8/20/2019 09:24:34	0.000	0.000	0.000	0.000
109	8/20/2019 09:25:34	0.000	0.001	0.005	0.001
110	8/20/2019 09:26:34	0.000	0.000	0.002	0.000
111	8/20/2019 09:27:34	0.000	0.000	0.000	0.000
112	8/20/2019 09:28:34	0.000	0.000	0.000	0.000
113	8/20/2019 09:29:34	0.000	0.001	0.004	0.000
114	8/20/2019 09:30:34	0.000	0.000	0.002	0.000
115	8/20/2019 09:31:34	0.000	0.000	0.000	0.000
116	8/20/2019 09:32:34	0.000	0.000	0.000	0.000
117	8/20/2019 09:33:34	0.000	0.000	0.000	0.000
118	8/20/2019 09:34:34	0.000	0.000	0.000	0.000
119	8/20/2019 09:35:34	0.000	0.000	0.000	0.000
120	8/20/2019 09:36:34	0.000	0.000	0.000	0.000
121	8/20/2019 09:37:34	0.000	0.000	0.000	0.000
122	8/20/2019 09:38:34	0.000	0.000	0.000	0.000
123	8/20/2019 09:39:34	0.000	0.000	0.000	0.000
124	8/20/2019 09:40:34	0.000	0.000	0.000	0.000
125	8/20/2019 09:41:34	0.000	0.000	0.000	0.000
126	8/20/2019 09:42:34	0.000	0.000	0.000	0.000
127	8/20/2019 09:43:34	0.000	0.000	0.000	0.000
128	8/20/2019 09:44:34	0.000	0.000	0.000	0.000

129	8/20/2019 09:45:34	0.000	0.000	0.000	0.000
130	8/20/2019 09:46:34	0.000	0.000	0.000	0.000
131	8/20/2019 09:47:34	0.000	0.000	0.000	0.000
132	8/20/2019 09:48:34	0.000	0.000	0.000	0.000
133	8/20/2019 09:49:34	0.000	0.000	0.000	0.000
134	8/20/2019 09:50:34	0.000	0.000	0.000	0.000
135	8/20/2019 09:51:34	0.000	0.000	0.000	0.000
136	8/20/2019 09:52:34	0.000	0.000	0.000	0.000
137	8/20/2019 09:53:34	0.000	0.000	0.000	0.000
Peak		0.060	0.063	0.069	0.064
Min		0.000	0.000	0.000	0.000
Average		0.023	0.027	0.030	0.027

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TWA/STEL

Index	Date/Time	VOC(ppm) (TWA)	VOC(ppm) (STEL)
001	8/20/2019 07:37:34	0.000	---
002	8/20/2019 07:38:34	0.000	---
003	8/20/2019 07:39:34	0.000	---
004	8/20/2019 07:40:34	0.000	---
005	8/20/2019 07:41:34	0.000	---
006	8/20/2019 07:42:34	0.000	---
007	8/20/2019 07:43:34	0.001	---
008	8/20/2019 07:44:34	0.001	---
009	8/20/2019 07:45:34	0.001	---
010	8/20/2019 07:46:34	0.001	---
011	8/20/2019 07:47:34	0.001	---
012	8/20/2019 07:48:34	0.001	---
013	8/20/2019 07:49:34	0.001	---
014	8/20/2019 07:50:34	0.001	---
015	8/20/2019 07:51:34	0.001	0.045
016	8/20/2019 07:52:34	0.002	0.048
017	8/20/2019 07:53:34	0.002	0.049
018	8/20/2019 07:54:34	0.002	0.051
019	8/20/2019 07:55:34	0.002	0.052
020	8/20/2019 07:56:34	0.002	0.053
021	8/20/2019 07:57:34	0.002	0.054
022	8/20/2019 07:58:34	0.002	0.055
023	8/20/2019 07:59:34	0.002	0.055
024	8/20/2019 08:00:34	0.002	0.056
025	8/20/2019 08:01:34	0.003	0.057
026	8/20/2019 08:02:34	0.003	0.058
027	8/20/2019 08:03:34	0.003	0.058
028	8/20/2019 08:04:34	0.003	0.058
029	8/20/2019 08:05:34	0.003	0.059
030	8/20/2019 08:06:34	0.003	0.059
031	8/20/2019 08:07:34	0.003	0.060
032	8/20/2019 08:08:34	0.003	0.061
033	8/20/2019 08:09:34	0.004	0.062
034	8/20/2019 08:10:34	0.004	0.062
035	8/20/2019 08:11:34	0.004	0.062
036	8/20/2019 08:12:34	0.004	0.063
037	8/20/2019 08:13:34	0.004	0.063
038	8/20/2019 08:14:34	0.004	0.063
039	8/20/2019 08:15:34	0.004	0.063
040	8/20/2019 08:16:34	0.004	0.063

041	8/20/2019 08:17:34	0.0040.063
042	8/20/2019 08:18:34	0.0050.063
043	8/20/2019 08:19:34	0.0050.063
044	8/20/2019 08:20:34	0.0050.063
045	8/20/2019 08:21:34	0.0050.062
046	8/20/2019 08:22:34	0.0050.059
047	8/20/2019 08:23:34	0.0050.059
048	8/20/2019 08:24:34	0.0050.058
049	8/20/2019 08:25:34	0.0050.057
050	8/20/2019 08:26:34	0.0050.056
051	8/20/2019 08:27:34	0.0050.055
052	8/20/2019 08:28:34	0.0060.054
053	8/20/2019 08:29:34	0.0060.052
054	8/20/2019 08:30:34	0.0060.051
055	8/20/2019 08:31:34	0.0060.050
056	8/20/2019 08:32:34	0.0060.048
057	8/20/2019 08:33:34	0.0060.047
058	8/20/2019 08:34:34	0.0060.045
059	8/20/2019 08:35:34	0.0060.044
060	8/20/2019 08:36:34	0.0060.043
061	8/20/2019 08:37:34	0.0060.041
062	8/20/2019 08:38:34	0.0060.043
063	8/20/2019 08:39:34	0.0060.039
064	8/20/2019 08:40:34	0.0060.038
065	8/20/2019 08:41:34	0.0060.037
066	8/20/2019 08:42:34	0.0070.036
067	8/20/2019 08:43:34	0.0070.035
068	8/20/2019 08:44:34	0.0070.034
069	8/20/2019 08:45:34	0.0070.033
070	8/20/2019 08:46:34	0.0070.032
071	8/20/2019 08:47:34	0.0070.031
072	8/20/2019 08:48:34	0.0070.030
073	8/20/2019 08:49:34	0.0070.030
074	8/20/2019 08:50:34	0.0070.029
075	8/20/2019 08:51:34	0.0070.028
076	8/20/2019 08:52:34	0.0070.027
077	8/20/2019 08:53:34	0.0070.026
078	8/20/2019 08:54:34	0.0070.025
079	8/20/2019 08:55:34	0.0070.026
080	8/20/2019 08:56:34	0.0070.025
081	8/20/2019 08:57:34	0.0070.024
082	8/20/2019 08:58:34	0.0070.024
083	8/20/2019 08:59:34	0.0070.023
084	8/20/2019 09:00:34	0.0070.023
085	8/20/2019 09:01:34	0.0070.022
086	8/20/2019 09:02:34	0.0070.022
087	8/20/2019 09:03:34	0.0070.021
088	8/20/2019 09:04:34	0.0070.021
089	8/20/2019 09:05:34	0.0080.020
090	8/20/2019 09:06:34	0.0080.020
091	8/20/2019 09:07:34	0.0080.018
092	8/20/2019 09:08:34	0.0080.018
093	8/20/2019 09:09:34	0.0080.017
094	8/20/2019 09:10:34	0.0080.016
095	8/20/2019 09:11:34	0.0080.015
096	8/20/2019 09:12:34	0.0080.015
097	8/20/2019 09:13:34	0.0080.014

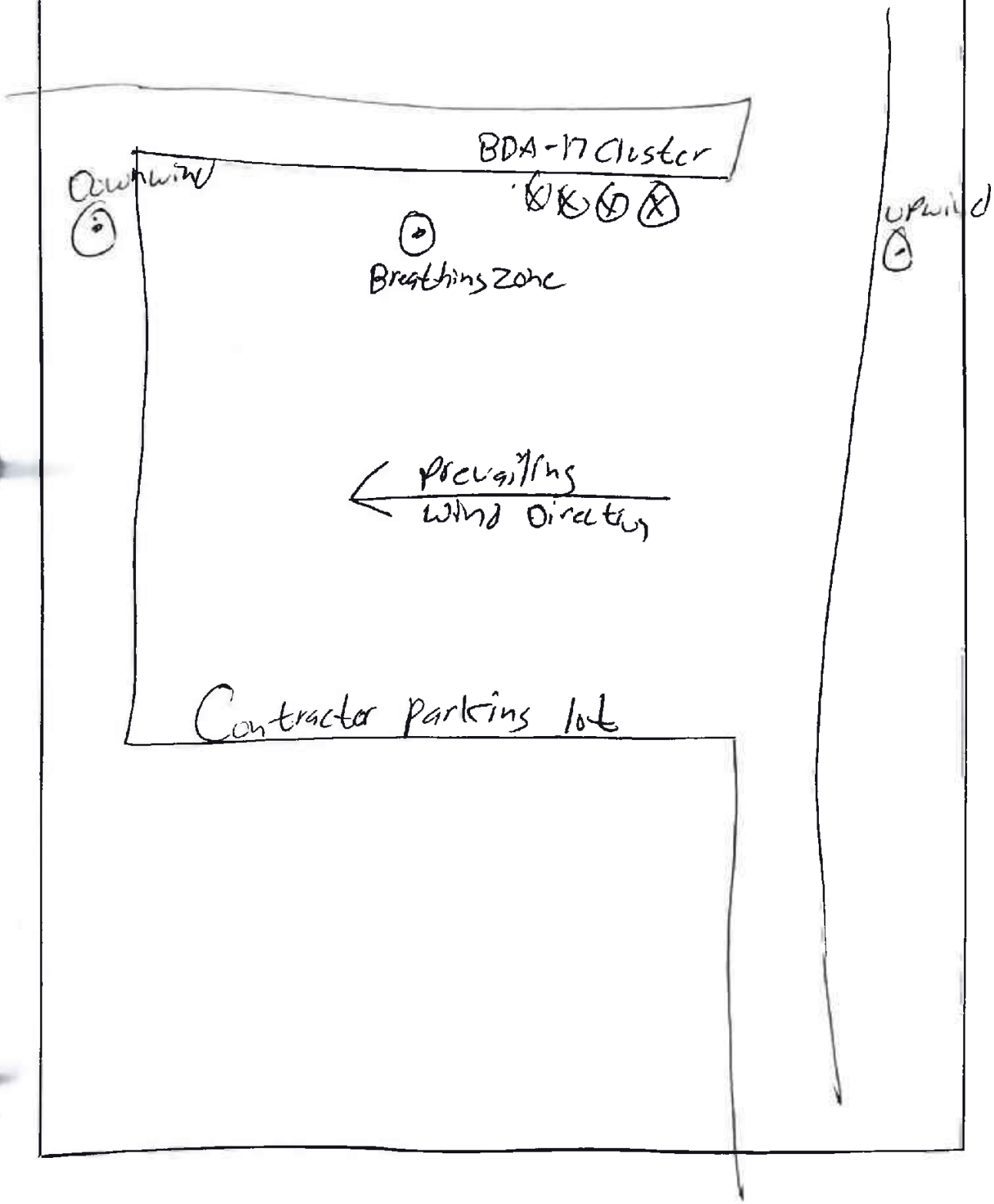
098	8/20/2019 09:14:34	0.0080.013
099	8/20/2019 09:15:34	0.0080.013
100	8/20/2019 09:16:34	0.0080.011
101	8/20/2019 09:17:34	0.0080.010
102	8/20/2019 09:18:34	0.0080.009
103	8/20/2019 09:19:34	0.0080.008
104	8/20/2019 09:20:34	0.0080.007
105	8/20/2019 09:21:34	0.0080.006
106	8/20/2019 09:22:34	0.0080.005
107	8/20/2019 09:23:34	0.0080.005
108	8/20/2019 09:24:34	0.0080.004
109	8/20/2019 09:25:34	0.0080.003
110	8/20/2019 09:26:34	0.0080.003
111	8/20/2019 09:27:34	0.0080.003
112	8/20/2019 09:28:34	0.0080.002
113	8/20/2019 09:29:34	0.0080.002
114	8/20/2019 09:30:34	0.0080.001
115	8/20/2019 09:31:34	0.0080.001
116	8/20/2019 09:32:34	0.0080.000
117	8/20/2019 09:33:34	0.0080.000
118	8/20/2019 09:34:34	0.0080.000
119	8/20/2019 09:35:34	0.0080.000
120	8/20/2019 09:36:34	0.0080.000
121	8/20/2019 09:37:34	0.0080.000
122	8/20/2019 09:38:34	0.0080.000
123	8/20/2019 09:39:34	0.0080.000
124	8/20/2019 09:40:34	0.0080.000
125	8/20/2019 09:41:34	0.0080.000
126	8/20/2019 09:42:34	0.0080.000
127	8/20/2019 09:43:34	0.0080.000
128	8/20/2019 09:44:34	0.0080.000
129	8/20/2019 09:45:34	0.0080.000
130	8/20/2019 09:46:34	0.0080.000
131	8/20/2019 09:47:34	0.0080.000
132	8/20/2019 09:48:34	0.0080.000
133	8/20/2019 09:49:34	0.0080.000
134	8/20/2019 09:50:34	0.0080.000
135	8/20/2019 09:51:34	0.0080.000
136	8/20/2019 09:52:34	0.0080.000
137	8/20/2019 09:53:34	0.0080.000

ARCADIS | Design & Consultancy for natural and built assets

Daily CAMP Log

Project	Phase 2 Groundwater RI
Location	East Syracuse, NY
Date	9/10/19
Weather Conditions	70's. Cloudy
Upwind Monitor	542-9122/3
Downwind Monitor	542-90 3545
Start Time	0800
End Time	1510

Site Sketch



Arcadis U.S., Inc.
One Lincoln Center
110 West Fayette Street
Suite 300
Syracuse
New York 13202
Tel 315 446 9120
Fax 315 449 0017
www.arcadis.com

Environmental North

Anne Locke
Associate Manager, Environmental Protection
Environmental, Health and Safety Department
Bristol-Myers Squibb
P.O. Box 4755
Syracuse, NY 13221

Date:
August 21, 2019

Contact:
William McCune

Phone:
315-671-9172

Email:
William.McCune@arcadis.com

Our ref:
B0087363.0037

Subject:
Community Air Monitoring During Phase II RI Well Installations Bristol-Myers Squibb Syracuse Facility – East Syracuse, New York 13057

Dear Ms. Locke:

The following is a summary of the community air monitoring plan (CAMP) provided by Arcadis U.S., Inc. (Arcadis) during the Phase II Remedial Investigation (RI) drilling activities conducted at the Bristol-Myers Squibb (BMS) Syracuse North Campus, East Syracuse, NY on August 21, 2019.

August 21, 2019: Parratt-Wolff Inc. (Parratt-Wolff) continued sonic drilling activities at BDA-17RX, drilling from 12:30 PM to 3:30 PM. CAMP monitoring included photo ionization detectors at upwind and downwind locations and a DustTrak at a breathing zone location. The prevailing wind direction was observed originating from the south through the day. Air quality parameters did not exceed CAMP standards at any time during work activities. Table 1 shows the serial numbers and associated CAMP stations locations.

CAMP Station Locations	Serial Number
Breathing Zone DustTrak	#8533151804
Upwind PID	#592-914273
Downwind PID	#592-905549

Please contact us with any questions or comments pertaining to this project.

Sincerely,

Arcadis U.S., Inc.

William McCune
Principal Geologist

Attachments

1 CAMP Data Logs
2 Site Sketches/Notes

Test 008

Instrument		Data Properties	
Model	DustTrak DRX	Start Date	08/21/2019
Instrument S/N	8533151804	Start Time	12:44:16
		Stop Date	08/21/2019
		Stop Time	15:14:16
		Total Time	0:02:30:00
		Logging Interval	900 seconds

Test Data

Data Point	Date	Time	PM1 mg/m^3	PM2.5 mg/m^3	RESP mg/m^3	PM10 mg/m^3	TOTAL mg/m^3
1	08/21/2019	12:59:16	0.023	0.024	0.024	0.025	0.025
2	08/21/2019	13:14:16	0.018	0.018	0.018	0.018	0.019
3	08/21/2019	13:29:16	0.016	0.016	0.016	0.016	0.016
4	08/21/2019	13:44:16	0.019	0.019	0.019	0.021	0.025
5	08/21/2019	13:59:16	0.017	0.018	0.018	0.018	0.019
6	08/21/2019	14:14:16	0.015	0.015	0.015	0.016	0.016
7	08/21/2019	14:29:16	0.017	0.018	0.018	0.020	0.021
8	08/21/2019	14:44:16	0.018	0.018	0.018	0.019	0.020
9	08/21/2019	14:59:16	0.017	0.017	0.017	0.018	0.019
10	08/21/2019	15:14:16	0.016	0.017	0.017	0.017	0.017

==========
19/08/21 12:50
****
Summary

Unit Name MiniRAE 3000(PGM-7320)
Unit SN 592-914273
Unit Firmware Ver V1.20A

Running Mode Hygiene Mode
Measure Type Min; Avg; Max; Real
Datalog Mode Continuous
Datalog Type Manual
Diagnostic Mode No
Stop Reason Power Down

Site ID RAE00005
User ID 00000001

Begin 8/21/2019 12:50:40
End 8/21/2019 15:28:38
Sample Period(s) 60
Number of Records 157

Sensor VOC(ppm)
Span 100.000
Span 2 N/A
Low Alarm 50.000
High Alarm 100.000
Over Alarm 2000.000
STEL Alarm 25.000
TWA Alarm 10.000
Measurement Gas Isobutylene
Calibration Time 8/21/2019 07:50
Peak 0.202
Min 0.000
Average 0.018

****
Datalog

Index	Date/Time	VOC(ppm) (Min)	VOC(ppm) (Avg)	VOC(ppm) (Max)	VOC(ppm) (Real)
001	8/21/2019 12:51:40	0.000	0.005	0.046	0.000
002	8/21/2019 12:52:40	0.000	0.001	0.007	0.000
003	8/21/2019 12:53:40	0.000	0.000	0.000	0.000
004	8/21/2019 12:54:40	0.000	0.000	0.000	0.000
005	8/21/2019 12:55:40	0.000	0.000	0.000	0.000
006	8/21/2019 12:56:40	0.000	0.000	0.000	0.000
007	8/21/2019 12:57:40	0.000	0.000	0.000	0.000
008	8/21/2019 12:58:40	0.000	0.000	0.000	0.000
009	8/21/2019 12:59:40	0.000	0.000	0.000	0.000
010	8/21/2019 13:00:40	0.000	0.000	0.000	0.000
011	8/21/2019 13:01:40	0.000	0.000	0.000	0.000
012	8/21/2019 13:02:40	0.000	0.000	0.000	0.000
013	8/21/2019 13:03:40	0.000	0.000	0.000	0.000
014	8/21/2019 13:04:40	0.000	0.000	0.000	0.000

015	8/21/2019 13:05:40	0.000	0.000	0.000	0.000
016	8/21/2019 13:06:40	0.000	0.000	0.000	0.000
017	8/21/2019 13:07:40	0.000	0.000	0.000	0.000
018	8/21/2019 13:08:40	0.000	0.000	0.000	0.000
019	8/21/2019 13:09:40	0.000	0.000	0.000	0.000
020	8/21/2019 13:10:40	0.000	0.000	0.000	0.000
021	8/21/2019 13:11:40	0.000	0.000	0.000	0.000
022	8/21/2019 13:12:40	0.000	0.000	0.000	0.000
023	8/21/2019 13:13:40	0.000	0.000	0.000	0.000
024	8/21/2019 13:14:40	0.000	0.000	0.000	0.000
025	8/21/2019 13:15:40	0.000	0.010	0.022	0.021
026	8/21/2019 13:16:40	0.022	0.036	0.055	0.054
027	8/21/2019 13:17:40	0.054	0.066	0.079	0.078
028	8/21/2019 13:18:40	0.076	0.087	0.099	0.093
029	8/21/2019 13:19:40	0.088	0.093	0.098	0.098
030	8/21/2019 13:20:40	0.094	0.100	0.202	0.202
031	8/21/2019 13:21:40	0.099	0.109	0.220	0.107
032	8/21/2019 13:22:40	0.098	0.103	0.110	0.107
033	8/21/2019 13:23:40	0.095	0.101	0.107	0.102
034	8/21/2019 13:24:40	0.102	0.104	0.107	0.106
035	8/21/2019 13:25:40	0.099	0.104	0.111	0.105
036	8/21/2019 13:26:40	0.098	0.102	0.108	0.102
037	8/21/2019 13:27:40	0.095	0.098	0.104	0.097
038	8/21/2019 13:28:40	0.089	0.092	0.098	0.091
039	8/21/2019 13:29:40	0.089	0.090	0.094	0.091
040	8/21/2019 13:30:40	0.092	0.095	0.098	0.098
041	8/21/2019 13:31:40	0.092	0.095	0.099	0.094
042	8/21/2019 13:32:40	0.086	0.090	0.097	0.089
043	8/21/2019 13:33:40	0.084	0.087	0.089	0.086
044	8/21/2019 13:34:40	0.080	0.084	0.087	0.085
045	8/21/2019 13:35:40	0.080	0.083	0.087	0.084
046	8/21/2019 13:36:40	0.069	0.075	0.084	0.070
047	8/21/2019 13:37:40	0.066	0.070	0.075	0.071
048	8/21/2019 13:38:40	0.059	0.065	0.071	0.059
049	8/21/2019 13:39:40	0.049	0.058	0.066	0.059
050	8/21/2019 13:40:40	0.055	0.061	0.066	0.055
051	8/21/2019 13:41:40	0.046	0.051	0.059	0.049
052	8/21/2019 13:42:40	0.042	0.053	0.061	0.052
053	8/21/2019 13:43:40	0.044	0.048	0.052	0.046
054	8/21/2019 13:44:40	0.038	0.043	0.049	0.047
055	8/21/2019 13:45:40	0.042	0.046	0.050	0.042
056	8/21/2019 13:46:40	0.035	0.039	0.045	0.041
057	8/21/2019 13:47:40	0.039	0.043	0.048	0.046
058	8/21/2019 13:48:40	0.000	0.025	0.044	0.000
059	8/21/2019 13:49:40	0.001	0.036	0.045	0.035
060	8/21/2019 13:50:40	0.000	0.012	0.037	0.001
061	8/21/2019 13:51:40	0.000	0.025	0.033	0.031
062	8/21/2019 13:52:40	0.020	0.025	0.031	0.023
063	8/21/2019 13:53:40	0.016	0.021	0.026	0.016
064	8/21/2019 13:54:40	0.000	0.011	0.019	0.000
065	8/21/2019 13:55:40	0.000	0.015	0.022	0.012
066	8/21/2019 13:56:40	0.007	0.012	0.016	0.008
067	8/21/2019 13:57:40	0.001	0.007	0.014	0.003
068	8/21/2019 13:58:40	0.000	0.007	0.060	0.060
069	8/21/2019 13:59:40	0.003	0.036	0.271	0.006
070	8/21/2019 14:00:40	0.004	0.008	0.014	0.009
071	8/21/2019 14:01:40	0.000	0.001	0.014	0.014

072	8/21/2019	14:02:40	0.000	0.003	0.013	0.000
073	8/21/2019	14:03:40	0.000	0.000	0.000	0.000
074	8/21/2019	14:04:40	0.000	0.003	0.020	0.012
075	8/21/2019	14:05:40	0.000	0.001	0.013	0.003
076	8/21/2019	14:06:40	0.000	0.000	0.005	0.001
077	8/21/2019	14:07:40	0.000	0.000	0.002	0.000
078	8/21/2019	14:08:40	0.000	0.000	0.006	0.003
079	8/21/2019	14:09:40	0.000	0.000	0.004	0.000
080	8/21/2019	14:10:40	0.000	0.000	0.005	0.000
081	8/21/2019	14:11:40	0.000	0.000	0.001	0.000
082	8/21/2019	14:12:40	0.000	0.000	0.000	0.000
083	8/21/2019	14:13:40	0.000	0.000	0.001	0.000
084	8/21/2019	14:14:40	0.000	0.000	0.000	0.000
085	8/21/2019	14:15:40	0.000	0.000	0.005	0.000
086	8/21/2019	14:16:40	0.000	0.000	0.000	0.000
087	8/21/2019	14:17:40	0.000	0.000	0.003	0.003
088	8/21/2019	14:18:40	0.000	0.000	0.002	0.000
089	8/21/2019	14:19:40	0.000	0.000	0.000	0.000
090	8/21/2019	14:20:40	0.000	0.000	0.000	0.000
091	8/21/2019	14:21:40	0.000	0.000	0.000	0.000
092	8/21/2019	14:22:40	0.000	0.000	0.000	0.000
093	8/21/2019	14:23:40	0.000	0.002	0.008	0.000
094	8/21/2019	14:24:40	0.000	0.001	0.006	0.000
095	8/21/2019	14:25:40	0.000	0.000	0.000	0.000
096	8/21/2019	14:26:40	0.000	0.004	0.014	0.000
097	8/21/2019	14:27:40	0.000	0.000	0.000	0.000
098	8/21/2019	14:28:40	0.000	0.000	0.000	0.000
099	8/21/2019	14:29:40	0.000	0.000	0.000	0.000
100	8/21/2019	14:30:40	0.000	0.000	0.000	0.000
101	8/21/2019	14:31:40	0.000	0.000	0.000	0.000
102	8/21/2019	14:32:40	0.000	0.005	0.021	0.010
103	8/21/2019	14:33:40	0.000	0.007	0.018	0.000
104	8/21/2019	14:34:40	0.000	0.000	0.000	0.000
105	8/21/2019	14:35:40	0.000	0.000	0.000	0.000
106	8/21/2019	14:36:40	0.000	0.000	0.000	0.000
107	8/21/2019	14:37:40	0.000	0.000	0.000	0.000
108	8/21/2019	14:38:40	0.000	0.000	0.000	0.000
109	8/21/2019	14:39:40	0.000	0.000	0.000	0.000
110	8/21/2019	14:40:40	0.000	0.000	0.000	0.000
111	8/21/2019	14:41:40	0.000	0.000	0.000	0.000
112	8/21/2019	14:42:40	0.000	0.000	0.000	0.000
113	8/21/2019	14:43:40	0.000	0.000	0.000	0.000
114	8/21/2019	14:44:40	0.000	0.000	0.000	0.000
115	8/21/2019	14:45:40	0.000	0.000	0.000	0.000
116	8/21/2019	14:46:40	0.000	0.000	0.000	0.000
117	8/21/2019	14:47:40	0.000	0.000	0.000	0.000
118	8/21/2019	14:48:40	0.000	0.000	0.000	0.000
119	8/21/2019	14:49:40	0.000	0.000	0.002	0.000
120	8/21/2019	14:50:40	0.000	0.000	0.000	0.000
121	8/21/2019	14:51:40	0.000	0.000	0.000	0.000
122	8/21/2019	14:52:40	0.000	0.000	0.000	0.000
123	8/21/2019	14:53:40	0.000	0.000	0.000	0.000
124	8/21/2019	14:54:40	0.000	0.000	0.000	0.000
125	8/21/2019	14:55:40	0.000	0.000	0.000	0.000
126	8/21/2019	14:56:40	0.000	0.000	0.000	0.000
127	8/21/2019	14:57:40	0.000	0.000	0.000	0.000
128	8/21/2019	14:58:40	0.000	0.000	0.000	0.000

129	8/21/2019	14:59:40	0.000	0.000	0.000	0.000
130	8/21/2019	15:00:40	0.000	0.000	0.000	0.000
131	8/21/2019	15:01:40	0.000	0.000	0.000	0.000
132	8/21/2019	15:02:40	0.000	0.000	0.000	0.000
133	8/21/2019	15:03:40	0.000	0.000	0.000	0.000
134	8/21/2019	15:04:40	0.000	0.000	0.000	0.000
135	8/21/2019	15:05:40	0.000	0.000	0.000	0.000
136	8/21/2019	15:06:40	0.000	0.000	0.000	0.000
137	8/21/2019	15:07:40	0.000	0.000	0.000	0.000
138	8/21/2019	15:08:40	0.000	0.000	0.000	0.000
139	8/21/2019	15:09:40	0.000	0.000	0.000	0.000
140	8/21/2019	15:10:40	0.000	0.000	0.000	0.000
141	8/21/2019	15:11:40	0.000	0.000	0.000	0.000
142	8/21/2019	15:12:40	0.000	0.000	0.000	0.000
143	8/21/2019	15:13:40	0.000	0.000	0.000	0.000
144	8/21/2019	15:14:40	0.000	0.000	0.000	0.000
145	8/21/2019	15:15:40	0.000	0.000	0.002	0.000
146	8/21/2019	15:16:40	0.0000.0000.0000.000			
147	8/21/2019	15:17:40	0.0000.0000.0000.000			
148	8/21/2019	15:18:40	0.0000.0000.0000.000			
149	8/21/2019	15:19:40	0.0000.0000.0000.000			
150	8/21/2019	15:20:40	0.0000.0000.0000.000			
151	8/21/2019	15:21:40	0.0000.0000.0000.000			
152	8/21/2019	15:22:40	0.0000.0000.0000.000			
153	8/21/2019	15:23:40	0.0000.0000.0000.000			
154	8/21/2019	15:24:40	0.0000.0000.0000.000			
155	8/21/2019	15:25:40	0.0000.0000.0000.000			
156	8/21/2019	15:26:40	0.0000.0000.0000.000			
157	8/21/2019	15:27:40	0.0000.0000.0010.000			
Peak			0.1020.1090.2710.202			
Min			0.0000.0000.0000.000			
Average			0.0150.0180.0240.018			

****

TWA/STEL

Index	Date/Time	VOC(ppm) (TWA)	VOC(ppm) (STEL)
001	8/21/2019 12:51:40	0.000	---
002	8/21/2019 12:52:40	0.000	---
003	8/21/2019 12:53:40	0.000	---
004	8/21/2019 12:54:40	0.000	---
005	8/21/2019 12:55:40	0.000	---
006	8/21/2019 12:56:40	0.000	---
007	8/21/2019 12:57:40	0.000	---
008	8/21/2019 12:58:40	0.000	---
009	8/21/2019 12:59:40	0.000	---
010	8/21/2019 13:00:40	0.000	---
011	8/21/2019 13:01:40	0.000	---
012	8/21/2019 13:02:40	0.000	---
013	8/21/2019 13:03:40	0.000	---
014	8/21/2019 13:04:40	0.000	---
015	8/21/2019 13:05:40	0.000	0.000
016	8/21/2019 13:06:40	0.000	0.000
017	8/21/2019 13:07:40	0.000	0.000
018	8/21/2019 13:08:40	0.000	0.000
019	8/21/2019 13:09:40	0.000	0.000
020	8/21/2019 13:10:40	0.000	0.000

021	8/21/2019 13:11:40	0.0000.000
022	8/21/2019 13:12:40	0.0000.000
023	8/21/2019 13:13:40	0.0000.000
024	8/21/2019 13:14:40	0.0000.000
025	8/21/2019 13:15:40	0.0000.001
026	8/21/2019 13:16:40	0.0000.005
027	8/21/2019 13:17:40	0.0000.010
028	8/21/2019 13:18:40	0.0010.016
029	8/21/2019 13:19:40	0.0010.023
030	8/21/2019 13:20:40	0.0010.036
031	8/21/2019 13:21:40	0.0010.044
032	8/21/2019 13:22:40	0.0020.051
033	8/21/2019 13:23:40	0.0020.057
034	8/21/2019 13:24:40	0.0020.065
035	8/21/2019 13:25:40	0.0020.072
036	8/21/2019 13:26:40	0.0020.078
037	8/21/2019 13:27:40	0.0030.085
038	8/21/2019 13:28:40	0.0030.091
039	8/21/2019 13:29:40	0.0030.097
040	8/21/2019 13:30:40	0.0030.103
041	8/21/2019 13:31:40	0.0030.108
042	8/21/2019 13:32:40	0.0040.111
043	8/21/2019 13:33:40	0.0040.111
044	8/21/2019 13:34:40	0.0040.111
045	8/21/2019 13:35:40	0.0040.110
046	8/21/2019 13:36:40	0.0040.101
047	8/21/2019 13:37:40	0.0040.099
048	8/21/2019 13:38:40	0.0050.095
049	8/21/2019 13:39:40	0.0050.092
050	8/21/2019 13:40:40	0.0050.089
051	8/21/2019 13:41:40	0.0050.085
052	8/21/2019 13:42:40	0.0050.082
053	8/21/2019 13:43:40	0.0050.079
054	8/21/2019 13:44:40	0.0050.076
055	8/21/2019 13:45:40	0.0050.072
056	8/21/2019 13:46:40	0.0050.069
057	8/21/2019 13:47:40	0.0050.065
058	8/21/2019 13:48:40	0.0050.059
059	8/21/2019 13:49:40	0.0060.056
060	8/21/2019 13:50:40	0.0060.050
061	8/21/2019 13:51:40	0.0060.047
062	8/21/2019 13:52:40	0.0060.044
063	8/21/2019 13:53:40	0.0060.040
064	8/21/2019 13:54:40	0.0060.036
065	8/21/2019 13:55:40	0.0060.033
066	8/21/2019 13:56:40	0.0060.030
067	8/21/2019 13:57:40	0.0060.027
068	8/21/2019 13:58:40	0.0060.027
069	8/21/2019 13:59:40	0.0060.025
070	8/21/2019 14:00:40	0.0060.022
071	8/21/2019 14:01:40	0.0060.020
072	8/21/2019 14:02:40	0.0060.018
073	8/21/2019 14:03:40	0.0060.015
074	8/21/2019 14:04:40	0.0060.015
075	8/21/2019 14:05:40	0.0060.013
076	8/21/2019 14:06:40	0.0060.013
077	8/21/2019 14:07:40	0.0060.011

078	8/21/2019 14:08:40	0.0060.010
079	8/21/2019 14:09:40	0.0060.009
080	8/21/2019 14:10:40	0.0060.009
081	8/21/2019 14:11:40	0.0060.008
082	8/21/2019 14:12:40	0.0060.007
083	8/21/2019 14:13:40	0.0060.007
084	8/21/2019 14:14:40	0.0060.003
085	8/21/2019 14:15:40	0.0060.003
086	8/21/2019 14:16:40	0.0060.002
087	8/21/2019 14:17:40	0.0060.001
088	8/21/2019 14:18:40	0.0060.001
089	8/21/2019 14:19:40	0.0060.001
090	8/21/2019 14:20:40	0.0060.001
091	8/21/2019 14:21:40	0.0060.000
092	8/21/2019 14:22:40	0.0060.000
093	8/21/2019 14:23:40	0.0060.000
094	8/21/2019 14:24:40	0.0060.000
095	8/21/2019 14:25:40	0.0060.000
096	8/21/2019 14:26:40	0.0060.000
097	8/21/2019 14:27:40	0.0060.000
098	8/21/2019 14:28:40	0.0060.000
099	8/21/2019 14:29:40	0.0060.000
100	8/21/2019 14:30:40	0.0060.000
101	8/21/2019 14:31:40	0.0060.000
102	8/21/2019 14:32:40	0.0060.001
103	8/21/2019 14:33:40	0.0060.001
104	8/21/2019 14:34:40	0.0060.001
105	8/21/2019 14:35:40	0.0060.001
106	8/21/2019 14:36:40	0.0060.001
107	8/21/2019 14:37:40	0.0060.001
108	8/21/2019 14:38:40	0.0060.001
109	8/21/2019 14:39:40	0.0060.001
110	8/21/2019 14:40:40	0.0060.001
111	8/21/2019 14:41:40	0.0060.001
112	8/21/2019 14:42:40	0.0060.001
113	8/21/2019 14:43:40	0.0060.001
114	8/21/2019 14:44:40	0.0060.001
115	8/21/2019 14:45:40	0.0060.001
116	8/21/2019 14:46:40	0.0060.001
117	8/21/2019 14:47:40	0.0060.001
118	8/21/2019 14:48:40	0.0060.000
119	8/21/2019 14:49:40	0.0060.000
120	8/21/2019 14:50:40	0.0060.000
121	8/21/2019 14:51:40	0.0060.000
122	8/21/2019 14:52:40	0.0060.000
123	8/21/2019 14:53:40	0.0060.000
124	8/21/2019 14:54:40	0.0060.000
125	8/21/2019 14:55:40	0.0060.000
126	8/21/2019 14:56:40	0.0060.000
127	8/21/2019 14:57:40	0.0060.000
128	8/21/2019 14:58:40	0.0060.000
129	8/21/2019 14:59:40	0.0060.000
130	8/21/2019 15:00:40	0.0060.000
131	8/21/2019 15:01:40	0.0060.000
132	8/21/2019 15:02:40	0.0060.000
133	8/21/2019 15:03:40	0.0060.000
134	8/21/2019 15:04:40	0.0060.000

135	8/21/2019 15:05:40	0.0060.000
136	8/21/2019 15:06:40	0.0060.000
137	8/21/2019 15:07:40	0.0060.000
138	8/21/2019 15:08:40	0.0060.000
139	8/21/2019 15:09:40	0.0060.000
140	8/21/2019 15:10:40	0.0060.000
141	8/21/2019 15:11:40	0.0060.000
142	8/21/2019 15:12:40	0.0060.000
143	8/21/2019 15:13:40	0.0060.000
144	8/21/2019 15:14:40	0.0060.000
145	8/21/2019 15:15:40	0.0060.000
146	8/21/2019 15:16:40	0.0060.000
147	8/21/2019 15:17:40	0.0060.000
148	8/21/2019 15:18:40	0.0060.000
149	8/21/2019 15:19:40	0.0060.000
150	8/21/2019 15:20:40	0.0060.000
151	8/21/2019 15:21:40	0.0060.000
152	8/21/2019 15:22:40	0.0060.000
153	8/21/2019 15:23:40	0.0060.000
154	8/21/2019 15:24:40	0.0060.000
155	8/21/2019 15:25:40	0.0060.000
156	8/21/2019 15:26:40	0.0060.000
157	8/21/2019 15:27:40	0.0060.000

==========
19/08/21 12:54
****
Summary

Unit Name MiniRAE 3000(PGM-7320)
Unit SN 592-903549
Unit Firmware Ver V2.20A

Running Mode Hygiene Mode
Datalog Mode Auto
Diagnostic Mode No
Stop Reason Power Down

Site ID 00000000
User ID 00000001

Begin 8/21/2019 12:54:56
End 8/21/2019 15:33:10
Sample Period(s) 60
Number of Records 158

Sensor PID(ppm)
Sensor SN S023030154V7
Measure Type Min; Avg; Max; Real
Span 100.0
Span 2 1000.0
Low Alarm 50.0
High Alarm 100.0
Over Alarm 2000.0
STEL Alarm 10025.0
TWA Alarm 10.0
Measurement Gas Isobutylene
Calibration Time 8/21/2019 07:55
Peak 0.0
Min 0.0
Average 0.0

****
Datalog

Index	Date/Time	PID(ppm) (Min)	PID(ppm) (Avg)	PID(ppm) (Max)	PID(ppm) (Real)
001	8/21/2019 12:55:56	0.0	0.1	0.1	0.0
002	8/21/2019 12:56:56	0.0	0.0	0.1	0.0
003	8/21/2019 12:57:56	0.0	0.0	0.0	0.0
004	8/21/2019 12:58:56	0.0	0.0	0.0	0.0
005	8/21/2019 12:59:56	0.0	0.0	0.0	0.0
006	8/21/2019 13:00:56	0.0	0.0	0.0	0.0
007	8/21/2019 13:01:56	0.0	0.0	0.0	0.0
008	8/21/2019 13:02:56	0.0	0.0	0.0	0.0
009	8/21/2019 13:03:56	0.0	0.0	0.0	0.0
010	8/21/2019 13:04:56	0.0	0.0	0.0	0.0
011	8/21/2019 13:05:56	0.0	0.0	0.0	0.0
012	8/21/2019 13:06:56	0.0	0.0	0.0	0.0
013	8/21/2019 13:07:56	0.0	0.0	0.0	0.0
014	8/21/2019 13:08:56	0.0	0.0	0.0	0.0

015	8/21/2019 13:09:56	0.0	0.0	0.0	0.0
016	8/21/2019 13:10:56	0.0	0.0	0.0	0.0
017	8/21/2019 13:11:56	0.0	0.0	0.0	0.0
018	8/21/2019 13:12:56	0.0	0.0	0.0	0.0
019	8/21/2019 13:13:56	0.0	0.0	0.0	0.0
020	8/21/2019 13:14:56	0.0	0.0	0.0	0.0
021	8/21/2019 13:15:56	0.0	0.0	0.0	0.0
022	8/21/2019 13:16:56	0.0	0.0	0.0	0.0
023	8/21/2019 13:17:56	0.0	0.0	0.0	0.0
024	8/21/2019 13:18:56	0.0	0.0	0.0	0.0
025	8/21/2019 13:19:56	0.0	0.0	0.0	0.0
026	8/21/2019 13:20:56	0.0	0.0	0.0	0.0
027	8/21/2019 13:21:56	0.0	0.0	0.0	0.0
028	8/21/2019 13:22:56	0.0	0.0	0.0	0.0
029	8/21/2019 13:23:56	0.0	0.0	0.0	0.0
030	8/21/2019 13:24:56	0.0	0.0	0.0	0.0
031	8/21/2019 13:25:56	0.0	0.0	0.0	0.0
032	8/21/2019 13:26:56	0.0	0.0	0.0	0.0
033	8/21/2019 13:27:56	0.0	0.0	0.0	0.0
034	8/21/2019 13:28:56	0.0	0.0	0.0	0.0
035	8/21/2019 13:29:56	0.0	0.0	0.0	0.0
036	8/21/2019 13:30:56	0.0	0.0	0.0	0.0
037	8/21/2019 13:31:56	0.0	0.0	0.0	0.0
038	8/21/2019 13:32:56	0.0	0.0	0.0	0.0
039	8/21/2019 13:33:56	0.0	0.0	0.0	0.0
040	8/21/2019 13:34:56	0.0	0.0	0.0	0.0
041	8/21/2019 13:35:56	0.0	0.0	0.0	0.0
042	8/21/2019 13:36:56	0.0	0.0	0.0	0.0
043	8/21/2019 13:37:56	0.0	0.0	0.0	0.0
044	8/21/2019 13:38:56	0.0	0.0	0.0	0.0
045	8/21/2019 13:39:56	0.0	0.0	0.0	0.0
046	8/21/2019 13:40:56	0.0	0.0	0.0	0.0
047	8/21/2019 13:41:56	0.0	0.0	0.0	0.0
048	8/21/2019 13:42:56	0.0	0.0	0.0	0.0
049	8/21/2019 13:43:56	0.0	0.0	0.0	0.0
050	8/21/2019 13:44:56	0.0	0.0	0.0	0.0
051	8/21/2019 13:45:56	0.0	0.0	0.0	0.0
052	8/21/2019 13:46:56	0.0	0.0	0.0	0.0
053	8/21/2019 13:47:56	0.0	0.0	0.0	0.0
054	8/21/2019 13:48:56	0.0	0.0	0.0	0.0
055	8/21/2019 13:49:56	0.0	0.0	0.0	0.0
056	8/21/2019 13:50:56	0.0	0.0	0.0	0.0
057	8/21/2019 13:51:56	0.0	0.0	0.0	0.0
058	8/21/2019 13:52:56	0.0	0.0	0.0	0.0
059	8/21/2019 13:53:56	0.0	0.0	0.0	0.0
060	8/21/2019 13:54:56	0.0	0.0	0.0	0.0
061	8/21/2019 13:55:56	0.0	0.0	0.0	0.0
062	8/21/2019 13:56:56	0.0	0.0	0.0	0.0
063	8/21/2019 13:57:56	0.0	0.0	0.0	0.0
064	8/21/2019 13:58:56	0.0	0.0	0.0	0.0
065	8/21/2019 13:59:56	0.0	0.0	0.0	0.0
066	8/21/2019 14:00:56	0.0	0.0	0.0	0.0
067	8/21/2019 14:01:56	0.0	0.0	0.0	0.0
068	8/21/2019 14:02:56	0.0	0.0	0.0	0.0
069	8/21/2019 14:03:56	0.0	0.0	0.0	0.0
070	8/21/2019 14:04:56	0.0	0.0	0.0	0.0
071	8/21/2019 14:05:56	0.0	0.0	0.0	0.0

072	8/21/2019 14:06:56	0.0	0.0	0.0	0.0
073	8/21/2019 14:07:56	0.0	0.0	0.0	0.0
074	8/21/2019 14:08:56	0.0	0.0	0.0	0.0
075	8/21/2019 14:09:56	0.0	0.0	0.0	0.0
076	8/21/2019 14:10:56	0.0	0.0	0.0	0.0
077	8/21/2019 14:11:56	0.0	0.0	0.0	0.0
078	8/21/2019 14:12:56	0.0	0.0	0.0	0.0
079	8/21/2019 14:13:56	0.0	0.0	0.0	0.0
080	8/21/2019 14:14:56	0.0	0.0	0.0	0.0
081	8/21/2019 14:15:56	0.0	0.0	0.0	0.0
082	8/21/2019 14:16:56	0.0	0.0	0.0	0.0
083	8/21/2019 14:17:56	0.0	0.0	0.0	0.0
084	8/21/2019 14:18:56	0.0	0.0	0.0	0.0
085	8/21/2019 14:19:56	0.0	0.0	0.0	0.0
086	8/21/2019 14:20:56	0.0	0.0	0.0	0.0
087	8/21/2019 14:21:56	0.0	0.0	0.0	0.0
088	8/21/2019 14:22:56	0.0	0.0	0.0	0.0
089	8/21/2019 14:23:56	0.0	0.0	0.0	0.0
090	8/21/2019 14:24:56	0.0	0.0	0.0	0.0
091	8/21/2019 14:25:56	0.0	0.0	0.0	0.0
092	8/21/2019 14:26:56	0.0	0.0	0.0	0.0
093	8/21/2019 14:27:56	0.0	0.0	0.0	0.0
094	8/21/2019 14:28:56	0.0	0.0	0.0	0.0
095	8/21/2019 14:29:56	0.0	0.0	0.0	0.0
096	8/21/2019 14:30:56	0.0	0.0	0.0	0.0
097	8/21/2019 14:31:56	0.0	0.0	0.0	0.0
098	8/21/2019 14:32:56	0.0	0.0	0.0	0.0
099	8/21/2019 14:33:56	0.0	0.0	0.0	0.0
100	8/21/2019 14:34:56	0.0	0.0	0.0	0.0
101	8/21/2019 14:35:56	0.0	0.0	0.0	0.0
102	8/21/2019 14:36:56	0.0	0.0	0.0	0.0
103	8/21/2019 14:37:56	0.0	0.0	0.0	0.0
104	8/21/2019 14:38:56	0.0	0.0	0.0	0.0
105	8/21/2019 14:39:56	0.0	0.0	0.0	0.0
106	8/21/2019 14:40:56	0.0	0.0	0.0	0.0
107	8/21/2019 14:41:56	0.0	0.0	0.0	0.0
108	8/21/2019 14:42:56	0.0	0.0	0.0	0.0
109	8/21/2019 14:43:56	0.0	0.0	0.0	0.0
110	8/21/2019 14:44:56	0.0	0.0	0.0	0.0
111	8/21/2019 14:45:56	0.0	0.0	0.0	0.0
112	8/21/2019 14:46:56	0.0	0.0	0.0	0.0
113	8/21/2019 14:47:56	0.0	0.0	0.0	0.0
114	8/21/2019 14:48:56	0.0	0.0	0.0	0.0
115	8/21/2019 14:49:56	0.0	0.0	0.0	0.0
116	8/21/2019 14:50:56	0.0	0.0	0.0	0.0
117	8/21/2019 14:51:56	0.0	0.0	0.0	0.0
118	8/21/2019 14:52:56	0.0	0.0	0.0	0.0
119	8/21/2019 14:53:56	0.0	0.0	0.0	0.0
120	8/21/2019 14:54:56	0.0	0.0	0.0	0.0
121	8/21/2019 14:55:56	0.0	0.0	0.0	0.0
122	8/21/2019 14:56:56	0.0	0.0	0.0	0.0
123	8/21/2019 14:57:56	0.0	0.0	0.0	0.0
124	8/21/2019 14:58:56	0.0	0.0	0.0	0.0
125	8/21/2019 14:59:56	0.0	0.0	0.0	0.0
126	8/21/2019 15:00:56	0.0	0.0	0.0	0.0
127	8/21/2019 15:01:56	0.0	0.0	0.0	0.0
128	8/21/2019 15:02:56	0.0	0.0	0.0	0.0

129	8/21/2019	15:03:56	0.0	0.0	0.0	0.0
130	8/21/2019	15:04:56	0.0	0.0	0.0	0.0
131	8/21/2019	15:05:56	0.0	0.0	0.0	0.0
132	8/21/2019	15:06:56	0.0	0.0	0.0	0.0
133	8/21/2019	15:07:56	0.0	0.0	0.0	0.0
134	8/21/2019	15:08:56	0.0	0.0	0.0	0.0
135	8/21/2019	15:09:56	0.0	0.0	0.0	0.0
136	8/21/2019	15:10:56	0.0	0.0	0.0	0.0
137	8/21/2019	15:11:56	0.0	0.0	0.0	0.0
138	8/21/2019	15:12:56	0.0	0.0	0.0	0.0
139	8/21/2019	15:13:56	0.0	0.0	0.0	0.0
140	8/21/2019	15:14:56	0.0	0.0	0.0	0.0
141	8/21/2019	15:15:56	0.0	0.0	0.0	0.0
142	8/21/2019	15:16:56	0.0	0.0	0.0	0.0
143	8/21/2019	15:17:56	0.0	0.0	0.0	0.0
144	8/21/2019	15:18:56	0.0	0.0	0.0	0.0
145	8/21/2019	15:19:56	0.0	0.0	0.0	0.0
146	8/21/2019	15:20:56	0.0	0.0	0.0	0.0
147	8/21/2019	15:21:56	0.0	0.0	0.0	0.0
148	8/21/2019	15:22:56	0.0	0.0	0.0	0.0
149	8/21/2019	15:23:56	0.0	0.0	0.0	0.0
150	8/21/2019	15:24:56	0.0	0.0	0.0	0.0
151	8/21/2019	15:25:56	0.0	0.0	0.0	0.0
152	8/21/2019	15:26:56	0.0	0.0	0.0	0.0
153	8/21/2019	15:27:56	0.0	0.0	0.0	0.0
154	8/21/2019	15:28:56	0.0	0.0	0.0	0.0
155	8/21/2019	15:29:56	0.0	0.0	0.0	0.0
156	8/21/2019	15:30:56	0.0	0.0	0.0	0.0
157	8/21/2019	15:31:56	0.0	0.0	0.0	0.0
158	8/21/2019	15:32:56	0.0	0.0	0.0	0.0
Peak			0.0	0.1	0.1	0.0
Min			0.0	0.0	0.0	0.0
Average			0.0	0.0	0.0	0.0

****

TWA/STEL

Index	Date/Time	PID(ppm) (TWA)	PID(ppm) (STEL)
001	8/21/2019 12:55:56	0.0	---
002	8/21/2019 12:56:56	0.0	---
003	8/21/2019 12:57:56	0.0	---
004	8/21/2019 12:58:56	0.0	---
005	8/21/2019 12:59:56	0.0	---
006	8/21/2019 13:00:56	0.0	---
007	8/21/2019 13:01:56	0.0	---
008	8/21/2019 13:02:56	0.0	---
009	8/21/2019 13:03:56	0.0	---
010	8/21/2019 13:04:56	0.0	---
011	8/21/2019 13:05:56	0.0	---
012	8/21/2019 13:06:56	0.0	---
013	8/21/2019 13:07:56	0.0	---
014	8/21/2019 13:08:56	0.0	---
015	8/21/2019 13:09:56	0.0	0.0
016	8/21/2019 13:10:56	0.0	0.0
017	8/21/2019 13:11:56	0.0	0.0
018	8/21/2019 13:12:56	0.0	0.0
019	8/21/2019 13:13:56	0.0	0.0

020	8/21/2019 13:14:56	0.0	0.0
021	8/21/2019 13:15:56	0.0	0.0
022	8/21/2019 13:16:56	0.0	0.0
023	8/21/2019 13:17:56	0.0	0.0
024	8/21/2019 13:18:56	0.0	0.0
025	8/21/2019 13:19:56	0.0	0.0
026	8/21/2019 13:20:56	0.0	0.0
027	8/21/2019 13:21:56	0.0	0.0
028	8/21/2019 13:22:56	0.0	0.0
029	8/21/2019 13:23:56	0.0	0.0
030	8/21/2019 13:24:56	0.0	0.0
031	8/21/2019 13:25:56	0.0	0.0
032	8/21/2019 13:26:56	0.0	0.0
033	8/21/2019 13:27:56	0.0	0.0
034	8/21/2019 13:28:56	0.0	0.0
035	8/21/2019 13:29:56	0.0	0.0
036	8/21/2019 13:30:56	0.0	0.0
037	8/21/2019 13:31:56	0.0	0.0
038	8/21/2019 13:32:56	0.0	0.0
039	8/21/2019 13:33:56	0.0	0.0
040	8/21/2019 13:34:56	0.0	0.0
041	8/21/2019 13:35:56	0.0	0.0
042	8/21/2019 13:36:56	0.0	0.0
043	8/21/2019 13:37:56	0.0	0.0
044	8/21/2019 13:38:56	0.0	0.0
045	8/21/2019 13:39:56	0.0	0.0
046	8/21/2019 13:40:56	0.0	0.0
047	8/21/2019 13:41:56	0.0	0.0
048	8/21/2019 13:42:56	0.0	0.0
049	8/21/2019 13:43:56	0.0	0.0
050	8/21/2019 13:44:56	0.0	0.0
051	8/21/2019 13:45:56	0.0	0.0
052	8/21/2019 13:46:56	0.0	0.0
053	8/21/2019 13:47:56	0.0	0.0
054	8/21/2019 13:48:56	0.0	0.0
055	8/21/2019 13:49:56	0.0	0.0
056	8/21/2019 13:50:56	0.0	0.0
057	8/21/2019 13:51:56	0.0	0.0
058	8/21/2019 13:52:56	0.0	0.0
059	8/21/2019 13:53:56	0.0	0.0
060	8/21/2019 13:54:56	0.0	0.0
061	8/21/2019 13:55:56	0.0	0.0
062	8/21/2019 13:56:56	0.0	0.0
063	8/21/2019 13:57:56	0.0	0.0
064	8/21/2019 13:58:56	0.0	0.0
065	8/21/2019 13:59:56	0.0	0.0
066	8/21/2019 14:00:56	0.0	0.0
067	8/21/2019 14:01:56	0.0	0.0
068	8/21/2019 14:02:56	0.0	0.0
069	8/21/2019 14:03:56	0.0	0.0
070	8/21/2019 14:04:56	0.0	0.0
071	8/21/2019 14:05:56	0.0	0.0
072	8/21/2019 14:06:56	0.0	0.0
073	8/21/2019 14:07:56	0.0	0.0
074	8/21/2019 14:08:56	0.0	0.0
075	8/21/2019 14:09:56	0.0	0.0
076	8/21/2019 14:10:56	0.0	0.0

077	8/21/2019	14:11:56	0.0	0.0
078	8/21/2019	14:12:56	0.0	0.0
079	8/21/2019	14:13:56	0.0	0.0
080	8/21/2019	14:14:56	0.0	0.0
081	8/21/2019	14:15:56	0.0	0.0
082	8/21/2019	14:16:56	0.0	0.0
083	8/21/2019	14:17:56	0.0	0.0
084	8/21/2019	14:18:56	0.0	0.0
085	8/21/2019	14:19:56	0.0	0.0
086	8/21/2019	14:20:56	0.0	0.0
087	8/21/2019	14:21:56	0.0	0.0
088	8/21/2019	14:22:56	0.0	0.0
089	8/21/2019	14:23:56	0.0	0.0
090	8/21/2019	14:24:56	0.0	0.0
091	8/21/2019	14:25:56	0.0	0.0
092	8/21/2019	14:26:56	0.0	0.0
093	8/21/2019	14:27:56	0.0	0.0
094	8/21/2019	14:28:56	0.0	0.0
095	8/21/2019	14:29:56	0.0	0.0
096	8/21/2019	14:30:56	0.0	0.0
097	8/21/2019	14:31:56	0.0	0.0
098	8/21/2019	14:32:56	0.0	0.0
099	8/21/2019	14:33:56	0.0	0.0
100	8/21/2019	14:34:56	0.0	0.0
101	8/21/2019	14:35:56	0.0	0.0
102	8/21/2019	14:36:56	0.0	0.0
103	8/21/2019	14:37:56	0.0	0.0
104	8/21/2019	14:38:56	0.0	0.0
105	8/21/2019	14:39:56	0.0	0.0
106	8/21/2019	14:40:56	0.0	0.0
107	8/21/2019	14:41:56	0.0	0.0
108	8/21/2019	14:42:56	0.0	0.0
109	8/21/2019	14:43:56	0.0	0.0
110	8/21/2019	14:44:56	0.0	0.0
111	8/21/2019	14:45:56	0.0	0.0
112	8/21/2019	14:46:56	0.0	0.0
113	8/21/2019	14:47:56	0.0	0.0
114	8/21/2019	14:48:56	0.0	0.0
115	8/21/2019	14:49:56	0.0	0.0
116	8/21/2019	14:50:56	0.0	0.0
117	8/21/2019	14:51:56	0.0	0.0
118	8/21/2019	14:52:56	0.0	0.0
119	8/21/2019	14:53:56	0.0	0.0
120	8/21/2019	14:54:56	0.0	0.0
121	8/21/2019	14:55:56	0.0	0.0
122	8/21/2019	14:56:56	0.0	0.0
123	8/21/2019	14:57:56	0.0	0.0
124	8/21/2019	14:58:56	0.0	0.0
125	8/21/2019	14:59:56	0.0	0.0
126	8/21/2019	15:00:56	0.0	0.0
127	8/21/2019	15:01:56	0.0	0.0
128	8/21/2019	15:02:56	0.0	0.0
129	8/21/2019	15:03:56	0.0	0.0
130	8/21/2019	15:04:56	0.0	0.0
131	8/21/2019	15:05:56	0.0	0.0
132	8/21/2019	15:06:56	0.0	0.0
133	8/21/2019	15:07:56	0.0	0.0

134	8/21/2019 15:08:56	0.0	0.0
135	8/21/2019 15:09:56	0.0	0.0
136	8/21/2019 15:10:56	0.0	0.0
137	8/21/2019 15:11:56	0.0	0.0
138	8/21/2019 15:12:56	0.0	0.0
139	8/21/2019 15:13:56	0.0	0.0
140	8/21/2019 15:14:56	0.0	0.0
141	8/21/2019 15:15:56	0.0	0.0
142	8/21/2019 15:16:56	0.0	0.0
143	8/21/2019 15:17:56	0.0	0.0
144	8/21/2019 15:18:56	0.0	0.0
145	8/21/2019 15:19:56	0.0	0.0
146	8/21/2019 15:20:56	0.0	0.0
147	8/21/2019 15:21:56	0.0	0.0
148	8/21/2019 15:22:56	0.0	0.0
149	8/21/2019 15:23:56	0.0	0.0
150	8/21/2019 15:24:56	0.0	0.0
151	8/21/2019 15:25:56	0.0	0.0
152	8/21/2019 15:26:56	0.0	0.0
153	8/21/2019 15:27:56	0.0	0.0
154	8/21/2019 15:28:56	0.0	0.0
155	8/21/2019 15:29:56	0.0	0.0
156	8/21/2019 15:30:56	0.0	0.0
157	8/21/2019 15:31:56	0.0	0.0
158	8/21/2019 15:32:56	0.0	0.0

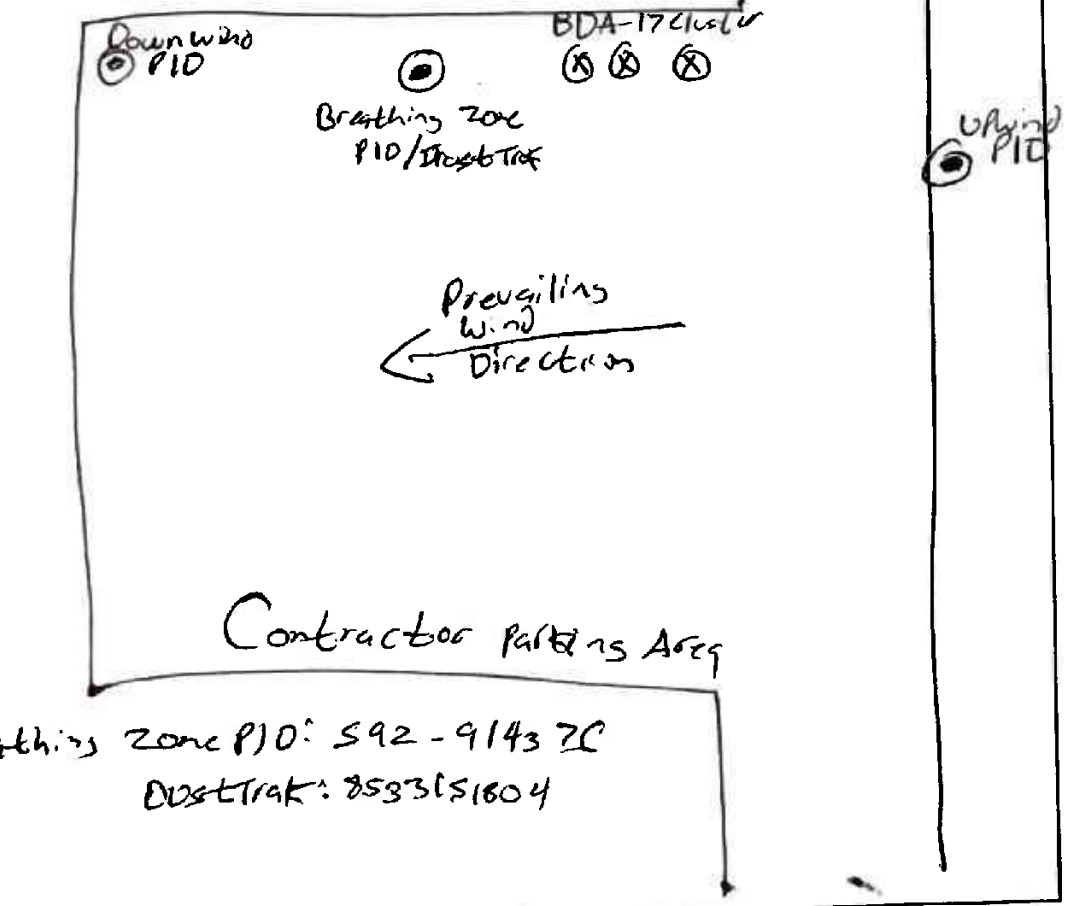
ARCADIS | Design & Consultancy for natural and built assets

Daily CAMP Log

Project	Phase 2 Groundwater RI
Location	East Syracuse, NY
Date	8/12/14
Weather Conditions	70's Partly Cloudy
Upwind Monitor	S92-9147??
Downwind Monitor	S92-90 55??
Start Time	0930
End Time	1615

Site Sketch

*. NO 11.7eV PID available before 11am today. Upwind PID Deployed at



Breathing Zone PID: S92-9143 7C
DustTrak: 8533151804

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Syracuse
New York 13202
Tel 315 446 9120
Fax 315 449 0017
www.arcadis.com

Environmental North

Anne Locke
Associate Manager, Environmental Protection
Environmental, Health and Safety Department
Bristol-Myers Squibb
P.O. Box 4755
Syracuse, NY 13221

Date:
August 22, 2019

Contact:
William McCune

Phone:
315-671-9172

Email:
William.McCune@arcadis.com

Our ref:
B0087363.0037

Subject:
Community Air Monitoring During Phase II RI Well Installations Bristol-Myers Squibb Syracuse Facility – East Syracuse, New York 13057

Dear Ms. Locke:

The following is a summary of the community air monitoring plan (CAMP) provided by Arcadis U.S., Inc. (Arcadis) during the Phase II Remedial Investigation (RI) drilling activities conducted at the Bristol-Myers Squibb (BMS) Syracuse North Campus, East Syracuse, NY on August 22, 2019.

August 22, 2019: Parratt-Wolff Inc. (Parratt-Wolff) continued sonic drilling activities at BDA-17RX, drilling from 9:30 AM to 11:30 AM. CAMP monitoring included photo ionization detectors at upwind and downwind locations and a DustTrak at a breathing zone location. The prevailing wind direction was observed originating from the south through the day. Air quality parameters did not exceed CAMP standards at any time during work activities. Table 1 shows the serial numbers and associated CAMP stations locations.

CAMP Station Locations	Serial Number
Breathing Zone DustTrak	#8533151804
Upwind PID	#592-914273
Downwind PID	#592-905549

Please contact us with any questions or comments pertaining to this project.

Sincerely,

Arcadis U.S., Inc.

William McCune
Principal Geologist

Attachments

1 CAMP Data Logs
2 Site Sketches/Notes

Test 009

Instrument		Data Properties	
Model	DustTrak DRX	Start Date	08/22/2019
Instrument S/N	8533151804	Start Time	11:20:24
		Stop Date	08/22/2019
		Stop Time	18:27:24
		Total Time	0:07:07:00
		Logging Interval	900 seconds

Test Data

Data Point	Date	Time	PM1 mg/m^3	PM2.5 mg/m^3	RESP mg/m^3	PM10 mg/m^3	TOTAL mg/m^3
1	08/22/2019	11:35:24	0.010	0.010	0.010	0.012	0.014
2	08/22/2019	11:50:24	0.010	0.010	0.011	0.013	0.016
3	08/22/2019	12:05:24	0.009	0.010	0.010	0.011	0.012
4	08/22/2019	12:20:24	0.010	0.010	0.010	0.012	0.013
5	08/22/2019	18:28:12	0.000	0.000	0.000	0.000	0.000

==========
19/08/22 09:44
****
Summary

Unit Name MiniRAE 3000(PGM-7320)
Unit SN 592-914273
Unit Firmware Ver V1.20A

Running Mode Hygiene Mode
Measure Type Min; Avg; Max; Real
Datalog Mode Continuous
Datalog Type Manual
Diagnostic Mode No
Stop Reason Power Down

Site ID RAE00005
User ID 00000001

Begin 8/22/2019 09:44:50
End 8/22/2019 11:13:33
Sample Period(s) 60
Number of Records 88

Sensor VOC(ppm)
Span 100.000
Span 2 N/A
Low Alarm 50.000
High Alarm 100.000
Over Alarm 2000.000
STEL Alarm 25.000
TWA Alarm 10.000
Measurement Gas Isobutylene
Calibration Time 8/22/2019 07:26
Peak 0.000
Min 0.000
Average 0.000

****
Datalog

Index	Date/Time	VOC(ppm) (Min)	VOC(ppm) (Avg)	VOC(ppm) (Max)	VOC(ppm) (Real)
001	8/22/2019 09:45:50	0.000	0.000	0.000	0.000
002	8/22/2019 09:46:50	0.000	0.000	0.000	0.000
003	8/22/2019 09:47:50	0.000	0.000	0.000	0.000
004	8/22/2019 09:48:50	0.000	0.000	0.000	0.000
005	8/22/2019 09:49:50	0.000	0.000	0.000	0.000
006	8/22/2019 09:50:50	0.000	0.000	0.000	0.000
007	8/22/2019 09:51:50	0.000	0.000	0.000	0.000
008	8/22/2019 09:52:50	0.000	0.000	0.000	0.000
009	8/22/2019 09:53:50	0.000	0.000	0.000	0.000
010	8/22/2019 09:54:50	0.000	0.000	0.000	0.000
011	8/22/2019 09:55:50	0.000	0.000	0.000	0.000
012	8/22/2019 09:56:50	0.000	0.000	0.000	0.000
013	8/22/2019 09:57:50	0.000	0.000	0.000	0.000
014	8/22/2019 09:58:50	0.000	0.000	0.000	0.000

015	8/22/2019	09:59:50	0.000	0.000	0.000	0.000
016	8/22/2019	10:00:50	0.000	0.000	0.000	0.000
017	8/22/2019	10:01:50	0.000	0.000	0.000	0.000
018	8/22/2019	10:02:50	0.000	0.000	0.000	0.000
019	8/22/2019	10:03:50	0.000	0.000	0.000	0.000
020	8/22/2019	10:04:50	0.000	0.000	0.000	0.000
021	8/22/2019	10:05:50	0.000	0.000	0.000	0.000
022	8/22/2019	10:06:50	0.000	0.000	0.000	0.000
023	8/22/2019	10:07:50	0.000	0.000	0.000	0.000
024	8/22/2019	10:08:50	0.000	0.000	0.000	0.000
025	8/22/2019	10:09:50	0.000	0.000	0.000	0.000
026	8/22/2019	10:10:50	0.000	0.000	0.000	0.000
027	8/22/2019	10:11:50	0.000	0.000	0.000	0.000
028	8/22/2019	10:12:50	0.000	0.000	0.000	0.000
029	8/22/2019	10:13:50	0.000	0.000	0.000	0.000
030	8/22/2019	10:14:50	0.000	0.000	0.000	0.000
031	8/22/2019	10:15:50	0.000	0.000	0.000	0.000
032	8/22/2019	10:16:50	0.000	0.000	0.000	0.000
033	8/22/2019	10:17:50	0.000	0.000	0.000	0.000
034	8/22/2019	10:18:50	0.000	0.000	0.000	0.000
035	8/22/2019	10:19:50	0.000	0.000	0.000	0.000
036	8/22/2019	10:20:50	0.000	0.000	0.000	0.000
037	8/22/2019	10:21:50	0.000	0.000	0.000	0.000
038	8/22/2019	10:22:50	0.000	0.000	0.000	0.000
039	8/22/2019	10:23:50	0.000	0.000	0.000	0.000
040	8/22/2019	10:24:50	0.000	0.000	0.000	0.000
041	8/22/2019	10:25:50	0.000	0.000	0.000	0.000
042	8/22/2019	10:26:50	0.000	0.000	0.000	0.000
043	8/22/2019	10:27:50	0.000	0.000	0.000	0.000
044	8/22/2019	10:28:50	0.000	0.000	0.000	0.000
045	8/22/2019	10:29:50	0.000	0.000	0.000	0.000
046	8/22/2019	10:30:50	0.000	0.000	0.000	0.000
047	8/22/2019	10:31:50	0.000	0.000	0.000	0.000
048	8/22/2019	10:32:50	0.000	0.000	0.000	0.000
049	8/22/2019	10:33:50	0.000	0.000	0.000	0.000
050	8/22/2019	10:34:50	0.000	0.000	0.000	0.000
051	8/22/2019	10:35:50	0.000	0.000	0.000	0.000
052	8/22/2019	10:36:50	0.000	0.000	0.000	0.000
053	8/22/2019	10:37:50	0.000	0.000	0.000	0.000
054	8/22/2019	10:38:50	0.000	0.000	0.000	0.000
055	8/22/2019	10:39:50	0.000	0.000	0.000	0.000
056	8/22/2019	10:40:50	0.000	0.000	0.000	0.000
057	8/22/2019	10:41:50	0.000	0.000	0.000	0.000
058	8/22/2019	10:42:50	0.000	0.000	0.000	0.000
059	8/22/2019	10:43:50	0.000	0.000	0.000	0.000
060	8/22/2019	10:44:50	0.000	0.000	0.000	0.000
061	8/22/2019	10:45:50	0.000	0.000	0.000	0.000
062	8/22/2019	10:46:50	0.000	0.000	0.000	0.000
063	8/22/2019	10:47:50	0.000	0.000	0.000	0.000
064	8/22/2019	10:48:50	0.000	0.000	0.000	0.000
065	8/22/2019	10:49:50	0.000	0.000	0.000	0.000
066	8/22/2019	10:50:50	0.000	0.000	0.000	0.000
067	8/22/2019	10:51:50	0.000	0.000	0.000	0.000
068	8/22/2019	10:52:50	0.000	0.000	0.000	0.000
069	8/22/2019	10:53:50	0.000	0.000	0.000	0.000
070	8/22/2019	10:54:50	0.000	0.000	0.000	0.000
071	8/22/2019	10:55:50	0.000	0.000	0.000	0.000

072	8/22/2019	10:56:50	0.000	0.000	0.000	0.000
073	8/22/2019	10:57:50	0.000	0.000	0.000	0.000
074	8/22/2019	10:58:50	0.000	0.000	0.000	0.000
075	8/22/2019	10:59:50	0.000	0.000	0.000	0.000
076	8/22/2019	11:00:50	0.000	0.000	0.000	0.000
077	8/22/2019	11:01:50	0.000	0.000	0.000	0.000
078	8/22/2019	11:02:50	0.000	0.000	0.000	0.000
079	8/22/2019	11:03:50	0.000	0.000	0.000	0.000
080	8/22/2019	11:04:50	0.000	0.000	0.000	0.000
081	8/22/2019	11:05:50	0.000	0.000	0.000	0.000
082	8/22/2019	11:06:50	0.000	0.000	0.000	0.000
083	8/22/2019	11:07:50	0.000	0.000	0.000	0.000
084	8/22/2019	11:08:50	0.000	0.000	0.000	0.000
085	8/22/2019	11:09:50	0.000	0.000	0.000	0.000
086	8/22/2019	11:10:50	0.000	0.000	0.000	0.000
087	8/22/2019	11:11:50	0.000	0.000	0.000	0.000
088	8/22/2019	11:12:50	0.000	0.000	0.000	0.000
Peak			0.000	0.000	0.000	0.000
Min			0.000	0.000	0.000	0.000
Average			0.000	0.000	0.000	0.000

****

TWA/STEL

Index	Date/Time	VOC(ppm) (TWA)	VOC(ppm) (STEL)
001	8/22/2019 09:45:50	0.000	---
002	8/22/2019 09:46:50	0.000	---
003	8/22/2019 09:47:50	0.000	---
004	8/22/2019 09:48:50	0.000	---
005	8/22/2019 09:49:50	0.000	---
006	8/22/2019 09:50:50	0.000	---
007	8/22/2019 09:51:50	0.000	---
008	8/22/2019 09:52:50	0.000	---
009	8/22/2019 09:53:50	0.000	---
010	8/22/2019 09:54:50	0.000	---
011	8/22/2019 09:55:50	0.000	---
012	8/22/2019 09:56:50	0.000	---
013	8/22/2019 09:57:50	0.000	---
014	8/22/2019 09:58:50	0.000	---
015	8/22/2019 09:59:50	0.000	0.000
016	8/22/2019 10:00:50	0.000	0.000
017	8/22/2019 10:01:50	0.000	0.000
018	8/22/2019 10:02:50	0.000	0.000
019	8/22/2019 10:03:50	0.000	0.000
020	8/22/2019 10:04:50	0.000	0.000
021	8/22/2019 10:05:50	0.000	0.000
022	8/22/2019 10:06:50	0.000	0.000
023	8/22/2019 10:07:50	0.000	0.000
024	8/22/2019 10:08:50	0.000	0.000
025	8/22/2019 10:09:50	0.000	0.000
026	8/22/2019 10:10:50	0.000	0.000
027	8/22/2019 10:11:50	0.000	0.000
028	8/22/2019 10:12:50	0.000	0.000
029	8/22/2019 10:13:50	0.000	0.000
030	8/22/2019 10:14:50	0.000	0.000
031	8/22/2019 10:15:50	0.000	0.000
032	8/22/2019 10:16:50	0.000	0.000

033	8/22/2019 10:17:50	0.000	0.000
034	8/22/2019 10:18:50	0.000	0.000
035	8/22/2019 10:19:50	0.000	0.000
036	8/22/2019 10:20:50	0.000	0.000
037	8/22/2019 10:21:50	0.000	0.000
038	8/22/2019 10:22:50	0.000	0.000
039	8/22/2019 10:23:50	0.000	0.000
040	8/22/2019 10:24:50	0.000	0.000
041	8/22/2019 10:25:50	0.000	0.000
042	8/22/2019 10:26:50	0.000	0.000
043	8/22/2019 10:27:50	0.000	0.000
044	8/22/2019 10:28:50	0.000	0.000
045	8/22/2019 10:29:50	0.000	0.000
046	8/22/2019 10:30:50	0.000	0.000
047	8/22/2019 10:31:50	0.000	0.000
048	8/22/2019 10:32:50	0.000	0.000
049	8/22/2019 10:33:50	0.000	0.000
050	8/22/2019 10:34:50	0.000	0.000
051	8/22/2019 10:35:50	0.000	0.000
052	8/22/2019 10:36:50	0.000	0.000
053	8/22/2019 10:37:50	0.000	0.000
054	8/22/2019 10:38:50	0.000	0.000
055	8/22/2019 10:39:50	0.000	0.000
056	8/22/2019 10:40:50	0.000	0.000
057	8/22/2019 10:41:50	0.000	0.000
058	8/22/2019 10:42:50	0.000	0.000
059	8/22/2019 10:43:50	0.000	0.000
060	8/22/2019 10:44:50	0.000	0.000
061	8/22/2019 10:45:50	0.000	0.000
062	8/22/2019 10:46:50	0.000	0.000
063	8/22/2019 10:47:50	0.000	0.000
064	8/22/2019 10:48:50	0.000	0.000
065	8/22/2019 10:49:50	0.000	0.000
066	8/22/2019 10:50:50	0.000	0.000
067	8/22/2019 10:51:50	0.000	0.000
068	8/22/2019 10:52:50	0.000	0.000
069	8/22/2019 10:53:50	0.000	0.000
070	8/22/2019 10:54:50	0.000	0.000
071	8/22/2019 10:55:50	0.000	0.000
072	8/22/2019 10:56:50	0.0000.000	
073	8/22/2019 10:57:50	0.0000.000	
074	8/22/2019 10:58:50	0.0000.000	
075	8/22/2019 10:59:50	0.0000.000	
076	8/22/2019 11:00:50	0.0000.000	
077	8/22/2019 11:01:50	0.0000.000	
078	8/22/2019 11:02:50	0.0000.000	
079	8/22/2019 11:03:50	0.0000.000	
080	8/22/2019 11:04:50	0.0000.000	
081	8/22/2019 11:05:50	0.0000.000	
082	8/22/2019 11:06:50	0.0000.000	
083	8/22/2019 11:07:50	0.0000.000	
084	8/22/2019 11:08:50	0.0000.000	
085	8/22/2019 11:09:50	0.0000.000	
086	8/22/2019 11:10:50	0.0000.000	
087	8/22/2019 11:11:50	0.0000.000	
088	8/22/2019 11:12:50	0.0000.000	

==========
19/08/22 09:48
****
Summary

Unit Name MiniRAE 3000(PGM-7320)
Unit SN 592-903549
Unit Firmware Ver V2.20A

Running Mode Hygiene Mode
Datalog Mode Auto
Diagnostic Mode No
Stop Reason Power Down

Site ID 00000000
User ID 00000001

Begin8/22/2019 09:48:59
End 8/22/2019 11:17:51
Sample Period(s) 60
Number of Records 88

Sensor PID(ppm)
Sensor SN S023030154V7
Measure Type Min; Avg; Max; Real
Span 100.0
Span 2 1000.0
Low Alarm 50.0
High Alarm100.0
Over Alarm2000.0
STEL Alarm 10025.0
TWA Alarm10.0
Measurement Gas Isobutylene
Calibration Time 8/22/2019 07:31
Peak 0.0
Min 0.0
Average 0.0

****
Datalog

Index	PID(ppm) Date/Time	PID(ppm) (Min)	PID(ppm) (Avg)	PID(ppm) (Max)	PID(ppm) (Real)
001	8/22/2019 09:49:59	0.0	0.0	0.0	0.0
002	8/22/2019 09:50:59	0.0	0.0	0.0	0.0
003	8/22/2019 09:51:59	0.0	0.0	0.0	0.0
004	8/22/2019 09:52:59	0.0	0.0	0.0	0.0
005	8/22/2019 09:53:59	0.0	0.0	0.0	0.0
006	8/22/2019 09:54:59	0.0	0.0	0.0	0.0
007	8/22/2019 09:55:59	0.0	0.0	0.0	0.0
008	8/22/2019 09:56:59	0.0	0.0	0.0	0.0
009	8/22/2019 09:57:59	0.0	0.0	0.0	0.0
010	8/22/2019 09:58:59	0.0	0.0	0.0	0.0
011	8/22/2019 09:59:59	0.0	0.0	0.0	0.0
012	8/22/2019 10:00:59	0.0	0.0	0.0	0.0
013	8/22/2019 10:01:59	0.0	0.0	0.0	0.0
014	8/22/2019 10:02:59	0.0	0.0	0.0	0.0

015	8/22/2019	10:03:59	0.0	0.0	0.0	0.0
016	8/22/2019	10:04:59	0.0	0.0	0.0	0.0
017	8/22/2019	10:05:59	0.0	0.0	0.0	0.0
018	8/22/2019	10:06:59	0.0	0.0	0.0	0.0
019	8/22/2019	10:07:59	0.0	0.0	0.0	0.0
020	8/22/2019	10:08:59	0.0	0.0	0.0	0.0
021	8/22/2019	10:09:59	0.0	0.0	0.0	0.0
022	8/22/2019	10:10:59	0.0	0.0	0.0	0.0
023	8/22/2019	10:11:59	0.0	0.0	0.0	0.0
024	8/22/2019	10:12:59	0.0	0.0	0.0	0.0
025	8/22/2019	10:13:59	0.0	0.0	0.0	0.0
026	8/22/2019	10:14:59	0.0	0.0	0.0	0.0
027	8/22/2019	10:15:59	0.0	0.0	0.0	0.0
028	8/22/2019	10:16:59	0.0	0.0	0.0	0.0
029	8/22/2019	10:17:59	0.0	0.0	0.0	0.0
030	8/22/2019	10:18:59	0.0	0.0	0.0	0.0
031	8/22/2019	10:19:59	0.0	0.0	0.0	0.0
032	8/22/2019	10:20:59	0.0	0.0	0.0	0.0
033	8/22/2019	10:21:59	0.0	0.0	0.0	0.0
034	8/22/2019	10:22:59	0.0	0.0	0.0	0.0
035	8/22/2019	10:23:59	0.0	0.0	0.0	0.0
036	8/22/2019	10:24:59	0.0	0.0	0.0	0.0
037	8/22/2019	10:25:59	0.0	0.0	0.0	0.0
038	8/22/2019	10:26:59	0.0	0.0	0.0	0.0
039	8/22/2019	10:27:59	0.0	0.0	0.0	0.0
040	8/22/2019	10:28:59	0.0	0.0	0.0	0.0
041	8/22/2019	10:29:59	0.0	0.0	0.0	0.0
042	8/22/2019	10:30:59	0.0	0.0	0.0	0.0
043	8/22/2019	10:31:59	0.0	0.0	0.0	0.0
044	8/22/2019	10:32:59	0.0	0.0	0.0	0.0
045	8/22/2019	10:33:59	0.0	0.0	0.0	0.0
046	8/22/2019	10:34:59	0.0	0.0	0.0	0.0
047	8/22/2019	10:35:59	0.0	0.0	0.0	0.0
048	8/22/2019	10:36:59	0.0	0.0	0.0	0.0
049	8/22/2019	10:37:59	0.0	0.0	0.0	0.0
050	8/22/2019	10:38:59	0.0	0.0	0.0	0.0
051	8/22/2019	10:39:59	0.0	0.0	0.0	0.0
052	8/22/2019	10:40:59	0.0	0.0	0.0	0.0
053	8/22/2019	10:41:59	0.0	0.0	0.0	0.0
054	8/22/2019	10:42:59	0.0	0.0	0.0	0.0
055	8/22/2019	10:43:59	0.0	0.0	0.0	0.0
056	8/22/2019	10:44:59	0.0	0.0	0.0	0.0
057	8/22/2019	10:45:59	0.0	0.0	0.0	0.0
058	8/22/2019	10:46:59	0.0	0.0	0.0	0.0
059	8/22/2019	10:47:59	0.0	0.0	0.0	0.0
060	8/22/2019	10:48:59	0.0	0.0	0.0	0.0
061	8/22/2019	10:49:59	0.0	0.0	0.0	0.0
062	8/22/2019	10:50:59	0.0	0.0	0.0	0.0
063	8/22/2019	10:51:59	0.0	0.0	0.0	0.0
064	8/22/2019	10:52:59	0.0	0.0	0.0	0.0
065	8/22/2019	10:53:59	0.0	0.0	0.0	0.0
066	8/22/2019	10:54:59	0.0	0.0	0.0	0.0
067	8/22/2019	10:55:59	0.0	0.0	0.0	0.0
068	8/22/2019	10:56:59	0.0	0.0	0.0	0.0
069	8/22/2019	10:57:59	0.0	0.0	0.0	0.0
070	8/22/2019	10:58:59	0.0	0.0	0.0	0.0
071	8/22/2019	10:59:59	0.0	0.0	0.0	0.0

072	8/22/2019	11:00:59	0.0	0.0	0.0	0.0
073	8/22/2019	11:01:59	0.0	0.0	0.0	0.0
074	8/22/2019	11:02:59	0.0	0.0	0.0	0.0
075	8/22/2019	11:03:59	0.0	0.0	0.0	0.0
076	8/22/2019	11:04:59	0.0	0.0	0.0	0.0
077	8/22/2019	11:05:59	0.0	0.0	0.0	0.0
078	8/22/2019	11:06:59	0.0	0.0	0.0	0.0
079	8/22/2019	11:07:59	0.0	0.0	0.0	0.0
080	8/22/2019	11:08:59	0.0	0.0	0.0	0.0
081	8/22/2019	11:09:59	0.0	0.0	0.0	0.0
082	8/22/2019	11:10:59	0.0	0.0	0.0	0.0
083	8/22/2019	11:11:59	0.0	0.0	0.0	0.0
084	8/22/2019	11:12:59	0.0	0.0	0.0	0.0
085	8/22/2019	11:13:59	0.0	0.0	0.0	0.0
086	8/22/2019	11:14:59	0.0	0.0	0.0	0.0
087	8/22/2019	11:15:59	0.0	0.0	0.0	0.0
088	8/22/2019	11:16:59	0.0	0.0	0.0	0.0
Peak			0.0	0.0	0.0	0.0
Min			0.0	0.0	0.0	0.0
Average				0.0	0.0	0.0

****

TWA/STEL

Index		PID(ppm) Date/Time	PID(ppm) (TWA)	(STEL)
001	8/22/2019	09:49:59	0.0	---
002	8/22/2019	09:50:59	0.0	---
003	8/22/2019	09:51:59	0.0	---
004	8/22/2019	09:52:59	0.0	---
005	8/22/2019	09:53:59	0.0	---
006	8/22/2019	09:54:59	0.0	---
007	8/22/2019	09:55:59	0.0	---
008	8/22/2019	09:56:59	0.0	---
009	8/22/2019	09:57:59	0.0	---
010	8/22/2019	09:58:59	0.0	---
011	8/22/2019	09:59:59	0.0	---
012	8/22/2019	10:00:59	0.0	---
013	8/22/2019	10:01:59	0.0	---
014	8/22/2019	10:02:59	0.0	---
015	8/22/2019	10:03:59	0.0	0.0
016	8/22/2019	10:04:59	0.0	0.0
017	8/22/2019	10:05:59	0.0	0.0
018	8/22/2019	10:06:59	0.0	0.0
019	8/22/2019	10:07:59	0.0	0.0
020	8/22/2019	10:08:59	0.0	0.0
021	8/22/2019	10:09:59	0.0	0.0
022	8/22/2019	10:10:59	0.0	0.0
023	8/22/2019	10:11:59	0.0	0.0
024	8/22/2019	10:12:59	0.0	0.0
025	8/22/2019	10:13:59	0.0	0.0
026	8/22/2019	10:14:59	0.0	0.0
027	8/22/2019	10:15:59	0.0	0.0
028	8/22/2019	10:16:59	0.0	0.0
029	8/22/2019	10:17:59	0.0	0.0
030	8/22/2019	10:18:59	0.0	0.0
031	8/22/2019	10:19:59	0.0	0.0
032	8/22/2019	10:20:59	0.0	0.0

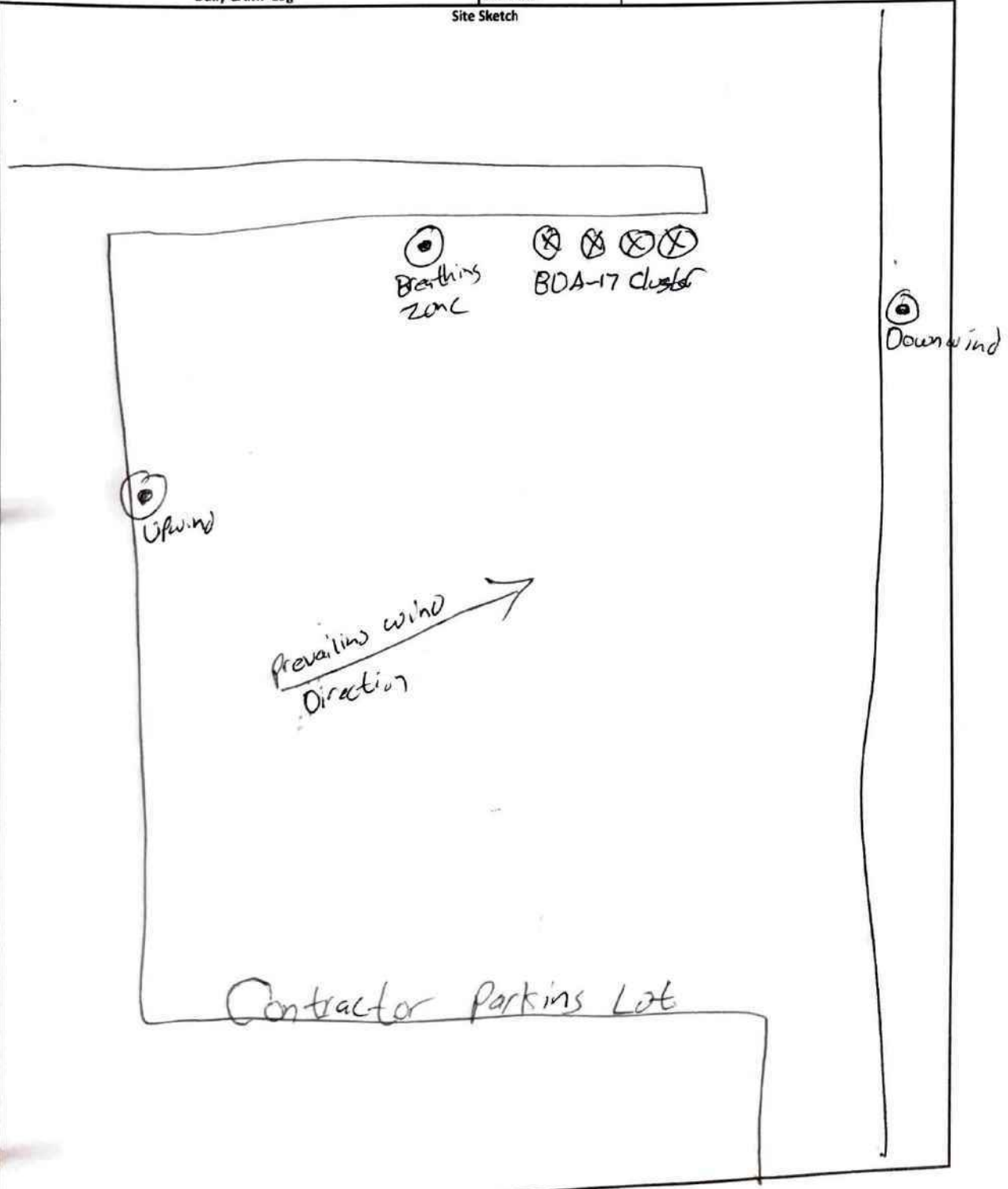
033	8/22/2019	10:21:59	0.0	0.0
034	8/22/2019	10:22:59	0.0	0.0
035	8/22/2019	10:23:59	0.0	0.0
036	8/22/2019	10:24:59	0.0	0.0
037	8/22/2019	10:25:59	0.0	0.0
038	8/22/2019	10:26:59	0.0	0.0
039	8/22/2019	10:27:59	0.0	0.0
040	8/22/2019	10:28:59	0.0	0.0
041	8/22/2019	10:29:59	0.0	0.0
042	8/22/2019	10:30:59	0.0	0.0
043	8/22/2019	10:31:59	0.0	0.0
044	8/22/2019	10:32:59	0.0	0.0
045	8/22/2019	10:33:59	0.0	0.0
046	8/22/2019	10:34:59	0.0	0.0
047	8/22/2019	10:35:59	0.0	0.0
048	8/22/2019	10:36:59	0.0	0.0
049	8/22/2019	10:37:59	0.0	0.0
050	8/22/2019	10:38:59	0.0	0.0
051	8/22/2019	10:39:59	0.0	0.0
052	8/22/2019	10:40:59	0.0	0.0
053	8/22/2019	10:41:59	0.0	0.0
054	8/22/2019	10:42:59	0.0	0.0
055	8/22/2019	10:43:59	0.0	0.0
056	8/22/2019	10:44:59	0.0	0.0
057	8/22/2019	10:45:59	0.0	0.0
058	8/22/2019	10:46:59	0.0	0.0
059	8/22/2019	10:47:59	0.0	0.0
060	8/22/2019	10:48:59	0.0	0.0
061	8/22/2019	10:49:59	0.0	0.0
062	8/22/2019	10:50:59	0.0	0.0
063	8/22/2019	10:51:59	0.0	0.0
064	8/22/2019	10:52:59	0.0	0.0
065	8/22/2019	10:53:59	0.0	0.0
066	8/22/2019	10:54:59	0.0	0.0
067	8/22/2019	10:55:59	0.0	0.0
068	8/22/2019	10:56:59	0.0	0.0
069	8/22/2019	10:57:59	0.0	0.0
070	8/22/2019	10:58:59	0.0	0.0
071	8/22/2019	10:59:59	0.0	0.0
072	8/22/2019	11:00:59	0.0	0.0
073	8/22/2019	11:01:59	0.0	0.0
074	8/22/2019	11:02:59	0.0	0.0
075	8/22/2019	11:03:59	0.0	0.0
076	8/22/2019	11:04:59	0.0	0.0
077	8/22/2019	11:05:59	0.0	0.0
078	8/22/2019	11:06:59	0.0	0.0
079	8/22/2019	11:07:59	0.0	0.0
080	8/22/2019	11:08:59	0.0	0.0
081	8/22/2019	11:09:59	0.0	0.0
082	8/22/2019	11:10:59	0.0	0.0
083	8/22/2019	11:11:59	0.0	0.0
084	8/22/2019	11:12:59	0.0	0.0
085	8/22/2019	11:13:59	0.0	0.0
086	8/22/2019	11:14:59	0.0	0.0
087	8/22/2019	11:15:59	0.0	0.0
088	8/22/2019	11:16:59	0.0	0.0

ARCADIS Design & Consultancy for natural and built assets

Daily CAMP Log

Project	Phase 2 Groundwater RI
Location	East Syracuse, NY
Date	8/22/19
Weather Conditions	70's Overcast
Upwind Monitor	502-903544
Downwind Monitor	392-41427
Start Time	0930
End Time	

Site Sketch



Arcadis U.S., Inc.
One Lincoln Center
110 West Fayette Street
Suite 300
Syracuse
New York 13202
Tel 315 446 9120
Fax 315 449 0017
www.arcadis.com

Environmental North

Anne Locke
Associate Manager, Environmental Protection
Environmental, Health and Safety Department
Bristol-Myers Squibb
P.O. Box 4755
Syracuse, NY 13221

Date:
August 23, 2019

Contact:
William McCune

Phone:
315-671-9172

Email:
William.McCune@arcadis.com

Our ref:
B0087363.0037

Subject:
Community Air Monitoring During Phase II RI Well Installations Bristol-Myers Squibb Syracuse Facility – East Syracuse, New York 13057

Dear Ms. Locke:

The following is a summary of the community air monitoring plan (CAMP) provided by Arcadis U.S., Inc. (Arcadis) during the Phase II Remedial Investigation (RI) drilling activities conducted at the Bristol-Myers Squibb (BMS) Syracuse North Campus, East Syracuse, NY on August 23, 2019.

August 23, 2019: Parratt-Wolff Inc. (Parratt-Wolff) began sonic drilling activities at BDA-14RX, drilling from 9:30 AM to 13:20 PM. CAMP monitoring included photo ionization detectors at upwind and downwind locations and a DustTrak at a breathing zone location. The prevailing wind direction was observed originating from the northwest through the day. Air quality parameters did not exceed CAMP standards at any time during work activities. Table 1 shows the serial numbers and associated CAMP stations locations.

CAMP Station Locations	Serial Number
Breathing Zone DustTrak	#8533151804
Upwind PID	#592-914273
Downwind PID	#592-905549

Anne Locke
Bristol-Myers Squibb
August 23, 2019

Please contact us with any questions or comments pertaining to this project.

Sincerely,

Arcadis U.S., Inc.

William McCune
Principal Geologist

Attachments

1 CAMP Data Logs
2 Site Sketches/Notes

Test 010

Instrument		Data Properties	
Model	DustTrak DRX	Start Date	08/23/2019
Instrument S/N	8533151804	Start Time	08:07:28
		Stop Date	08/23/2019
		Stop Time	17:22:28
		Total Time	0:09:15:00
		Logging Interval	900 seconds

Test Data

Data Point	Date	Time	PM1 mg/m^3	PM2.5 mg/m^3	RESP mg/m^3	PM10 mg/m^3	TOTAL mg/m^3
1	08/23/2019	08:22:28	0.013	0.014	0.015	0.018	0.021
2	08/23/2019	08:37:28	0.012	0.013	0.014	0.016	0.017
3	08/23/2019	08:52:28	0.032	0.034	0.037	0.059	0.098
4	08/23/2019	09:07:28	0.010	0.010	0.011	0.012	0.013
5	08/23/2019	09:22:28	0.013	0.014	0.014	0.019	0.024
6	08/23/2019	09:37:28	0.014	0.014	0.015	0.020	0.026
7	08/23/2019	09:52:28	0.013	0.013	0.014	0.016	0.019
8	08/23/2019	10:07:28	0.011	0.012	0.012	0.014	0.015
9	08/23/2019	10:22:28	0.011	0.011	0.011	0.013	0.014
10	08/23/2019	10:37:28	0.011	0.011	0.012	0.013	0.014
11	08/23/2019	10:52:28	0.011	0.012	0.012	0.014	0.015
12	08/23/2019	11:07:28	0.013	0.013	0.014	0.017	0.019
13	08/23/2019	11:22:28	0.010	0.010	0.010	0.011	0.012
14	08/23/2019	11:37:28	0.011	0.011	0.011	0.012	0.013
15	08/23/2019	11:52:28	0.010	0.010	0.010	0.010	0.011
16	08/23/2019	12:07:28	0.009	0.010	0.010	0.010	0.010
17	08/23/2019	12:22:28	0.010	0.010	0.010	0.010	0.010
18	08/23/2019	12:37:28	0.010	0.010	0.010	0.010	0.011
19	08/23/2019	12:52:28	0.009	0.009	0.009	0.009	0.010
20	08/23/2019	13:07:28	0.010	0.010	0.010	0.011	0.011
21	08/23/2019	13:22:28	0.010	0.010	0.010	0.011	0.012
22	08/23/2019	13:37:28	0.014	0.015	0.015	0.017	0.020
23	08/23/2019	13:52:28	0.010	0.010	0.010	0.011	0.012
24	08/23/2019	14:07:28	0.009	0.009	0.009	0.010	0.011
25	08/23/2019	14:22:28	0.009	0.009	0.009	0.010	0.011
26	08/23/2019	14:37:28	0.010	0.010	0.011	0.012	0.013
27	08/23/2019	14:52:28	0.010	0.010	0.010	0.011	0.012
28	08/23/2019	15:07:28	0.009	0.009	0.010	0.010	0.011
29	08/23/2019	15:22:28	0.009	0.009	0.009	0.010	0.010
30	08/23/2019	15:37:28	0.010	0.010	0.010	0.011	0.012
31	08/23/2019	17:11:13	0.000	0.000	0.000	0.000	0.000
32	08/23/2019	17:22:28	0.013	0.014	0.015	0.018	0.026

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19/08/23 08:16
****
Summary

Unit Name MiniRAE 3000(PGM-7320)
Unit SN 592-914273
Unit Firmware Ver V1.20A

Running Mode Hygiene Mode
Measure Type Min; Avg; Max; Real
Datalog Mode Continuous
Datalog Type Manual
Diagnostic Mode No
Stop Reason Power Down

Site ID RAE00005
User ID 00000001

Begin 8/23/2019 08:16:55
End 8/23/2019 15:29:15
Sample Period(s) 60
Number of Records 432

Sensor VOC(ppm)
Span 100.000
Span 2 N/A
Low Alarm 50.000
High Alarm 100.000
Over Alarm 2000.000
STEL Alarm 25.000
TWA Alarm 10.000
Measurement Gas Isobutylene
Calibration Time 8/23/2019 08:10
Peak 436207.616
Min 0.000
Average 1009.776

****
Datalog

Index	Date/Time	VOC(ppm) (Min)	VOC(ppm) (Avg)	VOC(ppm) (Max)	VOC(ppm) (Real)
001	8/23/2019 08:17:55	0.039	0.041	0.044	0.042
002	8/23/2019 08:18:55	0.040	0.042	0.053	0.041
003	8/23/2019 08:19:55	0.039	0.041	0.043	0.041
004	8/23/2019 08:20:55	0.040	0.041	0.044	0.041
005	8/23/2019 08:21:55	0.039	0.041	0.044	0.041
006	8/23/2019 08:22:55	0.040	0.041	0.045	0.043
007	8/23/2019 08:23:55	0.041	0.042	0.044	0.041
008	8/23/2019 08:24:55	0.039	0.041	0.044	0.043
009	8/23/2019 08:25:55	0.042	0.043	0.045	0.043
010	8/23/2019 08:26:55	0.040	0.041	0.044	0.043
011	8/23/2019 08:27:55	0.040	0.042	0.045	0.044
012	8/23/2019 08:28:55	0.042	0.045	0.048	0.048
013	8/23/2019 08:29:55	0.045	0.047	0.049	0.047
014	8/23/2019 08:30:55	0.046	0.047	0.050	0.050

015	8/23/2019 08:31:55	0.045	0.048	0.050	0.045
016	8/23/2019 08:32:55	0.044	0.046	0.051	0.051
017	8/23/2019 08:33:55	0.048	0.050	0.052	0.051
018	8/23/2019 08:34:55	0.049	0.051	0.053	0.050
019	8/23/2019 08:35:55	0.049	0.051	0.054	0.052
020	8/23/2019 08:36:55	0.051	0.052	0.054	0.051
021	8/23/2019 08:37:55	0.051	0.052	0.055	0.054
022	8/23/2019 08:38:55	0.052	0.054	0.057	0.056
023	8/23/2019 08:39:55	0.056	0.059	0.077	0.057
024	8/23/2019 08:40:55	0.056	0.057	0.060	0.059
025	8/23/2019 08:41:55	0.059	0.061	0.065	0.062
026	8/23/2019 08:42:55	0.061	0.062	0.064	0.062
027	8/23/2019 08:43:55	0.061	0.067	0.088	0.067
028	8/23/2019 08:44:55	0.062	0.091	0.172	0.072
029	8/23/2019 08:45:55	0.064	0.067	0.080	0.074
030	8/23/2019 08:46:55	0.064	0.068	0.073	0.067
031	8/23/2019 08:47:55	0.067	0.069	0.072	0.071
032	8/23/2019 08:48:55	0.069	0.071	0.074	0.072
033	8/23/2019 08:49:55	0.069	0.072	0.076	0.074
034	8/23/2019 08:50:55	0.075	0.146	0.206	0.206
035	8/23/2019 08:51:55	0.080	0.147	0.226	0.139
036	8/23/2019 08:52:55	0.127	0.145	0.182	0.144
037	8/23/2019 08:53:55	0.094	0.105	0.139	0.097
038	8/23/2019 08:54:55	0.076	0.084	0.096	0.076
039	8/23/2019 08:55:55	0.075	0.077	0.081	0.079
040	8/23/2019 08:56:55	0.078	0.080	0.083	0.082
041	8/23/2019 08:57:55	0.079	0.081	0.084	0.080
042	8/23/2019 08:58:55	0.081	0.082	0.085	0.083
043	8/23/2019 08:59:55	0.081	0.083	0.085	0.082
044	8/23/2019 09:00:55	0.079	0.080	0.083	0.081
045	8/23/2019 09:01:55	0.080	0.083	0.086	0.086
046	8/23/2019 09:02:55	0.084	0.086	0.088	0.085
047	8/23/2019 09:03:55	0.084	0.086	0.088	0.087
048	8/23/2019 09:04:55	0.084	0.087	0.091	0.091
049	8/23/2019 09:05:55	0.088	0.092	0.098	0.090
050	8/23/2019 09:06:55	0.085	0.089	0.093	0.089
051	8/23/2019 09:07:55	0.084	0.086	0.089	0.086
052	8/23/2019 09:08:55	0.084	0.086	0.089	0.086
053	8/23/2019 09:09:55	0.084	0.086	0.088	0.085
054	8/23/2019 09:10:55	0.084	0.086	0.089	0.086
055	8/23/2019 09:11:55	0.081	0.083	0.088	0.081
056	8/23/2019 09:12:55	0.080	0.081	0.084	0.083
057	8/23/2019 09:13:55	0.083	0.083	0.085	0.084
058	8/23/2019 09:14:55	0.082	0.083	0.084	0.082
059	8/23/2019 09:15:55	0.080	0.083	0.092	0.083
060	8/23/2019 09:16:55	0.082	0.083	0.084	0.082
061	8/23/2019 09:17:55	0.081	0.083	0.085	0.082
062	8/23/2019 09:18:55	0.081	0.084	0.087	0.085
063	8/23/2019 09:19:55	0.083	0.084	0.086	0.083
064	8/23/2019 09:20:55	0.083	0.084	0.086	0.085
065	8/23/2019 09:21:55	0.082	0.085	0.088	0.087
066	8/23/2019 09:22:55	0.082	0.084	0.087	0.084
067	8/23/2019 09:23:55	0.084	0.085	0.088	0.088
068	8/23/2019 09:24:55	0.087	0.090	0.092	0.090
069	8/23/2019 09:25:55	0.088	0.090	0.092	0.090
070	8/23/2019 09:26:55	0.087	0.088	0.091	0.089
071	8/23/2019 09:27:55	0.087	0.088	0.092	0.092

072	8/23/2019	09:28:55	0.089	0.090	0.093	0.091
073	8/23/2019	09:29:55	0.088	0.089	0.091	0.091
074	8/23/2019	09:30:55	0.087	0.089	0.093	0.092
075	8/23/2019	09:31:55	0.090	0.091	0.093	0.091
076	8/23/2019	09:32:55	0.087	0.090	0.092	0.091
077	8/23/2019	09:33:55	0.089	0.091	0.094	0.090
078	8/23/2019	09:34:55	0.090	0.092	0.096	0.091
079	8/23/2019	09:35:55	0.088	0.090	0.093	0.090
080	8/23/2019	09:36:55	0.087	0.089	0.092	0.092
081	8/23/2019	09:37:55	0.091	0.093	0.096	0.095
082	8/23/2019	09:38:55	0.088	0.092	0.096	0.088
083	8/23/2019	09:39:55	0.088	0.090	0.093	0.091
084	8/23/2019	09:40:55	0.090	0.092	0.097	0.097
085	8/23/2019	09:41:55	0.024	0.075	0.096	0.093
086	8/23/2019	09:42:55	0.090	0.092	0.096	0.094
087	8/23/2019	09:43:55	0.089	0.091	0.096	0.090
088	8/23/2019	09:44:55	0.082	0.086	0.091	0.085
089	8/23/2019	09:45:55	0.080	0.081	0.085	0.083
090	8/23/2019	09:46:55	0.083	0.084	0.089	0.088
091	8/23/2019	09:47:55	0.085	0.087	0.090	0.089
092	8/23/2019	09:48:55	0.088	0.089	0.092	0.092
093	8/23/2019	09:49:55	0.089	0.093	0.110	0.110
094	8/23/2019	09:50:55	0.092	0.098	0.108	0.092
095	8/23/2019	09:51:55	0.091	0.092	0.095	0.092
096	8/23/2019	09:52:55	0.012	0.048	0.092	0.018
097	8/23/2019	09:53:55	0.008	0.031	0.087	0.087
098	8/23/2019	09:54:55	0.080	0.083	0.087	0.081
099	8/23/2019	09:55:55	0.079	0.082	0.084	0.083
100	8/23/2019	09:56:55	0.081	0.082	0.085	0.083
101	8/23/2019	09:57:55	0.079	0.081	0.083	0.081
102	8/23/2019	09:58:55	0.077	0.079	0.083	0.078
103	8/23/2019	09:59:55	0.076	0.078	0.081	0.076
104	8/23/2019	10:00:55	0.008	0.067	0.077	0.028
105	8/23/2019	10:01:55	0.018	0.074	0.086	0.079
106	8/23/2019	10:02:55	0.075	0.077	0.080	0.076
107	8/23/2019	10:03:55	0.074	0.076	0.079	0.079
108	8/23/2019	10:04:55	0.076	0.081	0.090	0.086
109	8/23/2019	10:05:55	0.078	0.081	0.087	0.080
110	8/23/2019	10:06:55	0.077	0.080	0.083	0.081
111	8/23/2019	10:07:55	0.074	0.079	0.083	0.074
112	8/23/2019	10:08:55	0.073	0.077	0.083	0.079
113	8/23/2019	10:09:55	0.077	0.082	0.086	0.080
114	8/23/2019	10:10:55	0.076	0.079	0.085	0.085
115	8/23/2019	10:11:55	0.084	0.086	0.089	0.084
116	8/23/2019	10:12:55	0.083	0.086	0.090	0.086
117	8/23/2019	10:13:55	0.010	0.067	0.091	0.088
118	8/23/2019	10:14:55	0.088	0.091	0.094	0.092
119	8/23/2019	10:15:55	0.081	0.086	0.093	0.087
120	8/23/2019	10:16:55	0.085	0.088	0.092	0.091
121	8/23/2019	10:17:55	0.079	0.084	0.090	0.085
122	8/23/2019	10:18:55	0.081	0.085	0.090	0.085
123	8/23/2019	10:19:55	0.082	0.084	0.087	0.085
124	8/23/2019	10:20:55	0.081	0.085	0.090	0.084
125	8/23/2019	10:21:55	0.082	0.085	0.091	0.082
126	8/23/2019	10:22:55	0.012	0.060	0.088	0.079
127	8/23/2019	10:23:55	0.080	0.084	0.092	0.088
128	8/23/2019	10:24:55	0.085	0.088	0.092	0.087

129	8/23/2019	10:25:55	0.083	0.085	0.087	0.087
130	8/23/2019	10:26:55	0.084	0.085	0.088	0.085
131	8/23/2019	10:27:55	0.080	0.085	0.087	0.081
132	8/23/2019	10:28:55	0.083	0.086	0.090	0.089
133	8/23/2019	10:29:55	0.016	0.047	0.087	0.087
134	8/23/2019	10:30:55	0.086	0.089	0.094	0.087
135	8/23/2019	10:31:55	0.085	0.086	0.089	0.088
136	8/23/2019	10:32:55	0.085	0.087	0.094	0.085
137	8/23/2019	10:33:55	0.071	0.082	0.088	0.084
138	8/23/2019	10:34:55	0.075	0.081	0.085	0.076
139	8/23/2019	10:35:55	0.008	0.037	0.077	0.041
140	8/23/2019	10:36:55	0.014	0.064	0.087	0.080
141	8/23/2019	10:37:55	0.077	0.082	0.087	0.086
142	8/23/2019	10:38:55	0.082	0.084	0.087	0.086
143	8/23/2019	10:39:55	0.082	0.084	0.095	0.084
144	8/23/2019	10:40:55	0.011	0.077	0.084	0.011
145	8/23/2019	10:41:55	0.013	0.056	0.095	0.086
146	8/23/2019	10:42:55	0.080	0.087	0.092	0.091
147	8/23/2019	10:43:55	0.078	0.081	0.091	0.084
148	8/23/2019	10:44:55	0.077	0.081	0.086	0.078
149	8/23/2019	10:45:55	0.006	0.063	0.085	0.009
150	8/23/2019	10:46:55	0.007	0.022	0.041	0.032
151	8/23/2019	10:47:55	0.013	0.079	0.094	0.085
152	8/23/2019	10:48:55	0.081	0.086	0.091	0.091
153	8/23/2019	10:49:55	0.090	0.094	0.098	0.096
154	8/23/2019	10:50:55	0.087	0.090	0.096	0.088
155	8/23/2019	10:51:55	0.011	0.043	0.088	0.036
156	8/23/2019	10:52:55	0.022	0.079	0.096	0.094
157	8/23/2019	10:53:55	0.088	0.091	0.097	0.089
158	8/23/2019	10:54:55	0.085	0.088	0.091	0.089
159	8/23/2019	10:55:55	0.087	0.090	0.094	0.087
160	8/23/2019	10:56:55	0.013	0.037	0.086	0.023
161	8/23/2019	10:57:55	0.011	0.026	0.044	0.031
162	8/23/2019	10:58:55	0.007	0.027	0.049	0.021
163	8/23/2019	10:59:55	0.022	0.075	0.089	0.078
164	8/23/2019	11:00:55	0.077	0.082	0.087	0.086
165	8/23/2019	11:01:55	0.081	0.088	0.096	0.095
166	8/23/2019	11:02:55	0.006	0.073	0.095	0.034
167	8/23/2019	11:03:55	0.008	0.024	0.038	0.008
168	8/23/2019	11:04:55	0.005	0.024	0.043	0.040
169	8/23/2019	11:05:55	0.004	0.019	0.039	0.036
170	8/23/2019	11:06:55	0.010	0.026	0.042	0.032
171	8/23/2019	11:07:55	0.015	0.030	0.056	0.042
172	8/23/2019	11:08:55	0.012	0.028	0.050	0.024
173	8/23/2019	11:09:55	0.006	0.027	0.049	0.046
174	8/23/2019	11:10:55	0.010	0.028	0.057	0.035
175	8/23/2019	11:11:55	0.004	0.025	0.044	0.036
176	8/23/2019	11:12:55	0.005	0.026	0.056	0.023
177	8/23/2019	11:13:55	0.008	0.023	0.037	0.017
178	8/23/2019	11:14:55	0.006	0.021	0.036	0.026
179	8/23/2019	11:15:55	0.004	0.016	0.041	0.007
180	8/23/2019	11:16:55	0.005	0.020	0.042	0.025
181	8/23/2019	11:17:55	0.010	0.025	0.038	0.034
182	8/23/2019	11:18:55	0.020	0.031	0.042	0.026
183	8/23/2019	11:19:55	0.018	0.030	0.040	0.019
184	8/23/2019	11:20:55	0.017	0.029	0.040	0.025
185	8/23/2019	11:21:55	0.011	0.027	0.037	0.019

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187	8/23/2019	11:23:55	0.0080.0210.0350.026
188	8/23/2019	11:24:55	0.0030.0190.0320.025
189	8/23/2019	11:25:55	0.0060.0200.0320.023
190	8/23/2019	11:26:55	0.0080.0210.0350.026
191	8/23/2019	11:27:55	0.0020.0190.0360.002
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209	8/23/2019	11:45:55	0.0070.0250.0420.041
210	8/23/2019	11:46:55	0.0110.0250.0380.015
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212	8/23/2019	11:48:55	0.0070.0160.0310.028
213	8/23/2019	11:49:55	0.0010.0130.0250.018
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215	8/23/2019	11:51:55	0.0000.0130.0260.001
216	8/23/2019	11:52:55	0.0070.0210.0370.029
217	8/23/2019	11:53:55	0.0030.0160.0320.008
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219	8/23/2019	11:55:55	0.0020.0160.0360.004
220	8/23/2019	11:56:55	0.0030.0180.0310.023
221	8/23/2019	11:57:55	0.0020.0160.0310.028
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225	8/23/2019	12:01:55	0.0000.0110.0260.017
226	8/23/2019	12:02:55	0.0000.0120.0270.021
227	8/23/2019	12:03:55	0.0000.0130.0340.021
228	8/23/2019	12:04:55	0.0000.0070.0210.016
229	8/23/2019	12:05:55	0.0000.0070.0210.009
230	8/23/2019	12:06:55	0.0000.0120.0320.017
231	8/23/2019	12:07:55	0.0000.0110.0330.021
232	8/23/2019	12:08:55	0.0000.0100.0300.019
233	8/23/2019	12:09:55	0.0000.0100.0300.023
234	8/23/2019	12:10:55	0.0000.0090.0250.003
235	8/23/2019	12:11:55	0.0000.0110.0310.024
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240	8/23/2019	12:16:55	0.0000.0080.0250.016
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258	8/23/2019 12:34:55	0.0000.0080.0340.016
259	8/23/2019 12:35:55	0.0000.0060.0200.013
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263	8/23/2019 12:39:55	0.0000.0130.0360.008
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268	8/23/2019 12:44:55	0.0000.0070.0350.009
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277	8/23/2019 12:53:55	0.0000.0030.0250.000
278	8/23/2019 12:54:55	0.0000.0030.0240.000
279	8/23/2019 12:55:55	0.0000.0020.0220.000
280	8/23/2019 12:56:55	0.0000.0040.0260.000
281	8/23/2019 12:57:55	0.0000.0020.0250.002
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283	8/23/2019 12:59:55	0.0000.0030.0190.003
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285	8/23/2019 13:01:55	0.0000.0030.0260.004
286	8/23/2019 13:02:55	0.0000.0030.0280.005
287	8/23/2019 13:03:55	0.0000.0040.0250.000
288	8/23/2019 13:04:55	0.0000.0030.0250.000
289	8/23/2019 13:05:55	0.0000.0010.0200.002
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291	8/23/2019 13:07:55	0.0000.0030.0220.000
292	8/23/2019 13:08:55	0.0000.0020.0200.000
293	8/23/2019 13:09:55	0.0000.0010.0200.000
294	8/23/2019 13:10:55	0.0000.0010.0210.000
295	8/23/2019 13:11:55	0.0000.0010.0190.000
296	8/23/2019 13:12:55	0.0000.0020.0250.000
297	8/23/2019 13:13:55	0.0000.0010.0200.001
298	8/23/2019 13:14:55	0.0000.0010.0190.001
299	8/23/2019 13:15:55	0.0000.0020.0270.002

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302	8/23/2019	13:18:55	0.0000.0020.0260.001
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310	8/23/2019	13:26:55	0.0000.0060.0280.005
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328	8/23/2019	13:44:55	0.0010.0100.0210.019
329	8/23/2019	13:45:55	0.0000.0100.0310.005
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332	8/23/2019	13:48:55	0.0010.0090.0150.012
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336	8/23/2019	13:52:55	0.0000.0100.0350.012
337	8/23/2019	13:53:55	0.0050.0090.0140.014
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339	8/23/2019	13:55:55	0.0000.0060.0140.010
340	8/23/2019	13:56:55	0.0100.0140.0230.021
341	8/23/2019	13:57:55	0.0000.0100.0280.011
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346	8/23/2019	14:02:55	0.0150.0210.0380.026
347	8/23/2019	14:03:55	0.0000.0070.0160.015
348	8/23/2019	14:04:55	0.0010.0120.0310.016
349	8/23/2019	14:05:55	0.0000.0110.0280.008
350	8/23/2019	14:06:55	0.0000.0080.0130.013
351	8/23/2019	14:07:55	0.0090.0120.0160.016
352	8/23/2019	14:08:55	0.0000.0210.0380.000
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360	8/23/2019	14:16:55	0.0000.0100.0340.006
361	8/23/2019	14:17:55	0.0000.0080.0150.007
362	8/23/2019	14:18:55	0.0000.0100.0280.010
363	8/23/2019	14:19:55	0.0010.0080.0160.011
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366	8/23/2019	14:22:55	0.0050.0090.0130.009
367	8/23/2019	14:23:55	0.0090.0100.0130.013
368	8/23/2019	14:24:55	0.0000.0150.0350.000
369	8/23/2019	14:25:55	0.0000.0040.0110.007
370	8/23/2019	14:26:55	0.0010.0070.0130.013
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382	8/23/2019	14:38:55	0.0030.0040.0060.003
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384	8/23/2019	14:40:55	0.0030.0030.0050.004
385	8/23/2019	14:41:55	0.0030.0030.0050.004
386	8/23/2019	14:42:55	0.0040.0040.0060.005
387	8/23/2019	14:43:55	0.0040.0050.0070.007
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394	8/23/2019	14:50:55	0.0010.0070.0120.004
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396	8/23/2019	14:52:55	0.0030.0070.0140.010
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404	8/23/2019	15:00:55	0.0000.0050.0120.001
405	8/23/2019	15:01:55	0.0000.0060.0130.008
406	8/23/2019	15:02:55	0.0000.0050.0120.003
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408	8/23/2019	15:04:55	0.0010.0080.0140.011
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420 8/23/2019 15:16:55 0.0000.0000.0000.000
421 8/23/2019 15:17:55 0.0000.0000.0000.000
422 8/23/2019 15:18:55 0.0000.0000.0000.000
423 8/23/2019 15:19:55 0.0000.0000.0000.000
424 8/23/2019 15:20:55 0.0000.0000.0000.000
425 8/23/2019 15:21:55 0.0000.0000.0000.000
426 8/23/2019 15:22:55 0.0000.0000.0000.000
427 8/23/2019 15:23:55 0.0000.0000.0000.000
428 8/23/2019 15:24:55 0.0000.0000.0000.000
429 8/23/2019 15:25:55 0.0000.0000.0000.000
430 8/23/2019 15:26:55 0.0000.0000.0000.000
431 8/23/2019 15:27:55 0.0000.0000.0000.000
432 8/23/2019 15:28:55 0.0000.0000.0000.000
Peak 0.1270.1470.226436207.616
Min 0.0000.0000.0000.000
Average 0.0270.0350.0471009.776

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TWA/STEL

Index	Date/Time	VOC(ppm) (TWA)	VOC(ppm) (STEL)
001	8/23/2019 08:17:55	0.000	---
002	8/23/2019 08:18:55	0.000	---
003	8/23/2019 08:19:55	0.000	---
004	8/23/2019 08:20:55	0.000	---
005	8/23/2019 08:21:55	0.000	---
006	8/23/2019 08:22:55	0.001	---
007	8/23/2019 08:23:55	0.001	---
008	8/23/2019 08:24:55	0.001	---
009	8/23/2019 08:25:55	0.001	---
010	8/23/2019 08:26:55	0.001	---
011	8/23/2019 08:27:55	0.001	---
012	8/23/2019 08:28:55	0.001	---
013	8/23/2019 08:29:55	0.001	---
014	8/23/2019 08:30:55	0.001	---
015	8/23/2019 08:31:55	0.001	0.044
016	8/23/2019 08:32:55	0.001	0.047
017	8/23/2019 08:33:55	0.002	0.048
018	8/23/2019 08:34:55	0.002	0.048
019	8/23/2019 08:35:55	0.002	0.049
020	8/23/2019 08:36:55	0.002	0.050
021	8/23/2019 08:37:55	0.002	0.050
022	8/23/2019 08:38:55	0.002	0.051
023	8/23/2019 08:39:55	0.002	0.052
024	8/23/2019 08:40:55	0.002	0.053
025	8/23/2019 08:41:55	0.002	0.055
026	8/23/2019 08:42:55	0.003	0.056
027	8/23/2019 08:43:55	0.003	0.057
028	8/23/2019 08:44:55	0.003	0.059
029	8/23/2019 08:45:55	0.003	0.061
030	8/23/2019 08:46:55	0.003	0.062

031	8/23/2019	08:47:55	0.0030.064
032	8/23/2019	08:48:55	0.0040.065
033	8/23/2019	08:49:55	0.0040.067
034	8/23/2019	08:50:55	0.0040.077
035	8/23/2019	08:51:55	0.0040.083
036	8/23/2019	08:52:55	0.0050.089
037	8/23/2019	08:53:55	0.0050.092
038	8/23/2019	08:54:55	0.0050.093
039	8/23/2019	08:55:55	0.0050.095
040	8/23/2019	08:56:55	0.0050.096
041	8/23/2019	08:57:55	0.0060.097
042	8/23/2019	08:58:55	0.0060.099
043	8/23/2019	08:59:55	0.0060.100
044	8/23/2019	09:00:55	0.0060.100
045	8/23/2019	09:01:55	0.0060.101
046	8/23/2019	09:02:55	0.0060.102
047	8/23/2019	09:03:55	0.0070.104
048	8/23/2019	09:04:55	0.0070.105
049	8/23/2019	09:05:55	0.0070.106
050	8/23/2019	09:06:55	0.0070.098
051	8/23/2019	09:07:55	0.0070.095
052	8/23/2019	09:08:55	0.0080.091
053	8/23/2019	09:09:55	0.0080.090
054	8/23/2019	09:10:55	0.0080.091
055	8/23/2019	09:11:55	0.0080.091
056	8/23/2019	09:12:55	0.0080.091
057	8/23/2019	09:13:55	0.0080.091
058	8/23/2019	09:14:55	0.0090.091
059	8/23/2019	09:15:55	0.0090.091
060	8/23/2019	09:16:55	0.0090.091
061	8/23/2019	09:17:55	0.0090.091
062	8/23/2019	09:18:55	0.0090.091
063	8/23/2019	09:19:55	0.0090.091
064	8/23/2019	09:20:55	0.0100.090
065	8/23/2019	09:21:55	0.0100.090
066	8/23/2019	09:22:55	0.0100.090
067	8/23/2019	09:23:55	0.0100.090
068	8/23/2019	09:24:55	0.0100.090
069	8/23/2019	09:25:55	0.0110.090
070	8/23/2019	09:26:55	0.0110.091
071	8/23/2019	09:27:55	0.0110.091
072	8/23/2019	09:28:55	0.0110.092
073	8/23/2019	09:29:55	0.0110.092
074	8/23/2019	09:30:55	0.0110.093
075	8/23/2019	09:31:55	0.0120.093
076	8/23/2019	09:32:55	0.0120.094
077	8/23/2019	09:33:55	0.0120.095
078	8/23/2019	09:34:55	0.0120.095
079	8/23/2019	09:35:55	0.0120.095
080	8/23/2019	09:36:55	0.0130.096
081	8/23/2019	09:37:55	0.0130.096
082	8/23/2019	09:38:55	0.0130.097
083	8/23/2019	09:39:55	0.0130.097
084	8/23/2019	09:40:55	0.0130.097
085	8/23/2019	09:41:55	0.0140.098
086	8/23/2019	09:42:55	0.0140.098
087	8/23/2019	09:43:55	0.0140.098

088	8/23/2019	09:44:55	0.0140.097
089	8/23/2019	09:45:55	0.0140.097
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094	8/23/2019	09:50:55	0.0150.098
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096	8/23/2019	09:52:55	0.0160.093
097	8/23/2019	09:53:55	0.0160.093
098	8/23/2019	09:54:55	0.0160.092
099	8/23/2019	09:55:55	0.0160.092
100	8/23/2019	09:56:55	0.0160.091
101	8/23/2019	09:57:55	0.0160.090
102	8/23/2019	09:58:55	0.0170.089
103	8/23/2019	09:59:55	0.0170.088
104	8/23/2019	10:00:55	0.0170.084
105	8/23/2019	10:01:55	0.0170.084
106	8/23/2019	10:02:55	0.0170.083
107	8/23/2019	10:03:55	0.0170.082
108	8/23/2019	10:04:55	0.0170.082
109	8/23/2019	10:05:55	0.0180.080
110	8/23/2019	10:06:55	0.0180.079
111	8/23/2019	10:07:55	0.0180.078
112	8/23/2019	10:08:55	0.0180.082
113	8/23/2019	10:09:55	0.0180.082
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116	8/23/2019	10:12:55	0.0190.082
117	8/23/2019	10:13:55	0.0190.083
118	8/23/2019	10:14:55	0.0190.084
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124	8/23/2019	10:20:55	0.0200.090
125	8/23/2019	10:21:55	0.0200.090
126	8/23/2019	10:22:55	0.0210.090
127	8/23/2019	10:23:55	0.0210.091
128	8/23/2019	10:24:55	0.0210.091
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131	8/23/2019	10:27:55	0.0210.091
132	8/23/2019	10:28:55	0.0220.092
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134	8/23/2019	10:30:55	0.0220.091
135	8/23/2019	10:31:55	0.0220.091
136	8/23/2019	10:32:55	0.0220.091
137	8/23/2019	10:33:55	0.0230.091
138	8/23/2019	10:34:55	0.0230.090
139	8/23/2019	10:35:55	0.0230.087
140	8/23/2019	10:36:55	0.0230.087
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142	8/23/2019	10:38:55	0.0230.088
143	8/23/2019	10:39:55	0.0230.088
144	8/23/2019	10:40:55	0.0230.082

145	8/23/2019	10:41:55	0.0240.082
146	8/23/2019	10:42:55	0.0240.083
147	8/23/2019	10:43:55	0.0240.083
148	8/23/2019	10:44:55	0.0240.082
149	8/23/2019	10:45:55	0.0240.077
150	8/23/2019	10:46:55	0.0240.073
151	8/23/2019	10:47:55	0.0240.073
152	8/23/2019	10:48:55	0.0250.074
153	8/23/2019	10:49:55	0.0250.074
154	8/23/2019	10:50:55	0.0250.075
155	8/23/2019	10:51:55	0.0250.075
156	8/23/2019	10:52:55	0.0250.076
157	8/23/2019	10:53:55	0.0250.076
158	8/23/2019	10:54:55	0.0260.076
159	8/23/2019	10:55:55	0.0260.076
160	8/23/2019	10:56:55	0.0260.077
161	8/23/2019	10:57:55	0.0260.074
162	8/23/2019	10:58:55	0.0260.069
163	8/23/2019	10:59:55	0.0260.068
164	8/23/2019	11:00:55	0.0260.069
165	8/23/2019	11:01:55	0.0270.075
166	8/23/2019	11:02:55	0.0270.075
167	8/23/2019	11:03:55	0.0270.070
168	8/23/2019	11:04:55	0.0270.066
169	8/23/2019	11:05:55	0.0270.062
170	8/23/2019	11:06:55	0.0270.059
171	8/23/2019	11:07:55	0.0270.059
172	8/23/2019	11:08:55	0.0270.054
173	8/23/2019	11:09:55	0.0270.051
174	8/23/2019	11:10:55	0.0270.048
175	8/23/2019	11:11:55	0.0270.044
176	8/23/2019	11:12:55	0.0270.044
177	8/23/2019	11:13:55	0.0270.044
178	8/23/2019	11:14:55	0.0270.044
179	8/23/2019	11:15:55	0.0270.039
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182	8/23/2019	11:18:55	0.0280.030
183	8/23/2019	11:19:55	0.0280.031
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185	8/23/2019	11:21:55	0.0280.029
186	8/23/2019	11:22:55	0.0280.029
187	8/23/2019	11:23:55	0.0280.028
188	8/23/2019	11:24:55	0.0280.028
189	8/23/2019	11:25:55	0.0280.027
190	8/23/2019	11:26:55	0.0280.026
191	8/23/2019	11:27:55	0.0280.024
192	8/23/2019	11:28:55	0.0280.024
193	8/23/2019	11:29:55	0.0280.024
194	8/23/2019	11:30:55	0.0280.023
195	8/23/2019	11:31:55	0.0280.024
196	8/23/2019	11:32:55	0.0280.024
197	8/23/2019	11:33:55	0.0280.023
198	8/23/2019	11:34:55	0.0280.023
199	8/23/2019	11:35:55	0.0280.023
200	8/23/2019	11:36:55	0.0280.023
201	8/23/2019	11:37:55	0.0280.023

202	8/23/2019	11:38:55	0.028	0.022
203	8/23/2019	11:39:55	0.029	0.022
204	8/23/2019	11:40:55	0.029	0.022
205	8/23/2019	11:41:55	0.029	0.022
206	8/23/2019	11:42:55	0.029	0.022
207	8/23/2019	11:43:55	0.029	0.024
208	8/23/2019	11:44:55	0.029	0.024
209	8/23/2019	11:45:55	0.029	0.025
210	8/23/2019	11:46:55	0.029	0.025
211	8/23/2019	11:47:55	0.029	0.025
212	8/23/2019	11:48:55	0.029	0.025
213	8/23/2019	11:49:55	0.029	0.025
214	8/23/2019	11:50:55	0.029	0.025
215	8/23/2019	11:51:55	0.029	0.024
216	8/23/2019	11:52:55	0.029	0.025
217	8/23/2019	11:53:55	0.029	0.023
218	8/23/2019	11:54:55	0.029	0.023
219	8/23/2019	11:55:55	0.029	0.022
220	8/23/2019	11:56:55	0.029	0.022
221	8/23/2019	11:57:55	0.029	0.022
222	8/23/2019	11:58:55	0.029	0.021
223	8/23/2019	11:59:55	0.029	0.021
224	8/23/2019	12:00:55	0.029	0.020
225	8/23/2019	12:01:55	0.029	0.018
226	8/23/2019	12:02:55	0.029	0.019
227	8/23/2019	12:03:55	0.030	0.018
228	8/23/2019	12:04:55	0.030	0.018
229	8/23/2019	12:05:55	0.030	0.017
230	8/23/2019	12:06:55	0.030	0.017
231	8/23/2019	12:07:55	0.030	0.018
232	8/23/2019	12:08:55	0.030	0.017
233	8/23/2019	12:09:55	0.030	0.018
234	8/23/2019	12:10:55	0.030	0.018
235	8/23/2019	12:11:55	0.030	0.019
236	8/23/2019	12:12:55	0.030	0.018
237	8/23/2019	12:13:55	0.030	0.016
238	8/23/2019	12:14:55	0.030	0.016
239	8/23/2019	12:15:55	0.030	0.014
240	8/23/2019	12:16:55	0.030	0.015
241	8/23/2019	12:17:55	0.030	0.015
242	8/23/2019	12:18:55	0.030	0.015
243	8/23/2019	12:19:55	0.030	0.014
244	8/23/2019	12:20:55	0.030	0.014
245	8/23/2019	12:21:55	0.030	0.014
246	8/23/2019	12:22:55	0.030	0.013
247	8/23/2019	12:23:55	908.796	29080.519
248	8/23/2019	12:24:55	908.796	29080.518
249	8/23/2019	12:25:55	908.796	29080.517
250	8/23/2019	12:26:55	908.796	29080.517
251	8/23/2019	12:27:55	908.796	29080.517
252	8/23/2019	12:28:55	908.796	29080.517
253	8/23/2019	12:29:55	908.796	29080.517
254	8/23/2019	12:30:55	908.796	29080.517
255	8/23/2019	12:31:55	908.796	29080.518
256	8/23/2019	12:32:55	908.796	29080.517
257	8/23/2019	12:33:55	908.796	29080.516
258	8/23/2019	12:34:55	908.796	29080.515

259	8/23/2019	12:35:55	908.796	29080.516
260	8/23/2019	12:36:55	908.796	29080.516
261	8/23/2019	12:37:55	908.796	29080.516
262	8/23/2019	12:38:55	908.796	29080.516
263	8/23/2019	12:39:55	908.796	0.009
264	8/23/2019	12:40:55	908.796	0.009
265	8/23/2019	12:41:55	908.796	0.010
266	8/23/2019	12:42:55	908.796	0.010
267	8/23/2019	12:43:55	908.796	0.010
268	8/23/2019	12:44:55	908.796	0.010
269	8/23/2019	12:45:55	908.796	0.011
270	8/23/2019	12:46:55	908.796	0.011
271	8/23/2019	12:47:55	908.796	0.011
272	8/23/2019	12:48:55	908.796	0.011
273	8/23/2019	12:49:55	908.796	0.011
274	8/23/2019	12:50:55	908.796	0.011
275	8/23/2019	12:51:55	908.796	0.011
276	8/23/2019	12:52:55	908.796	0.010
277	8/23/2019	12:53:55	908.796	0.010
278	8/23/2019	12:54:55	908.796	0.009
279	8/23/2019	12:55:55	908.796	0.008
280	8/23/2019	12:56:55	908.796	0.007
281	8/23/2019	12:57:55	908.796	0.007
282	8/23/2019	12:58:55	908.796	0.007
283	8/23/2019	12:59:55	908.796	0.005
284	8/23/2019	13:00:55	908.796	0.004
285	8/23/2019	13:01:55	908.796	0.004
286	8/23/2019	13:02:55	908.796	0.003
287	8/23/2019	13:03:55	908.796	0.003
288	8/23/2019	13:04:55	908.796	0.002
289	8/23/2019	13:05:55	908.796	0.002
290	8/23/2019	13:06:55	908.796	0.002
291	8/23/2019	13:07:55	908.796	0.002
292	8/23/2019	13:08:55	908.796	0.002
293	8/23/2019	13:09:55	908.796	0.002
294	8/23/2019	13:10:55	908.796	0.002
295	8/23/2019	13:11:55	908.796	0.002
296	8/23/2019	13:12:55	908.796	0.002
297	8/23/2019	13:13:55	908.796	0.002
298	8/23/2019	13:14:55	908.796	0.002
299	8/23/2019	13:15:55	908.796	0.002
300	8/23/2019	13:16:55	908.796	0.002
301	8/23/2019	13:17:55	908.796	0.002
302	8/23/2019	13:18:55	908.796	0.001
303	8/23/2019	13:19:55	908.797	0.002
304	8/23/2019	13:20:55	908.797	0.002
305	8/23/2019	13:21:55	908.797	0.002
306	8/23/2019	13:22:55	908.797	0.001
307	8/23/2019	13:23:55	908.797	0.002
308	8/23/2019	13:24:55	908.797	0.003
309	8/23/2019	13:25:55	908.797	0.003
310	8/23/2019	13:26:55	908.797	0.004
311	8/23/2019	13:27:55	908.797	0.006
312	8/23/2019	13:28:55	908.797	0.006
313	8/23/2019	13:29:55	908.797	0.007
314	8/23/2019	13:30:55	908.797	0.008
315	8/23/2019	13:31:55	908.797	0.008

316	8/23/2019	13:32:55	908.797	0.009
317	8/23/2019	13:33:55	908.797	0.009
318	8/23/2019	13:34:55	908.797	0.011
319	8/23/2019	13:35:55	908.797	0.011
320	8/23/2019	13:36:55	908.797	0.012
321	8/23/2019	13:37:55	908.797	0.012
322	8/23/2019	13:38:55	908.797	0.013
323	8/23/2019	13:39:55	908.797	0.013
324	8/23/2019	13:40:55	908.797	0.014
325	8/23/2019	13:41:55	908.797	0.014
326	8/23/2019	13:42:55	908.797	0.015
327	8/23/2019	13:43:55	908.797	0.013
328	8/23/2019	13:44:55	908.797	0.014
329	8/23/2019	13:45:55	908.797	0.013
330	8/23/2019	13:46:55	908.797	0.013
331	8/23/2019	13:47:55	908.797	0.013
332	8/23/2019	13:48:55	908.797	0.013
333	8/23/2019	13:49:55	908.797	0.013
334	8/23/2019	13:50:55	908.797	0.012
335	8/23/2019	13:51:55	908.797	0.013
336	8/23/2019	13:52:55	908.797	0.013
337	8/23/2019	13:53:55	908.797	0.013
338	8/23/2019	13:54:55	908.797	0.012
339	8/23/2019	13:55:55	908.797	0.012
340	8/23/2019	13:56:55	908.797	0.012
341	8/23/2019	13:57:55	908.797	0.013
342	8/23/2019	13:58:55	908.797	0.012
343	8/23/2019	13:59:55	908.797	0.013
344	8/23/2019	14:00:55	908.797	0.013
345	8/23/2019	14:01:55	908.798	0.013
346	8/23/2019	14:02:55	908.798	0.014
347	8/23/2019	14:03:55	908.798	0.015
348	8/23/2019	14:04:55	908.798	0.015
349	8/23/2019	14:05:55	908.798	0.015
350	8/23/2019	14:06:55	908.798	0.015
351	8/23/2019	14:07:55	908.798	0.015
352	8/23/2019	14:08:55	908.798	0.014
353	8/23/2019	14:09:55	908.798	0.014
354	8/23/2019	14:10:55	908.798	0.014
355	8/23/2019	14:11:55	908.798	0.014
356	8/23/2019	14:12:55	908.798	0.014
357	8/23/2019	14:13:55	908.798	0.014
358	8/23/2019	14:14:55	908.798	0.014
359	8/23/2019	14:15:55	908.798	0.013
360	8/23/2019	14:16:55	908.798	0.013
361	8/23/2019	14:17:55	908.798	0.012
362	8/23/2019	14:18:55	908.798	0.011
363	8/23/2019	14:19:55	908.798	0.011
364	8/23/2019	14:20:55	908.798	0.010
365	8/23/2019	14:21:55	908.798	0.010
366	8/23/2019	14:22:55	908.798	0.010
367	8/23/2019	14:23:55	908.798	0.010
368	8/23/2019	14:24:55	908.798	0.010
369	8/23/2019	14:25:55	908.798	0.009
370	8/23/2019	14:26:55	908.798	0.010
371	8/23/2019	14:27:55	908.798	0.011
372	8/23/2019	14:28:55	908.798	0.010

373	8/23/2019	14:29:55	908.798	0.009
374	8/23/2019	14:30:55	908.798	0.010
375	8/23/2019	14:31:55	908.798	0.009
376	8/23/2019	14:32:55	908.798	0.009
377	8/23/2019	14:33:55	908.798	0.009
378	8/23/2019	14:34:55	908.798	0.009
379	8/23/2019	14:35:55	908.798	0.009
380	8/23/2019	14:36:55	908.798	0.009
381	8/23/2019	14:37:55	908.798	0.008
382	8/23/2019	14:38:55	908.798	0.008
383	8/23/2019	14:39:55	908.798	0.007
384	8/23/2019	14:40:55	908.798	0.008
385	8/23/2019	14:41:55	908.798	0.007
386	8/23/2019	14:42:55	908.798	0.007
387	8/23/2019	14:43:55	908.798	0.006
388	8/23/2019	14:44:55	908.798	0.005
389	8/23/2019	14:45:55	908.798	0.005
390	8/23/2019	14:46:55	908.798	0.005
391	8/23/2019	14:47:55	908.798	0.004
392	8/23/2019	14:48:55	908.798	0.005
393	8/23/2019	14:49:55	908.798	0.005
394	8/23/2019	14:50:55	908.798	0.005
395	8/23/2019	14:51:55	908.798	0.005
396	8/23/2019	14:52:55	908.798	0.005
397	8/23/2019	14:53:55	908.798	0.005
398	8/23/2019	14:54:55	908.798	0.005
399	8/23/2019	14:55:55	908.798	0.005
400	8/23/2019	14:56:55	908.798	0.005
401	8/23/2019	14:57:55	908.798	0.005
402	8/23/2019	14:58:55	908.798	0.005
403	8/23/2019	14:59:55	908.798	0.004
404	8/23/2019	15:00:55	908.798	0.004
405	8/23/2019	15:01:55	908.798	0.005
406	8/23/2019	15:02:55	908.798	0.005
407	8/23/2019	15:03:55	908.798	0.005
408	8/23/2019	15:04:55	908.798	0.005
409	8/23/2019	15:05:55	908.798	0.005
410	8/23/2019	15:06:55	908.799	0.005
411	8/23/2019	15:07:55	908.799	0.005
412	8/23/2019	15:08:55	908.799	0.005
413	8/23/2019	15:09:55	908.799	0.005
414	8/23/2019	15:10:55	908.799	0.004
415	8/23/2019	15:11:55	908.799	0.005
416	8/23/2019	15:12:55	908.799	0.004
417	8/23/2019	15:13:55	908.799	0.005
418	8/23/2019	15:14:55	908.799	0.005
419	8/23/2019	15:15:55	908.799	0.005
420	8/23/2019	15:16:55	908.799	0.005
421	8/23/2019	15:17:55	908.799	0.004
422	8/23/2019	15:18:55	908.799	0.004
423	8/23/2019	15:19:55	908.799	0.004
424	8/23/2019	15:20:55	908.799	0.003
425	8/23/2019	15:21:55	908.799	0.003
426	8/23/2019	15:22:55	908.799	0.002
427	8/23/2019	15:23:55	908.799	0.002
428	8/23/2019	15:24:55	908.799	0.001
429	8/23/2019	15:25:55	908.799	0.001

430	8/23/2019	15:26:55	908.799	0.001
431	8/23/2019	15:27:55	908.799	0.000
432	8/23/2019	15:28:55	908.799	0.000

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19/08/23 08:20
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Summary

Unit Name MiniRAE 3000(PGM-7320)
Unit SN 592-903549
Unit Firmware Ver V2.20A

Running Mode Hygiene Mode
Datalog Mode Auto
Diagnostic Mode No
Stop Reason Power Down

Site ID 00000000
User ID 00000001

Begin 8/23/2019 08:20:33
End 8/23/2019 15:27:51
Sample Period(s) 60
Number of Records 427

Sensor PID(ppm)
Sensor SN S023030154V7
Measure Type Min; Avg; Max; Real
Span 100.0
Span 2 1000.0
Low Alarm 50.0
High Alarm 100.0
Over Alarm 2000.0
STEL Alarm 10025.0
TWA Alarm 10.0
Measurement Gas Isobutylene
Calibration Time 8/23/2019 08:10
Peak 0.0
Min 0.0
Average 0.0

****
Datalog

Index	Date/Time	PID(ppm) (Min)	PID(ppm) (Avg)	PID(ppm) (Max)	PID(ppm) (Real)
001	8/23/2019 08:21:33	0.0	0.0	0.0	0.0
002	8/23/2019 08:22:33	0.0	0.0	0.0	0.0
003	8/23/2019 08:23:33	0.0	0.0	0.0	0.0
004	8/23/2019 08:24:33	0.0	0.0	0.0	0.0
005	8/23/2019 08:25:33	0.0	0.0	0.0	0.0
006	8/23/2019 08:26:33	0.0	0.0	0.0	0.0
007	8/23/2019 08:27:33	0.0	0.0	0.0	0.0
008	8/23/2019 08:28:33	0.0	0.0	0.0	0.0
009	8/23/2019 08:29:33	0.0	0.0	0.0	0.0
010	8/23/2019 08:30:33	0.0	0.0	0.0	0.0
011	8/23/2019 08:31:33	0.0	0.0	0.0	0.0
012	8/23/2019 08:32:33	0.0	0.0	0.0	0.0
013	8/23/2019 08:33:33	0.0	0.0	0.0	0.0
014	8/23/2019 08:34:33	0.0	0.0	0.0	0.0

015	8/23/2019 08:35:33	0.0	0.0	0.0	0.0
016	8/23/2019 08:36:33	0.0	0.0	0.0	0.0
017	8/23/2019 08:37:33	0.0	0.0	0.0	0.0
018	8/23/2019 08:38:33	0.0	0.0	0.0	0.0
019	8/23/2019 08:39:33	0.0	0.0	0.0	0.0
020	8/23/2019 08:40:33	0.0	0.0	0.0	0.0
021	8/23/2019 08:41:33	0.0	0.0	0.0	0.0
022	8/23/2019 08:42:33	0.0	0.0	0.0	0.0
023	8/23/2019 08:43:33	0.0	0.0	0.0	0.0
024	8/23/2019 08:44:33	0.0	0.0	0.0	0.0
025	8/23/2019 08:45:33	0.0	0.0	0.0	0.0
026	8/23/2019 08:46:33	0.0	0.0	0.0	0.0
027	8/23/2019 08:47:33	0.0	0.0	0.0	0.0
028	8/23/2019 08:48:33	0.0	0.0	0.0	0.0
029	8/23/2019 08:49:33	0.0	0.0	0.0	0.0
030	8/23/2019 08:50:33	0.0	0.0	0.0	0.0
031	8/23/2019 08:51:33	0.0	0.0	0.0	0.0
032	8/23/2019 08:52:33	0.0	0.0	0.0	0.0
033	8/23/2019 08:53:33	0.0	0.0	0.0	0.0
034	8/23/2019 08:54:33	0.0	0.0	0.0	0.0
035	8/23/2019 08:55:33	0.0	0.0	0.0	0.0
036	8/23/2019 08:56:33	0.0	0.0	0.0	0.0
037	8/23/2019 08:57:33	0.0	0.0	0.0	0.0
038	8/23/2019 08:58:33	0.0	0.0	0.0	0.0
039	8/23/2019 08:59:33	0.0	0.0	0.0	0.0
040	8/23/2019 09:00:33	0.0	0.0	0.0	0.0
041	8/23/2019 09:01:33	0.0	0.0	0.0	0.0
042	8/23/2019 09:02:33	0.0	0.0	0.0	0.0
043	8/23/2019 09:03:33	0.0	0.0	0.0	0.0
044	8/23/2019 09:04:33	0.0	0.0	0.0	0.0
045	8/23/2019 09:05:33	0.0	0.0	0.0	0.0
046	8/23/2019 09:06:33	0.0	0.0	0.0	0.0
047	8/23/2019 09:07:33	0.0	0.0	0.0	0.0
048	8/23/2019 09:08:33	0.0	0.0	0.0	0.0
049	8/23/2019 09:09:33	0.0	0.0	0.0	0.0
050	8/23/2019 09:10:33	0.0	0.0	0.0	0.0
051	8/23/2019 09:11:33	0.0	0.0	0.0	0.0
052	8/23/2019 09:12:33	0.0	0.0	0.0	0.0
053	8/23/2019 09:13:33	0.0	0.0	0.0	0.0
054	8/23/2019 09:14:33	0.0	0.0	0.0	0.0
055	8/23/2019 09:15:33	0.0	0.0	0.0	0.0
056	8/23/2019 09:16:33	0.0	0.0	0.0	0.0
057	8/23/2019 09:17:33	0.0	0.0	0.0	0.0
058	8/23/2019 09:18:33	0.0	0.0	0.0	0.0
059	8/23/2019 09:19:33	0.0	0.0	0.0	0.0
060	8/23/2019 09:20:33	0.0	0.0	0.0	0.0
061	8/23/2019 09:21:33	0.0	0.0	0.0	0.0
062	8/23/2019 09:22:33	0.0	0.0	0.0	0.0
063	8/23/2019 09:23:33	0.0	0.0	0.0	0.0
064	8/23/2019 09:24:33	0.0	0.0	0.0	0.0
065	8/23/2019 09:25:33	0.0	0.0	0.0	0.0
066	8/23/2019 09:26:33	0.0	0.0	0.0	0.0
067	8/23/2019 09:27:33	0.0	0.0	0.0	0.0
068	8/23/2019 09:28:33	0.0	0.0	0.0	0.0
069	8/23/2019 09:29:33	0.0	0.0	0.0	0.0
070	8/23/2019 09:30:33	0.0	0.0	0.0	0.0
071	8/23/2019 09:31:33	0.0	0.0	0.0	0.0

072	8/23/2019 09:32:33	0.0	0.0	0.0	0.0
073	8/23/2019 09:33:33	0.0	0.0	0.0	0.0
074	8/23/2019 09:34:33	0.0	0.0	0.0	0.0
075	8/23/2019 09:35:33	0.0	0.0	0.0	0.0
076	8/23/2019 09:36:33	0.0	0.0	0.0	0.0
077	8/23/2019 09:37:33	0.0	0.0	0.0	0.0
078	8/23/2019 09:38:33	0.0	0.0	0.0	0.0
079	8/23/2019 09:39:33	0.0	0.0	0.0	0.0
080	8/23/2019 09:40:33	0.0	0.0	0.0	0.0
081	8/23/2019 09:41:33	0.0	0.0	0.0	0.0
082	8/23/2019 09:42:33	0.0	0.0	0.0	0.0
083	8/23/2019 09:43:33	0.0	0.0	0.0	0.0
084	8/23/2019 09:44:33	0.0	0.0	0.0	0.0
085	8/23/2019 09:45:33	0.0	0.0	0.0	0.0
086	8/23/2019 09:46:33	0.0	0.0	0.0	0.0
087	8/23/2019 09:47:33	0.0	0.0	0.0	0.0
088	8/23/2019 09:48:33	0.0	0.0	0.0	0.0
089	8/23/2019 09:49:33	0.0	0.0	0.0	0.0
090	8/23/2019 09:50:33	0.0	0.0	0.0	0.0
091	8/23/2019 09:51:33	0.0	0.0	0.0	0.0
092	8/23/2019 09:52:33	0.0	0.0	0.0	0.0
093	8/23/2019 09:53:33	0.0	0.0	0.0	0.0
094	8/23/2019 09:54:33	0.0	0.0	0.0	0.0
095	8/23/2019 09:55:33	0.0	0.0	0.0	0.0
096	8/23/2019 09:56:33	0.0	0.0	0.0	0.0
097	8/23/2019 09:57:33	0.0	0.0	0.0	0.0
098	8/23/2019 09:58:33	0.0	0.0	0.0	0.0
099	8/23/2019 09:59:33	0.0	0.0	0.0	0.0
100	8/23/2019 10:00:33	0.0	0.0	0.0	0.0
101	8/23/2019 10:01:33	0.0	0.0	0.0	0.0
102	8/23/2019 10:02:33	0.0	0.0	0.0	0.0
103	8/23/2019 10:03:33	0.0	0.0	0.0	0.0
104	8/23/2019 10:04:33	0.0	0.0	0.0	0.0
105	8/23/2019 10:05:33	0.0	0.0	0.0	0.0
106	8/23/2019 10:06:33	0.0	0.0	0.0	0.0
107	8/23/2019 10:07:33	0.0	0.0	0.0	0.0
108	8/23/2019 10:08:33	0.0	0.0	0.0	0.0
109	8/23/2019 10:09:33	0.0	0.0	0.0	0.0
110	8/23/2019 10:10:33	0.0	0.0	0.0	0.0
111	8/23/2019 10:11:33	0.0	0.0	0.0	0.0
112	8/23/2019 10:12:33	0.0	0.0	0.0	0.0
113	8/23/2019 10:13:33	0.0	0.0	0.0	0.0
114	8/23/2019 10:14:33	0.0	0.0	0.0	0.0
115	8/23/2019 10:15:33	0.0	0.0	0.0	0.0
116	8/23/2019 10:16:33	0.0	0.0	0.0	0.0
117	8/23/2019 10:17:33	0.0	0.0	0.0	0.0
118	8/23/2019 10:18:33	0.0	0.0	0.0	0.0
119	8/23/2019 10:19:33	0.0	0.0	0.0	0.0
120	8/23/2019 10:20:33	0.0	0.0	0.0	0.0
121	8/23/2019 10:21:33	0.0	0.0	0.0	0.0
122	8/23/2019 10:22:33	0.0	0.0	0.0	0.0
123	8/23/2019 10:23:33	0.0	0.0	0.0	0.0
124	8/23/2019 10:24:33	0.0	0.0	0.0	0.0
125	8/23/2019 10:25:33	0.0	0.0	0.0	0.0
126	8/23/2019 10:26:33	0.0	0.0	0.0	0.0
127	8/23/2019 10:27:33	0.0	0.0	0.0	0.0
128	8/23/2019 10:28:33	0.0	0.0	0.0	0.0

129	8/23/2019 10:29:33	0.0	0.0	0.0	0.0
130	8/23/2019 10:30:33	0.0	0.0	0.0	0.0
131	8/23/2019 10:31:33	0.0	0.0	0.0	0.0
132	8/23/2019 10:32:33	0.0	0.0	0.0	0.0
133	8/23/2019 10:33:33	0.0	0.0	0.0	0.0
134	8/23/2019 10:34:33	0.0	0.0	0.0	0.0
135	8/23/2019 10:35:33	0.0	0.0	0.0	0.0
136	8/23/2019 10:36:33	0.0	0.0	0.0	0.0
137	8/23/2019 10:37:33	0.0	0.0	0.0	0.0
138	8/23/2019 10:38:33	0.0	0.0	0.0	0.0
139	8/23/2019 10:39:33	0.0	0.0	0.0	0.0
140	8/23/2019 10:40:33	0.0	0.0	0.0	0.0
141	8/23/2019 10:41:33	0.0	0.0	0.0	0.0
142	8/23/2019 10:42:33	0.0	0.0	0.0	0.0
143	8/23/2019 10:43:33	0.0	0.0	0.0	0.0
144	8/23/2019 10:44:33	0.0	0.0	0.0	0.0
145	8/23/2019 10:45:33	0.0	0.0	0.0	0.0
146	8/23/2019 10:46:33	0.0	0.0	0.0	0.0
147	8/23/2019 10:47:33	0.0	0.0	0.0	0.0
148	8/23/2019 10:48:33	0.0	0.0	0.0	0.0
149	8/23/2019 10:49:33	0.0	0.0	0.0	0.0
150	8/23/2019 10:50:33	0.0	0.0	0.0	0.0
151	8/23/2019 10:51:33	0.0	0.0	0.0	0.0
152	8/23/2019 10:52:33	0.0	0.0	0.0	0.0
153	8/23/2019 10:53:33	0.0	0.0	0.0	0.0
154	8/23/2019 10:54:33	0.0	0.0	0.0	0.0
155	8/23/2019 10:55:33	0.0	0.0	0.0	0.0
156	8/23/2019 10:56:33	0.0	0.0	0.0	0.0
157	8/23/2019 10:57:33	0.0	0.0	0.0	0.0
158	8/23/2019 10:58:33	0.0	0.0	0.0	0.0
159	8/23/2019 10:59:33	0.0	0.0	0.0	0.0
160	8/23/2019 11:00:33	0.0	0.0	0.0	0.0
161	8/23/2019 11:01:33	0.0	0.0	0.0	0.0
162	8/23/2019 11:02:33	0.0	0.0	0.0	0.0
163	8/23/2019 11:03:33	0.0	0.0	0.0	0.0
164	8/23/2019 11:04:33	0.0	0.0	0.0	0.0
165	8/23/2019 11:05:33	0.0	0.0	0.0	0.0
166	8/23/2019 11:06:33	0.0	0.0	0.0	0.0
167	8/23/2019 11:07:33	0.0	0.0	0.0	0.0
168	8/23/2019 11:08:33	0.0	0.0	0.0	0.0
169	8/23/2019 11:09:33	0.0	0.0	0.0	0.0
170	8/23/2019 11:10:33	0.0	0.0	0.0	0.0
171	8/23/2019 11:11:33	0.0	0.0	0.0	0.0
172	8/23/2019 11:12:33	0.0	0.0	0.0	0.0
173	8/23/2019 11:13:33	0.0	0.0	0.0	0.0
174	8/23/2019 11:14:33	0.0	0.0	0.0	0.0
175	8/23/2019 11:15:33	0.0	0.0	0.0	0.0
176	8/23/2019 11:16:33	0.0	0.0	0.0	0.0
177	8/23/2019 11:17:33	0.0	0.0	0.0	0.0
178	8/23/2019 11:18:33	0.0	0.0	0.0	0.0
179	8/23/2019 11:19:33	0.0	0.0	0.0	0.0
180	8/23/2019 11:20:33	0.0	0.0	0.0	0.0
181	8/23/2019 11:21:33	0.0	0.0	0.0	0.0
182	8/23/2019 11:22:33	0.0	0.0	0.0	0.0
183	8/23/2019 11:23:33	0.0	0.0	0.0	0.0
184	8/23/2019 11:24:33	0.0	0.0	0.0	0.0
185	8/23/2019 11:25:33	0.0	0.0	0.0	0.0

186	8/23/2019	11:26:33	0.0	0.0	0.0	0.0
187	8/23/2019	11:27:33	0.0	0.0	0.0	0.0
188	8/23/2019	11:28:33	0.0	0.0	0.0	0.0
189	8/23/2019	11:29:33	0.0	0.0	0.0	0.0
190	8/23/2019	11:30:33	0.0	0.0	0.0	0.0
191	8/23/2019	11:31:33	0.0	0.0	0.0	0.0
192	8/23/2019	11:32:33	0.0	0.0	0.0	0.0
193	8/23/2019	11:33:33	0.0	0.0	0.0	0.0
194	8/23/2019	11:34:33	0.0	0.0	0.0	0.0
195	8/23/2019	11:35:33	0.0	0.0	0.0	0.0
196	8/23/2019	11:36:33	0.0	0.0	0.0	0.0
197	8/23/2019	11:37:33	0.0	0.0	0.0	0.0
198	8/23/2019	11:38:33	0.0	0.0	0.0	0.0
199	8/23/2019	11:39:33	0.0	0.0	0.0	0.0
200	8/23/2019	11:40:33	0.0	0.0	0.0	0.0
201	8/23/2019	11:41:33	0.0	0.0	0.0	0.0
202	8/23/2019	11:42:33	0.0	0.0	0.0	0.0
203	8/23/2019	11:43:33	0.0	0.0	0.0	0.0
204	8/23/2019	11:44:33	0.0	0.0	0.0	0.0
205	8/23/2019	11:45:33	0.0	0.0	0.0	0.0
206	8/23/2019	11:46:33	0.0	0.0	0.0	0.0
207	8/23/2019	11:47:33	0.0	0.0	0.0	0.0
208	8/23/2019	11:48:33	0.0	0.0	0.0	0.0
209	8/23/2019	11:49:33	0.0	0.0	0.0	0.0
210	8/23/2019	11:50:33	0.0	0.0	0.0	0.0
211	8/23/2019	11:51:33	0.0	0.0	0.0	0.0
212	8/23/2019	11:52:33	0.0	0.0	0.0	0.0
213	8/23/2019	11:53:33	0.0	0.0	0.0	0.0
214	8/23/2019	11:54:33	0.0	0.0	0.0	0.0
215	8/23/2019	11:55:33	0.0	0.0	0.0	0.0
216	8/23/2019	11:56:33	0.0	0.0	0.0	0.0
217	8/23/2019	11:57:33	0.0	0.0	0.0	0.0
218	8/23/2019	11:58:33	0.0	0.0	0.0	0.0
219	8/23/2019	11:59:33	0.0	0.0	0.0	0.0
220	8/23/2019	12:00:33	0.0	0.0	0.0	0.0
221	8/23/2019	12:01:33	0.0	0.0	0.0	0.0
222	8/23/2019	12:02:33	0.0	0.0	0.0	0.0
223	8/23/2019	12:03:33	0.0	0.0	0.0	0.0
224	8/23/2019	12:04:33	0.0	0.0	0.0	0.0
225	8/23/2019	12:05:33	0.0	0.0	0.0	0.0
226	8/23/2019	12:06:33	0.0	0.0	0.0	0.0
227	8/23/2019	12:07:33	0.0	0.0	0.0	0.0
228	8/23/2019	12:08:33	0.0	0.0	0.0	0.0
229	8/23/2019	12:09:33	0.0	0.0	0.0	0.0
230	8/23/2019	12:10:33	0.0	0.0	0.0	0.0
231	8/23/2019	12:11:33	0.0	0.0	0.0	0.0
232	8/23/2019	12:12:33	0.0	0.0	0.0	0.0
233	8/23/2019	12:13:33	0.0	0.0	0.0	0.0
234	8/23/2019	12:14:33	0.0	0.0	0.0	0.0
235	8/23/2019	12:15:33	0.0	0.0	0.0	0.0
236	8/23/2019	12:16:33	0.0	0.0	0.0	0.0
237	8/23/2019	12:17:33	0.0	0.0	0.0	0.0
238	8/23/2019	12:18:33	0.0	0.0	0.0	0.0
239	8/23/2019	12:19:33	0.0	0.0	0.0	0.0
240	8/23/2019	12:20:33	0.0	0.0	0.0	0.0
241	8/23/2019	12:21:33	0.0	0.0	0.0	0.0
242	8/23/2019	12:22:33	0.0	0.0	0.0	0.0

243	8/23/2019 12:23:33	0.0	0.0	0.0	0.0
244	8/23/2019 12:24:33	0.0	0.0	0.0	0.0
245	8/23/2019 12:25:33	0.0	0.0	0.0	0.0
246	8/23/2019 12:26:33	0.0	0.0	0.0	0.0
247	8/23/2019 12:27:33	0.0	0.0	0.0	0.0
248	8/23/2019 12:28:33	0.0	0.0	0.0	0.0
249	8/23/2019 12:29:33	0.0	0.0	0.0	0.0
250	8/23/2019 12:30:33	0.0	0.0	0.0	0.0
251	8/23/2019 12:31:33	0.0	0.0	0.0	0.0
252	8/23/2019 12:32:33	0.0	0.0	0.0	0.0
253	8/23/2019 12:33:33	0.0	0.0	0.0	0.0
254	8/23/2019 12:34:33	0.0	0.0	0.0	0.0
255	8/23/2019 12:35:33	0.0	0.0	0.0	0.0
256	8/23/2019 12:36:33	0.0	0.0	0.0	0.0
257	8/23/2019 12:37:33	0.0	0.0	0.0	0.0
258	8/23/2019 12:38:33	0.0	0.0	0.0	0.0
259	8/23/2019 12:39:33	0.0	0.0	0.0	0.0
260	8/23/2019 12:40:33	0.0	0.0	0.0	0.0
261	8/23/2019 12:41:33	0.0	0.0	0.0	0.0
262	8/23/2019 12:42:33	0.0	0.0	0.0	0.0
263	8/23/2019 12:43:33	0.0	0.0	0.0	0.0
264	8/23/2019 12:44:33	0.0	0.0	0.0	0.0
265	8/23/2019 12:45:33	0.0	0.0	0.0	0.0
266	8/23/2019 12:46:33	0.0	0.0	0.0	0.0
267	8/23/2019 12:47:33	0.0	0.0	0.0	0.0
268	8/23/2019 12:48:33	0.0	0.0	0.0	0.0
269	8/23/2019 12:49:33	0.0	0.0	0.0	0.0
270	8/23/2019 12:50:33	0.0	0.0	0.0	0.0
271	8/23/2019 12:51:33	0.0	0.0	0.0	0.0
272	8/23/2019 12:52:33	0.0	0.0	0.0	0.0
273	8/23/2019 12:53:33	0.0	0.0	0.0	0.0
274	8/23/2019 12:54:33	0.0	0.0	0.0	0.0
275	8/23/2019 12:55:33	0.0	0.0	0.0	0.0
276	8/23/2019 12:56:33	0.0	0.0	0.0	0.0
277	8/23/2019 12:57:33	0.0	0.0	0.0	0.0
278	8/23/2019 12:58:33	0.0	0.0	0.0	0.0
279	8/23/2019 12:59:33	0.0	0.0	0.0	0.0
280	8/23/2019 13:00:33	0.0	0.0	0.0	0.0
281	8/23/2019 13:01:33	0.0	0.0	0.0	0.0
282	8/23/2019 13:02:33	0.0	0.0	0.0	0.0
283	8/23/2019 13:03:33	0.0	0.0	0.0	0.0
284	8/23/2019 13:04:33	0.0	0.0	0.0	0.0
285	8/23/2019 13:05:33	0.0	0.0	0.0	0.0
286	8/23/2019 13:06:33	0.0	0.0	0.0	0.0
287	8/23/2019 13:07:33	0.0	0.0	0.0	0.0
288	8/23/2019 13:08:33	0.0	0.0	0.0	0.0
289	8/23/2019 13:09:33	0.0	0.0	0.0	0.0
290	8/23/2019 13:10:33	0.0	0.0	0.0	0.0
291	8/23/2019 13:11:33	0.0	0.0	0.0	0.0
292	8/23/2019 13:12:33	0.0	0.0	0.0	0.0
293	8/23/2019 13:13:33	0.0	0.0	0.0	0.0
294	8/23/2019 13:14:33	0.0	0.0	0.0	0.0
295	8/23/2019 13:15:33	0.0	0.0	0.0	0.0
296	8/23/2019 13:16:33	0.0	0.0	0.0	0.0
297	8/23/2019 13:17:33	0.0	0.0	0.0	0.0
298	8/23/2019 13:18:33	0.0	0.0	0.0	0.0
299	8/23/2019 13:19:33	0.0	0.0	0.0	0.0

300	8/23/2019	13:20:33	0.0	0.0	0.0	0.0
301	8/23/2019	13:21:33	0.0	0.0	0.0	0.0
302	8/23/2019	13:22:33	0.0	0.0	0.0	0.0
303	8/23/2019	13:23:33	0.0	0.0	0.0	0.0
304	8/23/2019	13:24:33	0.0	0.0	0.0	0.0
305	8/23/2019	13:25:33	0.0	0.0	0.0	0.0
306	8/23/2019	13:26:33	0.0	0.0	0.0	0.0
307	8/23/2019	13:27:33	0.0	0.0	0.0	0.0
308	8/23/2019	13:28:33	0.0	0.0	0.0	0.0
309	8/23/2019	13:29:33	0.0	0.0	0.0	0.0
310	8/23/2019	13:30:33	0.0	0.0	0.0	0.0
311	8/23/2019	13:31:33	0.0	0.0	0.0	0.0
312	8/23/2019	13:32:33	0.0	0.0	0.0	0.0
313	8/23/2019	13:33:33	0.0	0.0	0.0	0.0
314	8/23/2019	13:34:33	0.0	0.0	0.0	0.0
315	8/23/2019	13:35:33	0.0	0.0	0.0	0.0
316	8/23/2019	13:36:33	0.0	0.0	0.0	0.0
317	8/23/2019	13:37:33	0.0	0.0	0.0	0.0
318	8/23/2019	13:38:33	0.0	0.0	0.0	0.0
319	8/23/2019	13:39:33	0.0	0.0	0.0	0.0
320	8/23/2019	13:40:33	0.0	0.0	0.0	0.0
321	8/23/2019	13:41:33	0.0	0.0	0.0	0.0
322	8/23/2019	13:42:33	0.0	0.0	0.0	0.0
323	8/23/2019	13:43:33	0.0	0.0	0.0	0.0
324	8/23/2019	13:44:33	0.0	0.0	0.0	0.0
325	8/23/2019	13:45:33	0.0	0.0	0.0	0.0
326	8/23/2019	13:46:33	0.0	0.0	0.0	0.0
327	8/23/2019	13:47:33	0.0	0.0	0.0	0.0
328	8/23/2019	13:48:33	0.0	0.0	0.0	0.0
329	8/23/2019	13:49:33	0.0	0.0	0.0	0.0
330	8/23/2019	13:50:33	0.0	0.0	0.0	0.0
331	8/23/2019	13:51:33	0.0	0.0	0.0	0.0
332	8/23/2019	13:52:33	0.0	0.0	0.0	0.0
333	8/23/2019	13:53:33	0.0	0.0	0.0	0.0
334	8/23/2019	13:54:33	0.0	0.0	0.0	0.0
335	8/23/2019	13:55:33	0.0	0.0	0.0	0.0
336	8/23/2019	13:56:33	0.0	0.0	0.0	0.0
337	8/23/2019	13:57:33	0.0	0.0	0.0	0.0
338	8/23/2019	13:58:33	0.0	0.0	0.0	0.0
339	8/23/2019	13:59:33	0.0	0.0	0.0	0.0
340	8/23/2019	14:00:33	0.0	0.0	0.0	0.0
341	8/23/2019	14:01:33	0.0	0.0	0.0	0.0
342	8/23/2019	14:02:33	0.0	0.0	0.0	0.0
343	8/23/2019	14:03:33	0.0	0.0	0.0	0.0
344	8/23/2019	14:04:33	0.0	0.0	0.0	0.0
345	8/23/2019	14:05:33	0.0	0.0	0.0	0.0
346	8/23/2019	14:06:33	0.0	0.0	0.0	0.0
347	8/23/2019	14:07:33	0.0	0.0	0.0	0.0
348	8/23/2019	14:08:33	0.0	0.0	0.0	0.0
349	8/23/2019	14:09:33	0.0	0.0	0.0	0.0
350	8/23/2019	14:10:33	0.0	0.0	0.0	0.0
351	8/23/2019	14:11:33	0.0	0.0	0.0	0.0
352	8/23/2019	14:12:33	0.0	0.0	0.0	0.0
353	8/23/2019	14:13:33	0.0	0.0	0.0	0.0
354	8/23/2019	14:14:33	0.0	0.0	0.0	0.0
355	8/23/2019	14:15:33	0.0	0.0	0.0	0.0
356	8/23/2019	14:16:33	0.0	0.0	0.0	0.0

357	8/23/2019 14:17:33	0.0	0.0	0.0	0.0
358	8/23/2019 14:18:33	0.0	0.0	0.0	0.0
359	8/23/2019 14:19:33	0.0	0.0	0.0	0.0
360	8/23/2019 14:20:33	0.0	0.0	0.0	0.0
361	8/23/2019 14:21:33	0.0	0.0	0.0	0.0
362	8/23/2019 14:22:33	0.0	0.0	0.0	0.0
363	8/23/2019 14:23:33	0.0	0.0	0.0	0.0
364	8/23/2019 14:24:33	0.0	0.0	0.0	0.0
365	8/23/2019 14:25:33	0.0	0.0	0.0	0.0
366	8/23/2019 14:26:33	0.0	0.0	0.0	0.0
367	8/23/2019 14:27:33	0.0	0.0	0.0	0.0
368	8/23/2019 14:28:33	0.0	0.0	0.0	0.0
369	8/23/2019 14:29:33	0.0	0.0	0.0	0.0
370	8/23/2019 14:30:33	0.0	0.0	0.0	0.0
371	8/23/2019 14:31:33	0.0	0.0	0.0	0.0
372	8/23/2019 14:32:33	0.0	0.0	0.0	0.0
373	8/23/2019 14:33:33	0.0	0.0	0.0	0.0
374	8/23/2019 14:34:33	0.0	0.0	0.0	0.0
375	8/23/2019 14:35:33	0.0	0.0	0.0	0.0
376	8/23/2019 14:36:33	0.0	0.0	0.0	0.0
377	8/23/2019 14:37:33	0.0	0.0	0.0	0.0
378	8/23/2019 14:38:33	0.0	0.0	0.0	0.0
379	8/23/2019 14:39:33	0.0	0.0	0.0	0.0
380	8/23/2019 14:40:33	0.0	0.0	0.0	0.0
381	8/23/2019 14:41:33	0.0	0.0	0.0	0.0
382	8/23/2019 14:42:33	0.0	0.0	0.0	0.0
383	8/23/2019 14:43:33	0.0	0.0	0.0	0.0
384	8/23/2019 14:44:33	0.0	0.0	0.0	0.0
385	8/23/2019 14:45:33	0.0	0.0	0.0	0.0
386	8/23/2019 14:46:33	0.0	0.0	0.0	0.0
387	8/23/2019 14:47:33	0.0	0.0	0.0	0.0
388	8/23/2019 14:48:33	0.0	0.0	0.0	0.0
389	8/23/2019 14:49:33	0.0	0.0	0.0	0.0
390	8/23/2019 14:50:33	0.0	0.0	0.0	0.0
391	8/23/2019 14:51:33	0.0	0.0	0.0	0.0
392	8/23/2019 14:52:33	0.0	0.0	0.0	0.0
393	8/23/2019 14:53:33	0.0	0.0	0.0	0.0
394	8/23/2019 14:54:33	0.0	0.0	0.0	0.0
395	8/23/2019 14:55:33	0.0	0.0	0.0	0.0
396	8/23/2019 14:56:33	0.0	0.0	0.0	0.0
397	8/23/2019 14:57:33	0.0	0.0	0.0	0.0
398	8/23/2019 14:58:33	0.0	0.0	0.0	0.0
399	8/23/2019 14:59:33	0.0	0.0	0.0	0.0
400	8/23/2019 15:00:33	0.0	0.0	0.0	0.0
401	8/23/2019 15:01:33	0.0	0.0	0.0	0.0
402	8/23/2019 15:02:33	0.0	0.0	0.0	0.0
403	8/23/2019 15:03:33	0.0	0.0	0.0	0.0
404	8/23/2019 15:04:33	0.0	0.0	0.0	0.0
405	8/23/2019 15:05:33	0.0	0.0	0.0	0.0
406	8/23/2019 15:06:33	0.0	0.0	0.0	0.0
407	8/23/2019 15:07:33	0.0	0.0	0.0	0.0
408	8/23/2019 15:08:33	0.0	0.0	0.0	0.0
409	8/23/2019 15:09:33	0.0	0.0	0.0	0.0
410	8/23/2019 15:10:33	0.0	0.0	0.0	0.0
411	8/23/2019 15:11:33	0.0	0.0	0.0	0.0
412	8/23/2019 15:12:33	0.0	0.0	0.0	0.0
413	8/23/2019 15:13:33	0.0	0.0	0.0	0.0

414	8/23/2019	15:14:33	0.0	0.0	0.0	0.0
415	8/23/2019	15:15:33	0.0	0.0	0.0	0.0
416	8/23/2019	15:16:33	0.0	0.0	0.0	0.0
417	8/23/2019	15:17:33	0.0	0.0	0.0	0.0
418	8/23/2019	15:18:33	0.0	0.0	0.0	0.0
419	8/23/2019	15:19:33	0.0	0.0	0.0	0.0
420	8/23/2019	15:20:33	0.0	0.0	0.0	0.0
421	8/23/2019	15:21:33	0.0	0.0	0.0	0.0
422	8/23/2019	15:22:33	0.0	0.0	0.0	0.0
423	8/23/2019	15:23:33	0.0	0.0	0.0	0.0
424	8/23/2019	15:24:33	0.0	0.0	0.0	0.0
425	8/23/2019	15:25:33	0.0	0.0	0.0	0.0
426	8/23/2019	15:26:33	0.0	0.0	0.0	0.0
427	8/23/2019	15:27:33	0.0	0.0	0.0	0.0
Peak			0.0	0.0	0.0	0.0
Min			0.0	0.0	0.0	0.0
Average				0.0	0.0	0.0

****

TWA/STEL

Index		PID(ppm) Date/Time	PID(ppm) (TWA)	(STEL)
001	8/23/2019	08:21:33	0.0	---
002	8/23/2019	08:22:33	0.0	---
003	8/23/2019	08:23:33	0.0	---
004	8/23/2019	08:24:33	0.0	---
005	8/23/2019	08:25:33	0.0	---
006	8/23/2019	08:26:33	0.0	---
007	8/23/2019	08:27:33	0.0	---
008	8/23/2019	08:28:33	0.0	---
009	8/23/2019	08:29:33	0.0	---
010	8/23/2019	08:30:33	0.0	---
011	8/23/2019	08:31:33	0.0	---
012	8/23/2019	08:32:33	0.0	---
013	8/23/2019	08:33:33	0.0	---
014	8/23/2019	08:34:33	0.0	---
015	8/23/2019	08:35:33	0.0	0.0
016	8/23/2019	08:36:33	0.0	0.0
017	8/23/2019	08:37:33	0.0	0.0
018	8/23/2019	08:38:33	0.0	0.0
019	8/23/2019	08:39:33	0.0	0.0
020	8/23/2019	08:40:33	0.0	0.0
021	8/23/2019	08:41:33	0.0	0.0
022	8/23/2019	08:42:33	0.0	0.0
023	8/23/2019	08:43:33	0.0	0.0
024	8/23/2019	08:44:33	0.0	0.0
025	8/23/2019	08:45:33	0.0	0.0
026	8/23/2019	08:46:33	0.0	0.0
027	8/23/2019	08:47:33	0.0	0.0
028	8/23/2019	08:48:33	0.0	0.0
029	8/23/2019	08:49:33	0.0	0.0
030	8/23/2019	08:50:33	0.0	0.0
031	8/23/2019	08:51:33	0.0	0.0
032	8/23/2019	08:52:33	0.0	0.0
033	8/23/2019	08:53:33	0.0	0.0
034	8/23/2019	08:54:33	0.0	0.0
035	8/23/2019	08:55:33	0.0	0.0

036	8/23/2019 08:56:33	0.0	0.0
037	8/23/2019 08:57:33	0.0	0.0
038	8/23/2019 08:58:33	0.0	0.0
039	8/23/2019 08:59:33	0.0	0.0
040	8/23/2019 09:00:33	0.0	0.0
041	8/23/2019 09:01:33	0.0	0.0
042	8/23/2019 09:02:33	0.0	0.0
043	8/23/2019 09:03:33	0.0	0.0
044	8/23/2019 09:04:33	0.0	0.0
045	8/23/2019 09:05:33	0.0	0.0
046	8/23/2019 09:06:33	0.0	0.0
047	8/23/2019 09:07:33	0.0	0.0
048	8/23/2019 09:08:33	0.0	0.0
049	8/23/2019 09:09:33	0.0	0.0
050	8/23/2019 09:10:33	0.0	0.0
051	8/23/2019 09:11:33	0.0	0.0
052	8/23/2019 09:12:33	0.0	0.0
053	8/23/2019 09:13:33	0.0	0.0
054	8/23/2019 09:14:33	0.0	0.0
055	8/23/2019 09:15:33	0.0	0.0
056	8/23/2019 09:16:33	0.0	0.0
057	8/23/2019 09:17:33	0.0	0.0
058	8/23/2019 09:18:33	0.0	0.0
059	8/23/2019 09:19:33	0.0	0.0
060	8/23/2019 09:20:33	0.0	0.0
061	8/23/2019 09:21:33	0.0	0.0
062	8/23/2019 09:22:33	0.0	0.0
063	8/23/2019 09:23:33	0.0	0.0
064	8/23/2019 09:24:33	0.0	0.0
065	8/23/2019 09:25:33	0.0	0.0
066	8/23/2019 09:26:33	0.0	0.0
067	8/23/2019 09:27:33	0.0	0.0
068	8/23/2019 09:28:33	0.0	0.0
069	8/23/2019 09:29:33	0.0	0.0
070	8/23/2019 09:30:33	0.0	0.0
071	8/23/2019 09:31:33	0.0	0.0
072	8/23/2019 09:32:33	0.0	0.0
073	8/23/2019 09:33:33	0.0	0.0
074	8/23/2019 09:34:33	0.0	0.0
075	8/23/2019 09:35:33	0.0	0.0
076	8/23/2019 09:36:33	0.0	0.0
077	8/23/2019 09:37:33	0.0	0.0
078	8/23/2019 09:38:33	0.0	0.0
079	8/23/2019 09:39:33	0.0	0.0
080	8/23/2019 09:40:33	0.0	0.0
081	8/23/2019 09:41:33	0.0	0.0
082	8/23/2019 09:42:33	0.0	0.0
083	8/23/2019 09:43:33	0.0	0.0
084	8/23/2019 09:44:33	0.0	0.0
085	8/23/2019 09:45:33	0.0	0.0
086	8/23/2019 09:46:33	0.0	0.0
087	8/23/2019 09:47:33	0.0	0.0
088	8/23/2019 09:48:33	0.0	0.0
089	8/23/2019 09:49:33	0.0	0.0
090	8/23/2019 09:50:33	0.0	0.0
091	8/23/2019 09:51:33	0.0	0.0
092	8/23/2019 09:52:33	0.0	0.0

093	8/23/2019 09:53:33	0.0	0.0
094	8/23/2019 09:54:33	0.0	0.0
095	8/23/2019 09:55:33	0.0	0.0
096	8/23/2019 09:56:33	0.0	0.0
097	8/23/2019 09:57:33	0.0	0.0
098	8/23/2019 09:58:33	0.0	0.0
099	8/23/2019 09:59:33	0.0	0.0
100	8/23/2019 10:00:33	0.0	0.0
101	8/23/2019 10:01:33	0.0	0.0
102	8/23/2019 10:02:33	0.0	0.0
103	8/23/2019 10:03:33	0.0	0.0
104	8/23/2019 10:04:33	0.0	0.0
105	8/23/2019 10:05:33	0.0	0.0
106	8/23/2019 10:06:33	0.0	0.0
107	8/23/2019 10:07:33	0.0	0.0
108	8/23/2019 10:08:33	0.0	0.0
109	8/23/2019 10:09:33	0.0	0.0
110	8/23/2019 10:10:33	0.0	0.0
111	8/23/2019 10:11:33	0.0	0.0
112	8/23/2019 10:12:33	0.0	0.0
113	8/23/2019 10:13:33	0.0	0.0
114	8/23/2019 10:14:33	0.0	0.0
115	8/23/2019 10:15:33	0.0	0.0
116	8/23/2019 10:16:33	0.0	0.0
117	8/23/2019 10:17:33	0.0	0.0
118	8/23/2019 10:18:33	0.0	0.0
119	8/23/2019 10:19:33	0.0	0.0
120	8/23/2019 10:20:33	0.0	0.0
121	8/23/2019 10:21:33	0.0	0.0
122	8/23/2019 10:22:33	0.0	0.0
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125	8/23/2019 10:25:33	0.0	0.0
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131	8/23/2019 10:31:33	0.0	0.0
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133	8/23/2019 10:33:33	0.0	0.0
134	8/23/2019 10:34:33	0.0	0.0
135	8/23/2019 10:35:33	0.0	0.0
136	8/23/2019 10:36:33	0.0	0.0
137	8/23/2019 10:37:33	0.0	0.0
138	8/23/2019 10:38:33	0.0	0.0
139	8/23/2019 10:39:33	0.0	0.0
140	8/23/2019 10:40:33	0.0	0.0
141	8/23/2019 10:41:33	0.0	0.0
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149	8/23/2019 10:49:33	0.0	0.0

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157	8/23/2019 10:57:33	0.0	0.0
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159	8/23/2019 10:59:33	0.0	0.0
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163	8/23/2019 11:03:33	0.0	0.0
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165	8/23/2019 11:05:33	0.0	0.0
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167	8/23/2019 11:07:33	0.0	0.0
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169	8/23/2019 11:09:33	0.0	0.0
170	8/23/2019 11:10:33	0.0	0.0
171	8/23/2019 11:11:33	0.0	0.0
172	8/23/2019 11:12:33	0.0	0.0
173	8/23/2019 11:13:33	0.0	0.0
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176	8/23/2019 11:16:33	0.0	0.0
177	8/23/2019 11:17:33	0.0	0.0
178	8/23/2019 11:18:33	0.0	0.0
179	8/23/2019 11:19:33	0.0	0.0
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181	8/23/2019 11:21:33	0.0	0.0
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185	8/23/2019 11:25:33	0.0	0.0
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187	8/23/2019 11:27:33	0.0	0.0
188	8/23/2019 11:28:33	0.0	0.0
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201	8/23/2019 11:41:33	0.0	0.0
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203	8/23/2019 11:43:33	0.0	0.0
204	8/23/2019 11:44:33	0.0	0.0
205	8/23/2019 11:45:33	0.0	0.0
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207	8/23/2019 11:47:33	0.0	0.0
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209	8/23/2019 11:49:33	0.0	0.0
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211	8/23/2019 11:51:33	0.0	0.0
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219	8/23/2019 11:59:33	0.0	0.0
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221	8/23/2019 12:01:33	0.0	0.0
222	8/23/2019 12:02:33	0.0	0.0
223	8/23/2019 12:03:33	0.0	0.0
224	8/23/2019 12:04:33	0.0	0.0
225	8/23/2019 12:05:33	0.0	0.0
226	8/23/2019 12:06:33	0.0	0.0
227	8/23/2019 12:07:33	0.0	0.0
228	8/23/2019 12:08:33	0.0	0.0
229	8/23/2019 12:09:33	0.0	0.0
230	8/23/2019 12:10:33	0.0	0.0
231	8/23/2019 12:11:33	0.0	0.0
232	8/23/2019 12:12:33	0.0	0.0
233	8/23/2019 12:13:33	0.0	0.0
234	8/23/2019 12:14:33	0.0	0.0
235	8/23/2019 12:15:33	0.0	0.0
236	8/23/2019 12:16:33	0.0	0.0
237	8/23/2019 12:17:33	0.0	0.0
238	8/23/2019 12:18:33	0.0	0.0
239	8/23/2019 12:19:33	0.0	0.0
240	8/23/2019 12:20:33	0.0	0.0
241	8/23/2019 12:21:33	0.0	0.0
242	8/23/2019 12:22:33	0.0	0.0
243	8/23/2019 12:23:33	0.0	0.0
244	8/23/2019 12:24:33	0.0	0.0
245	8/23/2019 12:25:33	0.0	0.0
246	8/23/2019 12:26:33	0.0	0.0
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257	8/23/2019 12:37:33	0.0	0.0
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259	8/23/2019 12:39:33	0.0	0.0
260	8/23/2019 12:40:33	0.0	0.0
261	8/23/2019 12:41:33	0.0	0.0
262	8/23/2019 12:42:33	0.0	0.0
263	8/23/2019 12:43:33	0.0	0.0

264	8/23/2019 12:44:33	0.0	0.0
265	8/23/2019 12:45:33	0.0	0.0
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267	8/23/2019 12:47:33	0.0	0.0
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270	8/23/2019 12:50:33	0.0	0.0
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276	8/23/2019 12:56:33	0.0	0.0
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279	8/23/2019 12:59:33	0.0	0.0
280	8/23/2019 13:00:33	0.0	0.0
281	8/23/2019 13:01:33	0.0	0.0
282	8/23/2019 13:02:33	0.0	0.0
283	8/23/2019 13:03:33	0.0	0.0
284	8/23/2019 13:04:33	0.0	0.0
285	8/23/2019 13:05:33	0.0	0.0
286	8/23/2019 13:06:33	0.0	0.0
287	8/23/2019 13:07:33	0.0	0.0
288	8/23/2019 13:08:33	0.0	0.0
289	8/23/2019 13:09:33	0.0	0.0
290	8/23/2019 13:10:33	0.0	0.0
291	8/23/2019 13:11:33	0.0	0.0
292	8/23/2019 13:12:33	0.0	0.0
293	8/23/2019 13:13:33	0.0	0.0
294	8/23/2019 13:14:33	0.0	0.0
295	8/23/2019 13:15:33	0.0	0.0
296	8/23/2019 13:16:33	0.0	0.0
297	8/23/2019 13:17:33	0.0	0.0
298	8/23/2019 13:18:33	0.0	0.0
299	8/23/2019 13:19:33	0.0	0.0
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301	8/23/2019 13:21:33	0.0	0.0
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303	8/23/2019 13:23:33	0.0	0.0
304	8/23/2019 13:24:33	0.0	0.0
305	8/23/2019 13:25:33	0.0	0.0
306	8/23/2019 13:26:33	0.0	0.0
307	8/23/2019 13:27:33	0.0	0.0
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309	8/23/2019 13:29:33	0.0	0.0
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311	8/23/2019 13:31:33	0.0	0.0
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315	8/23/2019 13:35:33	0.0	0.0
316	8/23/2019 13:36:33	0.0	0.0
317	8/23/2019 13:37:33	0.0	0.0
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320	8/23/2019 13:40:33	0.0	0.0

321	8/23/2019 13:41:33	0.0	0.0
322	8/23/2019 13:42:33	0.0	0.0
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325	8/23/2019 13:45:33	0.0	0.0
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327	8/23/2019 13:47:33	0.0	0.0
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329	8/23/2019 13:49:33	0.0	0.0
330	8/23/2019 13:50:33	0.0	0.0
331	8/23/2019 13:51:33	0.0	0.0
332	8/23/2019 13:52:33	0.0	0.0
333	8/23/2019 13:53:33	0.0	0.0
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335	8/23/2019 13:55:33	0.0	0.0
336	8/23/2019 13:56:33	0.0	0.0
337	8/23/2019 13:57:33	0.0	0.0
338	8/23/2019 13:58:33	0.0	0.0
339	8/23/2019 13:59:33	0.0	0.0
340	8/23/2019 14:00:33	0.0	0.0
341	8/23/2019 14:01:33	0.0	0.0
342	8/23/2019 14:02:33	0.0	0.0
343	8/23/2019 14:03:33	0.0	0.0
344	8/23/2019 14:04:33	0.0	0.0
345	8/23/2019 14:05:33	0.0	0.0
346	8/23/2019 14:06:33	0.0	0.0
347	8/23/2019 14:07:33	0.0	0.0
348	8/23/2019 14:08:33	0.0	0.0
349	8/23/2019 14:09:33	0.0	0.0
350	8/23/2019 14:10:33	0.0	0.0
351	8/23/2019 14:11:33	0.0	0.0
352	8/23/2019 14:12:33	0.0	0.0
353	8/23/2019 14:13:33	0.0	0.0
354	8/23/2019 14:14:33	0.0	0.0
355	8/23/2019 14:15:33	0.0	0.0
356	8/23/2019 14:16:33	0.0	0.0
357	8/23/2019 14:17:33	0.0	0.0
358	8/23/2019 14:18:33	0.0	0.0
359	8/23/2019 14:19:33	0.0	0.0
360	8/23/2019 14:20:33	0.0	0.0
361	8/23/2019 14:21:33	0.0	0.0
362	8/23/2019 14:22:33	0.0	0.0
363	8/23/2019 14:23:33	0.0	0.0
364	8/23/2019 14:24:33	0.0	0.0
365	8/23/2019 14:25:33	0.0	0.0
366	8/23/2019 14:26:33	0.0	0.0
367	8/23/2019 14:27:33	0.0	0.0
368	8/23/2019 14:28:33	0.0	0.0
369	8/23/2019 14:29:33	0.0	0.0
370	8/23/2019 14:30:33	0.0	0.0
371	8/23/2019 14:31:33	0.0	0.0
372	8/23/2019 14:32:33	0.0	0.0
373	8/23/2019 14:33:33	0.0	0.0
374	8/23/2019 14:34:33	0.0	0.0
375	8/23/2019 14:35:33	0.0	0.0
376	8/23/2019 14:36:33	0.0	0.0
377	8/23/2019 14:37:33	0.0	0.0

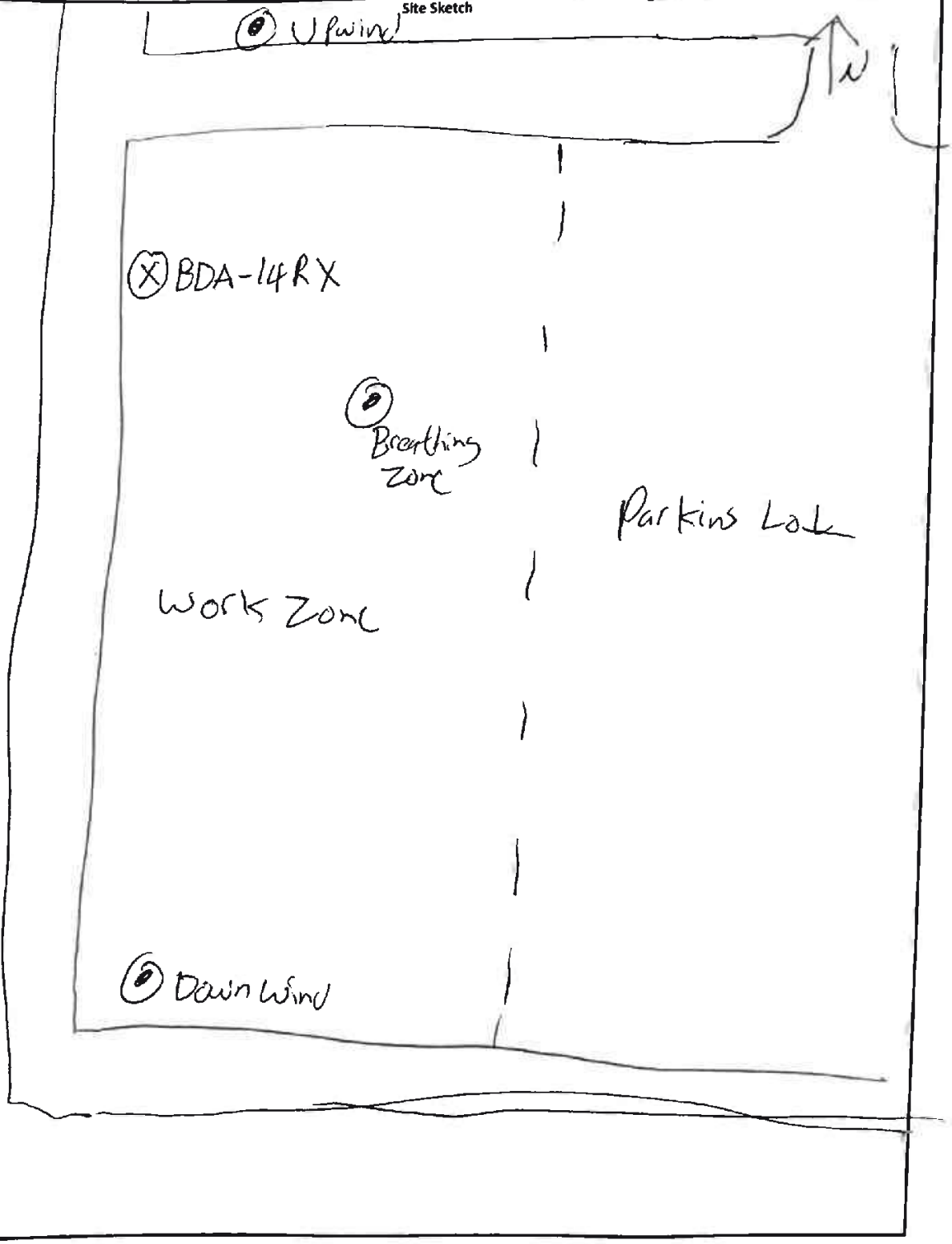
378	8/23/2019 14:38:33	0.0	0.0
379	8/23/2019 14:39:33	0.0	0.0
380	8/23/2019 14:40:33	0.0	0.0
381	8/23/2019 14:41:33	0.0	0.0
382	8/23/2019 14:42:33	0.0	0.0
383	8/23/2019 14:43:33	0.0	0.0
384	8/23/2019 14:44:33	0.0	0.0
385	8/23/2019 14:45:33	0.0	0.0
386	8/23/2019 14:46:33	0.0	0.0
387	8/23/2019 14:47:33	0.0	0.0
388	8/23/2019 14:48:33	0.0	0.0
389	8/23/2019 14:49:33	0.0	0.0
390	8/23/2019 14:50:33	0.0	0.0
391	8/23/2019 14:51:33	0.0	0.0
392	8/23/2019 14:52:33	0.0	0.0
393	8/23/2019 14:53:33	0.0	0.0
394	8/23/2019 14:54:33	0.0	0.0
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396	8/23/2019 14:56:33	0.0	0.0
397	8/23/2019 14:57:33	0.0	0.0
398	8/23/2019 14:58:33	0.0	0.0
399	8/23/2019 14:59:33	0.0	0.0
400	8/23/2019 15:00:33	0.0	0.0
401	8/23/2019 15:01:33	0.0	0.0
402	8/23/2019 15:02:33	0.0	0.0
403	8/23/2019 15:03:33	0.0	0.0
404	8/23/2019 15:04:33	0.0	0.0
405	8/23/2019 15:05:33	0.0	0.0
406	8/23/2019 15:06:33	0.0	0.0
407	8/23/2019 15:07:33	0.0	0.0
408	8/23/2019 15:08:33	0.0	0.0
409	8/23/2019 15:09:33	0.0	0.0
410	8/23/2019 15:10:33	0.0	0.0
411	8/23/2019 15:11:33	0.0	0.0
412	8/23/2019 15:12:33	0.0	0.0
413	8/23/2019 15:13:33	0.0	0.0
414	8/23/2019 15:14:33	0.0	0.0
415	8/23/2019 15:15:33	0.0	0.0
416	8/23/2019 15:16:33	0.0	0.0
417	8/23/2019 15:17:33	0.0	0.0
418	8/23/2019 15:18:33	0.0	0.0
419	8/23/2019 15:19:33	0.0	0.0
420	8/23/2019 15:20:33	0.0	0.0
421	8/23/2019 15:21:33	0.0	0.0
422	8/23/2019 15:22:33	0.0	0.0
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424	8/23/2019 15:24:33	0.0	0.0
425	8/23/2019 15:25:33	0.0	0.0
426	8/23/2019 15:26:33	0.0	0.0
427	8/23/2019 15:27:33	0.0	0.0

ARCADIS Design & Consultancy for natural and built assets

Daily CAMP Log

Project	Phase 2 Groundwater RI
Location	East Syracuse, NY
Date	8/23/19
Weather Conditions	70's, Sunny
Upwind Monitor	952 - 10:35AM
Downwind Monitor	954 - 9:40?
Start Time	0915
End Time	1520

Site Sketch



Arcadis U.S., Inc.
One Lincoln Center
110 West Fayette Street
Suite 300
Syracuse
New York 13202
Tel 315 446 9120
Fax 315 449 0017
www.arcadis.com

Environmental North

Anne Locke
Associate Manager, Environmental Protection
Environmental, Health and Safety Department
Bristol-Myers Squibb
P.O. Box 4755
Syracuse, NY 13221

Date:
August 26, 2019

Contact:
William McCune

Phone:
315-671-9172

Email:
William.McCune@arcadis.com

Our ref:
B0087363.0037

Subject:
Community Air Monitoring During Phase II RI Well Installations Bristol-Myers Squibb Syracuse Facility – East Syracuse, New York 13057

Dear Ms. Locke:

The following is a summary of the community air monitoring plan (CAMP) provided by Arcadis U.S., Inc. (Arcadis) during the Phase II Remedial Investigation (RI) drilling activities conducted at the Bristol-Myers Squibb (BMS) Syracuse North Campus, East Syracuse, NY on August 26, 2019.

August 26, 2019: Parratt-Wolff Inc. (Parratt-Wolff) began sonic drilling activities at BDA-14RX, drilling from 9:30 AM to 5:20 PM. CAMP monitoring included photo ionization detectors at upwind and downwind locations and a DustTrak at a breathing zone location. The prevailing wind direction was observed originating from the northwest through the day. Air quality parameters did not exceed CAMP standards at any time during work activities. Table 1 shows the serial numbers and associated CAMP stations locations.

CAMP Station Locations	Serial Number
Breathing Zone DustTrak	#8533151804
Upwind PID	#592-914273
Downwind PID	#592-905549

Please contact us with any questions or comments pertaining to this project.

Sincerely,

Arcadis U.S., Inc.

William McCune
Principal Geologist

Attachments

1 CAMP Data Logs
2 Site Sketches/Notes

Anne Locke
Associate Manager, Environmental Protection
Environmental, Health and Safety Department
Bristol-Myers Squibb
P.O. Box 4755
Syracuse, NY 13221

Arcadis U.S., Inc.
One Lincoln Center
110 West Fayette Street
Suite 300
Syracuse
New York 13202
Tel 315 446 9120
Fax 315 449 0017
www.arcadis.com

Environmental North

Subject:
Community Air Monitoring During Phase II RI Well Installations Bristol-Myers Squibb Syracuse Facility – East Syracuse, New York 13057

Date:
August 27, 2019

Contact:
William McCune

Phone:
315-671-9172

Email:
William.McCune@arcadis.com

Our ref:
B0087363.0037

Dear Ms. Locke:

The following is a summary of the community air monitoring plan (CAMP) provided by Arcadis U.S., Inc. (Arcadis) during the Phase II Remedial Investigation (RI) drilling activities conducted at the Bristol-Myers Squibb (BMS) Syracuse North Campus, East Syracuse, NY on August 27, 2019.

August 27, 2019: Parratt-Wolff Inc. (Parratt-Wolff) began sonic drilling activities at BDA-14RX, drilling from 8:10 AM to 11:20 AM. CAMP monitoring included photo ionization detectors at upwind and downwind locations and a DustTrak at a breathing zone location. The prevailing wind direction was observed originating from the northwest through the day. Air quality parameters did not exceed CAMP standards at any time during work activities. Table 1 shows the serial numbers and associated CAMP stations locations.

CAMP Station Locations	Serial Number
Breathing Zone DustTrak	#8533151804
Upwind PID	#592-914273
Downwind PID	#592-905549

Anne Locke
Bristol-Myers Squibb
August 27, 2019

Please contact us with any questions or comments pertaining to this project.

Sincerely,

Arcadis U.S., Inc.

William McCune
Principal Geologist

Attachments

1 CAMP Data Logs
2 Site Sketches/Notes

==========

19/08/27 08:02

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Summary

Unit Name MiniRAE 3000(PGM-7320)

Unit SN 592-914273

Unit Firmware Ver V1.20A

Running Mode Hygiene Mode

Measure Type Min; Avg; Max; Real

Datalog Mode Continuous

Datalog Type Manual

Diagnostic Mode No

Stop Reason Power Down

Site ID RAE00005

User ID 00000001

Begin 8/27/2019 08:02:05

End 8/27/2019 11:44:22

Sample Period(s) 60

Number of Records 222

Sensor	VOC(ppm)
Span	100.000
Span 2	N/A
Low Alarm	50.000
High Alarm	100.000
Over Alarm	2000.000
STEL Alarm	25.000
TWA Alarm	10.000
Measurement Gas	Isobutylene
Calibration Time	8/27/2019 07:26
Peak	0.281
Min	0.000
Average	0.163

****

Datalog

Index	Date/Time	VOC(ppm) (Min)	VOC(ppm) (Avg)	VOC(ppm) (Max)	VOC(ppm) (Real)	VOC(ppm)
001	8/27/2019 08:03:05	0.000	0.000	0.000	0.000	
002	8/27/2019 08:04:05	0.000	0.000	0.000	0.000	
003	8/27/2019 08:05:05	0.000	0.000	0.000	0.000	
004	8/27/2019 08:06:05	0.000	0.000	0.000	0.000	
005	8/27/2019 08:07:05	0.000	0.000	0.002	0.002	
006	8/27/2019 08:08:05	0.002	0.004	0.007	0.006	

007	8/27/2019 08:09:05	0.006	0.009	0.012	0.010
008	8/27/2019 08:10:05	0.010	0.011	0.013	0.013
009	8/27/2019 08:11:05	0.012	0.013	0.015	0.013
010	8/27/2019 08:12:05	0.011	0.013	0.016	0.015
011	8/27/2019 08:13:05	0.014	0.015	0.018	0.018
012	8/27/2019 08:14:05	0.018	0.020	0.025	0.023
013	8/27/2019 08:15:05	0.021	0.022	0.024	0.023
014	8/27/2019 08:16:05	0.022	0.025	0.029	0.027
015	8/27/2019 08:17:05	0.027	0.029	0.032	0.032
016	8/27/2019 08:18:05	0.031	0.031	0.035	0.035
017	8/27/2019 08:19:05	0.032	0.035	0.040	0.039
018	8/27/2019 08:20:05	0.037	0.041	0.047	0.047
019	8/27/2019 08:21:05	0.047	0.050	0.053	0.051
020	8/27/2019 08:22:05	0.050	0.053	0.065	0.056
021	8/27/2019 08:23:05	0.051	0.053	0.057	0.057
022	8/27/2019 08:24:05	0.054	0.057	0.061	0.056
023	8/27/2019 08:25:05	0.056	0.057	0.060	0.059
024	8/27/2019 08:26:05	0.058	0.059	0.062	0.061
025	8/27/2019 08:27:05	0.061	0.064	0.067	0.067
026	8/27/2019 08:28:05	0.067	0.068	0.071	0.071
027	8/27/2019 08:29:05	0.067	0.070	0.075	0.075
028	8/27/2019 08:30:05	0.071	0.074	0.078	0.074
029	8/27/2019 08:31:05	0.074	0.077	0.082	0.082
030	8/27/2019 08:32:05	0.080	0.081	0.091	0.090

031	8/27/2019 08:33:05	0.083	0.088	0.097	0.091
032	8/27/2019 08:34:05	0.085	0.089	0.098	0.089
033	8/27/2019 08:35:05	0.086	0.087	0.089	0.088
034	8/27/2019 08:36:05	0.088	0.090	0.095	0.093
035	8/27/2019 08:37:05	0.090	0.092	0.095	0.094
036	8/27/2019 08:38:05	0.093	0.096	0.099	0.098
037	8/27/2019 08:39:05	0.097	0.099	0.102	0.101
038	8/27/2019 08:40:05	0.099	0.101	0.104	0.104
039	8/27/2019 08:41:05	0.102	0.120	0.181	0.121
040	8/27/2019 08:42:05	0.105	0.108	0.120	0.105
041	8/27/2019 08:43:05	0.104	0.106	0.109	0.108
042	8/27/2019 08:44:05	0.107	0.109	0.114	0.114
043	8/27/2019 08:45:05	0.113	0.114	0.116	0.115
044	8/27/2019 08:46:05	0.111	0.114	0.118	0.115
045	8/27/2019 08:47:05	0.111	0.114	0.116	0.114
046	8/27/2019 08:48:05	0.112	0.115	0.118	0.116
047	8/27/2019 08:49:05	0.115	0.118	0.123	0.121
048	8/27/2019 08:50:05	0.119	0.122	0.125	0.125
049	8/27/2019 08:51:05	0.122	0.124	0.132	0.126
050	8/27/2019 08:52:05	0.122	0.124	0.128	0.125
051	8/27/2019 08:53:05	0.121	0.124	0.128	0.128
052	8/27/2019 08:54:05	0.125	0.126	0.130	0.129
053	8/27/2019 08:55:05	0.124	0.126	0.129	0.129
054	8/27/2019 08:56:05	0.124	0.127	0.130	0.129

055	8/27/2019 08:57:05	0.128	0.130	0.133	0.132
056	8/27/2019 08:58:05	0.129	0.131	0.133	0.132
057	8/27/2019 08:59:05	0.127	0.132	0.135	0.130
058	8/27/2019 09:00:05	0.128	0.133	0.140	0.134
059	8/27/2019 09:01:05	0.133	0.135	0.140	0.135
060	8/27/2019 09:02:05	0.132	0.136	0.141	0.136
061	8/27/2019 09:03:05	0.135	0.137	0.143	0.143
062	8/27/2019 09:04:05	0.137	0.139	0.143	0.143
063	8/27/2019 09:05:05	0.140	0.143	0.147	0.146
064	8/27/2019 09:06:05	0.144	0.147	0.152	0.147
065	8/27/2019 09:07:05	0.147	0.153	0.160	0.155
066	8/27/2019 09:08:05	0.150	0.155	0.160	0.159
067	8/27/2019 09:09:05	0.157	0.160	0.164	0.160
068	8/27/2019 09:10:05	0.159	0.162	0.169	0.162
069	8/27/2019 09:11:05	0.158	0.164	0.169	0.163
070	8/27/2019 09:12:05	0.166	0.171	0.177	0.177
071	8/27/2019 09:13:05	0.171	0.175	0.182	0.181
072	8/27/2019 09:14:05	0.177	0.183	0.190	0.189
073	8/27/2019 09:15:05	0.181	0.187	0.192	0.187
074	8/27/2019 09:16:05	0.182	0.187	0.191	0.191
075	8/27/2019 09:17:05	0.182	0.190	0.194	0.190
076	8/27/2019 09:18:05	0.187	0.194	0.199	0.196
077	8/27/2019 09:19:05	0.191	0.197	0.202	0.199
078	8/27/2019 09:20:05	0.192	0.201	0.207	0.207

079	8/27/2019 09:21:05	0.202	0.205	0.210	0.203
080	8/27/2019 09:22:05	0.204	0.230	0.295	0.281
081	8/27/2019 09:23:05	0.174	0.195	0.286	0.174
082	8/27/2019 09:24:05	0.174	0.181	0.190	0.188
083	8/27/2019 09:25:05	0.187	0.189	0.193	0.192
084	8/27/2019 09:26:05	0.191	0.194	0.199	0.199
085	8/27/2019 09:27:05	0.196	0.199	0.204	0.201
086	8/27/2019 09:28:05	0.195	0.200	0.205	0.204
087	8/27/2019 09:29:05	0.199	0.203	0.213	0.213
088	8/27/2019 09:30:05	0.208	0.213	0.222	0.222
089	8/27/2019 09:31:05	0.195	0.237	0.297	0.195
090	8/27/2019 09:32:05	0.182	0.185	0.194	0.184
091	8/27/2019 09:33:05	0.185	0.194	0.201	0.196
092	8/27/2019 09:34:05	0.193	0.197	0.201	0.200
093	8/27/2019 09:35:05	0.195	0.199	0.206	0.201
094	8/27/2019 09:36:05	0.200	0.204	0.211	0.211
095	8/27/2019 09:37:05	0.204	0.210	0.216	0.213
096	8/27/2019 09:38:05	0.197	0.232	0.303	0.197
097	8/27/2019 09:39:05	0.182	0.185	0.195	0.183
098	8/27/2019 09:40:05	0.181	0.188	0.197	0.197
099	8/27/2019 09:41:05	0.196	0.198	0.205	0.201
100	8/27/2019 09:42:05	0.200	0.203	0.208	0.207
101	8/27/2019 09:43:05	0.204	0.207	0.210	0.208
102	8/27/2019 09:44:05	0.203	0.207	0.211	0.210

103	8/27/2019 09:45:05	0.208	0.212	0.219	0.219
104	8/27/2019 09:46:05	0.208	0.243	0.297	0.208
105	8/27/2019 09:47:05	0.181	0.186	0.205	0.181
106	8/27/2019 09:48:05	0.180	0.185	0.193	0.184
107	8/27/2019 09:49:05	0.186	0.189	0.197	0.197
108	8/27/2019 09:50:05	0.192	0.198	0.204	0.202
109	8/27/2019 09:51:05	0.197	0.203	0.209	0.202
110	8/27/2019 09:52:05	0.198	0.204	0.212	0.206
111	8/27/2019 09:53:05	0.204	0.209	0.214	0.211
112	8/27/2019 09:54:05	0.208	0.235	0.297	0.258
113	8/27/2019 09:55:05	0.179	0.193	0.243	0.182
114	8/27/2019 09:56:05	0.178	0.181	0.184	0.183
115	8/27/2019 09:57:05	0.183	0.189	0.195	0.194
116	8/27/2019 09:58:05	0.189	0.193	0.199	0.197
117	8/27/2019 09:59:05	0.194	0.199	0.204	0.204
118	8/27/2019 10:00:05	0.200	0.203	0.209	0.206
119	8/27/2019 10:01:05	0.205	0.210	0.225	0.225
120	8/27/2019 10:02:05	0.189	0.223	0.301	0.189
121	8/27/2019 10:03:05	0.185	0.187	0.191	0.189
122	8/27/2019 10:04:05	0.186	0.190	0.194	0.191
123	8/27/2019 10:05:05	0.190	0.198	0.207	0.203
124	8/27/2019 10:06:05	0.193	0.199	0.206	0.205
125	8/27/2019 10:07:05	0.201	0.206	0.211	0.201
126	8/27/2019 10:08:05	0.200	0.208	0.216	0.209

127	8/27/2019 10:09:05	0.209	0.234	0.297	0.223
128	8/27/2019 10:10:05	0.183	0.191	0.221	0.183
129	8/27/2019 10:11:05	0.181	0.185	0.189	0.187
130	8/27/2019 10:12:05	0.186	0.189	0.193	0.189
131	8/27/2019 10:13:05	0.186	0.191	0.195	0.195
132	8/27/2019 10:14:05	0.195	0.198	0.203	0.202
133	8/27/2019 10:15:05	0.202	0.204	0.211	0.205
134	8/27/2019 10:16:05	0.195	0.207	0.219	0.219
135	8/27/2019 10:17:05	0.194	0.227	0.301	0.194
136	8/27/2019 10:18:05	0.186	0.190	0.194	0.193
137	8/27/2019 10:19:05	0.188	0.191	0.195	0.195
138	8/27/2019 10:20:05	0.189	0.194	0.199	0.195
139	8/27/2019 10:21:05	0.190	0.197	0.202	0.202
140	8/27/2019 10:22:05	0.198	0.201	0.208	0.208
141	8/27/2019 10:23:05	0.197	0.203	0.210	0.201
142	8/27/2019 10:24:05	0.198	0.220	0.296	0.264
143	8/27/2019 10:25:05	0.187	0.200	0.248	0.189
144	8/27/2019 10:26:05	0.187	0.189	0.194	0.192
145	8/27/2019 10:27:05	0.188	0.191	0.194	0.191
146	8/27/2019 10:28:05	0.190	0.195	0.199	0.199
147	8/27/2019 10:29:05	0.196	0.200	0.205	0.202
148	8/27/2019 10:30:05	0.201	0.204	0.209	0.207
149	8/27/2019 10:31:05	0.207	0.210	0.216	0.212
150	8/27/2019 10:32:05	0.211	0.214	0.217	0.216

151	8/27/2019 10:33:05	0.211	0.215	0.218	0.217
152	8/27/2019 10:34:05	0.211	0.215	0.219	0.217
153	8/27/2019 10:35:05	0.210	0.215	0.219	0.218
154	8/27/2019 10:36:05	0.212	0.216	0.220	0.216
155	8/27/2019 10:37:05	0.211	0.216	0.220	0.216
156	8/27/2019 10:38:05	0.210	0.216	0.222	0.218
157	8/27/2019 10:39:05	0.211	0.216	0.223	0.223
158	8/27/2019 10:40:05	0.212	0.218	0.225	0.217
159	8/27/2019 10:41:05	0.210	0.215	0.223	0.210
160	8/27/2019 10:42:05	0.209	0.220	0.225	0.220
161	8/27/2019 10:43:05	0.207	0.216	0.222	0.214
162	8/27/2019 10:44:05	0.211	0.217	0.223	0.222
163	8/27/2019 10:45:05	0.212	0.217	0.222	0.221
164	8/27/2019 10:46:05	0.212	0.218	0.224	0.220
165	8/27/2019 10:47:05	0.213	0.218	0.223	0.217
166	8/27/2019 10:48:05	0.213	0.217	0.222	0.219
167	8/27/2019 10:49:05	0.214	0.217	0.222	0.219
168	8/27/2019 10:50:05	0.213	0.217	0.222	0.221
169	8/27/2019 10:51:05	0.200	0.214	0.221	0.213
170	8/27/2019 10:52:05	0.206	0.211	0.219	0.210
171	8/27/2019 10:53:05	0.195	0.205	0.213	0.199
172	8/27/2019 10:54:05	0.190	0.201	0.209	0.199
173	8/27/2019 10:55:05	0.198	0.201	0.206	0.205
174	8/27/2019 10:56:05	0.191	0.202	0.212	0.207

175	8/27/2019 10:57:05	0.193	0.200	0.208	0.195
176	8/27/2019 10:58:05	0.186	0.197	0.204	0.199
177	8/27/2019 10:59:05	0.188	0.197	0.206	0.195
178	8/27/2019 11:00:05	0.188	0.195	0.200	0.194
179	8/27/2019 11:01:05	0.191	0.196	0.201	0.195
180	8/27/2019 11:02:05	0.192	0.198	0.205	0.204
181	8/27/2019 11:03:05	0.190	0.202	0.210	0.206
182	8/27/2019 11:04:05	0.194	0.201	0.207	0.201
183	8/27/2019 11:05:05	0.191	0.197	0.203	0.195
184	8/27/2019 11:06:05	0.196	0.200	0.204	0.202
185	8/27/2019 11:07:05	0.193	0.199	0.204	0.195
186	8/27/2019 11:08:05	0.190	0.198	0.203	0.200
187	8/27/2019 11:09:05	0.195	0.198	0.205	0.196
188	8/27/2019 11:10:05	0.196	0.200	0.204	0.202
189	8/27/2019 11:11:05	0.199	0.204	0.208	0.205
190	8/27/2019 11:12:05	0.200	0.204	0.208	0.206
191	8/27/2019 11:13:05	0.201	0.205	0.209	0.202
192	8/27/2019 11:14:05	0.191	0.198	0.203	0.191
193	8/27/2019 11:15:05	0.187	0.192	0.198	0.191
194	8/27/2019 11:16:05	0.177	0.181	0.190	0.178
195	8/27/2019 11:17:05	0.172	0.179	0.186	0.185
196	8/27/2019 11:18:05	0.174	0.179	0.185	0.178
197	8/27/2019 11:19:05	0.173	0.178	0.183	0.177
198	8/27/2019 11:20:05	0.171	0.176	0.182	0.179

199	8/27/2019 11:21:05	0.172	0.177	0.182	0.176
200	8/27/2019 11:22:05	0.173	0.177	0.182	0.178
201	8/27/2019 11:23:05	0.173	0.177	0.181	0.174
202	8/27/2019 11:24:05	0.170	0.176	0.184	0.175
203	8/27/2019 11:25:05	0.173	0.177	0.181	0.178
204	8/27/2019 11:26:05	0.167	0.173	0.178	0.175
205	8/27/2019 11:27:05	0.165	0.173	0.179	0.171
206	8/27/2019 11:28:05	0.170	0.175	0.181	0.173
207	8/27/2019 11:29:05	0.172	0.177	0.186	0.180
208	8/27/2019 11:30:05	0.172	0.177	0.181	0.181
209	8/27/2019 11:31:05	0.169	0.175	0.180	0.176
210	8/27/2019 11:32:05	0.169	0.174	0.178	0.172
211	8/27/2019 11:33:05	0.167	0.173	0.184	0.182
212	8/27/2019 11:34:05	0.168	0.173	0.182	0.173
213	8/27/2019 11:35:05	0.167	65.535	---	---
214	8/27/2019 11:36:05	---	---	---	---
215	8/27/2019 11:37:05	---	---	---	---
216	8/27/2019 11:38:05	0.156	0.162	0.171	0.158
217	8/27/2019 11:39:05	0.157	0.164	0.174	0.159
218	8/27/2019 11:40:05	0.156	0.160	0.167	0.162
219	8/27/2019 11:41:05	0.152	0.158	0.165	0.154
220	8/27/2019 11:42:05	0.149	0.154	0.160	0.153
221	8/27/2019 11:43:05	0.145	0.150	0.156	0.147
222	8/27/2019 11:44:05	0.134	0.143	0.150	0.135

Peak	0.214	65.535	0.303	0.281	
Min	0.000	0.000	0.000	0.000	
Average		0.156	0.459	0.171	0.163

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TWA/STEL

Index	Date/Time	VOC(ppm) (TWA)	VOC(ppm) (STEL)	
001	8/27/2019 08:03:05	0.000	---	
002	8/27/2019 08:04:05	0.000	---	
003	8/27/2019 08:05:05	0.000	---	
004	8/27/2019 08:06:05	0.000	---	
005	8/27/2019 08:07:05	0.000	---	
006	8/27/2019 08:08:05	0.000	---	
007	8/27/2019 08:09:05	0.000	---	
008	8/27/2019 08:10:05	0.000	---	
009	8/27/2019 08:11:05	0.000	---	
010	8/27/2019 08:12:05	0.000	---	
011	8/27/2019 08:13:05	0.000	---	
012	8/27/2019 08:14:05	0.000	---	
013	8/27/2019 08:15:05	0.000	---	
014	8/27/2019 08:16:05	0.000	---	
015	8/27/2019 08:17:05	0.000	0.012	
016	8/27/2019 08:18:05	0.000	0.014	

017	8/27/2019 08:19:05	0.001	0.017
018	8/27/2019 08:20:05	0.001	0.020
019	8/27/2019 08:21:05	0.001	0.024
020	8/27/2019 08:22:05	0.001	0.027
021	8/27/2019 08:23:05	0.001	0.031
022	8/27/2019 08:24:05	0.001	0.034
023	8/27/2019 08:25:05	0.001	0.038
024	8/27/2019 08:26:05	0.001	0.041
025	8/27/2019 08:27:05	0.001	0.044
026	8/27/2019 08:28:05	0.002	0.048
027	8/27/2019 08:29:05	0.002	0.052
028	8/27/2019 08:30:05	0.002	0.055
029	8/27/2019 08:31:05	0.002	0.059
030	8/27/2019 08:32:05	0.002	0.063
031	8/27/2019 08:33:05	0.002	0.067
032	8/27/2019 08:34:05	0.003	0.071
033	8/27/2019 08:35:05	0.003	0.074
034	8/27/2019 08:36:05	0.003	0.077
035	8/27/2019 08:37:05	0.003	0.080
036	8/27/2019 08:38:05	0.003	0.083
037	8/27/2019 08:39:05	0.004	0.086
038	8/27/2019 08:40:05	0.004	0.089
039	8/27/2019 08:41:05	0.004	0.093
040	8/27/2019 08:42:05	0.004	0.096

041	8/27/2019 08:43:05	0.005	0.099
042	8/27/2019 08:44:05	0.005	0.102
043	8/27/2019 08:45:05	0.005	0.104
044	8/27/2019 08:46:05	0.005	0.107
045	8/27/2019 08:47:05	0.006	0.109
046	8/27/2019 08:48:05	0.006	0.111
047	8/27/2019 08:49:05	0.006	0.113
048	8/27/2019 08:50:05	0.006	0.115
049	8/27/2019 08:51:05	0.007	0.118
050	8/27/2019 08:52:05	0.007	0.120
051	8/27/2019 08:53:05	0.007	0.122
052	8/27/2019 08:54:05	0.007	0.124
053	8/27/2019 08:55:05	0.008	0.126
054	8/27/2019 08:56:05	0.008	0.128
055	8/27/2019 08:57:05	0.008	0.129
056	8/27/2019 08:58:05	0.008	0.131
057	8/27/2019 08:59:05	0.009	0.132
058	8/27/2019 09:00:05	0.009	0.133
059	8/27/2019 09:01:05	0.009	0.135
060	8/27/2019 09:02:05	0.010	0.136
061	8/27/2019 09:03:05	0.010	0.138
062	8/27/2019 09:04:05	0.010	0.140
063	8/27/2019 09:05:05	0.010	0.141
064	8/27/2019 09:06:05	0.011	0.143

065	8/27/2019 09:07:05	0.011	0.145
066	8/27/2019 09:08:05	0.011	0.147
067	8/27/2019 09:09:05	0.012	0.149
068	8/27/2019 09:10:05	0.012	0.151
069	8/27/2019 09:11:05	0.012	0.154
070	8/27/2019 09:12:05	0.013	0.157
071	8/27/2019 09:13:05	0.013	0.160
072	8/27/2019 09:14:05	0.014	0.164
073	8/27/2019 09:15:05	0.014	0.168
074	8/27/2019 09:16:05	0.014	0.172
075	8/27/2019 09:17:05	0.015	0.175
076	8/27/2019 09:18:05	0.015	0.179
077	8/27/2019 09:19:05	0.016	0.183
078	8/27/2019 09:20:05	0.016	0.187
079	8/27/2019 09:21:05	0.016	0.191
080	8/27/2019 09:22:05	0.017	0.200
081	8/27/2019 09:23:05	0.017	0.201
082	8/27/2019 09:24:05	0.018	0.203
083	8/27/2019 09:25:05	0.018	0.205
084	8/27/2019 09:26:05	0.019	0.208
085	8/27/2019 09:27:05	0.019	0.210
086	8/27/2019 09:28:05	0.019	0.212
087	8/27/2019 09:29:05	0.020	0.214
088	8/27/2019 09:30:05	0.020	0.216

089	8/27/2019 09:31:05	0.021	0.217
090	8/27/2019 09:32:05	0.021	0.217
091	8/27/2019 09:33:05	0.022	0.217
092	8/27/2019 09:34:05	0.022	0.217
093	8/27/2019 09:35:05	0.022	0.217
094	8/27/2019 09:36:05	0.023	0.218
095	8/27/2019 09:37:05	0.023	0.218
096	8/27/2019 09:38:05	0.024	0.213
097	8/27/2019 09:39:05	0.024	0.213
098	8/27/2019 09:40:05	0.024	0.214
099	8/27/2019 09:41:05	0.025	0.214
100	8/27/2019 09:42:05	0.025	0.215
101	8/27/2019 09:43:05	0.026	0.215
102	8/27/2019 09:44:05	0.026	0.216
103	8/27/2019 09:45:05	0.027	0.216
104	8/27/2019 09:46:05	0.027	0.215
105	8/27/2019 09:47:05	0.027	0.214
106	8/27/2019 09:48:05	0.028	0.214
107	8/27/2019 09:49:05	0.028	0.214
108	8/27/2019 09:50:05	0.029	0.215
109	8/27/2019 09:51:05	0.029	0.215
110	8/27/2019 09:52:05	0.029	0.214
111	8/27/2019 09:53:05	0.030	0.214
112	8/27/2019 09:54:05	0.030	0.218

113	8/27/2019 09:55:05	0.031	0.218
114	8/27/2019 09:56:05	0.031	0.217
115	8/27/2019 09:57:05	0.032	0.217
116	8/27/2019 09:58:05	0.032	0.216
117	8/27/2019 09:59:05	0.032	0.216
118	8/27/2019 10:00:05	0.033	0.216
119	8/27/2019 10:01:05	0.033	0.216
120	8/27/2019 10:02:05	0.034	0.215
121	8/27/2019 10:03:05	0.034	0.215
122	8/27/2019 10:04:05	0.035	0.216
123	8/27/2019 10:05:05	0.035	0.216
124	8/27/2019 10:06:05	0.035	0.216
125	8/27/2019 10:07:05	0.036	0.216
126	8/27/2019 10:08:05	0.036	0.216
127	8/27/2019 10:09:05	0.037	0.217
128	8/27/2019 10:10:05	0.037	0.212
129	8/27/2019 10:11:05	0.037	0.213
130	8/27/2019 10:12:05	0.038	0.213
131	8/27/2019 10:13:05	0.038	0.213
132	8/27/2019 10:14:05	0.039	0.213
133	8/27/2019 10:15:05	0.039	0.213
134	8/27/2019 10:16:05	0.040	0.214
135	8/27/2019 10:17:05	0.040	0.212
136	8/27/2019 10:18:05	0.040	0.213

137	8/27/2019 10:19:05	0.041	0.213
138	8/27/2019 10:20:05	0.041	0.213
139	8/27/2019 10:21:05	0.042	0.213
140	8/27/2019 10:22:05	0.042	0.213
141	8/27/2019 10:23:05	0.042	0.213
142	8/27/2019 10:24:05	0.043	0.217
143	8/27/2019 10:25:05	0.043	0.215
144	8/27/2019 10:26:05	0.044	0.215
145	8/27/2019 10:27:05	0.044	0.216
146	8/27/2019 10:28:05	0.045	0.216
147	8/27/2019 10:29:05	0.045	0.217
148	8/27/2019 10:30:05	0.045	0.217
149	8/27/2019 10:31:05	0.046	0.218
150	8/27/2019 10:32:05	0.046	0.217
151	8/27/2019 10:33:05	0.047	0.219
152	8/27/2019 10:34:05	0.047	0.220
153	8/27/2019 10:35:05	0.048	0.222
154	8/27/2019 10:36:05	0.048	0.223
155	8/27/2019 10:37:05	0.049	0.224
156	8/27/2019 10:38:05	0.049	0.225
157	8/27/2019 10:39:05	0.050	0.226
158	8/27/2019 10:40:05	0.050	0.223
159	8/27/2019 10:41:05	0.050	0.225
160	8/27/2019 10:42:05	0.051	0.227

161	8/27/2019 10:43:05	0.051	0.228
162	8/27/2019 10:44:05	0.052	0.230
163	8/27/2019 10:45:05	0.052	0.231
164	8/27/2019 10:46:05	0.053	0.232
165	8/27/2019 10:47:05	0.053	0.232
166	8/27/2019 10:48:05	0.054	0.232
167	8/27/2019 10:49:05	0.054	0.232
168	8/27/2019 10:50:05	0.055	0.233
169	8/27/2019 10:51:05	0.055	0.232
170	8/27/2019 10:52:05	0.055	0.232
171	8/27/2019 10:53:05	0.056	0.231
172	8/27/2019 10:54:05	0.056	0.230
173	8/27/2019 10:55:05	0.057	0.228
174	8/27/2019 10:56:05	0.057	0.228
175	8/27/2019 10:57:05	0.058	0.227
176	8/27/2019 10:58:05	0.058	0.225
177	8/27/2019 10:59:05	0.058	0.224
178	8/27/2019 11:00:05	0.059	0.222
179	8/27/2019 11:01:05	0.059	0.220
180	8/27/2019 11:02:05	0.060	0.219
181	8/27/2019 11:03:05	0.060	0.219
182	8/27/2019 11:04:05	0.060	0.217
183	8/27/2019 11:05:05	0.061	0.216
184	8/27/2019 11:06:05	0.061	0.215

185	8/27/2019 11:07:05	0.062	0.213
186	8/27/2019 11:08:05	0.062	0.213
187	8/27/2019 11:09:05	0.062	0.213
188	8/27/2019 11:10:05	0.063	0.213
189	8/27/2019 11:11:05	0.063	0.213
190	8/27/2019 11:12:05	0.064	0.213
191	8/27/2019 11:13:05	0.064	0.213
192	8/27/2019 11:14:05	0.065	0.213
193	8/27/2019 11:15:05	0.065	0.212
194	8/27/2019 11:16:05	0.065	0.211
195	8/27/2019 11:17:05	0.066	0.211
196	8/27/2019 11:18:05	0.066	0.209
197	8/27/2019 11:19:05	0.066	0.207
198	8/27/2019 11:20:05	0.067	0.205
199	8/27/2019 11:21:05	0.067	0.204
200	8/27/2019 11:22:05	0.068	0.203
201	8/27/2019 11:23:05	0.068	0.201
202	8/27/2019 11:24:05	0.068	0.200
203	8/27/2019 11:25:05	0.069	0.198
204	8/27/2019 11:26:05	0.069	0.197
205	8/27/2019 11:27:05	0.069	0.194
206	8/27/2019 11:28:05	0.070	0.192
207	8/27/2019 11:29:05	0.070	0.191
208	8/27/2019 11:30:05	0.071	0.190

209	8/27/2019 11:31:05	0.071	0.189
210	8/27/2019 11:32:05	0.071	0.189
211	8/27/2019 11:33:05	0.072	0.188
212	8/27/2019 11:34:05	0.072	0.188
213	8/27/2019 11:35:05	---	---
214	8/27/2019 11:36:05	---	---
215	8/27/2019 11:37:05	---	---
216	8/27/2019 11:38:05	0.072	---
217	8/27/2019 11:39:05	0.073	---
218	8/27/2019 11:40:05	0.073	---
219	8/27/2019 11:41:05	0.073	---
220	8/27/2019 11:42:05	0.074	---
221	8/27/2019 11:43:05	0.074	---
222	8/27/2019 11:44:05	0.074	---

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19/08/27 08:02

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Summary

Unit Name MiniRAE 3000(PGM-7320)

Unit SN 592-903549

Unit Firmware Ver V2.20A

Running Mode Hygiene Mode

Datalog Mode Auto

Diagnostic Mode No

Stop Reason Power Down

Site ID 00000000

User ID 00000001

Begin 8/27/2019 08:02:22

End 8/27/2019 11:47:25

Sample Period(s) 60

Number of Records 225

Sensor PID(ppm)

Sensor SN S023030154V7

Measure Type Min; Avg; Max; Real

Span 100.0

Span 2 1000.0

Low Alarm 50.0

High Alarm 100.0

Over Alarm 2000.0

STEL Alarm 10025.0

TWA Alarm 10.0

Measurement Gas Isobutylene

Calibration Time 8/27/2019 07:26

Peak 0.1

Min 0.0

Average 0.0

****

Datalog

Index	Date/Time	PID(ppm) (Min)	PID(ppm) (Avg)	PID(ppm) (Max)	PID(ppm) (Real)	PID(ppm)
001	8/27/2019 08:03:22	0.0	0.1	0.2	0.0	
002	8/27/2019 08:04:22	0.0	0.1	0.1	0.0	
003	8/27/2019 08:05:22	0.0	0.1	0.1	0.0	
004	8/27/2019 08:06:22	0.0	0.1	0.1	0.1	
005	8/27/2019 08:07:22	0.0	0.1	0.1	0.1	
006	8/27/2019 08:08:22	0.0	0.1	0.1	0.0	
007	8/27/2019 08:09:22	0.0	0.1	0.1	0.0	
008	8/27/2019 08:10:22	0.0	0.1	0.1	0.0	
009	8/27/2019 08:11:22	0.0	0.1	0.1	0.1	
010	8/27/2019 08:12:22	0.0	0.0	0.1	0.1	
011	8/27/2019 08:13:22	0.0	0.1	0.1	0.0	
012	8/27/2019 08:14:22	0.0	0.1	0.1	0.0	
013	8/27/2019 08:15:22	0.0	0.1	0.1	0.1	
014	8/27/2019 08:16:22	0.0	0.1	0.1	0.1	
015	8/27/2019 08:17:22	0.0	0.1	0.1	0.0	
016	8/27/2019 08:18:22	0.0	0.1	0.1	0.1	

017	8/27/2019 08:19:22	0.0	0.0	0.1	0.0
018	8/27/2019 08:20:22	0.0	0.1	0.1	0.1
019	8/27/2019 08:21:22	0.0	0.0	0.1	0.0
020	8/27/2019 08:22:22	0.0	0.0	0.1	0.0
021	8/27/2019 08:23:22	0.0	0.1	0.1	0.0
022	8/27/2019 08:24:22	0.0	0.0	0.1	0.0
023	8/27/2019 08:25:22	0.0	0.0	0.1	0.1
024	8/27/2019 08:26:22	0.0	0.0	0.1	0.1
025	8/27/2019 08:27:22	0.0	0.0	0.1	0.1
026	8/27/2019 08:28:22	0.0	0.0	0.1	0.0
027	8/27/2019 08:29:22	0.0	0.0	0.1	0.0
028	8/27/2019 08:30:22	0.0	0.0	0.1	0.0
029	8/27/2019 08:31:22	0.0	0.0	0.1	0.0
030	8/27/2019 08:32:22	0.0	0.0	0.1	0.0
031	8/27/2019 08:33:22	0.0	0.0	0.1	0.0
032	8/27/2019 08:34:22	0.0	0.0	0.1	0.0
033	8/27/2019 08:35:22	0.0	0.0	0.1	0.0
034	8/27/2019 08:36:22	0.0	0.0	0.1	0.0
035	8/27/2019 08:37:22	0.0	0.0	0.1	0.0
036	8/27/2019 08:38:22	0.0	0.0	0.1	0.0
037	8/27/2019 08:39:22	0.0	0.0	0.1	0.0
038	8/27/2019 08:40:22	0.0	0.0	0.1	0.0
039	8/27/2019 08:41:22	0.0	0.0	0.1	0.0
040	8/27/2019 08:42:22	0.0	0.0	0.1	0.0

041	8/27/2019 08:43:22	0.0	0.0	0.1	0.0
042	8/27/2019 08:44:22	0.0	0.0	0.1	0.0
043	8/27/2019 08:45:22	0.0	0.0	0.1	0.0
044	8/27/2019 08:46:22	0.0	0.0	0.1	0.0
045	8/27/2019 08:47:22	0.0	0.0	0.0	0.0
046	8/27/2019 08:48:22	0.0	0.0	0.1	0.0
047	8/27/2019 08:49:22	0.0	0.0	0.0	0.0
048	8/27/2019 08:50:22	0.0	0.0	0.1	0.0
049	8/27/2019 08:51:22	0.0	0.0	0.0	0.0
050	8/27/2019 08:52:22	0.0	0.0	0.0	0.0
051	8/27/2019 08:53:22	0.0	0.0	0.0	0.0
052	8/27/2019 08:54:22	0.0	0.0	0.0	0.0
053	8/27/2019 08:55:22	0.0	0.0	0.0	0.0
054	8/27/2019 08:56:22	0.0	0.0	0.0	0.0
055	8/27/2019 08:57:22	0.0	0.0	0.0	0.0
056	8/27/2019 08:58:22	0.0	0.0	0.0	0.0
057	8/27/2019 08:59:22	0.0	0.0	0.0	0.0
058	8/27/2019 09:00:22	0.0	0.0	0.0	0.0
059	8/27/2019 09:01:22	0.0	0.0	0.0	0.0
060	8/27/2019 09:02:22	0.0	0.0	0.0	0.0
061	8/27/2019 09:03:22	0.0	0.0	0.0	0.0
062	8/27/2019 09:04:22	0.0	0.0	0.0	0.0
063	8/27/2019 09:05:22	0.0	0.0	0.0	0.0
064	8/27/2019 09:06:22	0.0	0.0	0.0	0.0

065	8/27/2019 09:07:22	0.0	0.0	0.0	0.0
066	8/27/2019 09:08:22	0.0	0.0	0.0	0.0
067	8/27/2019 09:09:22	0.0	0.0	0.0	0.0
068	8/27/2019 09:10:22	0.0	0.0	0.0	0.0
069	8/27/2019 09:11:22	0.0	0.0	0.0	0.0
070	8/27/2019 09:12:22	0.0	0.0	0.0	0.0
071	8/27/2019 09:13:22	0.0	0.0	0.0	0.0
072	8/27/2019 09:14:22	0.0	0.0	0.0	0.0
073	8/27/2019 09:15:22	0.0	0.0	0.0	0.0
074	8/27/2019 09:16:22	0.0	0.0	0.0	0.0
075	8/27/2019 09:17:22	0.0	0.0	0.0	0.0
076	8/27/2019 09:18:22	0.0	0.0	0.0	0.0
077	8/27/2019 09:19:22	0.0	0.0	0.0	0.0
078	8/27/2019 09:20:22	0.0	0.0	0.0	0.0
079	8/27/2019 09:21:22	0.0	0.0	0.0	0.0
080	8/27/2019 09:22:22	0.0	0.0	0.0	0.0
081	8/27/2019 09:23:22	0.0	0.0	0.0	0.0
082	8/27/2019 09:24:22	0.0	0.0	0.0	0.0
083	8/27/2019 09:25:22	0.0	0.0	0.0	0.0
084	8/27/2019 09:26:22	0.0	0.0	0.0	0.0
085	8/27/2019 09:27:22	0.0	0.0	0.0	0.0
086	8/27/2019 09:28:22	0.0	0.0	0.0	0.0
087	8/27/2019 09:29:22	0.0	0.0	0.0	0.0
088	8/27/2019 09:30:22	0.0	0.0	0.0	0.0

089	8/27/2019 09:31:22	0.0	0.0	0.0	0.0
090	8/27/2019 09:32:22	0.0	0.0	0.0	0.0
091	8/27/2019 09:33:22	0.0	0.0	0.0	0.0
092	8/27/2019 09:34:22	0.0	0.0	0.0	0.0
093	8/27/2019 09:35:22	0.0	0.0	0.0	0.0
094	8/27/2019 09:36:22	0.0	0.0	0.0	0.0
095	8/27/2019 09:37:22	0.0	0.0	0.0	0.0
096	8/27/2019 09:38:22	0.0	0.0	0.0	0.0
097	8/27/2019 09:39:22	0.0	0.0	0.0	0.0
098	8/27/2019 09:40:22	0.0	0.0	0.0	0.0
099	8/27/2019 09:41:22	0.0	0.0	0.0	0.0
100	8/27/2019 09:42:22	0.0	0.0	0.0	0.0
101	8/27/2019 09:43:22	0.0	0.0	0.0	0.0
102	8/27/2019 09:44:22	0.0	0.0	0.0	0.0
103	8/27/2019 09:45:22	0.0	0.0	0.0	0.0
104	8/27/2019 09:46:22	0.0	0.0	0.0	0.0
105	8/27/2019 09:47:22	0.0	0.0	0.0	0.0
106	8/27/2019 09:48:22	0.0	0.0	0.0	0.0
107	8/27/2019 09:49:22	0.0	0.0	0.0	0.0
108	8/27/2019 09:50:22	0.0	0.0	0.0	0.0
109	8/27/2019 09:51:22	0.0	0.0	0.0	0.0
110	8/27/2019 09:52:22	0.0	0.0	0.0	0.0
111	8/27/2019 09:53:22	0.0	0.0	0.0	0.0
112	8/27/2019 09:54:22	0.0	0.0	0.0	0.0

113	8/27/2019 09:55:22	0.0	0.0	0.0	0.0
114	8/27/2019 09:56:22	0.0	0.0	0.0	0.0
115	8/27/2019 09:57:22	0.0	0.0	0.0	0.0
116	8/27/2019 09:58:22	0.0	0.0	0.0	0.0
117	8/27/2019 09:59:22	0.0	0.0	0.0	0.0
118	8/27/2019 10:00:22	0.0	0.0	0.0	0.0
119	8/27/2019 10:01:22	0.0	0.0	0.0	0.0
120	8/27/2019 10:02:22	0.0	0.0	0.0	0.0
121	8/27/2019 10:03:22	0.0	0.0	0.0	0.0
122	8/27/2019 10:04:22	0.0	0.0	0.0	0.0
123	8/27/2019 10:05:22	0.0	0.0	0.0	0.0
124	8/27/2019 10:06:22	0.0	0.0	0.0	0.0
125	8/27/2019 10:07:22	0.0	0.0	0.0	0.0
126	8/27/2019 10:08:22	0.0	0.0	0.0	0.0
127	8/27/2019 10:09:22	0.0	0.0	0.0	0.0
128	8/27/2019 10:10:22	0.0	0.0	0.0	0.0
129	8/27/2019 10:11:22	0.0	0.0	0.0	0.0
130	8/27/2019 10:12:22	0.0	0.0	0.0	0.0
131	8/27/2019 10:13:22	0.0	0.0	0.0	0.0
132	8/27/2019 10:14:22	0.0	0.0	0.0	0.0
133	8/27/2019 10:15:22	0.0	0.0	0.0	0.0
134	8/27/2019 10:16:22	0.0	0.0	0.0	0.0
135	8/27/2019 10:17:22	0.0	0.0	0.0	0.0
136	8/27/2019 10:18:22	0.0	0.0	0.0	0.0

137	8/27/2019 10:19:22	0.0	0.0	0.0	0.0
138	8/27/2019 10:20:22	0.0	0.0	0.0	0.0
139	8/27/2019 10:21:22	0.0	0.0	0.0	0.0
140	8/27/2019 10:22:22	0.0	0.0	0.0	0.0
141	8/27/2019 10:23:22	0.0	0.0	0.0	0.0
142	8/27/2019 10:24:22	0.0	0.0	0.0	0.0
143	8/27/2019 10:25:22	0.0	0.0	0.0	0.0
144	8/27/2019 10:26:22	0.0	0.0	0.0	0.0
145	8/27/2019 10:27:22	0.0	0.0	0.0	0.0
146	8/27/2019 10:28:22	0.0	0.0	0.0	0.0
147	8/27/2019 10:29:22	0.0	0.0	0.0	0.0
148	8/27/2019 10:30:22	0.0	0.0	0.0	0.0
149	8/27/2019 10:31:22	0.0	0.0	0.0	0.0
150	8/27/2019 10:32:22	0.0	0.0	0.0	0.0
151	8/27/2019 10:33:22	0.0	0.0	0.0	0.0
152	8/27/2019 10:34:22	0.0	0.0	0.0	0.0
153	8/27/2019 10:35:22	0.0	0.0	0.0	0.0
154	8/27/2019 10:36:22	0.0	0.0	0.0	0.0
155	8/27/2019 10:37:22	0.0	0.0	0.0	0.0
156	8/27/2019 10:38:22	0.0	0.0	0.0	0.0
157	8/27/2019 10:39:22	0.0	0.0	0.0	0.0
158	8/27/2019 10:40:22	0.0	0.0	0.0	0.0
159	8/27/2019 10:41:22	0.0	0.0	0.0	0.0
160	8/27/2019 10:42:22	0.0	0.0	0.0	0.0

161	8/27/2019 10:43:22	0.0	0.0	0.0	0.0
162	8/27/2019 10:44:22	0.0	0.0	0.0	0.0
163	8/27/2019 10:45:22	0.0	0.0	0.0	0.0
164	8/27/2019 10:46:22	0.0	0.0	0.0	0.0
165	8/27/2019 10:47:22	0.0	0.0	0.0	0.0
166	8/27/2019 10:48:22	0.0	0.0	0.0	0.0
167	8/27/2019 10:49:22	0.0	0.0	0.0	0.0
168	8/27/2019 10:50:22	0.0	0.0	0.0	0.0
169	8/27/2019 10:51:22	0.0	0.0	0.0	0.0
170	8/27/2019 10:52:22	0.0	0.0	0.0	0.0
171	8/27/2019 10:53:22	0.0	0.0	0.0	0.0
172	8/27/2019 10:54:22	0.0	0.0	0.0	0.0
173	8/27/2019 10:55:22	0.0	0.0	0.0	0.0
174	8/27/2019 10:56:22	0.0	0.0	0.0	0.0
175	8/27/2019 10:57:22	0.0	0.0	0.0	0.0
176	8/27/2019 10:58:22	0.0	0.0	0.0	0.0
177	8/27/2019 10:59:22	0.0	0.0	0.0	0.0
178	8/27/2019 11:00:22	0.0	0.0	0.0	0.0
179	8/27/2019 11:01:22	0.0	0.0	0.0	0.0
180	8/27/2019 11:02:22	0.0	0.0	0.0	0.0
181	8/27/2019 11:03:22	0.0	0.0	0.0	0.0
182	8/27/2019 11:04:22	0.0	0.0	0.0	0.0
183	8/27/2019 11:05:22	0.0	0.0	0.0	0.0
184	8/27/2019 11:06:22	0.0	0.0	0.0	0.0

185	8/27/2019 11:07:22	0.0	0.0	0.0	0.0
186	8/27/2019 11:08:22	0.0	0.0	0.0	0.0
187	8/27/2019 11:09:22	0.0	0.0	0.0	0.0
188	8/27/2019 11:10:22	0.0	0.0	0.0	0.0
189	8/27/2019 11:11:22	0.0	0.0	0.0	0.0
190	8/27/2019 11:12:22	0.0	0.0	0.0	0.0
191	8/27/2019 11:13:22	0.0	0.0	0.0	0.0
192	8/27/2019 11:14:22	0.0	0.0	0.0	0.0
193	8/27/2019 11:15:22	0.0	0.0	0.0	0.0
194	8/27/2019 11:16:22	0.0	0.0	0.0	0.0
195	8/27/2019 11:17:22	0.0	0.0	0.0	0.0
196	8/27/2019 11:18:22	0.0	0.0	0.0	0.0
197	8/27/2019 11:19:22	0.0	0.0	0.0	0.0
198	8/27/2019 11:20:22	0.0	0.0	0.0	0.0
199	8/27/2019 11:21:22	0.0	0.0	0.0	0.0
200	8/27/2019 11:22:22	0.0	0.0	0.0	0.0
201	8/27/2019 11:23:22	0.0	0.0	0.0	0.0
202	8/27/2019 11:24:22	0.0	0.0	0.0	0.0
203	8/27/2019 11:25:22	0.0	0.0	0.0	0.0
204	8/27/2019 11:26:22	0.0	0.0	0.0	0.0
205	8/27/2019 11:27:22	0.0	0.0	0.0	0.0
206	8/27/2019 11:28:22	0.0	0.0	0.0	0.0
207	8/27/2019 11:29:22	0.0	0.0	0.0	0.0
208	8/27/2019 11:30:22	0.0	0.0	0.0	0.0

209	8/27/2019 11:31:22	0.0	0.0	0.0	0.0
210	8/27/2019 11:32:22	0.0	0.0	0.0	0.0
211	8/27/2019 11:33:22	0.0	0.0	0.0	0.0
212	8/27/2019 11:34:22	0.0	0.0	0.0	0.0
213	8/27/2019 11:35:22	0.0	0.0	0.0	0.0
214	8/27/2019 11:36:22	0.0	0.0	0.0	0.0
215	8/27/2019 11:37:22	0.0	0.0	0.0	0.0
216	8/27/2019 11:38:22	0.0	0.0	0.0	0.0
217	8/27/2019 11:39:22	0.0	0.0	0.0	0.0
218	8/27/2019 11:40:22	0.0	0.0	0.0	0.0
219	8/27/2019 11:41:22	0.0	0.0	0.0	0.0
220	8/27/2019 11:42:22	0.0	0.0	0.0	0.0
221	8/27/2019 11:43:22	0.0	0.0	0.0	0.0
222	8/27/2019 11:44:22	0.0	0.0	0.0	0.0
223	8/27/2019 11:45:22	0.0	0.0	0.0	0.0
224	8/27/2019 11:46:22	0.0	0.0	0.0	0.0
225	8/27/2019 11:47:22	0.0	0.0	0.0	0.0
Peak		0.0	0.1	0.2	0.1
Min		0.0	0.0	0.0	0.0
Average			0.0	0.0	0.0

****

TWA/STEL

	PID(ppm)	PID(ppm)

Index	Date/Time	(TWA)	(STEL)
001	8/27/2019 08:03:22	0.0	---
002	8/27/2019 08:04:22	0.0	---
003	8/27/2019 08:05:22	0.0	---
004	8/27/2019 08:06:22	0.0	---
005	8/27/2019 08:07:22	0.0	---
006	8/27/2019 08:08:22	0.0	---
007	8/27/2019 08:09:22	0.0	---
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010	8/27/2019 08:12:22	0.0	---
011	8/27/2019 08:13:22	0.0	---
012	8/27/2019 08:14:22	0.0	---
013	8/27/2019 08:15:22	0.0	---
014	8/27/2019 08:16:22	0.0	---
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019	8/27/2019 08:21:22	0.0	0.1
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021	8/27/2019 08:23:22	0.0	0.0
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023	8/27/2019 08:25:22	0.0	0.0

024	8/27/2019 08:26:22	0.0	0.1
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043	8/27/2019 08:45:22	0.0	0.0
044	8/27/2019 08:46:22	0.0	0.0
045	8/27/2019 08:47:22	0.0	0.0
046	8/27/2019 08:48:22	0.0	0.0
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058	8/27/2019 09:00:22	0.0	0.0
059	8/27/2019 09:01:22	0.0	0.0
060	8/27/2019 09:02:22	0.0	0.0
061	8/27/2019 09:03:22	0.0	0.0
062	8/27/2019 09:04:22	0.0	0.0
063	8/27/2019 09:05:22	0.0	0.0
064	8/27/2019 09:06:22	0.0	0.0
065	8/27/2019 09:07:22	0.0	0.0
066	8/27/2019 09:08:22	0.0	0.0
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068	8/27/2019 09:10:22	0.0	0.0
069	8/27/2019 09:11:22	0.0	0.0
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076	8/27/2019 09:18:22	0.0	0.0
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120	8/27/2019 10:02:22	0.0	0.0
121	8/27/2019 10:03:22	0.0	0.0
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123	8/27/2019 10:05:22	0.0	0.0
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125	8/27/2019 10:07:22	0.0	0.0
126	8/27/2019 10:08:22	0.0	0.0
127	8/27/2019 10:09:22	0.0	0.0
128	8/27/2019 10:10:22	0.0	0.0
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130	8/27/2019 10:12:22	0.0	0.0
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134	8/27/2019 10:16:22	0.0	0.0
135	8/27/2019 10:17:22	0.0	0.0
136	8/27/2019 10:18:22	0.0	0.0
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143	8/27/2019 10:25:22	0.0	0.0

144	8/27/2019 10:26:22	0.0	0.0
145	8/27/2019 10:27:22	0.0	0.0
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147	8/27/2019 10:29:22	0.0	0.0
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150	8/27/2019 10:32:22	0.0	0.0
151	8/27/2019 10:33:22	0.0	0.0
152	8/27/2019 10:34:22	0.0	0.0
153	8/27/2019 10:35:22	0.0	0.0
154	8/27/2019 10:36:22	0.0	0.0
155	8/27/2019 10:37:22	0.0	0.0
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157	8/27/2019 10:39:22	0.0	0.0
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164	8/27/2019 10:46:22	0.0	0.0
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167	8/27/2019 10:49:22	0.0	0.0

168	8/27/2019 10:50:22	0.0	0.0
169	8/27/2019 10:51:22	0.0	0.0
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183	8/27/2019 11:05:22	0.0	0.0
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185	8/27/2019 11:07:22	0.0	0.0
186	8/27/2019 11:08:22	0.0	0.0
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192	8/27/2019 11:14:22	0.0	0.0
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196	8/27/2019 11:18:22	0.0	0.0
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200	8/27/2019 11:22:22	0.0	0.0
201	8/27/2019 11:23:22	0.0	0.0
202	8/27/2019 11:24:22	0.0	0.0
203	8/27/2019 11:25:22	0.0	0.0
204	8/27/2019 11:26:22	0.0	0.0
205	8/27/2019 11:27:22	0.0	0.0
206	8/27/2019 11:28:22	0.0	0.0
207	8/27/2019 11:29:22	0.0	0.0
208	8/27/2019 11:30:22	0.0	0.0
209	8/27/2019 11:31:22	0.0	0.0
210	8/27/2019 11:32:22	0.0	0.0
211	8/27/2019 11:33:22	0.0	0.0
212	8/27/2019 11:34:22	0.0	0.0
213	8/27/2019 11:35:22	0.0	0.0
214	8/27/2019 11:36:22	0.0	0.0
215	8/27/2019 11:37:22	0.0	0.0

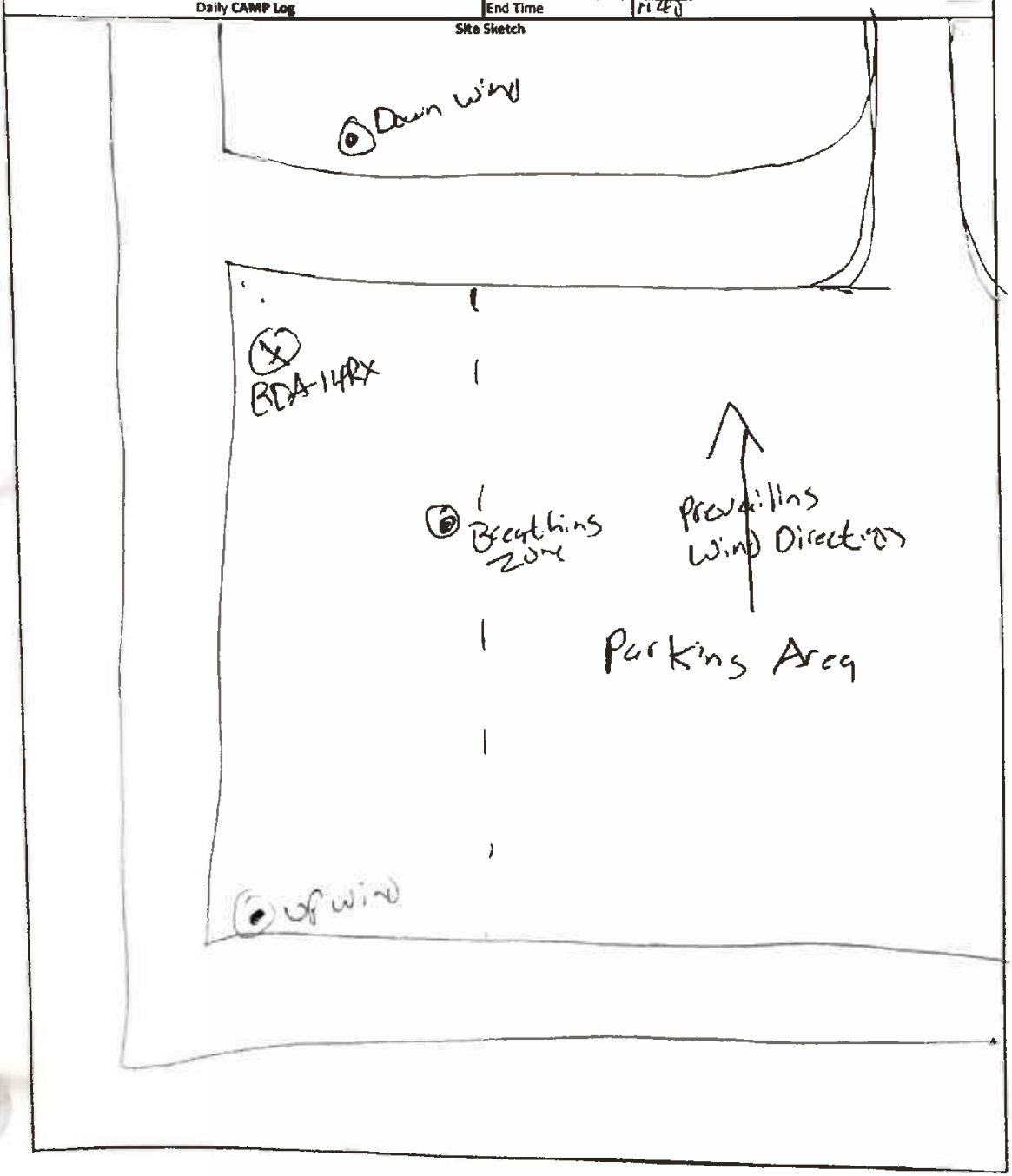
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218	8/27/2019 11:40:22	0.0	0.0
219	8/27/2019 11:41:22	0.0	0.0
220	8/27/2019 11:42:22	0.0	0.0
221	8/27/2019 11:43:22	0.0	0.0
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225	8/27/2019 11:47:22	0.0	0.0

ARCADIS | Design & Consultancy for natural and built assets

Daily CAMP Log

Project	Phase 2 Groundwater RI
Location	East Syracuse, NY
Date	8/27/19
Weather Conditions	70s overcast
Upwind Monitor	542-9035
Downwind Monitor	542-9142
Start Time	0910
End Time	1140

Site Sketch



Anne Locke
Associate Manager, Environmental Protection
Environmental, Health and Safety Department
Bristol-Myers Squibb
P.O. Box 4755
Syracuse, NY 13221

Arcadis U.S., Inc.
One Lincoln Center
110 West Fayette Street
Suite 300
Syracuse
New York 13202
Tel 315 446 9120
Fax 315 449 0017
www.arcadis.com

Environmental North

Subject:
Community Air Monitoring During Phase II RI Well Installations Bristol-Myers Squibb Syracuse Facility – East Syracuse, New York 13057

Date:
September 4, 2019

Contact:
William McCune

Phone:
315-671-9172

Email:
William.McCune@arcadis.com

Our ref:
B0087363.0037

Dear Ms. Locke:

The following is a summary of the community air monitoring plan (CAMP) provided by Arcadis U.S., Inc. (Arcadis) during Phase II RI drilling activities conducted at the Bristol-Myers Squibb (BMS) Syracuse North Campus, East Syracuse, NY on September 4, 2019.

September 4, 2019: Parratt-Wolff Inc. (Parratt-Wolff) completed coring activities at BDA-17RX, drilling from 8:00 AM to 5:00 PM. CAMP monitoring included photo ionization detectors at upwind and downwind locations and a DustTrak at a breathing zone location. The prevailing wind direction was observed originating from the northwest through the day. Air quality parameters did not exceed CAMP standards at any time during work activities. Table 1 shows the serial numbers and associated CAMP stations locations.

CAMP Station Locations	Serial Number
Breathing Zone DustTrak	#8533151804
Upwind PID	#592-914273
Downwind PID	#592-914276

Please contact us with any questions or comments pertaining to this project.

Sincerely,

Arcadis U.S., Inc.

William McCune
Principal Geologist

Attachments

1 CAMP Data Logs
2 Site Sketches/Notes

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19/09/04 08:23

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Summary

Unit Name MiniRAE 3000(PGM-7320)

Unit SN 592-914273

Unit Firmware Ver V1.20A

Running Mode Hygiene Mode

Measure Type Min; Avg; Max; Real

Datalog Mode Continuous

Datalog Type Manual

Diagnostic Mode No

Stop Reason Power Down

Site ID RAE00005

User ID 00000001

Begin 9/4/2019 08:23:14

End 9/4/2019 17:17:14

Sample Period(s) 60

Number of Records 534

Sensor	VOC(ppm)
Span	100.000
Span 2	N/A
Low Alarm	50.000
High Alarm	100.000
Over Alarm	2000.000
STEL Alarm	25.000
TWA Alarm	10.000
Measurement Gas	Isobutylene
Calibration Time	9/4/2019 07:39
Peak	0.039
Min	0.000
Average	0.004

****

Datalog

Index	Date/Time	VOC(ppm) (Min)	VOC(ppm) (Avg)	VOC(ppm) (Max)	VOC(ppm) (Real)	VOC(ppm)
001	9/4/2019 08:24:14	0.000	0.000	0.000	0.000	
002	9/4/2019 08:25:14	0.000	0.000	0.000	0.000	
003	9/4/2019 08:26:14	0.000	0.000	0.000	0.000	
004	9/4/2019 08:27:14	0.000	0.000	0.000	0.000	
005	9/4/2019 08:28:14	0.000	0.000	0.000	0.000	
006	9/4/2019 08:29:14	0.000	0.000	0.000	0.000	

007	9/4/2019 08:30:14	0.000	0.000	0.000	0.000
008	9/4/2019 08:31:14	0.000	0.000	0.000	0.000
009	9/4/2019 08:32:14	0.000	0.000	0.000	0.000
010	9/4/2019 08:33:14	0.000	0.000	0.000	0.000
011	9/4/2019 08:34:14	0.000	0.000	0.000	0.000
012	9/4/2019 08:35:14	0.000	0.000	0.000	0.000
013	9/4/2019 08:36:14	0.000	0.000	0.000	0.000
014	9/4/2019 08:37:14	0.000	0.000	0.000	0.000
015	9/4/2019 08:38:14	0.000	0.000	0.000	0.000
016	9/4/2019 08:39:14	0.000	0.000	0.000	0.000
017	9/4/2019 08:40:14	0.000	0.000	0.000	0.000
018	9/4/2019 08:41:14	0.000	0.000	0.000	0.000
019	9/4/2019 08:42:14	0.000	0.000	0.000	0.000
020	9/4/2019 08:43:14	0.000	0.000	0.000	0.000
021	9/4/2019 08:44:14	0.000	0.000	0.000	0.000
022	9/4/2019 08:45:14	0.000	0.000	0.000	0.000
023	9/4/2019 08:46:14	0.000	0.000	0.000	0.000
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025	9/4/2019 08:48:14	0.000	0.000	0.000	0.000
026	9/4/2019 08:49:14	0.000	0.000	0.000	0.000
027	9/4/2019 08:50:14	0.000	0.000	0.000	0.000
028	9/4/2019 08:51:14	0.000	0.000	0.000	0.000
029	9/4/2019 08:52:14	0.000	0.000	0.000	0.000
030	9/4/2019 08:53:14	0.000	0.000	0.000	0.000

031	9/4/2019 08:54:14	0.000	0.000	0.000	0.000
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037	9/4/2019 09:00:14	0.000	0.000	0.000	0.000
038	9/4/2019 09:01:14	0.000	0.000	0.000	0.000
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044	9/4/2019 09:07:14	0.000	0.000	0.000	0.000
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059	9/4/2019 09:22:14	0.000	0.000	0.000	0.000
060	9/4/2019 09:23:14	0.000	0.000	0.000	0.000
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064	9/4/2019 09:27:14	0.000	0.000	0.000	0.000
065	9/4/2019 09:28:14	0.000	0.000	0.000	0.000
066	9/4/2019 09:29:14	0.000	0.000	0.000	0.000
067	9/4/2019 09:30:14	0.000	0.000	0.000	0.000
068	9/4/2019 09:31:14	0.000	0.000	0.000	0.000
069	9/4/2019 09:32:14	0.000	0.000	0.000	0.000
070	9/4/2019 09:33:14	0.000	0.000	0.000	0.000
071	9/4/2019 09:34:14	0.000	0.000	0.000	0.000
072	9/4/2019 09:35:14	0.000	0.000	0.000	0.000
073	9/4/2019 09:36:14	0.000	0.000	0.000	0.000
074	9/4/2019 09:37:14	0.000	0.000	0.000	0.000
075	9/4/2019 09:38:14	0.000	0.000	0.000	0.000
076	9/4/2019 09:39:14	0.000	0.000	0.000	0.000
077	9/4/2019 09:40:14	0.000	0.000	0.000	0.000
078	9/4/2019 09:41:14	0.000	0.000	0.000	0.000

079	9/4/2019 09:42:14	0.000	0.000	0.000	0.000
080	9/4/2019 09:43:14	0.000	0.000	0.000	0.000
081	9/4/2019 09:44:14	0.000	0.000	0.000	0.000
082	9/4/2019 09:45:14	0.000	0.000	0.000	0.000
083	9/4/2019 09:46:14	0.000	0.000	0.000	0.000
084	9/4/2019 09:47:14	0.000	0.000	0.000	0.000
085	9/4/2019 09:48:14	0.000	0.000	0.000	0.000
086	9/4/2019 09:49:14	0.000	0.000	0.000	0.000
087	9/4/2019 09:50:14	0.000	0.000	0.000	0.000
088	9/4/2019 09:51:14	0.000	0.000	0.000	0.000
089	9/4/2019 09:52:14	0.000	0.000	0.000	0.000
090	9/4/2019 09:53:14	0.000	0.000	0.000	0.000
091	9/4/2019 09:54:14	0.000	0.000	0.000	0.000
092	9/4/2019 09:55:14	0.000	0.000	0.000	0.000
093	9/4/2019 09:56:14	0.000	0.000	0.000	0.000
094	9/4/2019 09:57:14	0.000	0.000	0.000	0.000
095	9/4/2019 09:58:14	0.000	0.000	0.000	0.000
096	9/4/2019 09:59:14	0.000	0.000	0.000	0.000
097	9/4/2019 10:00:14	0.000	0.000	0.000	0.000
098	9/4/2019 10:01:14	0.000	0.000	0.000	0.000
099	9/4/2019 10:02:14	0.000	0.000	0.000	0.000
100	9/4/2019 10:03:14	0.000	0.000	0.000	0.000
101	9/4/2019 10:04:14	0.000	0.000	0.000	0.000
102	9/4/2019 10:05:14	0.000	0.000	0.000	0.000

103	9/4/2019 10:06:14	0.000	0.000	0.000	0.000
104	9/4/2019 10:07:14	0.000	0.000	0.000	0.000
105	9/4/2019 10:08:14	0.000	0.000	0.000	0.000
106	9/4/2019 10:09:14	0.000	0.000	0.000	0.000
107	9/4/2019 10:10:14	0.000	0.000	0.000	0.000
108	9/4/2019 10:11:14	0.000	0.000	0.000	0.000
109	9/4/2019 10:12:14	0.000	0.000	0.000	0.000
110	9/4/2019 10:13:14	0.000	0.000	0.000	0.000
111	9/4/2019 10:14:14	0.000	0.000	0.000	0.000
112	9/4/2019 10:15:14	0.000	0.000	0.000	0.000
113	9/4/2019 10:16:14	0.000	0.000	0.000	0.000
114	9/4/2019 10:17:14	0.000	0.000	0.000	0.000
115	9/4/2019 10:18:14	0.000	0.000	0.000	0.000
116	9/4/2019 10:19:14	0.000	0.000	0.000	0.000
117	9/4/2019 10:20:14	0.000	0.000	0.000	0.000
118	9/4/2019 10:21:14	0.000	0.000	0.000	0.000
119	9/4/2019 10:22:14	0.000	0.000	0.000	0.000
120	9/4/2019 10:23:14	0.000	0.000	0.000	0.000
121	9/4/2019 10:24:14	0.000	0.000	0.000	0.000
122	9/4/2019 10:25:14	0.000	0.000	0.000	0.000
123	9/4/2019 10:26:14	0.000	0.000	0.000	0.000
124	9/4/2019 10:27:14	0.000	0.000	0.000	0.000
125	9/4/2019 10:28:14	0.000	0.000	0.000	0.000
126	9/4/2019 10:29:14	0.000	0.000	0.000	0.000

127	9/4/2019 10:30:14	0.000	0.000	0.000	0.000
128	9/4/2019 10:31:14	0.000	0.000	0.000	0.000
129	9/4/2019 10:32:14	0.000	0.000	0.000	0.000
130	9/4/2019 10:33:14	0.000	0.000	0.000	0.000
131	9/4/2019 10:34:14	0.000	0.000	0.000	0.000
132	9/4/2019 10:35:14	0.000	0.000	0.000	0.000
133	9/4/2019 10:36:14	0.000	0.000	0.000	0.000
134	9/4/2019 10:37:14	0.000	0.000	0.000	0.000
135	9/4/2019 10:38:14	0.000	0.000	0.000	0.000
136	9/4/2019 10:39:14	0.000	0.000	0.000	0.000
137	9/4/2019 10:40:14	0.000	0.000	0.000	0.000
138	9/4/2019 10:41:14	0.000	0.000	0.000	0.000
139	9/4/2019 10:42:14	0.000	0.000	0.000	0.000
140	9/4/2019 10:43:14	0.000	0.000	0.000	0.000
141	9/4/2019 10:44:14	0.000	0.000	0.000	0.000
142	9/4/2019 10:45:14	0.000	0.000	0.000	0.000
143	9/4/2019 10:46:14	0.000	0.000	0.000	0.000
144	9/4/2019 10:47:14	0.000	0.000	0.000	0.000
145	9/4/2019 10:48:14	0.000	0.000	0.000	0.000
146	9/4/2019 10:49:14	0.000	0.000	0.000	0.000
147	9/4/2019 10:50:14	0.000	0.000	0.000	0.000
148	9/4/2019 10:51:14	0.000	0.000	0.000	0.000
149	9/4/2019 10:52:14	0.000	0.000	0.000	0.000
150	9/4/2019 10:53:14	0.000	0.000	0.000	0.000

151	9/4/2019 10:54:14	0.000	0.000	0.000	0.000
152	9/4/2019 10:55:14	0.000	0.000	0.000	0.000
153	9/4/2019 10:56:14	0.000	0.000	0.000	0.000
154	9/4/2019 10:57:14	0.000	0.000	0.000	0.000
155	9/4/2019 10:58:14	0.000	0.000	0.000	0.000
156	9/4/2019 10:59:14	0.000	0.000	0.000	0.000
157	9/4/2019 11:00:14	0.000	0.000	0.000	0.000
158	9/4/2019 11:01:14	0.000	0.000	0.000	0.000
159	9/4/2019 11:02:14	0.000	0.000	0.000	0.000
160	9/4/2019 11:03:14	0.000	0.000	0.000	0.000
161	9/4/2019 11:04:14	0.000	0.000	0.000	0.000
162	9/4/2019 11:05:14	0.000	0.000	0.000	0.000
163	9/4/2019 11:06:14	0.000	0.000	0.000	0.000
164	9/4/2019 11:07:14	0.000	0.000	0.000	0.000
165	9/4/2019 11:08:14	0.000	0.000	0.000	0.000
166	9/4/2019 11:09:14	0.000	0.000	0.000	0.000
167	9/4/2019 11:10:14	0.000	0.000	0.000	0.000
168	9/4/2019 11:11:14	0.000	0.000	0.000	0.000
169	9/4/2019 11:12:14	0.000	0.000	0.000	0.000
170	9/4/2019 11:13:14	0.000	0.000	0.000	0.000
171	9/4/2019 11:14:14	0.000	0.000	0.000	0.000
172	9/4/2019 11:15:14	0.000	0.000	0.000	0.000
173	9/4/2019 11:16:14	0.000	0.000	0.000	0.000
174	9/4/2019 11:17:14	0.000	0.000	0.000	0.000

175	9/4/2019 11:18:14	0.000	0.000	0.000	0.000
176	9/4/2019 11:19:14	0.000	0.000	0.000	0.000
177	9/4/2019 11:20:14	0.000	0.000	0.000	0.000
178	9/4/2019 11:21:14	0.000	0.000	0.000	0.000
179	9/4/2019 11:22:14	0.000	0.000	0.000	0.000
180	9/4/2019 11:23:14	0.000	0.000	0.000	0.000
181	9/4/2019 11:24:14	0.000	0.000	0.000	0.000
182	9/4/2019 11:25:14	0.000	0.000	0.000	0.000
183	9/4/2019 11:26:14	0.000	0.000	0.000	0.000
184	9/4/2019 11:27:14	0.000	0.000	0.000	0.000
185	9/4/2019 11:28:14	0.000	0.000	0.000	0.000
186	9/4/2019 11:29:14	0.000	0.000	0.000	0.000
187	9/4/2019 11:30:14	0.000	0.000	0.000	0.000
188	9/4/2019 11:31:14	0.000	0.000	0.000	0.000
189	9/4/2019 11:32:14	0.000	0.000	0.000	0.000
190	9/4/2019 11:33:14	0.000	0.000	0.000	0.000
191	9/4/2019 11:34:14	0.000	0.000	0.000	0.000
192	9/4/2019 11:35:14	0.000	0.000	0.000	0.000
193	9/4/2019 11:36:14	0.000	0.000	0.000	0.000
194	9/4/2019 11:37:14	0.000	0.000	0.000	0.000
195	9/4/2019 11:38:14	0.000	0.000	0.000	0.000
196	9/4/2019 11:39:14	0.000	0.000	0.000	0.000
197	9/4/2019 11:40:14	0.000	0.000	0.000	0.000
198	9/4/2019 11:41:14	0.000	0.000	0.000	0.000

199	9/4/2019 11:42:14	0.000	0.000	0.000	0.000
200	9/4/2019 11:43:14	0.000	0.000	0.000	0.000
201	9/4/2019 11:44:14	0.000	0.000	0.000	0.000
202	9/4/2019 11:45:14	0.000	0.000	0.000	0.000
203	9/4/2019 11:46:14	0.000	0.000	0.000	0.000
204	9/4/2019 11:47:14	0.000	0.000	0.000	0.000
205	9/4/2019 11:48:14	0.000	0.000	0.000	0.000
206	9/4/2019 11:49:14	0.000	0.000	0.000	0.000
207	9/4/2019 11:50:14	0.000	0.000	0.000	0.000
208	9/4/2019 11:51:14	0.000	0.000	0.000	0.000
209	9/4/2019 11:52:14	0.000	0.000	0.000	0.000
210	9/4/2019 11:53:14	0.000	0.000	0.000	0.000
211	9/4/2019 11:54:14	0.000	0.000	0.000	0.000
212	9/4/2019 11:55:14	0.000	0.000	0.000	0.000
213	9/4/2019 11:56:14	0.000	0.000	0.000	0.000
214	9/4/2019 11:57:14	0.000	0.000	0.000	0.000
215	9/4/2019 11:58:14	0.000	0.000	0.000	0.000
216	9/4/2019 11:59:14	0.000	0.000	0.012	0.000
217	9/4/2019 12:00:14	0.000	0.000	0.000	0.000
218	9/4/2019 12:01:14	0.000	0.000	0.000	0.000
219	9/4/2019 12:02:14	0.000	0.000	0.000	0.000
220	9/4/2019 12:03:14	0.000	0.000	0.000	0.000
221	9/4/2019 12:04:14	0.000	0.001	0.011	0.000
222	9/4/2019 12:05:14	0.000	0.000	0.000	0.000

223	9/4/2019 12:06:14	0.000	0.011	0.111	0.000
224	9/4/2019 12:07:14	0.000	0.000	0.000	0.000
225	9/4/2019 12:08:14	0.000	0.000	0.000	0.000
226	9/4/2019 12:09:14	0.000	0.000	0.000	0.000
227	9/4/2019 12:10:14	0.000	0.000	0.000	0.000
228	9/4/2019 12:11:14	0.000	0.000	0.000	0.000
229	9/4/2019 12:12:14	0.000	0.000	0.000	0.000
230	9/4/2019 12:13:14	0.000	0.000	0.000	0.000
231	9/4/2019 12:14:14	0.000	0.000	0.000	0.000
232	9/4/2019 12:15:14	0.000	0.000	0.000	0.000
233	9/4/2019 12:16:14	0.000	0.000	0.000	0.000
234	9/4/2019 12:17:14	0.000	0.000	0.000	0.000
235	9/4/2019 12:18:14	0.000	0.000	0.000	0.000
236	9/4/2019 12:19:14	0.000	0.000	0.000	0.000
237	9/4/2019 12:20:14	0.000	0.000	0.000	0.000
238	9/4/2019 12:21:14	0.000	0.000	0.000	0.000
239	9/4/2019 12:22:14	0.000	0.000	0.000	0.000
240	9/4/2019 12:23:14	0.000	0.000	0.000	0.000
241	9/4/2019 12:24:14	0.000	0.000	0.000	0.000
242	9/4/2019 12:25:14	0.000	0.000	0.000	0.000
243	9/4/2019 12:26:14	0.000	0.000	0.000	0.000
244	9/4/2019 12:27:14	0.000	0.000	0.000	0.000
245	9/4/2019 12:28:14	0.000	0.000	0.000	0.000
246	9/4/2019 12:29:14	0.000	0.000	0.000	0.000

247	9/4/2019 12:30:14	0.000	0.000	0.000	0.000
248	9/4/2019 12:31:14	0.000	0.000	0.000	0.000
249	9/4/2019 12:32:14	0.000	0.000	0.000	0.000
250	9/4/2019 12:33:14	0.000	0.000	0.000	0.000
251	9/4/2019 12:34:14	0.000	0.000	0.000	0.000
252	9/4/2019 12:35:14	0.000	0.000	0.000	0.000
253	9/4/2019 12:36:14	0.000	0.000	0.000	0.000
254	9/4/2019 12:37:14	0.000	0.000	0.000	0.000
255	9/4/2019 12:38:14	0.000	0.000	0.000	0.000
256	9/4/2019 12:39:14	0.000	0.000	0.000	0.000
257	9/4/2019 12:40:14	0.000	0.000	0.000	0.000
258	9/4/2019 12:41:14	0.000	0.000	0.000	0.000
259	9/4/2019 12:42:14	0.000	0.000	0.000	0.000
260	9/4/2019 12:43:14	0.000	0.000	0.000	0.000
261	9/4/2019 12:44:14	0.000	0.000	0.000	0.000
262	9/4/2019 12:45:14	0.000	0.000	0.000	0.000
263	9/4/2019 12:46:14	0.000	0.000	0.000	0.000
264	9/4/2019 12:47:14	0.000	0.000	0.000	0.000
265	9/4/2019 12:48:14	0.000	0.000	0.000	0.000
266	9/4/2019 12:49:14	0.000	0.000	0.000	0.000
267	9/4/2019 12:50:14	0.000	0.000	0.000	0.000
268	9/4/2019 12:51:14	0.000	0.000	0.000	0.000
269	9/4/2019 12:52:14	0.000	0.000	0.000	0.000
270	9/4/2019 12:53:14	0.000	0.000	0.000	0.000

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272	9/4/2019 12:55:14	0.000	0.000	0.000	0.000
273	9/4/2019 12:56:14	0.000	0.000	0.000	0.000
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275	9/4/2019 12:58:14	0.000	0.000	0.000	0.000
276	9/4/2019 12:59:14	0.000	0.000	0.000	0.000
277	9/4/2019 13:00:14	0.000	0.000	0.000	0.000
278	9/4/2019 13:01:14	0.000	0.000	0.000	0.000
279	9/4/2019 13:02:14	0.000	0.000	0.000	0.000
280	9/4/2019 13:03:14	0.000	0.000	0.000	0.000
281	9/4/2019 13:04:14	0.000	0.000	0.000	0.000
282	9/4/2019 13:05:14	0.000	0.000	0.000	0.000
283	9/4/2019 13:06:14	0.000	0.000	0.000	0.000
284	9/4/2019 13:07:14	0.000	0.000	0.000	0.000
285	9/4/2019 13:08:14	0.000	0.000	0.000	0.000
286	9/4/2019 13:09:14	0.000	0.000	0.000	0.000
287	9/4/2019 13:10:14	0.000	0.001	0.011	0.001
288	9/4/2019 13:11:14	0.000	0.000	0.000	0.000
289	9/4/2019 13:12:14	0.000	0.000	0.000	0.000
290	9/4/2019 13:13:14	0.000	0.000	0.000	0.000
291	9/4/2019 13:14:14	0.000	0.000	0.000	0.000
292	9/4/2019 13:15:14	0.000	0.000	0.000	0.000
293	9/4/2019 13:16:14	0.000	0.000	0.000	0.000
294	9/4/2019 13:17:14	0.000	0.000	0.000	0.000

295	9/4/2019 13:18:14	0.000	0.000	0.000	0.000
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297	9/4/2019 13:20:14	0.000	0.000	0.000	0.000
298	9/4/2019 13:21:14	0.000	0.000	0.000	0.000
299	9/4/2019 13:22:14	0.000	0.000	0.000	0.000
300	9/4/2019 13:23:14	0.000	0.000	0.000	0.000
301	9/4/2019 13:24:14	0.000	0.000	0.000	0.000
302	9/4/2019 13:25:14	0.000	0.000	0.000	0.000
303	9/4/2019 13:26:14	0.000	0.000	0.000	0.000
304	9/4/2019 13:27:14	0.000	0.000	0.000	0.000
305	9/4/2019 13:28:14	0.000	0.000	0.000	0.000
306	9/4/2019 13:29:14	0.000	0.000	0.000	0.000
307	9/4/2019 13:30:14	0.000	0.000	0.000	0.000
308	9/4/2019 13:31:14	0.000	0.002	0.041	0.000
309	9/4/2019 13:32:14	0.000	0.000	0.000	0.000
310	9/4/2019 13:33:14	0.000	0.000	0.000	0.000
311	9/4/2019 13:34:14	0.000	0.000	0.000	0.000
312	9/4/2019 13:35:14	0.000	0.000	0.000	0.000
313	9/4/2019 13:36:14	0.000	0.000	0.000	0.000
314	9/4/2019 13:37:14	0.000	0.000	0.000	0.000
315	9/4/2019 13:38:14	0.000	0.000	0.000	0.000
316	9/4/2019 13:39:14	0.000	0.000	0.000	0.000
317	9/4/2019 13:40:14	0.000	0.000	0.000	0.000
318	9/4/2019 13:41:14	0.000	0.000	0.000	0.000

319	9/4/2019 13:42:14	0.000	0.000	0.000	0.000
320	9/4/2019 13:43:14	0.000	0.000	0.000	0.000
321	9/4/2019 13:44:14	0.000	0.002	0.032	0.020
322	9/4/2019 13:45:14	0.000	0.000	0.018	0.000
323	9/4/2019 13:46:14	0.000	0.000	0.000	0.000
324	9/4/2019 13:47:14	0.000	0.000	0.000	0.000
325	9/4/2019 13:48:14	0.000	0.000	0.000	0.000
326	9/4/2019 13:49:14	0.000	0.000	0.000	0.000
327	9/4/2019 13:50:14	0.000	0.000	0.000	0.000
328	9/4/2019 13:51:14	0.000	0.000	0.000	0.000
329	9/4/2019 13:52:14	0.000	0.000	0.000	0.000
330	9/4/2019 13:53:14	0.000	0.000	0.000	0.000
331	9/4/2019 13:54:14	0.000	0.000	0.000	0.000
332	9/4/2019 13:55:14	0.000	0.000	0.000	0.000
333	9/4/2019 13:56:14	0.000	0.000	0.000	0.000
334	9/4/2019 13:57:14	0.000	0.000	0.000	0.000
335	9/4/2019 13:58:14	0.000	0.000	0.000	0.000
336	9/4/2019 13:59:14	0.000	0.000	0.000	0.000
337	9/4/2019 14:00:14	0.000	0.000	0.000	0.000
338	9/4/2019 14:01:14	0.000	0.000	0.000	0.000
339	9/4/2019 14:02:14	0.000	0.000	0.000	0.000
340	9/4/2019 14:03:14	0.000	0.000	0.000	0.000
341	9/4/2019 14:04:14	0.000	0.000	0.003	0.000
342	9/4/2019 14:05:14	0.000	0.000	0.000	0.000

343	9/4/2019 14:06:14	0.000	0.000	0.000	0.000
344	9/4/2019 14:07:14	0.000	0.000	0.000	0.000
345	9/4/2019 14:08:14	0.000	0.000	0.000	0.000
346	9/4/2019 14:09:14	0.000	0.000	0.000	0.000
347	9/4/2019 14:10:14	0.000	0.000	0.000	0.000
348	9/4/2019 14:11:14	0.000	0.000	0.000	0.000
349	9/4/2019 14:12:14	0.000	0.000	0.000	0.000
350	9/4/2019 14:13:14	0.000	0.000	0.000	0.000
351	9/4/2019 14:14:14	0.000	0.000	0.000	0.000
352	9/4/2019 14:15:14	0.000	0.000	0.000	0.000
353	9/4/2019 14:16:14	0.000	0.000	0.000	0.000
354	9/4/2019 14:17:14	0.000	0.000	0.000	0.000
355	9/4/2019 14:18:14	0.000	0.000	0.000	0.000
356	9/4/2019 14:19:14	0.000	0.000	0.000	0.000
357	9/4/2019 14:20:14	0.000	0.000	0.000	0.000
358	9/4/2019 14:21:14	0.000	0.000	0.000	0.000
359	9/4/2019 14:22:14	0.000	0.000	0.000	0.000
360	9/4/2019 14:23:14	0.000	0.000	0.000	0.000
361	9/4/2019 14:24:14	0.000	0.000	0.000	0.000
362	9/4/2019 14:25:14	0.000	0.000	0.000	0.000
363	9/4/2019 14:26:14	0.000	0.000	0.000	0.000
364	9/4/2019 14:27:14	0.000	0.000	0.000	0.000
365	9/4/2019 14:28:14	0.000	0.000	0.000	0.000
366	9/4/2019 14:29:14	0.000	0.000	0.000	0.000

367	9/4/2019 14:30:14	0.000	0.000	0.000	0.000
368	9/4/2019 14:31:14	0.000	0.000	0.000	0.000
369	9/4/2019 14:32:14	0.000	0.000	0.000	0.000
370	9/4/2019 14:33:14	0.000	0.000	0.000	0.000
371	9/4/2019 14:34:14	0.000	0.000	0.000	0.000
372	9/4/2019 14:35:14	0.000	0.000	0.000	0.000
373	9/4/2019 14:36:14	0.000	0.000	0.000	0.000
374	9/4/2019 14:37:14	0.000	0.000	0.000	0.000
375	9/4/2019 14:38:14	0.000	0.000	0.000	0.000
376	9/4/2019 14:39:14	0.000	0.000	0.000	0.000
377	9/4/2019 14:40:14	0.000	0.000	0.000	0.000
378	9/4/2019 14:41:14	0.000	0.000	0.000	0.000
379	9/4/2019 14:42:14	0.000	0.000	0.000	0.000
380	9/4/2019 14:43:14	0.000	0.000	0.000	0.000
381	9/4/2019 14:44:14	0.000	0.000	0.000	0.000
382	9/4/2019 14:45:14	0.000	0.000	0.000	0.000
383	9/4/2019 14:46:14	0.000	0.000	0.000	0.000
384	9/4/2019 14:47:14	0.000	0.000	0.000	0.000
385	9/4/2019 14:48:14	0.000	0.000	0.001	0.001
386	9/4/2019 14:49:14	0.000	0.000	0.000	0.000
387	9/4/2019 14:50:14	0.000	0.000	0.000	0.000
388	9/4/2019 14:51:14	0.000	0.000	0.000	0.000
389	9/4/2019 14:52:14	0.000	0.000	0.000	0.000
390	9/4/2019 14:53:14	0.000	0.000	0.000	0.000

391	9/4/2019 14:54:14	0.000	0.000	0.000	0.000
392	9/4/2019 14:55:14	0.000	0.000	0.000	0.000
393	9/4/2019 14:56:14	0.000	0.000	0.000	0.000
394	9/4/2019 14:57:14	0.000	0.000	0.000	0.000
395	9/4/2019 14:58:14	0.000	0.001	0.013	0.000
396	9/4/2019 14:59:14	0.000	0.000	0.000	0.000
397	9/4/2019 15:00:14	0.000	0.000	0.000	0.000
398	9/4/2019 15:01:14	0.000	0.000	0.001	0.000
399	9/4/2019 15:02:14	0.000	0.000	0.000	0.000
400	9/4/2019 15:03:14	0.000	0.000	0.001	0.000
401	9/4/2019 15:04:14	0.000	0.000	0.000	0.000
402	9/4/2019 15:05:14	0.000	0.000	0.000	0.000
403	9/4/2019 15:06:14	0.000	0.000	0.000	0.000
404	9/4/2019 15:07:14	0.000	0.000	0.000	0.000
405	9/4/2019 15:08:14	0.000	0.000	0.000	0.000
406	9/4/2019 15:09:14	0.000	0.000	0.000	0.000
407	9/4/2019 15:10:14	0.000	0.000	0.003	0.003
408	9/4/2019 15:11:14	0.000	0.000	0.004	0.000
409	9/4/2019 15:12:14	0.000	0.000	0.000	0.000
410	9/4/2019 15:13:14	0.000	0.000	0.001	0.000
411	9/4/2019 15:14:14	0.000	0.000	0.000	0.000
412	9/4/2019 15:15:14	0.000	0.000	0.000	0.000
413	9/4/2019 15:16:14	0.000	0.000	0.000	0.000
414	9/4/2019 15:17:14	0.000	0.000	0.000	0.000

415	9/4/2019 15:18:14	0.000	0.000	0.002	0.000
416	9/4/2019 15:19:14	0.000	0.000	0.000	0.000
417	9/4/2019 15:20:14	0.000	0.000	0.000	0.000
418	9/4/2019 15:21:14	0.000	0.000	0.000	0.000
419	9/4/2019 15:22:14	0.000	0.000	0.000	0.000
420	9/4/2019 15:23:14	0.000	0.000	0.001	0.000
421	9/4/2019 15:24:14	0.000	0.000	0.005	0.000
422	9/4/2019 15:25:14	0.000	0.000	0.006	0.000
423	9/4/2019 15:26:14	0.000	0.000	0.000	0.000
424	9/4/2019 15:27:14	0.000	0.006	0.065	0.018
425	9/4/2019 15:28:14	0.000	0.001	0.014	0.012
426	9/4/2019 15:29:14	0.000	0.005	0.033	0.000
427	9/4/2019 15:30:14	0.000	0.000	0.002	0.001
428	9/4/2019 15:31:14	0.000	0.000	0.001	0.000
429	9/4/2019 15:32:14	0.000	0.001	0.010	0.001
430	9/4/2019 15:33:14	0.000	0.001	0.007	0.003
431	9/4/2019 15:34:14	0.000	0.003	0.007	0.001
432	9/4/2019 15:35:14	0.000	0.007	0.029	0.002
433	9/4/2019 15:36:14	0.000	0.001	0.005	0.003
434	9/4/2019 15:37:14	0.000	0.001	0.004	0.003
435	9/4/2019 15:38:14	0.001	0.002	0.005	0.002
436	9/4/2019 15:39:14	0.002	0.002	0.005	0.003
437	9/4/2019 15:40:14	0.001	0.002	0.005	0.001
438	9/4/2019 15:41:14	0.001	0.002	0.006	0.001

439	9/4/2019 15:42:14	0.001	0.003	0.005	0.001
440	9/4/2019 15:43:14	0.001	0.009	0.052	0.003
441	9/4/2019 15:44:14	0.002	0.006	0.009	0.004
442	9/4/2019 15:45:14	0.003	0.004	0.006	0.005
443	9/4/2019 15:46:14	0.000	0.002	0.006	0.002
444	9/4/2019 15:47:14	0.002	0.003	0.005	0.004
445	9/4/2019 15:48:14	0.002	0.003	0.006	0.002
446	9/4/2019 15:49:14	0.000	0.002	0.005	0.005
447	9/4/2019 15:50:14	0.000	0.002	0.005	0.001
448	9/4/2019 15:51:14	0.000	0.006	0.024	0.005
449	9/4/2019 15:52:14	0.004	0.005	0.008	0.006
450	9/4/2019 15:53:14	0.003	0.004	0.007	0.005
451	9/4/2019 15:54:14	0.002	0.004	0.006	0.004
452	9/4/2019 15:55:14	0.003	0.004	0.006	0.005
453	9/4/2019 15:56:14	0.004	0.005	0.008	0.006
454	9/4/2019 15:57:14	0.003	0.005	0.007	0.003
455	9/4/2019 15:58:14	0.003	0.008	0.039	0.039
456	9/4/2019 15:59:14	0.005	0.011	0.046	0.005
457	9/4/2019 16:00:14	0.005	0.007	0.010	0.009
458	9/4/2019 16:01:14	0.006	0.008	0.010	0.010
459	9/4/2019 16:02:14	0.007	0.008	0.011	0.010
460	9/4/2019 16:03:14	0.007	0.008	0.011	0.010
461	9/4/2019 16:04:14	0.008	0.010	0.024	0.009
462	9/4/2019 16:05:14	0.006	0.008	0.010	0.010

463	9/4/2019 16:06:14	0.009	0.010	0.013	0.011
464	9/4/2019 16:07:14	0.007	0.010	0.012	0.011
465	9/4/2019 16:08:14	0.010	0.012	0.022	0.015
466	9/4/2019 16:09:14	0.011	0.013	0.020	0.012
467	9/4/2019 16:10:14	0.011	0.015	0.017	0.015
468	9/4/2019 16:11:14	0.012	0.013	0.015	0.014
469	9/4/2019 16:12:14	0.012	0.014	0.017	0.014
470	9/4/2019 16:13:14	0.013	0.014	0.017	0.017
471	9/4/2019 16:14:14	0.015	0.017	0.020	0.018
472	9/4/2019 16:15:14	0.017	0.018	0.020	0.019
473	9/4/2019 16:16:14	0.017	0.018	0.021	0.019
474	9/4/2019 16:17:14	0.019	0.021	0.024	0.022
475	9/4/2019 16:18:14	0.020	0.021	0.023	0.021
476	9/4/2019 16:19:14	0.019	0.020	0.023	0.022
477	9/4/2019 16:20:14	0.018	0.020	0.023	0.021
478	9/4/2019 16:21:14	0.020	0.022	0.024	0.024
479	9/4/2019 16:22:14	0.023	0.023	0.025	0.024
480	9/4/2019 16:23:14	0.020	0.022	0.024	0.022
481	9/4/2019 16:24:14	0.021	0.021	0.023	0.021
482	9/4/2019 16:25:14	0.020	0.023	0.025	0.025
483	9/4/2019 16:26:14	0.021	0.024	0.026	0.024
484	9/4/2019 16:27:14	0.023	0.024	0.026	0.025
485	9/4/2019 16:28:14	0.023	0.026	0.030	0.028
486	9/4/2019 16:29:14	0.024	0.026	0.029	0.026

487	9/4/2019 16:30:14	0.023	0.025	0.029	0.029
488	9/4/2019 16:31:14	0.026	0.027	0.028	0.028
489	9/4/2019 16:32:14	0.026	0.027	0.030	0.030
490	9/4/2019 16:33:14	0.028	0.028	0.030	0.028
491	9/4/2019 16:34:14	0.026	0.027	0.030	0.026
492	9/4/2019 16:35:14	0.026	0.027	0.028	0.028
493	9/4/2019 16:36:14	0.027	0.028	0.031	0.028
494	9/4/2019 16:37:14	0.028	0.029	0.031	0.029
495	9/4/2019 16:38:14	0.028	0.029	0.031	0.030
496	9/4/2019 16:39:14	0.027	0.029	0.031	0.029
497	9/4/2019 16:40:14	0.027	0.029	0.031	0.028
498	9/4/2019 16:41:14	0.028	0.029	0.030	0.030
499	9/4/2019 16:42:14	0.027	0.028	0.031	0.028
500	9/4/2019 16:43:14	0.027	0.029	0.033	0.031
501	9/4/2019 16:44:14	0.029	0.030	0.032	0.030
502	9/4/2019 16:45:14	0.029	0.030	0.032	0.030
503	9/4/2019 16:46:14	0.028	0.029	0.031	0.030
504	9/4/2019 16:47:14	0.027	0.030	0.034	0.032
505	9/4/2019 16:48:14	0.028	0.046	0.116	0.029
506	9/4/2019 16:49:14	0.026	0.029	0.035	0.030
507	9/4/2019 16:50:14	0.027	0.030	0.033	0.033
508	9/4/2019 16:51:14	0.030	0.032	0.035	0.031
509	9/4/2019 16:52:14	0.031	0.032	0.036	0.035
510	9/4/2019 16:53:14	0.032	0.033	0.035	0.034

511	9/4/2019 16:54:14	0.032	0.032	0.036	0.035
512	9/4/2019 16:55:14	0.032	0.035	0.046	0.035
513	9/4/2019 16:56:14	0.033	0.034	0.036	0.034
514	9/4/2019 16:57:14	0.030	0.032	0.034	0.033
515	9/4/2019 16:58:14	0.031	0.032	0.034	0.032
516	9/4/2019 16:59:14	0.031	0.033	0.035	0.034
517	9/4/2019 17:00:14	0.033	0.033	0.035	0.034
518	9/4/2019 17:01:14	0.031	0.033	0.035	0.035
519	9/4/2019 17:02:14	0.031	0.034	0.035	0.032
520	9/4/2019 17:03:14	0.031	0.032	0.034	0.032
521	9/4/2019 17:04:14	0.030	0.032	0.034	0.032
522	9/4/2019 17:05:14	0.029	0.032	0.034	0.034
523	9/4/2019 17:06:14	0.032	0.033	0.035	0.035
524	9/4/2019 17:07:14	0.033	0.033	0.035	0.034
525	9/4/2019 17:08:14	0.031	0.033	0.034	0.033
526	9/4/2019 17:09:14	0.033	0.035	0.044	0.034
527	9/4/2019 17:10:14	0.029	0.030	0.033	0.032
528	9/4/2019 17:11:14	0.029	0.030	0.032	0.029
529	9/4/2019 17:12:14	0.028	0.030	0.034	0.031
530	9/4/2019 17:13:14	0.030	0.030	0.033	0.033
531	9/4/2019 17:14:14	0.029	0.031	0.034	0.029
532	9/4/2019 17:15:14	0.029	0.030	0.031	0.030
533	9/4/2019 17:16:14	0.029	0.030	0.032	0.030
534	9/4/2019 17:17:14	0.025	0.032	0.034	0.031

Peak	0.033	0.046	0.116	0.039	
Min	0.000	0.000	0.000	0.000	
Average		0.004	0.004	0.006	0.004

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TWA/STEL

Index	Date/Time	VOC(ppm) (TWA)	VOC(ppm) (STEL)	
001	9/4/2019 08:24:14	0.000	---	
002	9/4/2019 08:25:14	0.000	---	
003	9/4/2019 08:26:14	0.000	---	
004	9/4/2019 08:27:14	0.000	---	
005	9/4/2019 08:28:14	0.000	---	
006	9/4/2019 08:29:14	0.000	---	
007	9/4/2019 08:30:14	0.000	---	
008	9/4/2019 08:31:14	0.000	---	
009	9/4/2019 08:32:14	0.000	---	
010	9/4/2019 08:33:14	0.000	---	
011	9/4/2019 08:34:14	0.000	---	
012	9/4/2019 08:35:14	0.000	---	
013	9/4/2019 08:36:14	0.000	---	
014	9/4/2019 08:37:14	0.000	---	
015	9/4/2019 08:38:14	0.000	0.000	
016	9/4/2019 08:39:14	0.000	0.000	

017	9/4/2019 08:40:14	0.000	0.000
018	9/4/2019 08:41:14	0.000	0.000
019	9/4/2019 08:42:14	0.000	0.000
020	9/4/2019 08:43:14	0.000	0.000
021	9/4/2019 08:44:14	0.000	0.000
022	9/4/2019 08:45:14	0.000	0.000
023	9/4/2019 08:46:14	0.000	0.000
024	9/4/2019 08:47:14	0.000	0.000
025	9/4/2019 08:48:14	0.000	0.000
026	9/4/2019 08:49:14	0.000	0.000
027	9/4/2019 08:50:14	0.000	0.000
028	9/4/2019 08:51:14	0.000	0.000
029	9/4/2019 08:52:14	0.000	0.000
030	9/4/2019 08:53:14	0.000	0.000
031	9/4/2019 08:54:14	0.000	0.000
032	9/4/2019 08:55:14	0.000	0.000
033	9/4/2019 08:56:14	0.000	0.000
034	9/4/2019 08:57:14	0.000	0.000
035	9/4/2019 08:58:14	0.000	0.000
036	9/4/2019 08:59:14	0.000	0.000
037	9/4/2019 09:00:14	0.000	0.000
038	9/4/2019 09:01:14	0.000	0.000
039	9/4/2019 09:02:14	0.000	0.000
040	9/4/2019 09:03:14	0.000	0.000

041	9/4/2019 09:04:14	0.000	0.000
042	9/4/2019 09:05:14	0.000	0.000
043	9/4/2019 09:06:14	0.000	0.000
044	9/4/2019 09:07:14	0.000	0.000
045	9/4/2019 09:08:14	0.000	0.000
046	9/4/2019 09:09:14	0.000	0.000
047	9/4/2019 09:10:14	0.000	0.000
048	9/4/2019 09:11:14	0.000	0.000
049	9/4/2019 09:12:14	0.000	0.000
050	9/4/2019 09:13:14	0.000	0.000
051	9/4/2019 09:14:14	0.000	0.000
052	9/4/2019 09:15:14	0.000	0.000
053	9/4/2019 09:16:14	0.000	0.000
054	9/4/2019 09:17:14	0.000	0.000
055	9/4/2019 09:18:14	0.000	0.000
056	9/4/2019 09:19:14	0.000	0.000
057	9/4/2019 09:20:14	0.000	0.000
058	9/4/2019 09:21:14	0.000	0.000
059	9/4/2019 09:22:14	0.000	0.000
060	9/4/2019 09:23:14	0.000	0.000
061	9/4/2019 09:24:14	0.000	0.000
062	9/4/2019 09:25:14	0.000	0.000
063	9/4/2019 09:26:14	0.000	0.000
064	9/4/2019 09:27:14	0.000	0.000

065	9/4/2019 09:28:14	0.000	0.000
066	9/4/2019 09:29:14	0.000	0.000
067	9/4/2019 09:30:14	0.000	0.000
068	9/4/2019 09:31:14	0.000	0.000
069	9/4/2019 09:32:14	0.000	0.000
070	9/4/2019 09:33:14	0.000	0.000
071	9/4/2019 09:34:14	0.000	0.000
072	9/4/2019 09:35:14	0.000	0.000
073	9/4/2019 09:36:14	0.000	0.000
074	9/4/2019 09:37:14	0.000	0.000
075	9/4/2019 09:38:14	0.000	0.000
076	9/4/2019 09:39:14	0.000	0.000
077	9/4/2019 09:40:14	0.000	0.000
078	9/4/2019 09:41:14	0.000	0.000
079	9/4/2019 09:42:14	0.000	0.000
080	9/4/2019 09:43:14	0.000	0.000
081	9/4/2019 09:44:14	0.000	0.000
082	9/4/2019 09:45:14	0.000	0.000
083	9/4/2019 09:46:14	0.000	0.000
084	9/4/2019 09:47:14	0.000	0.000
085	9/4/2019 09:48:14	0.000	0.000
086	9/4/2019 09:49:14	0.000	0.000
087	9/4/2019 09:50:14	0.000	0.000
088	9/4/2019 09:51:14	0.000	0.000

089	9/4/2019 09:52:14	0.000	0.000
090	9/4/2019 09:53:14	0.000	0.000
091	9/4/2019 09:54:14	0.000	0.000
092	9/4/2019 09:55:14	0.000	0.000
093	9/4/2019 09:56:14	0.000	0.000
094	9/4/2019 09:57:14	0.000	0.000
095	9/4/2019 09:58:14	0.000	0.000
096	9/4/2019 09:59:14	0.000	0.000
097	9/4/2019 10:00:14	0.000	0.000
098	9/4/2019 10:01:14	0.000	0.000
099	9/4/2019 10:02:14	0.000	0.000
100	9/4/2019 10:03:14	0.000	0.000
101	9/4/2019 10:04:14	0.000	0.000
102	9/4/2019 10:05:14	0.000	0.000
103	9/4/2019 10:06:14	0.000	0.000
104	9/4/2019 10:07:14	0.000	0.000
105	9/4/2019 10:08:14	0.000	0.000
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474	9/4/2019 16:17:14	0.001	0.015
475	9/4/2019 16:18:14	0.001	0.016
476	9/4/2019 16:19:14	0.001	0.017
477	9/4/2019 16:20:14	0.001	0.017
478	9/4/2019 16:21:14	0.001	0.018
479	9/4/2019 16:22:14	0.001	0.019
480	9/4/2019 16:23:14	0.001	0.020
481	9/4/2019 16:24:14	0.001	0.020
482	9/4/2019 16:25:14	0.001	0.021
483	9/4/2019 16:26:14	0.001	0.022
484	9/4/2019 16:27:14	0.001	0.023
485	9/4/2019 16:28:14	0.001	0.023
486	9/4/2019 16:29:14	0.001	0.024
487	9/4/2019 16:30:14	0.002	0.025
488	9/4/2019 16:31:14	0.002	0.025
489	9/4/2019 16:32:14	0.002	0.026
490	9/4/2019 16:33:14	0.002	0.027
491	9/4/2019 16:34:14	0.002	0.027
492	9/4/2019 16:35:14	0.002	0.027
493	9/4/2019 16:36:14	0.002	0.028
494	9/4/2019 16:37:14	0.002	0.028
495	9/4/2019 16:38:14	0.002	0.028
496	9/4/2019 16:39:14	0.002	0.029

497	9/4/2019 16:40:14	0.002	0.029
498	9/4/2019 16:41:14	0.002	0.030
499	9/4/2019 16:42:14	0.002	0.030
500	9/4/2019 16:43:14	0.002	0.030
501	9/4/2019 16:44:14	0.002	0.031
502	9/4/2019 16:45:14	0.002	0.031
503	9/4/2019 16:46:14	0.003	0.031
504	9/4/2019 16:47:14	0.003	0.031
505	9/4/2019 16:48:14	0.003	0.031
506	9/4/2019 16:49:14	0.003	0.031
507	9/4/2019 16:50:14	0.003	0.032
508	9/4/2019 16:51:14	0.003	0.032
509	9/4/2019 16:52:14	0.003	0.032
510	9/4/2019 16:53:14	0.003	0.033
511	9/4/2019 16:54:14	0.003	0.033
512	9/4/2019 16:55:14	0.003	0.033
513	9/4/2019 16:56:14	0.003	0.034
514	9/4/2019 16:57:14	0.003	0.034
515	9/4/2019 16:58:14	0.003	0.034
516	9/4/2019 16:59:14	0.003	0.034
517	9/4/2019 17:00:14	0.003	0.035
518	9/4/2019 17:01:14	0.004	0.035
519	9/4/2019 17:02:14	0.004	0.035
520	9/4/2019 17:03:14	0.004	0.035

521	9/4/2019 17:04:14	0.004	0.035
522	9/4/2019 17:05:14	0.004	0.036
523	9/4/2019 17:06:14	0.004	0.036
524	9/4/2019 17:07:14	0.004	0.036
525	9/4/2019 17:08:14	0.004	0.036
526	9/4/2019 17:09:14	0.004	0.036
527	9/4/2019 17:10:14	0.004	0.036
528	9/4/2019 17:11:14	0.004	0.035
529	9/4/2019 17:12:14	0.004	0.035
530	9/4/2019 17:13:14	0.004	0.035
531	9/4/2019 17:14:14	0.004	0.035
532	9/4/2019 17:15:14	0.004	0.035
533	9/4/2019 17:16:14	0.005	0.034
534	9/4/2019 17:17:14	0.005	0.034

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19/09/04 08:19

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Summary

Unit Name MiniRAE 3000(PGM-7320)

Unit SN 592-914376

Unit Firmware Ver V2.14

Running Mode Hygiene Mode

Datalog Mode Auto

Diagnostic Mode No

Stop Reason Power Down

Site ID RAE00000

User ID 00000001

Begin 9/4/2019 08:19:45

End 9/4/2019 17:20:23

Sample Period(s) 60

Number of Records 540

Sensor PID(ppm)

Sensor SN S023030126S2

Measure Type Min; Avg; Max; Real

Span 100.0

Span 2 1000.0

Low Alarm 50.0

High Alarm 100.0

Over Alarm 2000.0

STEL Alarm 25.0

TWA Alarm 10.0

Measurement Gas Isobutylene

Calibration Time 9/4/2019 07:59

Peak 0.3

Min 0.0

Average 0.2

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Datalog

Index	Date/Time	PID(ppm) (Min)	PID(ppm) (Avg)	PID(ppm) (Max)	PID(ppm) (Real)	PID(ppm)
001	9/4/2019 08:20:45	0.0	0.0	0.0	0.0	
002	9/4/2019 08:21:45	0.0	0.0	0.0	0.0	
003	9/4/2019 08:22:45	0.0	0.1	0.1	0.1	
004	9/4/2019 08:23:45	0.1	0.1	0.1	0.1	
005	9/4/2019 08:24:45	0.1	0.2	0.2	0.2	
006	9/4/2019 08:25:45	0.1	0.2	0.2	0.1	
007	9/4/2019 08:26:45	0.1	0.2	0.2	0.2	
008	9/4/2019 08:27:45	0.1	0.2	0.2	0.1	
009	9/4/2019 08:28:45	0.1	0.1	0.2	0.1	
010	9/4/2019 08:29:45	0.1	0.1	0.2	0.1	
011	9/4/2019 08:30:45	0.1	0.1	0.2	0.1	
012	9/4/2019 08:31:45	0.1	0.1	0.1	0.1	
013	9/4/2019 08:32:45	0.1	0.1	0.2	0.2	
014	9/4/2019 08:33:45	0.1	0.1	0.2	0.1	
015	9/4/2019 08:34:45	0.1	0.1	0.2	0.2	
016	9/4/2019 08:35:45	0.1	0.1	0.2	0.2	

017	9/4/2019 08:36:45	0.1	0.1	0.2	0.1
018	9/4/2019 08:37:45	0.1	0.1	0.2	0.1
019	9/4/2019 08:38:45	0.1	0.1	0.2	0.1
020	9/4/2019 08:39:45	0.1	0.1	0.2	0.1
021	9/4/2019 08:40:45	0.1	0.1	0.1	0.1
022	9/4/2019 08:41:45	0.1	0.1	0.1	0.1
023	9/4/2019 08:42:45	0.1	0.1	0.1	0.1
024	9/4/2019 08:43:45	0.1	0.1	0.1	0.1
025	9/4/2019 08:44:45	0.1	0.1	0.1	0.1
026	9/4/2019 08:45:45	0.1	0.1	0.2	0.1
027	9/4/2019 08:46:45	0.1	0.1	0.1	0.1
028	9/4/2019 08:47:45	0.1	0.1	0.1	0.1
029	9/4/2019 08:48:45	0.1	0.1	0.2	0.1
030	9/4/2019 08:49:45	0.1	0.1	0.1	0.1
031	9/4/2019 08:50:45	0.1	0.1	0.1	0.1
032	9/4/2019 08:51:45	0.1	0.1	0.2	0.1
033	9/4/2019 08:52:45	0.1	0.1	0.1	0.1
034	9/4/2019 08:53:45	0.1	0.1	0.1	0.1
035	9/4/2019 08:54:45	0.1	0.1	0.1	0.1
036	9/4/2019 08:55:45	0.1	0.1	0.1	0.1
037	9/4/2019 08:56:45	0.1	0.1	0.1	0.1
038	9/4/2019 08:57:45	0.1	0.1	0.2	0.1
039	9/4/2019 08:58:45	0.1	0.1	0.2	0.1
040	9/4/2019 08:59:45	0.1	0.1	0.2	0.1

041	9/4/2019 09:00:45	0.1	0.1	0.2	0.1
042	9/4/2019 09:01:45	0.1	0.1	0.2	0.1
043	9/4/2019 09:02:45	0.1	0.1	0.2	0.1
044	9/4/2019 09:03:45	0.1	0.1	0.2	0.1
045	9/4/2019 09:04:45	0.1	0.1	0.2	0.1
046	9/4/2019 09:05:45	0.1	0.1	0.2	0.1
047	9/4/2019 09:06:45	0.1	0.1	0.2	0.1
048	9/4/2019 09:07:45	0.1	0.1	0.2	0.1
049	9/4/2019 09:08:45	0.1	0.1	0.2	0.1
050	9/4/2019 09:09:45	0.1	0.1	0.1	0.1
051	9/4/2019 09:10:45	0.1	0.1	0.2	0.1
052	9/4/2019 09:11:45	0.1	0.1	0.2	0.1
053	9/4/2019 09:12:45	0.1	0.1	0.2	0.1
054	9/4/2019 09:13:45	0.1	0.2	0.2	0.1
055	9/4/2019 09:14:45	0.1	0.2	0.2	0.2
056	9/4/2019 09:15:45	0.1	0.2	0.2	0.2
057	9/4/2019 09:16:45	0.1	0.1	0.2	0.2
058	9/4/2019 09:17:45	0.1	0.1	0.2	0.1
059	9/4/2019 09:18:45	0.1	0.1	0.2	0.1
060	9/4/2019 09:19:45	0.1	0.1	0.2	0.1
061	9/4/2019 09:20:45	0.1	0.1	0.2	0.1
062	9/4/2019 09:21:45	0.1	0.1	0.2	0.1
063	9/4/2019 09:22:45	0.1	0.2	0.2	0.2
064	9/4/2019 09:23:45	0.1	0.1	0.2	0.2

065	9/4/2019 09:24:45	0.1	0.1	0.2	0.1
066	9/4/2019 09:25:45	0.1	0.1	0.1	0.1
067	9/4/2019 09:26:45	0.1	0.1	0.2	0.1
068	9/4/2019 09:27:45	0.1	0.1	0.1	0.1
069	9/4/2019 09:28:45	0.1	0.1	0.1	0.1
070	9/4/2019 09:29:45	0.1	0.1	0.1	0.1
071	9/4/2019 09:30:45	0.1	0.1	0.1	0.1
072	9/4/2019 09:31:45	0.1	0.1	0.2	0.1
073	9/4/2019 09:32:45	0.1	0.1	0.2	0.1
074	9/4/2019 09:33:45	0.1	0.1	0.1	0.1
075	9/4/2019 09:34:45	0.1	0.1	0.1	0.1
076	9/4/2019 09:35:45	0.1	0.1	0.1	0.1
077	9/4/2019 09:36:45	0.1	0.1	0.1	0.1
078	9/4/2019 09:37:45	0.1	0.1	0.1	0.1
079	9/4/2019 09:38:45	0.1	0.1	0.1	0.1
080	9/4/2019 09:39:45	0.1	0.1	0.1	0.1
081	9/4/2019 09:40:45	0.1	0.1	0.1	0.1
082	9/4/2019 09:41:45	0.1	0.1	0.1	0.1
083	9/4/2019 09:42:45	0.1	0.1	0.1	0.1
084	9/4/2019 09:43:45	0.1	0.1	0.1	0.1
085	9/4/2019 09:44:45	0.1	0.1	0.1	0.1
086	9/4/2019 09:45:45	0.1	0.1	0.1	0.1
087	9/4/2019 09:46:45	0.1	0.1	0.1	0.1
088	9/4/2019 09:47:45	0.1	0.1	0.1	0.1

089	9/4/2019 09:48:45	0.1	0.1	0.2	0.1
090	9/4/2019 09:49:45	0.1	0.1	0.2	0.1
091	9/4/2019 09:50:45	0.1	0.1	0.2	0.1
092	9/4/2019 09:51:45	0.1	0.1	0.2	0.1
093	9/4/2019 09:52:45	0.1	0.1	0.1	0.1
094	9/4/2019 09:53:45	0.1	0.1	0.1	0.1
095	9/4/2019 09:54:45	0.1	0.1	0.1	0.1
096	9/4/2019 09:55:45	0.1	0.1	0.1	0.1
097	9/4/2019 09:56:45	0.1	0.1	0.1	0.1
098	9/4/2019 09:57:45	0.1	0.1	0.1	0.1
099	9/4/2019 09:58:45	0.1	0.1	0.1	0.1
100	9/4/2019 09:59:45	0.1	0.1	0.1	0.1
101	9/4/2019 10:00:45	0.1	0.1	0.1	0.1
102	9/4/2019 10:01:45	0.1	0.1	0.1	0.1
103	9/4/2019 10:02:45	0.1	0.1	0.1	0.1
104	9/4/2019 10:03:45	0.1	0.1	0.1	0.1
105	9/4/2019 10:04:45	0.1	0.1	0.1	0.1
106	9/4/2019 10:05:45	0.1	0.1	0.1	0.1
107	9/4/2019 10:06:45	0.1	0.1	0.1	0.1
108	9/4/2019 10:07:45	0.1	0.1	0.1	0.1
109	9/4/2019 10:08:45	0.1	0.1	0.1	0.1
110	9/4/2019 10:09:45	0.1	0.1	0.1	0.1
111	9/4/2019 10:10:45	0.1	0.1	0.1	0.1
112	9/4/2019 10:11:45	0.1	0.1	0.1	0.1

113	9/4/2019 10:12:45	0.1	0.1	0.1	0.1
114	9/4/2019 10:13:45	0.1	0.1	0.1	0.1
115	9/4/2019 10:14:45	0.1	0.1	0.1	0.1
116	9/4/2019 10:15:45	0.1	0.1	0.1	0.1
117	9/4/2019 10:16:45	0.1	0.1	0.1	0.1
118	9/4/2019 10:17:45	0.1	0.1	0.1	0.1
119	9/4/2019 10:18:45	0.1	0.1	0.1	0.1
120	9/4/2019 10:19:45	0.1	0.1	0.1	0.1
121	9/4/2019 10:20:45	0.1	0.1	0.1	0.1
122	9/4/2019 10:21:45	0.1	0.1	0.1	0.1
123	9/4/2019 10:22:45	0.1	0.1	0.1	0.1
124	9/4/2019 10:23:45	0.1	0.1	0.1	0.1
125	9/4/2019 10:24:45	0.1	0.1	0.1	0.1
126	9/4/2019 10:25:45	0.1	0.1	0.1	0.1
127	9/4/2019 10:26:45	0.1	0.1	0.1	0.1
128	9/4/2019 10:27:45	0.1	0.1	0.1	0.1
129	9/4/2019 10:28:45	0.1	0.1	0.1	0.1
130	9/4/2019 10:29:45	0.1	0.1	0.1	0.1
131	9/4/2019 10:30:45	0.1	0.1	0.1	0.1
132	9/4/2019 10:31:45	0.1	0.1	0.1	0.1
133	9/4/2019 10:32:45	0.1	0.1	0.1	0.1
134	9/4/2019 10:33:45	0.1	0.1	0.2	0.1
135	9/4/2019 10:34:45	0.1	0.1	0.2	0.1
136	9/4/2019 10:35:45	0.1	0.1	0.2	0.1

137	9/4/2019 10:36:45	0.1	0.2	0.2	0.2
138	9/4/2019 10:37:45	0.1	0.1	0.2	0.1
139	9/4/2019 10:38:45	0.1	0.1	0.2	0.1
140	9/4/2019 10:39:45	0.1	0.1	0.2	0.1
141	9/4/2019 10:40:45	0.1	0.1	0.2	0.1
142	9/4/2019 10:41:45	0.1	0.1	0.2	0.1
143	9/4/2019 10:42:45	0.1	0.1	0.2	0.2
144	9/4/2019 10:43:45	0.1	0.2	0.2	0.2
145	9/4/2019 10:44:45	0.1	0.1	0.2	0.2
146	9/4/2019 10:45:45	0.1	0.2	0.2	0.1
147	9/4/2019 10:46:45	0.1	0.2	0.2	0.2
148	9/4/2019 10:47:45	0.1	0.2	0.2	0.2
149	9/4/2019 10:48:45	0.1	0.2	0.2	0.2
150	9/4/2019 10:49:45	0.1	0.2	0.2	0.2
151	9/4/2019 10:50:45	0.1	0.2	0.2	0.2
152	9/4/2019 10:51:45	0.1	0.2	0.2	0.2
153	9/4/2019 10:52:45	0.1	0.2	0.2	0.2
154	9/4/2019 10:53:45	0.1	0.2	0.2	0.2
155	9/4/2019 10:54:45	0.2	0.2	0.2	0.2
156	9/4/2019 10:55:45	0.1	0.2	0.2	0.2
157	9/4/2019 10:56:45	0.2	0.2	0.2	0.2
158	9/4/2019 10:57:45	0.2	0.2	0.2	0.2
159	9/4/2019 10:58:45	0.1	0.2	0.2	0.2
160	9/4/2019 10:59:45	0.1	0.2	0.2	0.2

161	9/4/2019 11:00:45	0.1	0.2	0.2	0.2
162	9/4/2019 11:01:45	0.1	0.2	0.2	0.1
163	9/4/2019 11:02:45	0.1	0.2	0.2	0.2
164	9/4/2019 11:03:45	0.1	0.2	0.2	0.1
165	9/4/2019 11:04:45	0.1	0.2	0.2	0.2
166	9/4/2019 11:05:45	0.1	0.2	0.2	0.2
167	9/4/2019 11:06:45	0.1	0.2	0.2	0.2
168	9/4/2019 11:07:45	0.1	0.2	0.2	0.2
169	9/4/2019 11:08:45	0.2	0.2	0.2	0.2
170	9/4/2019 11:09:45	0.1	0.2	0.2	0.2
171	9/4/2019 11:10:45	0.1	0.1	0.2	0.1
172	9/4/2019 11:11:45	0.1	0.2	0.2	0.2
173	9/4/2019 11:12:45	0.1	0.2	0.2	0.2
174	9/4/2019 11:13:45	0.1	0.2	0.2	0.1
175	9/4/2019 11:14:45	0.1	0.2	0.2	0.2
176	9/4/2019 11:15:45	0.1	0.2	0.2	0.1
177	9/4/2019 11:16:45	0.1	0.2	0.2	0.1
178	9/4/2019 11:17:45	0.1	0.2	0.2	0.2
179	9/4/2019 11:18:45	0.1	0.2	0.2	0.2
180	9/4/2019 11:19:45	0.1	0.2	0.2	0.1
181	9/4/2019 11:20:45	0.1	0.2	0.2	0.2
182	9/4/2019 11:21:45	0.1	0.2	0.2	0.2
183	9/4/2019 11:22:45	0.1	0.2	0.2	0.2
184	9/4/2019 11:23:45	0.2	0.2	0.2	0.2

185	9/4/2019 11:24:45	0.2	0.2	0.2	0.2
186	9/4/2019 11:25:45	0.1	0.2	0.2	0.2
187	9/4/2019 11:26:45	0.1	0.2	0.2	0.2
188	9/4/2019 11:27:45	0.2	0.2	0.2	0.2
189	9/4/2019 11:28:45	0.1	0.2	0.2	0.2
190	9/4/2019 11:29:45	0.1	0.2	0.2	0.2
191	9/4/2019 11:30:45	0.1	0.2	0.2	0.2
192	9/4/2019 11:31:45	0.1	0.2	0.2	0.2
193	9/4/2019 11:32:45	0.1	0.2	0.2	0.2
194	9/4/2019 11:33:45	0.1	0.2	0.2	0.1
195	9/4/2019 11:34:45	0.1	0.2	0.2	0.1
196	9/4/2019 11:35:45	0.1	0.2	0.2	0.2
197	9/4/2019 11:36:45	0.1	0.2	0.2	0.1
198	9/4/2019 11:37:45	0.1	0.2	0.2	0.1
199	9/4/2019 11:38:45	0.1	0.2	0.2	0.2
200	9/4/2019 11:39:45	0.1	0.1	0.2	0.2
201	9/4/2019 11:40:45	0.1	0.1	0.2	0.2
202	9/4/2019 11:41:45	0.1	0.1	0.2	0.1
203	9/4/2019 11:42:45	0.1	0.1	0.2	0.1
204	9/4/2019 11:43:45	0.1	0.1	0.2	0.2
205	9/4/2019 11:44:45	0.1	0.1	0.2	0.1
206	9/4/2019 11:45:45	0.1	0.1	0.2	0.1
207	9/4/2019 11:46:45	0.1	0.1	0.2	0.1
208	9/4/2019 11:47:45	0.1	0.1	0.2	0.1

209	9/4/2019 11:48:45	0.1	0.1	0.2	0.1
210	9/4/2019 11:49:45	0.1	0.1	0.2	0.2
211	9/4/2019 11:50:45	0.1	0.1	0.2	0.2
212	9/4/2019 11:51:45	0.1	0.1	0.2	0.1
213	9/4/2019 11:52:45	0.1	0.2	0.2	0.2
214	9/4/2019 11:53:45	0.1	0.1	0.2	0.2
215	9/4/2019 11:54:45	0.1	0.2	0.2	0.1
216	9/4/2019 11:55:45	0.1	0.2	0.2	0.2
217	9/4/2019 11:56:45	0.1	0.2	0.2	0.2
218	9/4/2019 11:57:45	0.1	0.2	0.2	0.2
219	9/4/2019 11:58:45	0.1	0.2	0.2	0.2
220	9/4/2019 11:59:45	0.1	0.2	0.2	0.2
221	9/4/2019 12:00:45	0.1	0.2	0.2	0.2
222	9/4/2019 12:01:45	0.1	0.2	0.2	0.2
223	9/4/2019 12:02:45	0.2	0.2	0.2	0.2
224	9/4/2019 12:03:45	0.1	0.2	0.2	0.2
225	9/4/2019 12:04:45	0.1	0.2	0.2	0.2
226	9/4/2019 12:05:45	0.1	0.2	0.2	0.2
227	9/4/2019 12:06:45	0.1	0.2	0.2	0.2
228	9/4/2019 12:07:45	0.2	0.2	0.2	0.2
229	9/4/2019 12:08:45	0.1	0.2	0.2	0.2
230	9/4/2019 12:09:45	0.1	0.2	0.2	0.2
231	9/4/2019 12:10:45	0.1	0.2	0.2	0.2
232	9/4/2019 12:11:45	0.1	0.2	0.2	0.2

233	9/4/2019 12:12:45	0.1	0.2	0.2	0.2
234	9/4/2019 12:13:45	0.1	0.2	0.2	0.2
235	9/4/2019 12:14:45	0.1	0.2	0.2	0.1
236	9/4/2019 12:15:45	0.1	0.1	0.2	0.1
237	9/4/2019 12:16:45	0.1	0.1	0.2	0.2
238	9/4/2019 12:17:45	0.1	0.1	0.2	0.1
239	9/4/2019 12:18:45	0.1	0.2	0.2	0.1
240	9/4/2019 12:19:45	0.1	0.2	0.2	0.2
241	9/4/2019 12:20:45	0.1	0.2	0.2	0.1
242	9/4/2019 12:21:45	0.1	0.2	0.2	0.2
243	9/4/2019 12:22:45	0.1	0.2	0.2	0.2
244	9/4/2019 12:23:45	0.1	0.2	0.2	0.2
245	9/4/2019 12:24:45	0.1	0.2	0.2	0.2
246	9/4/2019 12:25:45	0.1	0.2	0.2	0.2
247	9/4/2019 12:26:45	0.2	0.2	0.2	0.2
248	9/4/2019 12:27:45	0.1	0.2	0.2	0.1
249	9/4/2019 12:28:45	0.1	0.2	0.2	0.2
250	9/4/2019 12:29:45	0.1	0.2	0.2	0.2
251	9/4/2019 12:30:45	0.1	0.1	0.2	0.1
252	9/4/2019 12:31:45	0.1	0.2	0.2	0.2
253	9/4/2019 12:32:45	0.1	0.1	0.2	0.2
254	9/4/2019 12:33:45	0.1	0.2	0.2	0.2
255	9/4/2019 12:34:45	0.2	0.2	0.2	0.2
256	9/4/2019 12:35:45	0.1	0.2	0.2	0.2

257	9/4/2019 12:36:45	0.1	0.2	0.2	0.2
258	9/4/2019 12:37:45	0.1	0.2	0.2	0.2
259	9/4/2019 12:38:45	0.1	0.2	0.2	0.2
260	9/4/2019 12:39:45	0.1	0.2	0.2	0.2
261	9/4/2019 12:40:45	0.1	0.2	0.2	0.2
262	9/4/2019 12:41:45	0.1	0.2	0.2	0.2
263	9/4/2019 12:42:45	0.1	0.2	0.2	0.1
264	9/4/2019 12:43:45	0.1	0.2	0.2	0.2
265	9/4/2019 12:44:45	0.1	0.2	0.2	0.1
266	9/4/2019 12:45:45	0.1	0.2	0.2	0.2
267	9/4/2019 12:46:45	0.1	0.2	0.2	0.2
268	9/4/2019 12:47:45	0.1	0.1	0.2	0.1
269	9/4/2019 12:48:45	0.1	0.1	0.2	0.2
270	9/4/2019 12:49:45	0.1	0.1	0.2	0.2
271	9/4/2019 12:50:45	0.1	0.2	0.2	0.1
272	9/4/2019 12:51:45	0.1	0.1	0.2	0.1
273	9/4/2019 12:52:45	0.1	0.1	0.2	0.2
274	9/4/2019 12:53:45	0.1	0.1	0.2	0.2
275	9/4/2019 12:54:45	0.1	0.1	0.2	0.2
276	9/4/2019 12:55:45	0.1	0.2	0.2	0.2
277	9/4/2019 12:56:45	0.1	0.1	0.2	0.2
278	9/4/2019 12:57:45	0.1	0.2	0.2	0.1
279	9/4/2019 12:58:45	0.1	0.1	0.2	0.1
280	9/4/2019 12:59:45	0.1	0.1	0.2	0.1

281	9/4/2019 13:00:45	0.1	0.1	0.2	0.2
282	9/4/2019 13:01:45	0.1	0.2	0.2	0.1
283	9/4/2019 13:02:45	0.1	0.1	0.2	0.1
284	9/4/2019 13:03:45	0.1	0.1	0.2	0.1
285	9/4/2019 13:04:45	0.1	0.1	0.2	0.2
286	9/4/2019 13:05:45	0.1	0.2	0.2	0.1
287	9/4/2019 13:06:45	0.1	0.1	0.2	0.1
288	9/4/2019 13:07:45	0.1	0.1	0.2	0.2
289	9/4/2019 13:08:45	0.1	0.2	0.2	0.1
290	9/4/2019 13:09:45	0.1	0.1	0.2	0.2
291	9/4/2019 13:10:45	0.1	0.1	0.2	0.1
292	9/4/2019 13:11:45	0.1	0.1	0.2	0.2
293	9/4/2019 13:12:45	0.1	0.1	0.2	0.1
294	9/4/2019 13:13:45	0.1	0.2	0.2	0.1
295	9/4/2019 13:14:45	0.1	0.2	0.2	0.2
296	9/4/2019 13:15:45	0.1	0.2	0.2	0.2
297	9/4/2019 13:16:45	0.1	0.2	0.2	0.2
298	9/4/2019 13:17:45	0.2	0.2	0.2	0.2
299	9/4/2019 13:18:45	0.1	0.2	0.2	0.2
300	9/4/2019 13:19:45	0.2	0.2	0.2	0.2
301	9/4/2019 13:20:45	0.2	0.2	0.2	0.2
302	9/4/2019 13:21:45	0.2	0.2	0.2	0.2
303	9/4/2019 13:22:45	0.1	0.2	0.2	0.2
304	9/4/2019 13:23:45	0.1	0.2	0.2	0.2

305	9/4/2019 13:24:45	0.1	0.2	0.2	0.2
306	9/4/2019 13:25:45	0.1	0.2	0.2	0.2
307	9/4/2019 13:26:45	0.2	0.2	0.2	0.2
308	9/4/2019 13:27:45	0.1	0.2	0.2	0.2
309	9/4/2019 13:28:45	0.2	0.2	0.2	0.2
310	9/4/2019 13:29:45	0.1	0.2	0.2	0.1
311	9/4/2019 13:30:45	0.1	0.2	0.2	0.2
312	9/4/2019 13:31:45	0.2	0.2	0.2	0.2
313	9/4/2019 13:32:45	0.1	0.2	0.2	0.2
314	9/4/2019 13:33:45	0.2	0.2	0.2	0.2
315	9/4/2019 13:34:45	0.2	0.2	0.2	0.2
316	9/4/2019 13:35:45	0.1	0.2	0.2	0.2
317	9/4/2019 13:36:45	0.1	0.2	0.2	0.2
318	9/4/2019 13:37:45	0.2	0.2	0.2	0.2
319	9/4/2019 13:38:45	0.1	0.2	0.2	0.2
320	9/4/2019 13:39:45	0.1	0.2	0.2	0.2
321	9/4/2019 13:40:45	0.2	0.2	0.2	0.2
322	9/4/2019 13:41:45	0.1	0.2	0.2	0.1
323	9/4/2019 13:42:45	0.2	0.2	0.2	0.2
324	9/4/2019 13:43:45	0.1	0.2	0.2	0.2
325	9/4/2019 13:44:45	0.1	0.2	0.2	0.2
326	9/4/2019 13:45:45	0.2	0.2	0.2	0.2
327	9/4/2019 13:46:45	0.1	0.2	0.2	0.2
328	9/4/2019 13:47:45	0.1	0.2	0.2	0.2

329	9/4/2019 13:48:45	0.1	0.2	0.2	0.2
330	9/4/2019 13:49:45	0.1	0.2	0.2	0.2
331	9/4/2019 13:50:45	0.1	0.2	0.2	0.2
332	9/4/2019 13:51:45	0.2	0.2	0.2	0.2
333	9/4/2019 13:52:45	0.2	0.2	0.2	0.2
334	9/4/2019 13:53:45	0.1	0.2	0.2	0.2
335	9/4/2019 13:54:45	0.1	0.2	0.2	0.2
336	9/4/2019 13:55:45	0.1	0.2	0.2	0.2
337	9/4/2019 13:56:45	0.1	0.2	0.2	0.2
338	9/4/2019 13:57:45	0.1	0.2	0.2	0.2
339	9/4/2019 13:58:45	0.1	0.2	0.2	0.2
340	9/4/2019 13:59:45	0.1	0.2	0.2	0.2
341	9/4/2019 14:00:45	0.1	0.2	0.2	0.2
342	9/4/2019 14:01:45	0.1	0.2	0.2	0.2
343	9/4/2019 14:02:45	0.1	0.2	0.2	0.2
344	9/4/2019 14:03:45	0.1	0.2	0.2	0.2
345	9/4/2019 14:04:45	0.1	0.2	0.2	0.2
346	9/4/2019 14:05:45	0.2	0.2	0.2	0.2
347	9/4/2019 14:06:45	0.2	0.2	0.2	0.2
348	9/4/2019 14:07:45	0.2	0.2	0.2	0.2
349	9/4/2019 14:08:45	0.2	0.2	0.2	0.2
350	9/4/2019 14:09:45	0.1	0.2	0.2	0.2
351	9/4/2019 14:10:45	0.2	0.2	0.2	0.2
352	9/4/2019 14:11:45	0.2	0.2	0.2	0.2

353	9/4/2019 14:12:45	0.2	0.2	0.2	0.2
354	9/4/2019 14:13:45	0.2	0.2	0.2	0.2
355	9/4/2019 14:14:45	0.2	0.2	0.2	0.2
356	9/4/2019 14:15:45	0.2	0.2	0.2	0.2
357	9/4/2019 14:16:45	0.2	0.2	0.2	0.2
358	9/4/2019 14:17:45	0.2	0.2	0.2	0.2
359	9/4/2019 14:18:45	0.2	0.2	0.2	0.2
360	9/4/2019 14:19:45	0.2	0.2	0.2	0.2
361	9/4/2019 14:20:45	0.2	0.2	0.2	0.2
362	9/4/2019 14:21:45	0.2	0.2	0.2	0.2
363	9/4/2019 14:22:45	0.2	0.2	0.2	0.2
364	9/4/2019 14:23:45	0.2	0.2	0.2	0.2
365	9/4/2019 14:24:45	0.2	0.2	0.2	0.2
366	9/4/2019 14:25:45	0.2	0.2	0.2	0.2
367	9/4/2019 14:26:45	0.2	0.2	0.2	0.2
368	9/4/2019 14:27:45	0.2	0.2	0.2	0.2
369	9/4/2019 14:28:45	0.2	0.2	0.2	0.2
370	9/4/2019 14:29:45	0.2	0.2	0.2	0.2
371	9/4/2019 14:30:45	0.2	0.2	0.2	0.2
372	9/4/2019 14:31:45	0.2	0.2	0.2	0.2
373	9/4/2019 14:32:45	0.2	0.2	0.2	0.2
374	9/4/2019 14:33:45	0.2	0.2	0.2	0.2
375	9/4/2019 14:34:45	0.2	0.2	0.2	0.2
376	9/4/2019 14:35:45	0.2	0.2	0.2	0.2

377	9/4/2019 14:36:45	0.2	0.2	0.2	0.2
378	9/4/2019 14:37:45	0.2	0.2	0.2	0.2
379	9/4/2019 14:38:45	0.2	0.2	0.2	0.2
380	9/4/2019 14:39:45	0.2	0.2	0.2	0.2
381	9/4/2019 14:40:45	0.2	0.2	0.2	0.2
382	9/4/2019 14:41:45	0.2	0.2	0.2	0.2
383	9/4/2019 14:42:45	0.2	0.2	0.2	0.2
384	9/4/2019 14:43:45	0.2	0.2	0.2	0.2
385	9/4/2019 14:44:45	0.2	0.2	0.2	0.2
386	9/4/2019 14:45:45	0.2	0.2	0.2	0.2
387	9/4/2019 14:46:45	0.2	0.2	0.2	0.2
388	9/4/2019 14:47:45	0.2	0.2	0.2	0.2
389	9/4/2019 14:48:45	0.2	0.2	0.2	0.2
390	9/4/2019 14:49:45	0.2	0.2	0.2	0.2
391	9/4/2019 14:50:45	0.2	0.2	0.2	0.2
392	9/4/2019 14:51:45	0.2	0.2	0.2	0.2
393	9/4/2019 14:52:45	0.2	0.2	0.2	0.2
394	9/4/2019 14:53:45	0.2	0.2	0.2	0.2
395	9/4/2019 14:54:45	0.2	0.2	0.2	0.2
396	9/4/2019 14:55:45	0.2	0.2	0.2	0.2
397	9/4/2019 14:56:45	0.2	0.2	0.2	0.2
398	9/4/2019 14:57:45	0.2	0.2	0.2	0.2
399	9/4/2019 14:58:45	0.2	0.2	0.2	0.2
400	9/4/2019 14:59:45	0.2	0.2	0.2	0.2

401	9/4/2019 15:00:45	0.2	0.2	0.2	0.2
402	9/4/2019 15:01:45	0.2	0.2	0.2	0.2
403	9/4/2019 15:02:45	0.2	0.2	0.2	0.2
404	9/4/2019 15:03:45	0.2	0.2	0.2	0.2
405	9/4/2019 15:04:45	0.2	0.2	0.2	0.2
406	9/4/2019 15:05:45	0.2	0.2	0.2	0.2
407	9/4/2019 15:06:45	0.2	0.2	0.2	0.2
408	9/4/2019 15:07:45	0.2	0.2	0.2	0.2
409	9/4/2019 15:08:45	0.2	0.2	0.2	0.2
410	9/4/2019 15:09:45	0.2	0.2	0.2	0.2
411	9/4/2019 15:10:45	0.2	0.2	0.2	0.2
412	9/4/2019 15:11:45	0.2	0.2	0.2	0.2
413	9/4/2019 15:12:45	0.2	0.2	0.2	0.2
414	9/4/2019 15:13:45	0.2	0.2	0.2	0.2
415	9/4/2019 15:14:45	0.2	0.2	0.2	0.2
416	9/4/2019 15:15:45	0.2	0.2	0.2	0.2
417	9/4/2019 15:16:45	0.2	0.2	0.2	0.2
418	9/4/2019 15:17:45	0.2	0.2	0.2	0.2
419	9/4/2019 15:18:45	0.2	0.2	0.2	0.2
420	9/4/2019 15:19:45	0.2	0.2	0.2	0.2
421	9/4/2019 15:20:45	0.2	0.2	0.2	0.2
422	9/4/2019 15:21:45	0.2	0.2	0.2	0.2
423	9/4/2019 15:22:45	0.2	0.2	0.2	0.2
424	9/4/2019 15:23:45	0.2	0.2	0.2	0.2

425	9/4/2019 15:24:45	0.2	0.2	0.2	0.2
426	9/4/2019 15:25:45	0.2	0.2	0.2	0.2
427	9/4/2019 15:26:45	0.2	0.2	0.2	0.2
428	9/4/2019 15:27:45	0.2	0.2	0.2	0.2
429	9/4/2019 15:28:45	0.2	0.2	0.2	0.2
430	9/4/2019 15:29:45	0.2	0.2	0.2	0.2
431	9/4/2019 15:30:45	0.2	0.2	0.2	0.2
432	9/4/2019 15:31:45	0.2	0.2	0.2	0.2
433	9/4/2019 15:32:45	0.2	0.2	0.2	0.2
434	9/4/2019 15:33:45	0.2	0.2	0.2	0.2
435	9/4/2019 15:34:45	0.2	0.2	0.2	0.2
436	9/4/2019 15:35:45	0.2	0.2	0.2	0.2
437	9/4/2019 15:36:45	0.2	0.2	0.2	0.2
438	9/4/2019 15:37:45	0.2	0.2	0.2	0.2
439	9/4/2019 15:38:45	0.2	0.2	0.2	0.2
440	9/4/2019 15:39:45	0.2	0.2	0.2	0.2
441	9/4/2019 15:40:45	0.2	0.2	0.2	0.2
442	9/4/2019 15:41:45	0.2	0.2	0.2	0.2
443	9/4/2019 15:42:45	0.2	0.2	0.2	0.2
444	9/4/2019 15:43:45	0.2	0.2	0.2	0.2
445	9/4/2019 15:44:45	0.2	0.2	0.2	0.2
446	9/4/2019 15:45:45	0.2	0.2	0.2	0.2
447	9/4/2019 15:46:45	0.2	0.2	0.2	0.2
448	9/4/2019 15:47:45	0.2	0.2	0.2	0.2

449	9/4/2019 15:48:45	0.2	0.2	0.2	0.2
450	9/4/2019 15:49:45	0.2	0.2	0.2	0.2
451	9/4/2019 15:50:45	0.2	0.2	0.2	0.2
452	9/4/2019 15:51:45	0.2	0.2	0.2	0.2
453	9/4/2019 15:52:45	0.2	0.2	0.2	0.2
454	9/4/2019 15:53:45	0.2	0.2	0.2	0.2
455	9/4/2019 15:54:45	0.2	0.2	0.2	0.2
456	9/4/2019 15:55:45	0.2	0.2	0.2	0.2
457	9/4/2019 15:56:45	0.2	0.2	0.2	0.2
458	9/4/2019 15:57:45	0.2	0.2	0.2	0.2
459	9/4/2019 15:58:45	0.2	0.2	0.2	0.2
460	9/4/2019 15:59:45	0.2	0.2	0.2	0.2
461	9/4/2019 16:00:45	0.2	0.2	0.2	0.2
462	9/4/2019 16:01:45	0.2	0.2	0.2	0.2
463	9/4/2019 16:02:45	0.2	0.2	0.2	0.2
464	9/4/2019 16:03:45	0.2	0.2	0.2	0.2
465	9/4/2019 16:04:45	0.2	0.2	0.2	0.2
466	9/4/2019 16:05:45	0.2	0.2	0.2	0.2
467	9/4/2019 16:06:45	0.2	0.2	0.2	0.2
468	9/4/2019 16:07:45	0.2	0.2	0.2	0.2
469	9/4/2019 16:08:45	0.2	0.2	0.2	0.2
470	9/4/2019 16:09:45	0.2	0.2	0.2	0.2
471	9/4/2019 16:10:45	0.2	0.2	0.2	0.2
472	9/4/2019 16:11:45	0.2	0.2	0.2	0.2

473	9/4/2019 16:12:45	0.2	0.2	0.2	0.2
474	9/4/2019 16:13:45	0.2	0.2	0.2	0.2
475	9/4/2019 16:14:45	0.2	0.2	0.2	0.2
476	9/4/2019 16:15:45	0.2	0.2	0.2	0.2
477	9/4/2019 16:16:45	0.2	0.2	0.2	0.2
478	9/4/2019 16:17:45	0.2	0.2	0.2	0.2
479	9/4/2019 16:18:45	0.2	0.2	0.2	0.2
480	9/4/2019 16:19:45	0.2	0.2	0.2	0.2
481	9/4/2019 16:20:45	0.2	0.2	0.2	0.2
482	9/4/2019 16:21:45	0.2	0.2	0.2	0.2
483	9/4/2019 16:22:45	0.2	0.2	0.2	0.2
484	9/4/2019 16:23:45	0.2	0.2	0.2	0.2
485	9/4/2019 16:24:45	0.2	0.2	0.2	0.2
486	9/4/2019 16:25:45	0.2	0.2	0.2	0.2
487	9/4/2019 16:26:45	0.2	0.2	0.2	0.2
488	9/4/2019 16:27:45	0.2	0.2	0.2	0.2
489	9/4/2019 16:28:45	0.2	0.2	0.2	0.2
490	9/4/2019 16:29:45	0.2	0.2	0.2	0.2
491	9/4/2019 16:30:45	0.2	0.2	0.2	0.2
492	9/4/2019 16:31:45	0.2	0.2	0.2	0.2
493	9/4/2019 16:32:45	0.2	0.2	0.2	0.2
494	9/4/2019 16:33:45	0.2	0.2	0.3	0.2
495	9/4/2019 16:34:45	0.2	0.2	0.2	0.2
496	9/4/2019 16:35:45	0.2	0.2	0.2	0.2

497	9/4/2019 16:36:45	0.2	0.2	0.3	0.2
498	9/4/2019 16:37:45	0.2	0.2	0.3	0.2
499	9/4/2019 16:38:45	0.2	0.2	0.3	0.2
500	9/4/2019 16:39:45	0.2	0.2	0.3	0.2
501	9/4/2019 16:40:45	0.2	0.2	0.2	0.2
502	9/4/2019 16:41:45	0.2	0.2	0.2	0.2
503	9/4/2019 16:42:45	0.2	0.2	0.2	0.2
504	9/4/2019 16:43:45	0.2	0.2	0.2	0.2
505	9/4/2019 16:44:45	0.2	0.2	0.2	0.2
506	9/4/2019 16:45:45	0.2	0.2	0.3	0.2
507	9/4/2019 16:46:45	0.2	0.2	0.3	0.3
508	9/4/2019 16:47:45	0.2	0.2	0.3	0.2
509	9/4/2019 16:48:45	0.2	0.2	0.3	0.2
510	9/4/2019 16:49:45	0.2	0.2	0.3	0.2
511	9/4/2019 16:50:45	0.2	0.2	0.3	0.2
512	9/4/2019 16:51:45	0.2	0.2	0.3	0.2
513	9/4/2019 16:52:45	0.2	0.2	0.3	0.3
514	9/4/2019 16:53:45	0.2	0.2	0.3	0.2
515	9/4/2019 16:54:45	0.2	0.2	0.3	0.2
516	9/4/2019 16:55:45	0.2	0.2	0.2	0.2
517	9/4/2019 16:56:45	0.2	0.2	0.3	0.2
518	9/4/2019 16:57:45	0.2	0.2	0.3	0.2
519	9/4/2019 16:58:45	0.2	0.2	0.3	0.3
520	9/4/2019 16:59:45	0.2	0.3	0.3	0.2

521	9/4/2019 17:00:45	0.2	0.2	0.3	0.2
522	9/4/2019 17:01:45	0.2	0.2	0.3	0.2
523	9/4/2019 17:02:45	0.2	0.2	0.3	0.3
524	9/4/2019 17:03:45	0.2	0.3	0.3	0.3
525	9/4/2019 17:04:45	0.2	0.3	0.3	0.2
526	9/4/2019 17:05:45	0.2	0.3	0.3	0.3
527	9/4/2019 17:06:45	0.2	0.2	0.3	0.3
528	9/4/2019 17:07:45	0.2	0.2	0.3	0.3
529	9/4/2019 17:08:45	0.2	0.2	0.3	0.3
530	9/4/2019 17:09:45	0.2	0.3	0.3	0.3
531	9/4/2019 17:10:45	0.2	0.3	0.3	0.3
532	9/4/2019 17:11:45	0.2	0.3	0.3	0.3
533	9/4/2019 17:12:45	0.2	0.3	0.3	0.2
534	9/4/2019 17:13:45	0.2	0.3	0.3	0.3
535	9/4/2019 17:14:45	0.2	0.3	0.3	0.3
536	9/4/2019 17:15:45	0.2	0.2	0.3	0.2
537	9/4/2019 17:16:45	0.2	0.3	0.3	0.2
538	9/4/2019 17:17:45	0.2	0.3	0.3	0.3
539	9/4/2019 17:18:45	0.2	0.3	0.3	0.3
540	9/4/2019 17:19:45	0.2	0.3	0.3	0.3
Peak	0.2	0.3	0.3	0.3	
Min	0.0	0.0	0.0	0.0	
Average		0.1	0.2	0.2	0.2

****

TWA/STEL

Index	Date/Time	PID(ppm) (TWA)	PID(ppm) (STEL)	
001	9/4/2019 08:20:45	0.0	---	
002	9/4/2019 08:21:45	0.0	---	
003	9/4/2019 08:22:45	0.0	---	
004	9/4/2019 08:23:45	0.0	---	
005	9/4/2019 08:24:45	0.0	---	
006	9/4/2019 08:25:45	0.0	---	
007	9/4/2019 08:26:45	0.0	---	
008	9/4/2019 08:27:45	0.0	---	
009	9/4/2019 08:28:45	0.0	---	
010	9/4/2019 08:29:45	0.0	---	
011	9/4/2019 08:30:45	0.0	---	
012	9/4/2019 08:31:45	0.0	---	
013	9/4/2019 08:32:45	0.0	---	
014	9/4/2019 08:33:45	0.0	---	
015	9/4/2019 08:34:45	0.0	0.1	
016	9/4/2019 08:35:45	0.0	0.1	
017	9/4/2019 08:36:45	0.0	0.1	
018	9/4/2019 08:37:45	0.0	0.1	
019	9/4/2019 08:38:45	0.0	0.1	
020	9/4/2019 08:39:45	0.0	0.1	

021	9/4/2019 08:40:45	0.0	0.1
022	9/4/2019 08:41:45	0.0	0.1
023	9/4/2019 08:42:45	0.0	0.1
024	9/4/2019 08:43:45	0.0	0.1
025	9/4/2019 08:44:45	0.0	0.1
026	9/4/2019 08:45:45	0.0	0.1
027	9/4/2019 08:46:45	0.0	0.1
028	9/4/2019 08:47:45	0.0	0.1
029	9/4/2019 08:48:45	0.0	0.1
030	9/4/2019 08:49:45	0.0	0.1
031	9/4/2019 08:50:45	0.0	0.1
032	9/4/2019 08:51:45	0.0	0.1
033	9/4/2019 08:52:45	0.0	0.1
034	9/4/2019 08:53:45	0.0	0.1
035	9/4/2019 08:54:45	0.0	0.1
036	9/4/2019 08:55:45	0.0	0.1
037	9/4/2019 08:56:45	0.0	0.1
038	9/4/2019 08:57:45	0.0	0.1
039	9/4/2019 08:58:45	0.0	0.1
040	9/4/2019 08:59:45	0.0	0.1
041	9/4/2019 09:00:45	0.0	0.1
042	9/4/2019 09:01:45	0.0	0.1
043	9/4/2019 09:02:45	0.0	0.1
044	9/4/2019 09:03:45	0.0	0.1

045	9/4/2019 09:04:45	0.0	0.1
046	9/4/2019 09:05:45	0.0	0.1
047	9/4/2019 09:06:45	0.0	0.1
048	9/4/2019 09:07:45	0.0	0.1
049	9/4/2019 09:08:45	0.0	0.1
050	9/4/2019 09:09:45	0.0	0.1
051	9/4/2019 09:10:45	0.0	0.1
052	9/4/2019 09:11:45	0.0	0.1
053	9/4/2019 09:12:45	0.0	0.1
054	9/4/2019 09:13:45	0.0	0.1
055	9/4/2019 09:14:45	0.0	0.1
056	9/4/2019 09:15:45	0.0	0.1
057	9/4/2019 09:16:45	0.0	0.1
058	9/4/2019 09:17:45	0.0	0.1
059	9/4/2019 09:18:45	0.0	0.1
060	9/4/2019 09:19:45	0.0	0.1
061	9/4/2019 09:20:45	0.0	0.1
062	9/4/2019 09:21:45	0.0	0.1
063	9/4/2019 09:22:45	0.0	0.1
064	9/4/2019 09:23:45	0.0	0.1
065	9/4/2019 09:24:45	0.0	0.1
066	9/4/2019 09:25:45	0.0	0.1
067	9/4/2019 09:26:45	0.0	0.1
068	9/4/2019 09:27:45	0.0	0.1

069	9/4/2019 09:28:45	0.0	0.1
070	9/4/2019 09:29:45	0.0	0.1
071	9/4/2019 09:30:45	0.0	0.1
072	9/4/2019 09:31:45	0.0	0.1
073	9/4/2019 09:32:45	0.0	0.1
074	9/4/2019 09:33:45	0.0	0.1
075	9/4/2019 09:34:45	0.0	0.1
076	9/4/2019 09:35:45	0.0	0.1
077	9/4/2019 09:36:45	0.0	0.1
078	9/4/2019 09:37:45	0.0	0.1
079	9/4/2019 09:38:45	0.0	0.1
080	9/4/2019 09:39:45	0.0	0.1
081	9/4/2019 09:40:45	0.0	0.1
082	9/4/2019 09:41:45	0.0	0.1
083	9/4/2019 09:42:45	0.0	0.1
084	9/4/2019 09:43:45	0.0	0.1
085	9/4/2019 09:44:45	0.0	0.1
086	9/4/2019 09:45:45	0.0	0.1
087	9/4/2019 09:46:45	0.0	0.1
088	9/4/2019 09:47:45	0.0	0.1
089	9/4/2019 09:48:45	0.0	0.1
090	9/4/2019 09:49:45	0.0	0.1
091	9/4/2019 09:50:45	0.0	0.1
092	9/4/2019 09:51:45	0.0	0.1

093	9/4/2019 09:52:45	0.0	0.1
094	9/4/2019 09:53:45	0.0	0.1
095	9/4/2019 09:54:45	0.0	0.1
096	9/4/2019 09:55:45	0.0	0.1
097	9/4/2019 09:56:45	0.0	0.1
098	9/4/2019 09:57:45	0.0	0.1
099	9/4/2019 09:58:45	0.0	0.1
100	9/4/2019 09:59:45	0.0	0.1
101	9/4/2019 10:00:45	0.0	0.1
102	9/4/2019 10:01:45	0.0	0.1
103	9/4/2019 10:02:45	0.0	0.1
104	9/4/2019 10:03:45	0.0	0.1
105	9/4/2019 10:04:45	0.0	0.1
106	9/4/2019 10:05:45	0.0	0.1
107	9/4/2019 10:06:45	0.0	0.1
108	9/4/2019 10:07:45	0.0	0.1
109	9/4/2019 10:08:45	0.0	0.1
110	9/4/2019 10:09:45	0.0	0.1
111	9/4/2019 10:10:45	0.0	0.1
112	9/4/2019 10:11:45	0.0	0.1
113	9/4/2019 10:12:45	0.0	0.1
114	9/4/2019 10:13:45	0.0	0.1
115	9/4/2019 10:14:45	0.0	0.1
116	9/4/2019 10:15:45	0.0	0.1

117	9/4/2019 10:16:45	0.0	0.1
118	9/4/2019 10:17:45	0.0	0.1
119	9/4/2019 10:18:45	0.0	0.1
120	9/4/2019 10:19:45	0.0	0.1
121	9/4/2019 10:20:45	0.0	0.1
122	9/4/2019 10:21:45	0.0	0.1
123	9/4/2019 10:22:45	0.0	0.1
124	9/4/2019 10:23:45	0.0	0.1
125	9/4/2019 10:24:45	0.0	0.1
126	9/4/2019 10:25:45	0.0	0.1
127	9/4/2019 10:26:45	0.0	0.1
128	9/4/2019 10:27:45	0.0	0.1
129	9/4/2019 10:28:45	0.0	0.1
130	9/4/2019 10:29:45	0.0	0.1
131	9/4/2019 10:30:45	0.0	0.1
132	9/4/2019 10:31:45	0.0	0.1
133	9/4/2019 10:32:45	0.0	0.1
134	9/4/2019 10:33:45	0.0	0.1
135	9/4/2019 10:34:45	0.0	0.1
136	9/4/2019 10:35:45	0.0	0.1
137	9/4/2019 10:36:45	0.0	0.1
138	9/4/2019 10:37:45	0.0	0.1
139	9/4/2019 10:38:45	0.0	0.1
140	9/4/2019 10:39:45	0.0	0.1

141	9/4/2019 10:40:45	0.0	0.1
142	9/4/2019 10:41:45	0.0	0.1
143	9/4/2019 10:42:45	0.0	0.1
144	9/4/2019 10:43:45	0.0	0.1
145	9/4/2019 10:44:45	0.0	0.1
146	9/4/2019 10:45:45	0.0	0.1
147	9/4/2019 10:46:45	0.0	0.1
148	9/4/2019 10:47:45	0.0	0.1
149	9/4/2019 10:48:45	0.0	0.2
150	9/4/2019 10:49:45	0.0	0.2
151	9/4/2019 10:50:45	0.0	0.2
152	9/4/2019 10:51:45	0.0	0.2
153	9/4/2019 10:52:45	0.0	0.2
154	9/4/2019 10:53:45	0.0	0.2
155	9/4/2019 10:54:45	0.0	0.2
156	9/4/2019 10:55:45	0.0	0.2
157	9/4/2019 10:56:45	0.0	0.2
158	9/4/2019 10:57:45	0.0	0.2
159	9/4/2019 10:58:45	0.0	0.2
160	9/4/2019 10:59:45	0.0	0.2
161	9/4/2019 11:00:45	0.0	0.2
162	9/4/2019 11:01:45	0.0	0.2
163	9/4/2019 11:02:45	0.0	0.2
164	9/4/2019 11:03:45	0.0	0.2

165	9/4/2019 11:04:45	0.0	0.2
166	9/4/2019 11:05:45	0.0	0.2
167	9/4/2019 11:06:45	0.0	0.2
168	9/4/2019 11:07:45	0.0	0.2
169	9/4/2019 11:08:45	0.0	0.2
170	9/4/2019 11:09:45	0.0	0.2
171	9/4/2019 11:10:45	0.0	0.2
172	9/4/2019 11:11:45	0.0	0.2
173	9/4/2019 11:12:45	0.0	0.2
174	9/4/2019 11:13:45	0.0	0.2
175	9/4/2019 11:14:45	0.0	0.2
176	9/4/2019 11:15:45	0.0	0.2
177	9/4/2019 11:16:45	0.0	0.2
178	9/4/2019 11:17:45	0.0	0.2
179	9/4/2019 11:18:45	0.0	0.2
180	9/4/2019 11:19:45	0.0	0.2
181	9/4/2019 11:20:45	0.0	0.2
182	9/4/2019 11:21:45	0.0	0.2
183	9/4/2019 11:22:45	0.0	0.2
184	9/4/2019 11:23:45	0.0	0.2
185	9/4/2019 11:24:45	0.0	0.2
186	9/4/2019 11:25:45	0.0	0.2
187	9/4/2019 11:26:45	0.0	0.2
188	9/4/2019 11:27:45	0.0	0.2

189	9/4/2019 11:28:45	0.0	0.2
190	9/4/2019 11:29:45	0.0	0.2
191	9/4/2019 11:30:45	0.1	0.2
192	9/4/2019 11:31:45	0.1	0.2
193	9/4/2019 11:32:45	0.1	0.2
194	9/4/2019 11:33:45	0.1	0.2
195	9/4/2019 11:34:45	0.1	0.2
196	9/4/2019 11:35:45	0.1	0.2
197	9/4/2019 11:36:45	0.1	0.2
198	9/4/2019 11:37:45	0.1	0.2
199	9/4/2019 11:38:45	0.1	0.2
200	9/4/2019 11:39:45	0.1	0.2
201	9/4/2019 11:40:45	0.1	0.2
202	9/4/2019 11:41:45	0.1	0.2
203	9/4/2019 11:42:45	0.1	0.2
204	9/4/2019 11:43:45	0.1	0.2
205	9/4/2019 11:44:45	0.1	0.2
206	9/4/2019 11:45:45	0.1	0.2
207	9/4/2019 11:46:45	0.1	0.2
208	9/4/2019 11:47:45	0.1	0.1
209	9/4/2019 11:48:45	0.1	0.1
210	9/4/2019 11:49:45	0.1	0.1
211	9/4/2019 11:50:45	0.1	0.2
212	9/4/2019 11:51:45	0.1	0.1

213	9/4/2019 11:52:45	0.1	0.2
214	9/4/2019 11:53:45	0.1	0.2
215	9/4/2019 11:54:45	0.1	0.2
216	9/4/2019 11:55:45	0.1	0.2
217	9/4/2019 11:56:45	0.1	0.2
218	9/4/2019 11:57:45	0.1	0.2
219	9/4/2019 11:58:45	0.1	0.2
220	9/4/2019 11:59:45	0.1	0.2
221	9/4/2019 12:00:45	0.1	0.2
222	9/4/2019 12:01:45	0.1	0.2
223	9/4/2019 12:02:45	0.1	0.2
224	9/4/2019 12:03:45	0.1	0.2
225	9/4/2019 12:04:45	0.1	0.2
226	9/4/2019 12:05:45	0.1	0.2
227	9/4/2019 12:06:45	0.1	0.2
228	9/4/2019 12:07:45	0.1	0.2
229	9/4/2019 12:08:45	0.1	0.2
230	9/4/2019 12:09:45	0.1	0.2
231	9/4/2019 12:10:45	0.1	0.2
232	9/4/2019 12:11:45	0.1	0.2
233	9/4/2019 12:12:45	0.1	0.2
234	9/4/2019 12:13:45	0.1	0.2
235	9/4/2019 12:14:45	0.1	0.2
236	9/4/2019 12:15:45	0.1	0.2

237	9/4/2019 12:16:45	0.1	0.2
238	9/4/2019 12:17:45	0.1	0.2
239	9/4/2019 12:18:45	0.1	0.2
240	9/4/2019 12:19:45	0.1	0.2
241	9/4/2019 12:20:45	0.1	0.2
242	9/4/2019 12:21:45	0.1	0.2
243	9/4/2019 12:22:45	0.1	0.2
244	9/4/2019 12:23:45	0.1	0.2
245	9/4/2019 12:24:45	0.1	0.2
246	9/4/2019 12:25:45	0.1	0.2
247	9/4/2019 12:26:45	0.1	0.2
248	9/4/2019 12:27:45	0.1	0.2
249	9/4/2019 12:28:45	0.1	0.2
250	9/4/2019 12:29:45	0.1	0.2
251	9/4/2019 12:30:45	0.1	0.2
252	9/4/2019 12:31:45	0.1	0.2
253	9/4/2019 12:32:45	0.1	0.2
254	9/4/2019 12:33:45	0.1	0.2
255	9/4/2019 12:34:45	0.1	0.2
256	9/4/2019 12:35:45	0.1	0.2
257	9/4/2019 12:36:45	0.1	0.2
258	9/4/2019 12:37:45	0.1	0.2
259	9/4/2019 12:38:45	0.1	0.2
260	9/4/2019 12:39:45	0.1	0.2

261	9/4/2019 12:40:45	0.1	0.2
262	9/4/2019 12:41:45	0.1	0.2
263	9/4/2019 12:42:45	0.1	0.2
264	9/4/2019 12:43:45	0.1	0.2
265	9/4/2019 12:44:45	0.1	0.2
266	9/4/2019 12:45:45	0.1	0.2
267	9/4/2019 12:46:45	0.1	0.2
268	9/4/2019 12:47:45	0.1	0.2
269	9/4/2019 12:48:45	0.1	0.2
270	9/4/2019 12:49:45	0.1	0.2
271	9/4/2019 12:50:45	0.1	0.2
272	9/4/2019 12:51:45	0.1	0.2
273	9/4/2019 12:52:45	0.1	0.2
274	9/4/2019 12:53:45	0.1	0.2
275	9/4/2019 12:54:45	0.1	0.2
276	9/4/2019 12:55:45	0.1	0.2
277	9/4/2019 12:56:45	0.1	0.2
278	9/4/2019 12:57:45	0.1	0.2
279	9/4/2019 12:58:45	0.1	0.2
280	9/4/2019 12:59:45	0.1	0.2
281	9/4/2019 13:00:45	0.1	0.2
282	9/4/2019 13:01:45	0.1	0.2
283	9/4/2019 13:02:45	0.1	0.2
284	9/4/2019 13:03:45	0.1	0.2

285	9/4/2019 13:04:45	0.1	0.2
286	9/4/2019 13:05:45	0.1	0.2
287	9/4/2019 13:06:45	0.1	0.2
288	9/4/2019 13:07:45	0.1	0.2
289	9/4/2019 13:08:45	0.1	0.2
290	9/4/2019 13:09:45	0.1	0.2
291	9/4/2019 13:10:45	0.1	0.1
292	9/4/2019 13:11:45	0.1	0.1
293	9/4/2019 13:12:45	0.1	0.1
294	9/4/2019 13:13:45	0.1	0.1
295	9/4/2019 13:14:45	0.1	0.1
296	9/4/2019 13:15:45	0.1	0.2
297	9/4/2019 13:16:45	0.1	0.2
298	9/4/2019 13:17:45	0.1	0.2
299	9/4/2019 13:18:45	0.1	0.2
300	9/4/2019 13:19:45	0.1	0.2
301	9/4/2019 13:20:45	0.1	0.2
302	9/4/2019 13:21:45	0.1	0.2
303	9/4/2019 13:22:45	0.1	0.2
304	9/4/2019 13:23:45	0.1	0.2
305	9/4/2019 13:24:45	0.1	0.2
306	9/4/2019 13:25:45	0.1	0.2
307	9/4/2019 13:26:45	0.1	0.2
308	9/4/2019 13:27:45	0.1	0.2

309	9/4/2019 13:28:45	0.1	0.2
310	9/4/2019 13:29:45	0.1	0.2
311	9/4/2019 13:30:45	0.1	0.2
312	9/4/2019 13:31:45	0.1	0.2
313	9/4/2019 13:32:45	0.1	0.2
314	9/4/2019 13:33:45	0.1	0.2
315	9/4/2019 13:34:45	0.1	0.2
316	9/4/2019 13:35:45	0.1	0.2
317	9/4/2019 13:36:45	0.1	0.2
318	9/4/2019 13:37:45	0.1	0.2
319	9/4/2019 13:38:45	0.1	0.2
320	9/4/2019 13:39:45	0.1	0.2
321	9/4/2019 13:40:45	0.1	0.2
322	9/4/2019 13:41:45	0.1	0.2
323	9/4/2019 13:42:45	0.1	0.2
324	9/4/2019 13:43:45	0.1	0.2
325	9/4/2019 13:44:45	0.1	0.2
326	9/4/2019 13:45:45	0.1	0.2
327	9/4/2019 13:46:45	0.1	0.2
328	9/4/2019 13:47:45	0.1	0.2
329	9/4/2019 13:48:45	0.1	0.2
330	9/4/2019 13:49:45	0.1	0.2
331	9/4/2019 13:50:45	0.1	0.2
332	9/4/2019 13:51:45	0.1	0.2

333	9/4/2019 13:52:45	0.1	0.2
334	9/4/2019 13:53:45	0.1	0.2
335	9/4/2019 13:54:45	0.1	0.2
336	9/4/2019 13:55:45	0.1	0.2
337	9/4/2019 13:56:45	0.1	0.2
338	9/4/2019 13:57:45	0.1	0.2
339	9/4/2019 13:58:45	0.1	0.2
340	9/4/2019 13:59:45	0.1	0.2
341	9/4/2019 14:00:45	0.1	0.2
342	9/4/2019 14:01:45	0.1	0.2
343	9/4/2019 14:02:45	0.1	0.2
344	9/4/2019 14:03:45	0.1	0.2
345	9/4/2019 14:04:45	0.1	0.2
346	9/4/2019 14:05:45	0.1	0.2
347	9/4/2019 14:06:45	0.1	0.2
348	9/4/2019 14:07:45	0.1	0.2
349	9/4/2019 14:08:45	0.1	0.2
350	9/4/2019 14:09:45	0.1	0.2
351	9/4/2019 14:10:45	0.1	0.2
352	9/4/2019 14:11:45	0.1	0.2
353	9/4/2019 14:12:45	0.1	0.2
354	9/4/2019 14:13:45	0.1	0.2
355	9/4/2019 14:14:45	0.1	0.2
356	9/4/2019 14:15:45	0.1	0.2

357	9/4/2019 14:16:45	0.1	0.2
358	9/4/2019 14:17:45	0.1	0.2
359	9/4/2019 14:18:45	0.1	0.2
360	9/4/2019 14:19:45	0.1	0.2
361	9/4/2019 14:20:45	0.1	0.2
362	9/4/2019 14:21:45	0.1	0.2
363	9/4/2019 14:22:45	0.1	0.2
364	9/4/2019 14:23:45	0.1	0.2
365	9/4/2019 14:24:45	0.1	0.2
366	9/4/2019 14:25:45	0.1	0.2
367	9/4/2019 14:26:45	0.1	0.2
368	9/4/2019 14:27:45	0.1	0.2
369	9/4/2019 14:28:45	0.1	0.2
370	9/4/2019 14:29:45	0.1	0.2
371	9/4/2019 14:30:45	0.1	0.2
372	9/4/2019 14:31:45	0.1	0.2
373	9/4/2019 14:32:45	0.1	0.2
374	9/4/2019 14:33:45	0.1	0.2
375	9/4/2019 14:34:45	0.1	0.2
376	9/4/2019 14:35:45	0.1	0.2
377	9/4/2019 14:36:45	0.1	0.2
378	9/4/2019 14:37:45	0.1	0.2
379	9/4/2019 14:38:45	0.1	0.2
380	9/4/2019 14:39:45	0.1	0.2

381	9/4/2019 14:40:45	0.1	0.2
382	9/4/2019 14:41:45	0.1	0.2
383	9/4/2019 14:42:45	0.1	0.2
384	9/4/2019 14:43:45	0.1	0.2
385	9/4/2019 14:44:45	0.1	0.2
386	9/4/2019 14:45:45	0.1	0.2
387	9/4/2019 14:46:45	0.1	0.2
388	9/4/2019 14:47:45	0.1	0.2
389	9/4/2019 14:48:45	0.1	0.2
390	9/4/2019 14:49:45	0.1	0.2
391	9/4/2019 14:50:45	0.1	0.2
392	9/4/2019 14:51:45	0.1	0.2
393	9/4/2019 14:52:45	0.1	0.2
394	9/4/2019 14:53:45	0.1	0.2
395	9/4/2019 14:54:45	0.1	0.2
396	9/4/2019 14:55:45	0.1	0.2
397	9/4/2019 14:56:45	0.1	0.2
398	9/4/2019 14:57:45	0.1	0.2
399	9/4/2019 14:58:45	0.1	0.2
400	9/4/2019 14:59:45	0.1	0.2
401	9/4/2019 15:00:45	0.1	0.2
402	9/4/2019 15:01:45	0.1	0.2
403	9/4/2019 15:02:45	0.1	0.2
404	9/4/2019 15:03:45	0.1	0.2

405	9/4/2019 15:04:45	0.1	0.2
406	9/4/2019 15:05:45	0.1	0.2
407	9/4/2019 15:06:45	0.1	0.2
408	9/4/2019 15:07:45	0.1	0.2
409	9/4/2019 15:08:45	0.1	0.2
410	9/4/2019 15:09:45	0.1	0.2
411	9/4/2019 15:10:45	0.1	0.2
412	9/4/2019 15:11:45	0.1	0.2
413	9/4/2019 15:12:45	0.1	0.2
414	9/4/2019 15:13:45	0.1	0.2
415	9/4/2019 15:14:45	0.1	0.2
416	9/4/2019 15:15:45	0.1	0.2
417	9/4/2019 15:16:45	0.1	0.2
418	9/4/2019 15:17:45	0.1	0.2
419	9/4/2019 15:18:45	0.1	0.2
420	9/4/2019 15:19:45	0.1	0.2
421	9/4/2019 15:20:45	0.1	0.2
422	9/4/2019 15:21:45	0.1	0.2
423	9/4/2019 15:22:45	0.1	0.2
424	9/4/2019 15:23:45	0.1	0.2
425	9/4/2019 15:24:45	0.1	0.2
426	9/4/2019 15:25:45	0.1	0.2
427	9/4/2019 15:26:45	0.1	0.2
428	9/4/2019 15:27:45	0.1	0.2

429	9/4/2019 15:28:45	0.1	0.2
430	9/4/2019 15:29:45	0.1	0.2
431	9/4/2019 15:30:45	0.1	0.2
432	9/4/2019 15:31:45	0.1	0.2
433	9/4/2019 15:32:45	0.1	0.2
434	9/4/2019 15:33:45	0.1	0.2
435	9/4/2019 15:34:45	0.1	0.2
436	9/4/2019 15:35:45	0.1	0.2
437	9/4/2019 15:36:45	0.1	0.2
438	9/4/2019 15:37:45	0.1	0.2
439	9/4/2019 15:38:45	0.1	0.2
440	9/4/2019 15:39:45	0.1	0.2
441	9/4/2019 15:40:45	0.1	0.2
442	9/4/2019 15:41:45	0.1	0.2
443	9/4/2019 15:42:45	0.1	0.2
444	9/4/2019 15:43:45	0.1	0.2
445	9/4/2019 15:44:45	0.1	0.2
446	9/4/2019 15:45:45	0.1	0.2
447	9/4/2019 15:46:45	0.1	0.2
448	9/4/2019 15:47:45	0.1	0.2
449	9/4/2019 15:48:45	0.1	0.2
450	9/4/2019 15:49:45	0.2	0.2
451	9/4/2019 15:50:45	0.2	0.2
452	9/4/2019 15:51:45	0.2	0.2

453	9/4/2019 15:52:45	0.2	0.2
454	9/4/2019 15:53:45	0.2	0.2
455	9/4/2019 15:54:45	0.2	0.2
456	9/4/2019 15:55:45	0.2	0.2
457	9/4/2019 15:56:45	0.2	0.2
458	9/4/2019 15:57:45	0.2	0.2
459	9/4/2019 15:58:45	0.2	0.2
460	9/4/2019 15:59:45	0.2	0.2
461	9/4/2019 16:00:45	0.2	0.2
462	9/4/2019 16:01:45	0.2	0.2
463	9/4/2019 16:02:45	0.2	0.2
464	9/4/2019 16:03:45	0.2	0.2
465	9/4/2019 16:04:45	0.2	0.2
466	9/4/2019 16:05:45	0.2	0.2
467	9/4/2019 16:06:45	0.2	0.2
468	9/4/2019 16:07:45	0.2	0.2
469	9/4/2019 16:08:45	0.2	0.2
470	9/4/2019 16:09:45	0.2	0.2
471	9/4/2019 16:10:45	0.2	0.2
472	9/4/2019 16:11:45	0.2	0.2
473	9/4/2019 16:12:45	0.2	0.2
474	9/4/2019 16:13:45	0.2	0.2
475	9/4/2019 16:14:45	0.2	0.2
476	9/4/2019 16:15:45	0.2	0.2

477	9/4/2019 16:16:45	0.2	0.2
478	9/4/2019 16:17:45	0.2	0.2
479	9/4/2019 16:18:45	0.2	0.2
480	9/4/2019 16:19:45	0.2	0.2
481	9/4/2019 16:20:45	0.2	0.2
482	9/4/2019 16:21:45	0.2	0.2
483	9/4/2019 16:22:45	0.2	0.2
484	9/4/2019 16:23:45	0.2	0.2
485	9/4/2019 16:24:45	0.2	0.2
486	9/4/2019 16:25:45	0.2	0.2
487	9/4/2019 16:26:45	0.2	0.2
488	9/4/2019 16:27:45	0.2	0.2
489	9/4/2019 16:28:45	0.2	0.2
490	9/4/2019 16:29:45	0.2	0.2
491	9/4/2019 16:30:45	0.2	0.2
492	9/4/2019 16:31:45	0.2	0.2
493	9/4/2019 16:32:45	0.2	0.2
494	9/4/2019 16:33:45	0.2	0.2
495	9/4/2019 16:34:45	0.2	0.2
496	9/4/2019 16:35:45	0.2	0.2
497	9/4/2019 16:36:45	0.2	0.2
498	9/4/2019 16:37:45	0.2	0.2
499	9/4/2019 16:38:45	0.2	0.2
500	9/4/2019 16:39:45	0.2	0.2

501	9/4/2019 16:40:45	0.2	0.2
502	9/4/2019 16:41:45	0.2	0.2
503	9/4/2019 16:42:45	0.2	0.2
504	9/4/2019 16:43:45	0.2	0.2
505	9/4/2019 16:44:45	0.2	0.2
506	9/4/2019 16:45:45	0.2	0.2
507	9/4/2019 16:46:45	0.2	0.2
508	9/4/2019 16:47:45	0.2	0.2
509	9/4/2019 16:48:45	0.2	0.2
510	9/4/2019 16:49:45	0.2	0.2
511	9/4/2019 16:50:45	0.2	0.2
512	9/4/2019 16:51:45	0.2	0.2
513	9/4/2019 16:52:45	0.2	0.2
514	9/4/2019 16:53:45	0.2	0.2
515	9/4/2019 16:54:45	0.2	0.2
516	9/4/2019 16:55:45	0.2	0.2
517	9/4/2019 16:56:45	0.2	0.2
518	9/4/2019 16:57:45	0.2	0.2
519	9/4/2019 16:58:45	0.2	0.2
520	9/4/2019 16:59:45	0.2	0.2
521	9/4/2019 17:00:45	0.2	0.2
522	9/4/2019 17:01:45	0.2	0.2
523	9/4/2019 17:02:45	0.2	0.2
524	9/4/2019 17:03:45	0.2	0.2

525	9/4/2019 17:04:45	0.2	0.2
526	9/4/2019 17:05:45	0.2	0.2
527	9/4/2019 17:06:45	0.2	0.3
528	9/4/2019 17:07:45	0.2	0.3
529	9/4/2019 17:08:45	0.2	0.3
530	9/4/2019 17:09:45	0.2	0.3
531	9/4/2019 17:10:45	0.2	0.3
532	9/4/2019 17:11:45	0.2	0.3
533	9/4/2019 17:12:45	0.2	0.3
534	9/4/2019 17:13:45	0.2	0.3
535	9/4/2019 17:14:45	0.2	0.3
536	9/4/2019 17:15:45	0.2	0.3
537	9/4/2019 17:16:45	0.2	0.3
538	9/4/2019 17:17:45	0.2	0.3
539	9/4/2019 17:18:45	0.2	0.3
540	9/4/2019 17:19:45	0.2	0.3

Test 017

Instrument	
Model	DustTrak DRX
Instrument S/N	8533151804

Data Properties	
Start Date	09/04/2019
Start Time	08:10:05
Stop Date	09/04/2019
Stop Time	16:55:05
Total Time	0:08:45:00
Logging Interval	900 seconds

Test Data

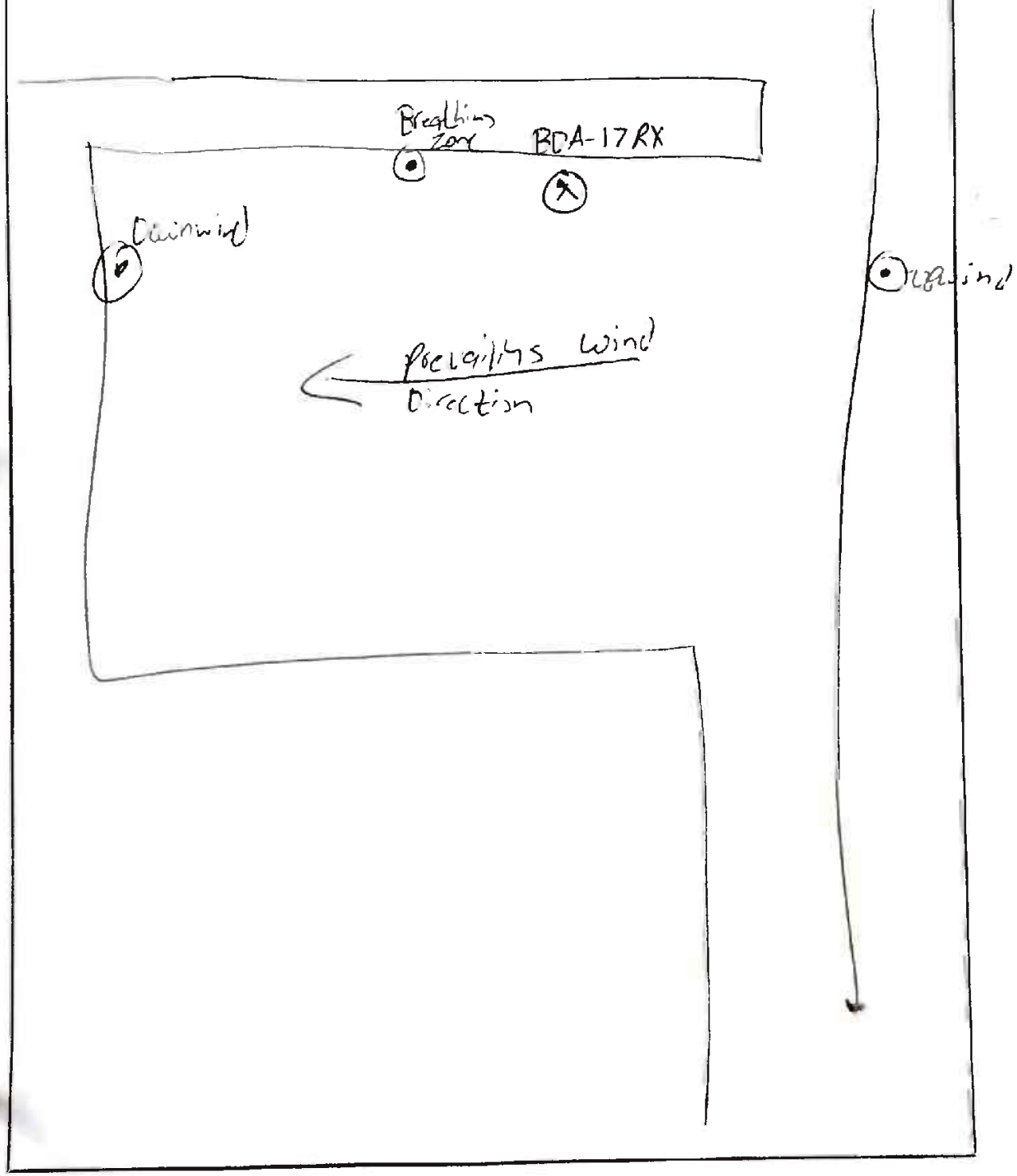
Data Point	Date	Time	PM1 mg/m^3	PM2.5 mg/m^3	RESP mg/m^3	PM10 mg/m^3	TOTAL mg/m^3
1	09/04/2019	08:25:05	0.022	0.023	0.023	0.024	0.024
2	09/04/2019	08:40:05	0.020	0.021	0.021	0.022	0.022
3	09/04/2019	08:55:05	0.019	0.020	0.020	0.021	0.021
4	09/04/2019	09:10:05	0.022	0.023	0.023	0.024	0.025
5	09/04/2019	09:25:05	0.023	0.024	0.024	0.025	0.026
6	09/04/2019	09:40:05	0.023	0.024	0.024	0.025	0.026
7	09/04/2019	09:55:05	0.021	0.021	0.022	0.023	0.024
8	09/04/2019	10:10:05	0.023	0.024	0.024	0.026	0.028
9	09/04/2019	10:25:05	0.024	0.025	0.026	0.027	0.028
10	09/04/2019	10:40:05	0.022	0.022	0.023	0.023	0.024
11	09/04/2019	10:55:05	0.020	0.020	0.020	0.021	0.022
12	09/04/2019	11:10:05	0.017	0.017	0.018	0.018	0.019
13	09/04/2019	11:25:05	0.016	0.016	0.016	0.017	0.017
14	09/04/2019	11:40:05	0.014	0.014	0.014	0.015	0.015
15	09/04/2019	11:55:05	0.012	0.012	0.013	0.013	0.014
16	09/04/2019	12:10:05	0.010	0.011	0.011	0.011	0.012
17	09/04/2019	12:25:05	0.011	0.011	0.011	0.011	0.011
18	09/04/2019	12:40:05	0.010	0.011	0.011	0.011	0.011
19	09/04/2019	12:55:05	0.009	0.009	0.009	0.010	0.010
20	09/04/2019	13:10:05	0.011	0.011	0.011	0.012	0.012
21	09/04/2019	13:25:05	0.013	0.013	0.013	0.014	0.015
22	09/04/2019	13:40:05	0.012	0.012	0.012	0.013	0.013
23	09/04/2019	13:55:05	0.009	0.009	0.009	0.010	0.010
24	09/04/2019	14:10:05	0.013	0.013	0.013	0.014	0.014
25	09/04/2019	14:25:05	0.010	0.010	0.011	0.011	0.012
26	09/04/2019	14:40:05	0.009	0.009	0.009	0.010	0.010
27	09/04/2019	14:55:05	0.012	0.012	0.012	0.013	0.014
28	09/04/2019	15:10:05	0.008	0.009	0.009	0.009	0.010
29	09/04/2019	15:25:05	0.008	0.008	0.008	0.009	0.009
30	09/04/2019	15:40:05	0.007	0.007	0.007	0.007	0.008
31	09/04/2019	15:55:05	0.006	0.006	0.006	0.007	0.008
32	09/04/2019	16:10:05	0.005	0.005	0.006	0.006	0.007
33	09/04/2019	16:25:05	0.004	0.004	0.005	0.005	0.005
34	09/04/2019	16:40:05	0.004	0.004	0.004	0.005	0.005
35	09/04/2019	16:55:05	0.005	0.005	0.005	0.006	0.006

ARCADIS Design & Consultancy for natural and built assets

Daily CAMP Log

Project	Phase 2 Groundwater RI
Location	East Syracuse, NY
Date	9/3/14
Weather Conditions	70's Sunny
Upwind Monitor	SW2 - 914223
Downwind Monitor	SW2 - 914 [illegible]
Start Time	1130
End Time	1625

Site Sketch



Anne Locke
Associate Manager, Environmental Protection
Environmental, Health and Safety Department
Bristol-Myers Squibb
P.O. Box 4755
Syracuse, NY 13221

Arcadis U.S., Inc.
One Lincoln Center
110 West Fayette Street
Suite 300
Syracuse
New York 13202
Tel 315 446 9120
Fax 315 449 0017
www.arcadis.com

Environmental North

Subject:
Community Air Monitoring During Phase II RI Well Installations Bristol-Myers Squibb Syracuse Facility – East Syracuse, New York 13057

Date:
September 5, 2019

Contact:
William McCune

Phone:
315-671-9172

Email:
William.McCune@arcadis.com

Our ref:
B0087363.0037

Dear Ms. Locke:

The following is a summary of the community air monitoring plan (CAMP) provided by Arcadis U.S., Inc. (Arcadis) during Phase II RI drilling activities conducted at the Bristol-Myers Squibb (BMS) Syracuse North Campus, East Syracuse, NY on September 5, 2019.

September 5, 2019: Parratt-Wolff Inc. (Parratt-Wolff) completed coring activities at BDA-17RX, drilling from 7:30 AM to 3:35 PM. CAMP monitoring included photo ionization detectors at upwind and downwind locations and a DustTrak at a breathing zone location. The prevailing wind direction was observed originating from the south through the day. Air quality parameters did not exceed CAMP standards at any time during work activities. Table 1 shows the serial numbers and associated CAMP stations locations.

CAMP Station Locations	Serial Number
Breathing Zone DustTrak	#8533151804
Upwind PID	#592-914273
Downwind PID	#592-914276

Please contact us with any questions or comments pertaining to this project.

Sincerely,

Arcadis U.S., Inc.

William McCune
Principal Geologist

Attachments

1 CAMP Data Logs
2 Site Sketches/Notes

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19/09/05 07:34

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Summary

Unit Name MiniRAE 3000(PGM-7320)

Unit SN 592-914273

Unit Firmware Ver V1.20A

Running Mode Hygiene Mode

Measure Type Min; Avg; Max; Real

Datalog Mode Continuous

Datalog Type Manual

Diagnostic Mode No

Stop Reason Power Down

Site ID RAE00005

User ID 00000001

Begin 9/5/2019 07:34:41

End 9/5/2019 15:59:16

Sample Period(s) 60

Number of Records 504

Sensor	VOC(ppm)
Span	100.000
Span 2	N/A
Low Alarm	50.000
High Alarm	100.000
Over Alarm	2000.000
STEL Alarm	25.000
TWA Alarm	10.000
Measurement Gas	Isobutylene
Calibration Time	9/5/2019 07:33
Peak	0.000
Min	0.000
Average	0.000

****

Datalog

Index	Date/Time	VOC(ppm) (Min)	VOC(ppm) (Avg)	VOC(ppm) (Max)	VOC(ppm) (Real)	VOC(ppm)
001	9/5/2019 07:35:41	0.000	0.000	0.000	0.000	
002	9/5/2019 07:36:41	0.000	0.000	0.000	0.000	
003	9/5/2019 07:37:41	0.000	0.000	0.000	0.000	
004	9/5/2019 07:38:41	0.000	0.000	0.000	0.000	
005	9/5/2019 07:39:41	0.000	0.000	0.000	0.000	
006	9/5/2019 07:40:41	0.000	0.000	0.000	0.000	

007	9/5/2019 07:41:41	0.000	0.000	0.000	0.000
008	9/5/2019 07:42:41	0.000	0.000	0.000	0.000
009	9/5/2019 07:43:41	0.000	0.000	0.000	0.000
010	9/5/2019 07:44:41	0.000	0.000	0.000	0.000
011	9/5/2019 07:45:41	0.000	0.000	0.000	0.000
012	9/5/2019 07:46:41	0.000	0.000	0.000	0.000
013	9/5/2019 07:47:41	0.000	0.000	0.000	0.000
014	9/5/2019 07:48:41	0.000	0.000	0.000	0.000
015	9/5/2019 07:49:41	0.000	0.000	0.000	0.000
016	9/5/2019 07:50:41	0.000	0.000	0.000	0.000
017	9/5/2019 07:51:41	0.000	0.000	0.000	0.000
018	9/5/2019 07:52:41	0.000	0.000	0.000	0.000
019	9/5/2019 07:53:41	0.000	0.000	0.000	0.000
020	9/5/2019 07:54:41	0.000	0.000	0.000	0.000
021	9/5/2019 07:55:41	0.000	0.000	0.000	0.000
022	9/5/2019 07:56:41	0.000	0.000	0.000	0.000
023	9/5/2019 07:57:41	0.000	0.000	0.000	0.000
024	9/5/2019 07:58:41	0.000	0.000	0.000	0.000
025	9/5/2019 07:59:41	0.000	0.000	0.000	0.000
026	9/5/2019 08:00:41	0.000	0.000	0.000	0.000
027	9/5/2019 08:01:41	0.000	0.000	0.000	0.000
028	9/5/2019 08:02:41	0.000	0.000	0.000	0.000
029	9/5/2019 08:03:41	0.000	0.000	0.000	0.000
030	9/5/2019 08:04:41	0.000	0.000	0.000	0.000

031	9/5/2019 08:05:41	0.000	0.000	0.000	0.000
032	9/5/2019 08:06:41	0.000	0.000	0.000	0.000
033	9/5/2019 08:07:41	0.000	0.000	0.000	0.000
034	9/5/2019 08:08:41	0.000	0.000	0.000	0.000
035	9/5/2019 08:09:41	0.000	0.000	0.000	0.000
036	9/5/2019 08:10:41	0.000	0.000	0.000	0.000
037	9/5/2019 08:11:41	0.000	0.000	0.000	0.000
038	9/5/2019 08:12:41	0.000	0.000	0.000	0.000
039	9/5/2019 08:13:41	0.000	0.000	0.000	0.000
040	9/5/2019 08:14:41	0.000	0.000	0.000	0.000
041	9/5/2019 08:15:41	0.000	0.000	0.000	0.000
042	9/5/2019 08:16:41	0.000	0.000	0.000	0.000
043	9/5/2019 08:17:41	0.000	0.000	0.000	0.000
044	9/5/2019 08:18:41	0.000	0.000	0.000	0.000
045	9/5/2019 08:19:41	0.000	0.000	0.000	0.000
046	9/5/2019 08:20:41	0.000	0.000	0.000	0.000
047	9/5/2019 08:21:41	0.000	0.000	0.000	0.000
048	9/5/2019 08:22:41	0.000	0.000	0.000	0.000
049	9/5/2019 08:23:41	0.000	0.000	0.000	0.000
050	9/5/2019 08:24:41	0.000	0.000	0.000	0.000
051	9/5/2019 08:25:41	0.000	0.000	0.000	0.000
052	9/5/2019 08:26:41	0.000	0.000	0.000	0.000
053	9/5/2019 08:27:41	0.000	0.000	0.000	0.000
054	9/5/2019 08:28:41	0.000	0.000	0.000	0.000

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059	9/5/2019 08:33:41	0.000	0.000	0.000	0.000
060	9/5/2019 08:34:41	0.000	0.000	0.000	0.000
061	9/5/2019 08:35:41	0.000	0.000	0.000	0.000
062	9/5/2019 08:36:41	0.000	0.000	0.000	0.000
063	9/5/2019 08:37:41	0.000	0.000	0.000	0.000
064	9/5/2019 08:38:41	0.000	0.000	0.000	0.000
065	9/5/2019 08:39:41	0.000	0.000	0.000	0.000
066	9/5/2019 08:40:41	0.000	0.000	0.000	0.000
067	9/5/2019 08:41:41	0.000	0.000	0.000	0.000
068	9/5/2019 08:42:41	0.000	0.000	0.000	0.000
069	9/5/2019 08:43:41	0.000	0.000	0.000	0.000
070	9/5/2019 08:44:41	0.000	0.000	0.000	0.000
071	9/5/2019 08:45:41	0.000	0.000	0.000	0.000
072	9/5/2019 08:46:41	0.000	0.000	0.000	0.000
073	9/5/2019 08:47:41	0.000	0.000	0.000	0.000
074	9/5/2019 08:48:41	0.000	0.000	0.000	0.000
075	9/5/2019 08:49:41	0.000	0.000	0.000	0.000
076	9/5/2019 08:50:41	0.000	0.000	0.000	0.000
077	9/5/2019 08:51:41	0.000	0.000	0.000	0.000
078	9/5/2019 08:52:41	0.000	0.000	0.000	0.000

079	9/5/2019 08:53:41	0.000	0.000	0.000	0.000
080	9/5/2019 08:54:41	0.000	0.000	0.000	0.000
081	9/5/2019 08:55:41	0.000	0.000	0.000	0.000
082	9/5/2019 08:56:41	0.000	0.000	0.000	0.000
083	9/5/2019 08:57:41	0.000	0.000	0.000	0.000
084	9/5/2019 08:58:41	0.000	0.000	0.000	0.000
085	9/5/2019 08:59:41	0.000	0.000	0.000	0.000
086	9/5/2019 09:00:41	0.000	0.000	0.000	0.000
087	9/5/2019 09:01:41	0.000	0.000	0.000	0.000
088	9/5/2019 09:02:41	0.000	0.000	0.000	0.000
089	9/5/2019 09:03:41	0.000	0.000	0.000	0.000
090	9/5/2019 09:04:41	0.000	0.000	0.000	0.000
091	9/5/2019 09:05:41	0.000	0.000	0.000	0.000
092	9/5/2019 09:06:41	0.000	0.000	0.000	0.000
093	9/5/2019 09:07:41	0.000	0.000	0.000	0.000
094	9/5/2019 09:08:41	0.000	0.000	0.000	0.000
095	9/5/2019 09:09:41	0.000	0.000	0.000	0.000
096	9/5/2019 09:10:41	0.000	0.000	0.000	0.000
097	9/5/2019 09:11:41	0.000	0.000	0.000	0.000
098	9/5/2019 09:12:41	0.000	0.000	0.000	0.000
099	9/5/2019 09:13:41	0.000	0.000	0.000	0.000
100	9/5/2019 09:14:41	0.000	0.000	0.000	0.000
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106	9/5/2019 09:20:41	0.000	0.000	0.000	0.000
107	9/5/2019 09:21:41	0.000	0.000	0.000	0.000
108	9/5/2019 09:22:41	0.000	0.000	0.000	0.000
109	9/5/2019 09:23:41	0.000	0.000	0.000	0.000
110	9/5/2019 09:24:41	0.000	0.000	0.000	0.000
111	9/5/2019 09:25:41	0.000	0.000	0.000	0.000
112	9/5/2019 09:26:41	0.000	0.000	0.000	0.000
113	9/5/2019 09:27:41	0.000	0.000	0.000	0.000
114	9/5/2019 09:28:41	0.000	0.000	0.000	0.000
115	9/5/2019 09:29:41	0.000	0.000	0.000	0.000
116	9/5/2019 09:30:41	0.000	0.000	0.000	0.000
117	9/5/2019 09:31:41	0.000	0.000	0.000	0.000
118	9/5/2019 09:32:41	0.000	0.000	0.000	0.000
119	9/5/2019 09:33:41	0.000	0.000	0.000	0.000
120	9/5/2019 09:34:41	0.000	0.000	0.000	0.000
121	9/5/2019 09:35:41	0.000	0.000	0.000	0.000
122	9/5/2019 09:36:41	0.000	0.000	0.000	0.000
123	9/5/2019 09:37:41	0.000	0.000	0.000	0.000
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131	9/5/2019 09:45:41	0.000	0.000	0.000	0.000
132	9/5/2019 09:46:41	0.000	0.000	0.000	0.000
133	9/5/2019 09:47:41	0.000	0.000	0.000	0.000
134	9/5/2019 09:48:41	0.000	0.000	0.000	0.000
135	9/5/2019 09:49:41	0.000	0.000	0.000	0.000
136	9/5/2019 09:50:41	0.000	0.000	0.000	0.000
137	9/5/2019 09:51:41	0.000	0.000	0.000	0.000
138	9/5/2019 09:52:41	0.000	0.000	0.000	0.000
139	9/5/2019 09:53:41	0.000	0.000	0.000	0.000
140	9/5/2019 09:54:41	0.000	0.000	0.000	0.000
141	9/5/2019 09:55:41	0.000	0.000	0.000	0.000
142	9/5/2019 09:56:41	0.000	0.000	0.000	0.000
143	9/5/2019 09:57:41	0.000	0.000	0.000	0.000
144	9/5/2019 09:58:41	0.000	0.000	0.000	0.000
145	9/5/2019 09:59:41	0.000	0.000	0.000	0.000
146	9/5/2019 10:00:41	0.000	0.000	0.000	0.000
147	9/5/2019 10:01:41	0.000	0.000	0.000	0.000
148	9/5/2019 10:02:41	0.000	0.000	0.000	0.000
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155	9/5/2019 10:09:41	0.000	0.000	0.000	0.000
156	9/5/2019 10:10:41	0.000	0.000	0.000	0.000
157	9/5/2019 10:11:41	0.000	0.000	0.000	0.000
158	9/5/2019 10:12:41	0.000	0.000	0.000	0.000
159	9/5/2019 10:13:41	0.000	0.000	0.000	0.000
160	9/5/2019 10:14:41	0.000	0.000	0.000	0.000
161	9/5/2019 10:15:41	0.000	0.000	0.000	0.000
162	9/5/2019 10:16:41	0.000	0.000	0.000	0.000
163	9/5/2019 10:17:41	0.000	0.000	0.000	0.000
164	9/5/2019 10:18:41	0.000	0.000	0.000	0.000
165	9/5/2019 10:19:41	0.000	0.000	0.000	0.000
166	9/5/2019 10:20:41	0.000	0.000	0.000	0.000
167	9/5/2019 10:21:41	0.000	0.000	0.000	0.000
168	9/5/2019 10:22:41	0.000	0.000	0.000	0.000
169	9/5/2019 10:23:41	0.000	0.000	0.000	0.000
170	9/5/2019 10:24:41	0.000	0.000	0.000	0.000
171	9/5/2019 10:25:41	0.000	0.000	0.000	0.000
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179	9/5/2019 10:33:41	0.000	0.000	0.000	0.000
180	9/5/2019 10:34:41	0.000	0.000	0.000	0.000
181	9/5/2019 10:35:41	0.000	0.000	0.000	0.000
182	9/5/2019 10:36:41	0.000	0.000	0.000	0.000
183	9/5/2019 10:37:41	0.000	0.000	0.000	0.000
184	9/5/2019 10:38:41	0.000	0.000	0.000	0.000
185	9/5/2019 10:39:41	0.000	0.000	0.000	0.000
186	9/5/2019 10:40:41	0.000	0.000	0.000	0.000
187	9/5/2019 10:41:41	0.000	0.000	0.000	0.000
188	9/5/2019 10:42:41	0.000	0.000	0.000	0.000
189	9/5/2019 10:43:41	0.000	0.000	0.000	0.000
190	9/5/2019 10:44:41	0.000	0.000	0.000	0.000
191	9/5/2019 10:45:41	0.000	0.000	0.000	0.000
192	9/5/2019 10:46:41	0.000	0.000	0.000	0.000
193	9/5/2019 10:47:41	0.000	0.000	0.000	0.000
194	9/5/2019 10:48:41	0.000	0.000	0.000	0.000
195	9/5/2019 10:49:41	0.000	0.000	0.000	0.000
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197	9/5/2019 10:51:41	0.000	0.000	0.000	0.000
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203	9/5/2019 10:57:41	0.000	0.000	0.000	0.000
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205	9/5/2019 10:59:41	0.000	0.000	0.000	0.000
206	9/5/2019 11:00:41	0.000	0.000	0.000	0.000
207	9/5/2019 11:01:41	0.000	0.000	0.000	0.000
208	9/5/2019 11:02:41	0.000	0.000	0.000	0.000
209	9/5/2019 11:03:41	0.000	0.000	0.000	0.000
210	9/5/2019 11:04:41	0.000	0.000	0.000	0.000
211	9/5/2019 11:05:41	0.000	0.000	0.000	0.000
212	9/5/2019 11:06:41	0.000	0.000	0.000	0.000
213	9/5/2019 11:07:41	0.000	0.000	0.000	0.000
214	9/5/2019 11:08:41	0.000	0.000	0.000	0.000
215	9/5/2019 11:09:41	0.000	0.000	0.000	0.000
216	9/5/2019 11:10:41	0.000	0.000	0.000	0.000
217	9/5/2019 11:11:41	0.000	0.000	0.000	0.000
218	9/5/2019 11:12:41	0.000	0.000	0.000	0.000
219	9/5/2019 11:13:41	0.000	0.000	0.000	0.000
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221	9/5/2019 11:15:41	0.000	0.000	0.000	0.000
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227	9/5/2019 11:21:41	0.000	0.000	0.000	0.000
228	9/5/2019 11:22:41	0.000	0.000	0.000	0.000
229	9/5/2019 11:23:41	0.000	0.000	0.000	0.000
230	9/5/2019 11:24:41	0.000	0.000	0.000	0.000
231	9/5/2019 11:25:41	0.000	0.000	0.000	0.000
232	9/5/2019 11:26:41	0.000	0.000	0.000	0.000
233	9/5/2019 11:27:41	0.000	0.001	0.015	0.000
234	9/5/2019 11:28:41	0.000	0.000	0.000	0.000
235	9/5/2019 11:29:41	0.000	0.000	0.000	0.000
236	9/5/2019 11:30:41	0.000	0.000	0.000	0.000
237	9/5/2019 11:31:41	0.000	0.000	0.000	0.000
238	9/5/2019 11:32:41	0.000	0.000	0.000	0.000
239	9/5/2019 11:33:41	0.000	0.000	0.000	0.000
240	9/5/2019 11:34:41	0.000	0.000	0.000	0.000
241	9/5/2019 11:35:41	0.000	0.000	0.000	0.000
242	9/5/2019 11:36:41	0.000	0.000	0.000	0.000
243	9/5/2019 11:37:41	0.000	0.000	0.000	0.000
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250	9/5/2019 11:44:41	0.000	0.000	0.000	0.000
251	9/5/2019 11:45:41	0.000	0.000	0.000	0.000
252	9/5/2019 11:46:41	0.000	0.000	0.000	0.000
253	9/5/2019 11:47:41	0.000	0.000	0.000	0.000
254	9/5/2019 11:48:41	0.000	0.000	0.000	0.000
255	9/5/2019 11:49:41	0.000	0.000	0.000	0.000
256	9/5/2019 11:50:41	0.000	0.000	0.000	0.000
257	9/5/2019 11:51:41	0.000	0.000	0.000	0.000
258	9/5/2019 11:52:41	0.000	0.000	0.000	0.000
259	9/5/2019 11:53:41	0.000	0.000	0.000	0.000
260	9/5/2019 11:54:41	0.000	0.000	0.000	0.000
261	9/5/2019 11:55:41	0.000	0.000	0.000	0.000
262	9/5/2019 11:56:41	0.000	0.000	0.000	0.000
263	9/5/2019 11:57:41	0.000	0.000	0.000	0.000
264	9/5/2019 11:58:41	0.000	0.000	0.000	0.000
265	9/5/2019 11:59:41	0.000	0.000	0.000	0.000
266	9/5/2019 12:00:41	0.000	0.000	0.000	0.000
267	9/5/2019 12:01:41	0.000	0.000	0.000	0.000
268	9/5/2019 12:02:41	0.000	0.000	0.000	0.000
269	9/5/2019 12:03:41	0.000	0.000	0.000	0.000
270	9/5/2019 12:04:41	0.000	0.000	0.000	0.000

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272	9/5/2019 12:06:41	0.000	0.000	0.000	0.000
273	9/5/2019 12:07:41	0.000	0.000	0.000	0.000
274	9/5/2019 12:08:41	0.000	0.000	0.000	0.000
275	9/5/2019 12:09:41	0.000	0.000	0.000	0.000
276	9/5/2019 12:10:41	0.000	0.000	0.000	0.000
277	9/5/2019 12:11:41	0.000	0.000	0.000	0.000
278	9/5/2019 12:12:41	0.000	0.000	0.000	0.000
279	9/5/2019 12:13:41	0.000	0.000	0.000	0.000
280	9/5/2019 12:14:41	0.000	0.000	0.000	0.000
281	9/5/2019 12:15:41	0.000	0.000	0.000	0.000
282	9/5/2019 12:16:41	0.000	0.000	0.000	0.000
283	9/5/2019 12:17:41	0.000	0.000	0.000	0.000
284	9/5/2019 12:18:41	0.000	0.000	0.000	0.000
285	9/5/2019 12:19:41	0.000	0.000	0.000	0.000
286	9/5/2019 12:20:41	0.000	0.000	0.000	0.000
287	9/5/2019 12:21:41	0.000	0.000	0.000	0.000
288	9/5/2019 12:22:41	0.000	0.000	0.000	0.000
289	9/5/2019 12:23:41	0.000	0.000	0.000	0.000
290	9/5/2019 12:24:41	0.000	0.000	0.000	0.000
291	9/5/2019 12:25:41	0.000	0.000	0.000	0.000
292	9/5/2019 12:26:41	0.000	0.000	0.000	0.000
293	9/5/2019 12:27:41	0.000	0.000	0.000	0.000
294	9/5/2019 12:28:41	0.000	0.000	0.000	0.000

295	9/5/2019 12:29:41	0.000	0.000	0.000	0.000
296	9/5/2019 12:30:41	0.000	0.000	0.000	0.000
297	9/5/2019 12:31:41	0.000	0.000	0.000	0.000
298	9/5/2019 12:32:41	0.000	0.000	0.000	0.000
299	9/5/2019 12:33:41	0.000	0.000	0.000	0.000
300	9/5/2019 12:34:41	0.000	0.000	0.000	0.000
301	9/5/2019 12:35:41	0.000	0.000	0.000	0.000
302	9/5/2019 12:36:41	0.000	0.000	0.000	0.000
303	9/5/2019 12:37:41	0.000	0.000	0.000	0.000
304	9/5/2019 12:38:41	0.000	0.000	0.000	0.000
305	9/5/2019 12:39:41	0.000	0.000	0.000	0.000
306	9/5/2019 12:40:41	0.000	0.000	0.000	0.000
307	9/5/2019 12:41:41	0.000	0.000	0.000	0.000
308	9/5/2019 12:42:41	0.000	0.000	0.000	0.000
309	9/5/2019 12:43:41	0.000	0.000	0.000	0.000
310	9/5/2019 12:44:41	0.000	0.000	0.000	0.000
311	9/5/2019 12:45:41	0.000	0.000	0.000	0.000
312	9/5/2019 12:46:41	0.000	0.000	0.000	0.000
313	9/5/2019 12:47:41	0.000	0.000	0.000	0.000
314	9/5/2019 12:48:41	0.000	0.000	0.000	0.000
315	9/5/2019 12:49:41	0.000	0.000	0.000	0.000
316	9/5/2019 12:50:41	0.000	0.000	0.000	0.000
317	9/5/2019 12:51:41	0.000	0.000	0.000	0.000
318	9/5/2019 12:52:41	0.000	0.000	0.000	0.000

319	9/5/2019 12:53:41	0.000	0.000	0.000	0.000
320	9/5/2019 12:54:41	0.000	0.000	0.000	0.000
321	9/5/2019 12:55:41	0.000	0.000	0.000	0.000
322	9/5/2019 12:56:41	0.000	0.000	0.000	0.000
323	9/5/2019 12:57:41	0.000	0.000	0.000	0.000
324	9/5/2019 12:58:41	0.000	0.000	0.000	0.000
325	9/5/2019 12:59:41	0.000	0.000	0.000	0.000
326	9/5/2019 13:00:41	0.000	0.000	0.000	0.000
327	9/5/2019 13:01:41	0.000	0.000	0.000	0.000
328	9/5/2019 13:02:41	0.000	0.000	0.000	0.000
329	9/5/2019 13:03:41	0.000	0.000	0.000	0.000
330	9/5/2019 13:04:41	0.000	0.000	0.000	0.000
331	9/5/2019 13:05:41	0.000	0.000	0.000	0.000
332	9/5/2019 13:06:41	0.000	0.000	0.000	0.000
333	9/5/2019 13:07:41	0.000	0.000	0.000	0.000
334	9/5/2019 13:08:41	0.000	0.000	0.000	0.000
335	9/5/2019 13:09:41	0.000	0.000	0.000	0.000
336	9/5/2019 13:10:41	0.000	0.000	0.000	0.000
337	9/5/2019 13:11:41	0.000	0.000	0.000	0.000
338	9/5/2019 13:12:41	0.000	0.000	0.000	0.000
339	9/5/2019 13:13:41	0.000	0.000	0.000	0.000
340	9/5/2019 13:14:41	0.000	0.000	0.000	0.000
341	9/5/2019 13:15:41	0.000	0.000	0.000	0.000
342	9/5/2019 13:16:41	0.000	0.000	0.000	0.000

343	9/5/2019 13:17:41	0.000	0.000	0.000	0.000
344	9/5/2019 13:18:41	0.000	0.000	0.000	0.000
345	9/5/2019 13:19:41	0.000	0.000	0.000	0.000
346	9/5/2019 13:20:41	0.000	0.000	0.000	0.000
347	9/5/2019 13:21:41	0.000	0.000	0.000	0.000
348	9/5/2019 13:22:41	0.000	0.000	0.000	0.000
349	9/5/2019 13:23:41	0.000	0.000	0.000	0.000
350	9/5/2019 13:24:41	0.000	0.000	0.000	0.000
351	9/5/2019 13:25:41	0.000	0.000	0.000	0.000
352	9/5/2019 13:26:41	0.000	0.000	0.000	0.000
353	9/5/2019 13:27:41	0.000	0.000	0.000	0.000
354	9/5/2019 13:28:41	0.000	0.000	0.000	0.000
355	9/5/2019 13:29:41	0.000	0.000	0.000	0.000
356	9/5/2019 13:30:41	0.000	0.000	0.000	0.000
357	9/5/2019 13:31:41	0.000	0.000	0.000	0.000
358	9/5/2019 13:32:41	0.000	0.000	0.000	0.000
359	9/5/2019 13:33:41	0.000	0.000	0.000	0.000
360	9/5/2019 13:34:41	0.000	0.000	0.000	0.000
361	9/5/2019 13:35:41	0.000	0.000	0.000	0.000
362	9/5/2019 13:36:41	0.000	0.000	0.000	0.000
363	9/5/2019 13:37:41	0.000	0.000	0.000	0.000
364	9/5/2019 13:38:41	0.000	0.000	0.000	0.000
365	9/5/2019 13:39:41	0.000	0.000	0.000	0.000
366	9/5/2019 13:40:41	0.000	0.000	0.000	0.000

367	9/5/2019 13:41:41	0.000	0.000	0.000	0.000
368	9/5/2019 13:42:41	0.000	0.000	0.000	0.000
369	9/5/2019 13:43:41	0.000	0.000	0.000	0.000
370	9/5/2019 13:44:41	0.000	0.000	0.000	0.000
371	9/5/2019 13:45:41	0.000	0.000	0.000	0.000
372	9/5/2019 13:46:41	0.000	0.000	0.000	0.000
373	9/5/2019 13:47:41	0.000	0.000	0.000	0.000
374	9/5/2019 13:48:41	0.000	0.000	0.000	0.000
375	9/5/2019 13:49:41	0.000	0.000	0.000	0.000
376	9/5/2019 13:50:41	0.000	0.000	0.000	0.000
377	9/5/2019 13:51:41	0.000	0.000	0.000	0.000
378	9/5/2019 13:52:41	0.000	0.000	0.000	0.000
379	9/5/2019 13:53:41	0.000	0.000	0.000	0.000
380	9/5/2019 13:54:41	0.000	0.000	0.000	0.000
381	9/5/2019 13:55:41	0.000	0.000	0.000	0.000
382	9/5/2019 13:56:41	0.000	0.000	0.000	0.000
383	9/5/2019 13:57:41	0.000	0.000	0.000	0.000
384	9/5/2019 13:58:41	0.000	0.000	0.000	0.000
385	9/5/2019 13:59:41	0.000	0.000	0.000	0.000
386	9/5/2019 14:00:41	0.000	0.000	0.000	0.000
387	9/5/2019 14:01:41	0.000	0.000	0.000	0.000
388	9/5/2019 14:02:41	0.000	0.000	0.000	0.000
389	9/5/2019 14:03:41	0.000	0.000	0.000	0.000
390	9/5/2019 14:04:41	0.000	0.000	0.000	0.000

391	9/5/2019 14:05:41	0.000	0.000	0.000	0.000
392	9/5/2019 14:06:41	0.000	0.000	0.000	0.000
393	9/5/2019 14:07:41	0.000	0.000	0.000	0.000
394	9/5/2019 14:08:41	0.000	0.000	0.000	0.000
395	9/5/2019 14:09:41	0.000	0.000	0.000	0.000
396	9/5/2019 14:10:41	0.000	0.000	0.000	0.000
397	9/5/2019 14:11:41	0.000	0.000	0.000	0.000
398	9/5/2019 14:12:41	0.000	0.000	0.000	0.000
399	9/5/2019 14:13:41	0.000	0.000	0.000	0.000
400	9/5/2019 14:14:41	0.000	0.000	0.000	0.000
401	9/5/2019 14:15:41	0.000	0.000	0.000	0.000
402	9/5/2019 14:16:41	0.000	0.000	0.000	0.000
403	9/5/2019 14:17:41	0.000	0.000	0.000	0.000
404	9/5/2019 14:18:41	0.000	0.000	0.000	0.000
405	9/5/2019 14:19:41	0.000	0.000	0.000	0.000
406	9/5/2019 14:20:41	0.000	0.000	0.000	0.000
407	9/5/2019 14:21:41	0.000	0.000	0.000	0.000
408	9/5/2019 14:22:41	0.000	0.000	0.000	0.000
409	9/5/2019 14:23:41	0.000	0.000	0.000	0.000
410	9/5/2019 14:24:41	0.000	0.000	0.000	0.000
411	9/5/2019 14:25:41	0.000	0.000	0.000	0.000
412	9/5/2019 14:26:41	0.000	0.000	0.000	0.000
413	9/5/2019 14:27:41	0.000	0.000	0.000	0.000
414	9/5/2019 14:28:41	0.000	0.000	0.000	0.000

415	9/5/2019 14:29:41	0.000	0.000	0.000	0.000
416	9/5/2019 14:30:41	0.000	0.000	0.000	0.000
417	9/5/2019 14:31:41	0.000	0.000	0.000	0.000
418	9/5/2019 14:32:41	0.000	0.000	0.000	0.000
419	9/5/2019 14:33:41	0.000	0.000	0.000	0.000
420	9/5/2019 14:34:41	0.000	0.000	0.000	0.000
421	9/5/2019 14:35:41	0.000	0.000	0.000	0.000
422	9/5/2019 14:36:41	0.000	0.000	0.000	0.000
423	9/5/2019 14:37:41	0.000	0.000	0.000	0.000
424	9/5/2019 14:38:41	0.000	0.000	0.000	0.000
425	9/5/2019 14:39:41	0.000	0.000	0.000	0.000
426	9/5/2019 14:40:41	0.000	0.000	0.000	0.000
427	9/5/2019 14:41:41	0.000	0.000	0.000	0.000
428	9/5/2019 14:42:41	0.000	0.000	0.000	0.000
429	9/5/2019 14:43:41	0.000	0.000	0.000	0.000
430	9/5/2019 14:44:41	0.000	0.000	0.000	0.000
431	9/5/2019 14:45:41	0.000	0.000	0.000	0.000
432	9/5/2019 14:46:41	0.000	0.000	0.000	0.000
433	9/5/2019 14:47:41	0.000	0.000	0.000	0.000
434	9/5/2019 14:48:41	0.000	0.000	0.000	0.000
435	9/5/2019 14:49:41	0.000	0.000	0.000	0.000
436	9/5/2019 14:50:41	0.000	0.000	0.000	0.000
437	9/5/2019 14:51:41	0.000	0.000	0.000	0.000
438	9/5/2019 14:52:41	0.000	0.000	0.000	0.000

439	9/5/2019 14:53:41	0.000	0.000	0.000	0.000
440	9/5/2019 14:54:41	0.000	0.000	0.000	0.000
441	9/5/2019 14:55:41	0.000	0.000	0.000	0.000
442	9/5/2019 14:56:41	0.000	0.000	0.000	0.000
443	9/5/2019 14:57:41	0.000	0.000	0.000	0.000
444	9/5/2019 14:58:41	0.000	0.000	0.000	0.000
445	9/5/2019 14:59:41	0.000	0.000	0.000	0.000
446	9/5/2019 15:00:41	0.000	0.000	0.000	0.000
447	9/5/2019 15:01:41	0.000	0.000	0.000	0.000
448	9/5/2019 15:02:41	0.000	0.000	0.000	0.000
449	9/5/2019 15:03:41	0.000	0.000	0.000	0.000
450	9/5/2019 15:04:41	0.000	0.000	0.000	0.000
451	9/5/2019 15:05:41	0.000	0.000	0.000	0.000
452	9/5/2019 15:06:41	0.000	0.000	0.000	0.000
453	9/5/2019 15:07:41	0.000	0.000	0.000	0.000
454	9/5/2019 15:08:41	0.000	0.000	0.000	0.000
455	9/5/2019 15:09:41	0.000	0.000	0.000	0.000
456	9/5/2019 15:10:41	0.000	0.000	0.000	0.000
457	9/5/2019 15:11:41	0.000	0.000	0.000	0.000
458	9/5/2019 15:12:41	0.000	0.000	0.000	0.000
459	9/5/2019 15:13:41	0.000	0.000	0.000	0.000
460	9/5/2019 15:14:41	0.000	0.000	0.000	0.000
461	9/5/2019 15:15:41	0.000	0.000	0.000	0.000
462	9/5/2019 15:16:41	0.000	0.000	0.000	0.000

463	9/5/2019 15:17:41	0.000	0.000	0.000	0.000
464	9/5/2019 15:18:41	0.000	0.000	0.000	0.000
465	9/5/2019 15:19:41	0.000	0.000	0.000	0.000
466	9/5/2019 15:20:41	0.000	0.000	0.000	0.000
467	9/5/2019 15:21:41	0.000	0.000	0.000	0.000
468	9/5/2019 15:22:41	0.000	0.000	0.000	0.000
469	9/5/2019 15:23:41	0.000	0.000	0.000	0.000
470	9/5/2019 15:24:41	0.000	0.000	0.000	0.000
471	9/5/2019 15:25:41	0.000	0.000	0.000	0.000
472	9/5/2019 15:26:41	0.000	0.000	0.000	0.000
473	9/5/2019 15:27:41	0.000	0.000	0.000	0.000
474	9/5/2019 15:28:41	0.000	0.000	0.000	0.000
475	9/5/2019 15:29:41	0.000	0.000	0.000	0.000
476	9/5/2019 15:30:41	0.000	0.000	0.000	0.000
477	9/5/2019 15:31:41	0.000	0.000	0.000	0.000
478	9/5/2019 15:32:41	0.000	0.000	0.000	0.000
479	9/5/2019 15:33:41	0.000	0.000	0.000	0.000
480	9/5/2019 15:34:41	0.000	0.000	0.000	0.000
481	9/5/2019 15:35:41	0.000	0.000	0.000	0.000
482	9/5/2019 15:36:41	0.000	0.000	0.000	0.000
483	9/5/2019 15:37:41	0.000	0.000	0.000	0.000
484	9/5/2019 15:38:41	0.000	0.000	0.000	0.000
485	9/5/2019 15:39:41	0.000	0.000	0.000	0.000
486	9/5/2019 15:40:41	0.000	0.000	0.000	0.000

487	9/5/2019 15:41:41	0.000	0.000	0.000	0.000
488	9/5/2019 15:42:41	0.000	0.000	0.000	0.000
489	9/5/2019 15:43:41	0.000	0.000	0.000	0.000
490	9/5/2019 15:44:41	0.000	0.000	0.000	0.000
491	9/5/2019 15:45:41	0.000	0.000	0.000	0.000
492	9/5/2019 15:46:41	0.000	0.000	0.000	0.000
493	9/5/2019 15:47:41	0.000	0.000	0.000	0.000
494	9/5/2019 15:48:41	0.000	0.000	0.000	0.000
495	9/5/2019 15:49:41	0.000	0.000	0.000	0.000
496	9/5/2019 15:50:41	0.000	0.000	0.000	0.000
497	9/5/2019 15:51:41	0.000	0.000	0.000	0.000
498	9/5/2019 15:52:41	0.000	0.000	0.000	0.000
499	9/5/2019 15:53:41	0.000	0.000	0.000	0.000
500	9/5/2019 15:54:41	0.000	0.000	0.000	0.000
501	9/5/2019 15:55:41	0.000	0.000	0.000	0.000
502	9/5/2019 15:56:41	0.000	0.000	0.000	0.000
503	9/5/2019 15:57:41	0.000	0.000	0.000	0.000
504	9/5/2019 15:58:41	0.000	0.000	0.000	0.000
Peak	0.000	0.001	0.015	0.000	
Min	0.000	0.000	0.000	0.000	
Average		0.000	0.000	0.000	0.000

****

TWA/STEL

Index	Date/Time	VOC(ppm) (TWA)	VOC(ppm) (STEL)
001	9/5/2019 07:35:41	0.000	---
002	9/5/2019 07:36:41	0.000	---
003	9/5/2019 07:37:41	0.000	---
004	9/5/2019 07:38:41	0.000	---
005	9/5/2019 07:39:41	0.000	---
006	9/5/2019 07:40:41	0.000	---
007	9/5/2019 07:41:41	0.000	---
008	9/5/2019 07:42:41	0.000	---
009	9/5/2019 07:43:41	0.000	---
010	9/5/2019 07:44:41	0.000	---
011	9/5/2019 07:45:41	0.000	---
012	9/5/2019 07:46:41	0.000	---
013	9/5/2019 07:47:41	0.000	---
014	9/5/2019 07:48:41	0.000	---
015	9/5/2019 07:49:41	0.000	0.000
016	9/5/2019 07:50:41	0.000	0.000
017	9/5/2019 07:51:41	0.000	0.000
018	9/5/2019 07:52:41	0.000	0.000
019	9/5/2019 07:53:41	0.000	0.000
020	9/5/2019 07:54:41	0.000	0.000
021	9/5/2019 07:55:41	0.000	0.000
022	9/5/2019 07:56:41	0.000	0.000

023	9/5/2019 07:57:41	0.000	0.000
024	9/5/2019 07:58:41	0.000	0.000
025	9/5/2019 07:59:41	0.000	0.000
026	9/5/2019 08:00:41	0.000	0.000
027	9/5/2019 08:01:41	0.000	0.000
028	9/5/2019 08:02:41	0.000	0.000
029	9/5/2019 08:03:41	0.000	0.000
030	9/5/2019 08:04:41	0.000	0.000
031	9/5/2019 08:05:41	0.000	0.000
032	9/5/2019 08:06:41	0.000	0.000
033	9/5/2019 08:07:41	0.000	0.000
034	9/5/2019 08:08:41	0.000	0.000
035	9/5/2019 08:09:41	0.000	0.000
036	9/5/2019 08:10:41	0.000	0.000
037	9/5/2019 08:11:41	0.000	0.000
038	9/5/2019 08:12:41	0.000	0.000
039	9/5/2019 08:13:41	0.000	0.000
040	9/5/2019 08:14:41	0.000	0.000
041	9/5/2019 08:15:41	0.000	0.000
042	9/5/2019 08:16:41	0.000	0.000
043	9/5/2019 08:17:41	0.000	0.000
044	9/5/2019 08:18:41	0.000	0.000
045	9/5/2019 08:19:41	0.000	0.000
046	9/5/2019 08:20:41	0.000	0.000

047	9/5/2019 08:21:41	0.000	0.000
048	9/5/2019 08:22:41	0.000	0.000
049	9/5/2019 08:23:41	0.000	0.000
050	9/5/2019 08:24:41	0.000	0.000
051	9/5/2019 08:25:41	0.000	0.000
052	9/5/2019 08:26:41	0.000	0.000
053	9/5/2019 08:27:41	0.000	0.000
054	9/5/2019 08:28:41	0.000	0.000
055	9/5/2019 08:29:41	0.000	0.000
056	9/5/2019 08:30:41	0.000	0.000
057	9/5/2019 08:31:41	0.000	0.000
058	9/5/2019 08:32:41	0.000	0.000
059	9/5/2019 08:33:41	0.000	0.000
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429	9/5/2019 14:43:41	0.000	0.000
430	9/5/2019 14:44:41	0.000	0.000

431	9/5/2019 14:45:41	0.000	0.000
432	9/5/2019 14:46:41	0.000	0.000
433	9/5/2019 14:47:41	0.000	0.000
434	9/5/2019 14:48:41	0.000	0.000
435	9/5/2019 14:49:41	0.000	0.000
436	9/5/2019 14:50:41	0.000	0.000
437	9/5/2019 14:51:41	0.000	0.000
438	9/5/2019 14:52:41	0.000	0.000
439	9/5/2019 14:53:41	0.000	0.000
440	9/5/2019 14:54:41	0.000	0.000
441	9/5/2019 14:55:41	0.000	0.000
442	9/5/2019 14:56:41	0.000	0.000
443	9/5/2019 14:57:41	0.000	0.000
444	9/5/2019 14:58:41	0.000	0.000
445	9/5/2019 14:59:41	0.000	0.000
446	9/5/2019 15:00:41	0.000	0.000
447	9/5/2019 15:01:41	0.000	0.000
448	9/5/2019 15:02:41	0.000	0.000
449	9/5/2019 15:03:41	0.000	0.000
450	9/5/2019 15:04:41	0.000	0.000
451	9/5/2019 15:05:41	0.000	0.000
452	9/5/2019 15:06:41	0.000	0.000
453	9/5/2019 15:07:41	0.000	0.000
454	9/5/2019 15:08:41	0.000	0.000

455	9/5/2019 15:09:41	0.000	0.000
456	9/5/2019 15:10:41	0.000	0.000
457	9/5/2019 15:11:41	0.000	0.000
458	9/5/2019 15:12:41	0.000	0.000
459	9/5/2019 15:13:41	0.000	0.000
460	9/5/2019 15:14:41	0.000	0.000
461	9/5/2019 15:15:41	0.000	0.000
462	9/5/2019 15:16:41	0.000	0.000
463	9/5/2019 15:17:41	0.000	0.000
464	9/5/2019 15:18:41	0.000	0.000
465	9/5/2019 15:19:41	0.000	0.000
466	9/5/2019 15:20:41	0.000	0.000
467	9/5/2019 15:21:41	0.000	0.000
468	9/5/2019 15:22:41	0.000	0.000
469	9/5/2019 15:23:41	0.000	0.000
470	9/5/2019 15:24:41	0.000	0.000
471	9/5/2019 15:25:41	0.000	0.000
472	9/5/2019 15:26:41	0.000	0.000
473	9/5/2019 15:27:41	0.000	0.000
474	9/5/2019 15:28:41	0.000	0.000
475	9/5/2019 15:29:41	0.000	0.000
476	9/5/2019 15:30:41	0.000	0.000
477	9/5/2019 15:31:41	0.000	0.000
478	9/5/2019 15:32:41	0.000	0.000

479	9/5/2019 15:33:41	0.000	0.000
480	9/5/2019 15:34:41	0.000	0.000
481	9/5/2019 15:35:41	0.000	0.000
482	9/5/2019 15:36:41	0.000	0.000
483	9/5/2019 15:37:41	0.000	0.000
484	9/5/2019 15:38:41	0.000	0.000
485	9/5/2019 15:39:41	0.000	0.000
486	9/5/2019 15:40:41	0.000	0.000
487	9/5/2019 15:41:41	0.000	0.000
488	9/5/2019 15:42:41	0.000	0.000
489	9/5/2019 15:43:41	0.000	0.000
490	9/5/2019 15:44:41	0.000	0.000
491	9/5/2019 15:45:41	0.000	0.000
492	9/5/2019 15:46:41	0.000	0.000
493	9/5/2019 15:47:41	0.000	0.000
494	9/5/2019 15:48:41	0.000	0.000
495	9/5/2019 15:49:41	0.000	0.000
496	9/5/2019 15:50:41	0.000	0.000
497	9/5/2019 15:51:41	0.000	0.000
498	9/5/2019 15:52:41	0.000	0.000
499	9/5/2019 15:53:41	0.000	0.000
500	9/5/2019 15:54:41	0.000	0.000
501	9/5/2019 15:55:41	0.000	0.000
502	9/5/2019 15:56:41	0.000	0.000

503 9/5/2019 15:57:41 0.000 0.000

504 9/5/2019 15:58:41 0.000 0.000

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19/09/05 07:39

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Summary

Unit Name MiniRAE 3000(PGM-7320)

Unit SN 592-914376

Unit Firmware Ver V2.14

Running Mode Hygiene Mode

Datalog Mode Auto

Diagnostic Mode No

Stop Reason Power Down

Site ID RAE00000

User ID 00000001

Begin 9/5/2019 07:39:37

End 9/5/2019 16:02:26

Sample Period(s) 60

Number of Records 502

Sensor PID(ppm)

Sensor SN S023030126S2

Measure Type Min; Avg; Max; Real

Span 100.0

Span 2 1000.0

Low Alarm 50.0

High Alarm 100.0

Over Alarm 2000.0

STEL Alarm 25.0

TWA Alarm 10.0

Measurement Gas Isobutylene

Calibration Time 9/5/2019 07:39

Peak 1.0

Min 0.0

Average 0.1

****

Datalog

Index	Date/Time	PID(ppm) (Min)	PID(ppm) (Avg)	PID(ppm) (Max)	PID(ppm) (Real)
001	9/5/2019 07:40:37	0.2	0.6	1.6	1.0
002	9/5/2019 07:41:37	0.1	0.4	1.0	0.2
003	9/5/2019 07:42:37	0.0	0.0	0.2	0.0
004	9/5/2019 07:43:37	0.0	0.0	0.1	0.0

005	9/5/2019 07:44:37	0.0	0.1	0.4	0.0
006	9/5/2019 07:45:37	0.0	0.2	0.8	0.0
007	9/5/2019 07:46:37	0.0	0.0	0.0	0.0
008	9/5/2019 07:47:37	0.0	0.0	0.0	0.0
009	9/5/2019 07:48:37	0.0	0.0	0.0	0.0
010	9/5/2019 07:49:37	0.0	0.0	0.0	0.0
011	9/5/2019 07:50:37	0.0	0.1	0.1	0.1
012	9/5/2019 07:51:37	0.1	0.1	0.2	0.1
013	9/5/2019 07:52:37	0.1	0.1	0.2	0.2
014	9/5/2019 07:53:37	0.1	0.2	0.2	0.2
015	9/5/2019 07:54:37	0.2	0.2	0.2	0.2
016	9/5/2019 07:55:37	0.1	0.2	0.2	0.2
017	9/5/2019 07:56:37	0.2	0.2	0.2	0.2
018	9/5/2019 07:57:37	0.2	0.2	0.3	0.2
019	9/5/2019 07:58:37	0.2	0.2	0.3	0.2
020	9/5/2019 07:59:37	0.2	0.2	0.3	0.3
021	9/5/2019 08:00:37	0.2	0.2	0.3	0.2
022	9/5/2019 08:01:37	0.2	0.2	0.3	0.3
023	9/5/2019 08:02:37	0.2	0.3	0.3	0.3
024	9/5/2019 08:03:37	0.2	0.3	0.3	0.3
025	9/5/2019 08:04:37	0.3	0.3	0.3	0.3
026	9/5/2019 08:05:37	0.3	0.3	0.3	0.3
027	9/5/2019 08:06:37	0.3	0.3	0.4	0.3
028	9/5/2019 08:07:37	0.3	0.3	0.4	0.3

029	9/5/2019 08:08:37	0.2	0.3	0.4	0.3
030	9/5/2019 08:09:37	0.2	0.3	0.4	0.2
031	9/5/2019 08:10:37	0.2	0.3	0.3	0.3
032	9/5/2019 08:11:37	0.3	0.3	0.3	0.3
033	9/5/2019 08:12:37	0.3	0.3	0.3	0.3
034	9/5/2019 08:13:37	0.3	0.3	0.3	0.3
035	9/5/2019 08:14:37	0.3	0.3	0.3	0.3
036	9/5/2019 08:15:37	0.3	0.3	0.3	0.3
037	9/5/2019 08:16:37	0.3	0.3	0.4	0.4
038	9/5/2019 08:17:37	0.3	0.3	0.4	0.4
039	9/5/2019 08:18:37	0.3	0.4	0.4	0.4
040	9/5/2019 08:19:37	0.3	0.4	0.4	0.4
041	9/5/2019 08:20:37	0.3	0.3	0.4	0.3
042	9/5/2019 08:21:37	0.3	0.3	0.4	0.3
043	9/5/2019 08:22:37	0.3	0.3	0.4	0.3
044	9/5/2019 08:23:37	0.3	0.4	0.4	0.4
045	9/5/2019 08:24:37	0.3	0.4	0.4	0.3
046	9/5/2019 08:25:37	0.3	0.4	0.4	0.4
047	9/5/2019 08:26:37	0.3	0.4	0.4	0.3
048	9/5/2019 08:27:37	0.3	0.4	0.5	0.4
049	9/5/2019 08:28:37	0.3	0.4	0.4	0.4
050	9/5/2019 08:29:37	0.4	0.4	0.4	0.4
051	9/5/2019 08:30:37	0.4	0.4	0.4	0.4
052	9/5/2019 08:31:37	0.4	0.4	0.5	0.4

053	9/5/2019 08:32:37	0.3	0.4	0.4	0.3
054	9/5/2019 08:33:37	0.3	0.4	0.4	0.4
055	9/5/2019 08:34:37	0.3	0.4	0.6	0.5
056	9/5/2019 08:35:37	0.5	0.7	1.1	0.6
057	9/5/2019 08:36:37	0.4	0.5	0.6	0.4
058	9/5/2019 08:37:37	0.3	0.4	0.5	0.3
059	9/5/2019 08:38:37	0.3	0.3	0.3	0.3
060	9/5/2019 08:39:37	0.3	0.5	0.8	0.4
061	9/5/2019 08:40:37	0.4	0.5	1.1	0.4
062	9/5/2019 08:41:37	0.3	0.3	0.4	0.3
063	9/5/2019 08:42:37	0.3	0.3	0.3	0.3
064	9/5/2019 08:43:37	0.3	0.4	0.5	0.3
065	9/5/2019 08:44:37	0.3	0.3	0.4	0.3
066	9/5/2019 08:45:37	0.3	0.3	0.3	0.3
067	9/5/2019 08:46:37	0.3	0.4	0.4	0.4
068	9/5/2019 08:47:37	0.2	0.4	0.6	0.3
069	9/5/2019 08:48:37	0.3	0.3	0.3	0.3
070	9/5/2019 08:49:37	0.3	0.3	0.3	0.3
071	9/5/2019 08:50:37	0.3	0.3	0.4	0.3
072	9/5/2019 08:51:37	0.3	0.3	0.3	0.3
073	9/5/2019 08:52:37	0.3	0.3	0.3	0.3
074	9/5/2019 08:53:37	0.3	0.3	0.4	0.4
075	9/5/2019 08:54:37	0.3	0.3	0.4	0.3
076	9/5/2019 08:55:37	0.3	0.3	0.3	0.3

077	9/5/2019 08:56:37	0.3	0.3	0.3	0.3
078	9/5/2019 08:57:37	0.2	0.3	0.3	0.2
079	9/5/2019 08:58:37	0.2	0.3	0.3	0.3
080	9/5/2019 08:59:37	0.3	0.3	0.3	0.3
081	9/5/2019 09:00:37	0.2	0.3	0.4	0.2
082	9/5/2019 09:01:37	0.2	0.3	0.3	0.3
083	9/5/2019 09:02:37	0.2	0.3	0.3	0.3
084	9/5/2019 09:03:37	0.2	0.2	0.3	0.2
085	9/5/2019 09:04:37	0.2	0.2	0.2	0.2
086	9/5/2019 09:05:37	0.2	0.2	0.3	0.2
087	9/5/2019 09:06:37	0.1	0.2	0.3	0.2
088	9/5/2019 09:07:37	0.2	0.2	0.2	0.2
089	9/5/2019 09:08:37	0.1	0.2	0.3	0.2
090	9/5/2019 09:09:37	0.1	0.2	0.4	0.4
091	9/5/2019 09:10:37	0.2	0.3	0.5	0.3
092	9/5/2019 09:11:37	0.2	0.2	0.3	0.2
093	9/5/2019 09:12:37	0.1	0.2	0.2	0.2
094	9/5/2019 09:13:37	0.1	0.2	0.2	0.2
095	9/5/2019 09:14:37	0.2	0.2	0.2	0.2
096	9/5/2019 09:15:37	0.1	0.2	0.3	0.2
097	9/5/2019 09:16:37	0.2	0.2	0.3	0.2
098	9/5/2019 09:17:37	0.2	0.2	0.3	0.2
099	9/5/2019 09:18:37	0.2	0.2	0.3	0.2
100	9/5/2019 09:19:37	0.2	0.2	0.2	0.2

101	9/5/2019 09:20:37	0.2	0.2	0.3	0.2
102	9/5/2019 09:21:37	0.2	0.2	0.3	0.2
103	9/5/2019 09:22:37	0.1	0.2	0.3	0.2
104	9/5/2019 09:23:37	0.1	0.2	0.2	0.1
105	9/5/2019 09:24:37	0.1	0.2	0.3	0.3
106	9/5/2019 09:25:37	0.1	0.2	0.3	0.2
107	9/5/2019 09:26:37	0.2	0.2	0.3	0.2
108	9/5/2019 09:27:37	0.2	0.2	0.2	0.2
109	9/5/2019 09:28:37	0.1	0.2	0.3	0.1
110	9/5/2019 09:29:37	0.1	0.2	0.3	0.2
111	9/5/2019 09:30:37	0.1	0.2	0.3	0.3
112	9/5/2019 09:31:37	0.2	0.2	0.3	0.2
113	9/5/2019 09:32:37	0.2	0.2	0.3	0.2
114	9/5/2019 09:33:37	0.1	0.2	0.2	0.2
115	9/5/2019 09:34:37	0.1	0.2	0.2	0.1
116	9/5/2019 09:35:37	0.1	0.2	0.2	0.2
117	9/5/2019 09:36:37	0.1	0.2	0.2	0.2
118	9/5/2019 09:37:37	0.1	0.2	0.2	0.1
119	9/5/2019 09:38:37	0.1	0.2	0.3	0.2
120	9/5/2019 09:39:37	0.1	0.2	0.4	0.1
121	9/5/2019 09:40:37	0.1	0.1	0.2	0.1
122	9/5/2019 09:41:37	0.1	0.2	0.2	0.1
123	9/5/2019 09:42:37	0.1	0.1	0.2	0.2
124	9/5/2019 09:43:37	0.1	0.2	0.3	0.2

125	9/5/2019 09:44:37	0.0	0.2	0.4	0.3
126	9/5/2019 09:45:37	0.0	0.1	0.3	0.2
127	9/5/2019 09:46:37	0.1	0.1	0.2	0.1
128	9/5/2019 09:47:37	0.1	0.1	0.1	0.1
129	9/5/2019 09:48:37	0.0	0.1	0.2	0.1
130	9/5/2019 09:49:37	0.0	0.1	0.3	0.1
131	9/5/2019 09:50:37	0.0	0.1	0.3	0.2
132	9/5/2019 09:51:37	0.0	0.1	0.2	0.1
133	9/5/2019 09:52:37	0.0	0.1	0.2	0.1
134	9/5/2019 09:53:37	0.0	0.1	0.2	0.0
135	9/5/2019 09:54:37	0.0	0.1	0.1	0.1
136	9/5/2019 09:55:37	0.0	0.1	0.3	0.1
137	9/5/2019 09:56:37	0.0	0.2	0.4	0.1
138	9/5/2019 09:57:37	0.0	0.1	0.3	0.0
139	9/5/2019 09:58:37	0.0	0.1	0.2	0.1
140	9/5/2019 09:59:37	0.0	0.1	0.2	0.0
141	9/5/2019 10:00:37	0.0	0.1	0.2	0.0
142	9/5/2019 10:01:37	0.0	0.0	0.2	0.1
143	9/5/2019 10:02:37	0.0	0.1	0.2	0.0
144	9/5/2019 10:03:37	0.0	0.1	0.4	0.2
145	9/5/2019 10:04:37	0.0	0.1	0.3	0.1
146	9/5/2019 10:05:37	0.0	0.1	0.3	0.0
147	9/5/2019 10:06:37	0.0	0.1	0.4	0.1
148	9/5/2019 10:07:37	0.1	0.1	0.2	0.1

149	9/5/2019 10:08:37	0.0	0.1	0.1	0.0
150	9/5/2019 10:09:37	0.0	0.1	0.2	0.1
151	9/5/2019 10:10:37	0.0	0.1	0.3	0.1
152	9/5/2019 10:11:37	0.0	0.1	0.2	0.1
153	9/5/2019 10:12:37	0.0	0.0	0.2	0.2
154	9/5/2019 10:13:37	0.0	0.1	0.2	0.1
155	9/5/2019 10:14:37	0.0	0.1	0.1	0.1
156	9/5/2019 10:15:37	0.0	0.0	0.1	0.0
157	9/5/2019 10:16:37	0.0	0.0	0.2	0.0
158	9/5/2019 10:17:37	0.0	0.1	0.2	0.0
159	9/5/2019 10:18:37	0.0	0.0	0.2	0.0
160	9/5/2019 10:19:37	0.0	0.0	0.1	0.0
161	9/5/2019 10:20:37	0.0	0.0	0.0	0.0
162	9/5/2019 10:21:37	0.0	0.0	0.1	0.0
163	9/5/2019 10:22:37	0.0	0.1	0.1	0.1
164	9/5/2019 10:23:37	0.0	0.1	0.1	0.0
165	9/5/2019 10:24:37	0.0	0.0	0.2	0.0
166	9/5/2019 10:25:37	0.0	0.0	0.0	0.0
167	9/5/2019 10:26:37	0.0	0.0	0.0	0.0
168	9/5/2019 10:27:37	0.0	0.0	0.2	0.1
169	9/5/2019 10:28:37	0.0	0.1	0.2	0.1
170	9/5/2019 10:29:37	0.0	0.1	0.2	0.1
171	9/5/2019 10:30:37	0.0	0.0	0.1	0.0
172	9/5/2019 10:31:37	0.0	0.0	0.1	0.1

173	9/5/2019 10:32:37	0.0	0.0	0.1	0.0
174	9/5/2019 10:33:37	0.0	0.0	0.0	0.0
175	9/5/2019 10:34:37	0.0	0.0	0.1	0.0
176	9/5/2019 10:35:37	0.0	0.0	0.1	0.0
177	9/5/2019 10:36:37	0.0	0.0	0.2	0.0
178	9/5/2019 10:37:37	0.0	0.0	0.1	0.0
179	9/5/2019 10:38:37	0.0	0.0	0.1	0.0
180	9/5/2019 10:39:37	0.0	0.0	0.1	0.0
181	9/5/2019 10:40:37	0.0	0.0	0.1	0.0
182	9/5/2019 10:41:37	0.0	0.0	0.1	0.0
183	9/5/2019 10:42:37	0.0	0.0	0.0	0.0
184	9/5/2019 10:43:37	0.0	0.0	0.1	0.0
185	9/5/2019 10:44:37	0.0	0.0	0.1	0.0
186	9/5/2019 10:45:37	0.0	0.0	0.0	0.0
187	9/5/2019 10:46:37	0.0	0.0	0.0	0.0
188	9/5/2019 10:47:37	0.0	0.0	0.0	0.0
189	9/5/2019 10:48:37	0.0	0.0	0.1	0.0
190	9/5/2019 10:49:37	0.0	0.0	0.0	0.0
191	9/5/2019 10:50:37	0.0	0.0	0.0	0.0
192	9/5/2019 10:51:37	0.0	0.0	0.0	0.0
193	9/5/2019 10:52:37	0.0	0.0	0.0	0.0
194	9/5/2019 10:53:37	0.0	0.0	0.1	0.0
195	9/5/2019 10:54:37	0.0	0.0	0.0	0.0
196	9/5/2019 10:55:37	0.0	0.0	0.1	0.0

197	9/5/2019 10:56:37	0.0	0.0	0.0	0.0
198	9/5/2019 10:57:37	0.0	0.0	0.1	0.0
199	9/5/2019 10:58:37	0.0	0.0	0.1	0.0
200	9/5/2019 10:59:37	0.0	0.0	0.1	0.0
201	9/5/2019 11:00:37	0.0	0.0	0.0	0.0
202	9/5/2019 11:01:37	0.0	0.0	0.0	0.0
203	9/5/2019 11:02:37	0.0	0.0	0.1	0.0
204	9/5/2019 11:03:37	0.0	0.0	0.0	0.0
205	9/5/2019 11:04:37	0.0	0.0	0.0	0.0
206	9/5/2019 11:05:37	0.0	0.0	0.0	0.0
207	9/5/2019 11:06:37	0.0	0.0	0.1	0.0
208	9/5/2019 11:07:37	0.0	0.0	0.2	0.0
209	9/5/2019 11:08:37	0.0	0.0	0.0	0.0
210	9/5/2019 11:09:37	0.0	0.0	0.0	0.0
211	9/5/2019 11:10:37	0.0	0.0	0.0	0.0
212	9/5/2019 11:11:37	0.0	0.0	0.0	0.0
213	9/5/2019 11:12:37	0.0	0.0	0.0	0.0
214	9/5/2019 11:13:37	0.0	0.0	0.0	0.0
215	9/5/2019 11:14:37	0.0	0.0	0.0	0.0
216	9/5/2019 11:15:37	0.0	0.0	0.0	0.0
217	9/5/2019 11:16:37	0.0	0.0	0.0	0.0
218	9/5/2019 11:17:37	0.0	0.0	0.1	0.1
219	9/5/2019 11:18:37	0.0	0.0	0.0	0.0
220	9/5/2019 11:19:37	0.0	0.0	0.0	0.0

221	9/5/2019 11:20:37	0.0	0.0	0.0	0.0
222	9/5/2019 11:21:37	0.0	0.0	0.0	0.0
223	9/5/2019 11:22:37	0.0	0.0	0.0	0.0
224	9/5/2019 11:23:37	0.0	0.0	0.0	0.0
225	9/5/2019 11:24:37	0.0	0.0	0.0	0.0
226	9/5/2019 11:25:37	0.0	0.0	0.0	0.0
227	9/5/2019 11:26:37	0.0	0.0	0.0	0.0
228	9/5/2019 11:27:37	0.0	0.0	0.1	0.0
229	9/5/2019 11:28:37	0.0	0.0	0.0	0.0
230	9/5/2019 11:29:37	0.0	0.0	0.1	0.0
231	9/5/2019 11:30:37	0.0	0.0	0.0	0.0
232	9/5/2019 11:31:37	0.0	0.0	0.1	0.0
233	9/5/2019 11:32:37	0.0	0.0	0.0	0.0
234	9/5/2019 11:33:37	0.0	0.0	0.1	0.0
235	9/5/2019 11:34:37	0.0	0.0	0.0	0.0
236	9/5/2019 11:35:37	0.0	0.0	0.0	0.0
237	9/5/2019 11:36:37	0.0	0.0	0.1	0.0
238	9/5/2019 11:37:37	0.0	0.0	0.0	0.0
239	9/5/2019 11:38:37	0.0	0.0	0.1	0.0
240	9/5/2019 11:39:37	0.0	0.0	0.0	0.0
241	9/5/2019 11:40:37	0.0	0.0	0.1	0.1
242	9/5/2019 11:41:37	0.0	0.0	0.0	0.0
243	9/5/2019 11:42:37	0.0	0.0	0.0	0.0
244	9/5/2019 11:43:37	0.0	0.0	0.1	0.0

245	9/5/2019 11:44:37	0.0	0.0	0.0	0.0
246	9/5/2019 11:45:37	0.0	0.0	0.0	0.0
247	9/5/2019 11:46:37	0.0	0.0	0.0	0.0
248	9/5/2019 11:47:37	0.0	0.0	0.1	0.0
249	9/5/2019 11:48:37	0.0	0.0	0.0	0.0
250	9/5/2019 11:49:37	0.0	0.0	0.1	0.0
251	9/5/2019 11:50:37	0.0	0.0	0.0	0.0
252	9/5/2019 11:51:37	0.0	0.0	0.0	0.0
253	9/5/2019 11:52:37	0.0	0.0	0.1	0.0
254	9/5/2019 11:53:37	0.0	0.0	0.0	0.0
255	9/5/2019 11:54:37	0.0	0.0	0.0	0.0
256	9/5/2019 11:55:37	0.0	0.0	0.0	0.0
257	9/5/2019 11:56:37	0.0	0.0	0.0	0.0
258	9/5/2019 11:57:37	0.0	0.0	0.0	0.0
259	9/5/2019 11:58:37	0.0	0.0	0.0	0.0
260	9/5/2019 11:59:37	0.0	0.0	0.0	0.0
261	9/5/2019 12:00:37	0.0	0.0	0.0	0.0
262	9/5/2019 12:01:37	0.0	0.0	0.0	0.0
263	9/5/2019 12:02:37	0.0	0.0	0.1	0.0
264	9/5/2019 12:03:37	0.0	0.0	0.0	0.0
265	9/5/2019 12:04:37	0.0	0.0	0.0	0.0
266	9/5/2019 12:05:37	0.0	0.0	0.0	0.0
267	9/5/2019 12:06:37	0.0	0.0	0.0	0.0
268	9/5/2019 12:07:37	0.0	0.0	0.0	0.0

269	9/5/2019 12:08:37	0.0	0.0	0.0	0.0
270	9/5/2019 12:09:37	0.0	0.0	0.0	0.0
271	9/5/2019 12:10:37	0.0	0.0	0.0	0.0
272	9/5/2019 12:11:37	0.0	0.0	0.0	0.0
273	9/5/2019 12:12:37	0.0	0.0	0.0	0.0
274	9/5/2019 12:13:37	0.0	0.0	0.0	0.0
275	9/5/2019 12:14:37	0.0	0.0	0.0	0.0
276	9/5/2019 12:15:37	0.0	0.0	0.0	0.0
277	9/5/2019 12:16:37	0.0	0.0	0.0	0.0
278	9/5/2019 12:17:37	0.0	0.0	0.0	0.0
279	9/5/2019 12:18:37	0.0	0.0	0.0	0.0
280	9/5/2019 12:19:37	0.0	0.0	0.0	0.0
281	9/5/2019 12:20:37	0.0	0.0	0.0	0.0
282	9/5/2019 12:21:37	0.0	0.0	0.0	0.0
283	9/5/2019 12:22:37	0.0	0.0	0.0	0.0
284	9/5/2019 12:23:37	0.0	0.0	0.0	0.0
285	9/5/2019 12:24:37	0.0	0.0	0.0	0.0
286	9/5/2019 12:25:37	0.0	0.0	0.0	0.0
287	9/5/2019 12:26:37	0.0	0.0	0.0	0.0
288	9/5/2019 12:27:37	0.0	0.0	0.0	0.0
289	9/5/2019 12:28:37	0.0	0.0	0.0	0.0
290	9/5/2019 12:29:37	0.0	0.0	0.0	0.0
291	9/5/2019 12:30:37	0.0	0.0	0.0	0.0
292	9/5/2019 12:31:37	0.0	0.0	0.0	0.0

293	9/5/2019 12:32:37	0.0	0.0	0.0	0.0
294	9/5/2019 12:33:37	0.0	0.0	0.0	0.0
295	9/5/2019 12:34:37	0.0	0.0	0.0	0.0
296	9/5/2019 12:35:37	0.0	0.0	0.0	0.0
297	9/5/2019 12:36:37	0.0	0.0	0.0	0.0
298	9/5/2019 12:37:37	0.0	0.0	0.0	0.0
299	9/5/2019 12:38:37	0.0	0.0	0.0	0.0
300	9/5/2019 12:39:37	0.0	0.0	0.0	0.0
301	9/5/2019 12:40:37	0.0	0.0	0.1	0.0
302	9/5/2019 12:41:37	0.0	0.0	0.0	0.0
303	9/5/2019 12:42:37	0.0	0.0	0.0	0.0
304	9/5/2019 12:43:37	0.0	0.0	0.0	0.0
305	9/5/2019 12:44:37	0.0	0.0	0.0	0.0
306	9/5/2019 12:45:37	0.0	0.0	0.0	0.0
307	9/5/2019 12:46:37	0.0	0.0	0.0	0.0
308	9/5/2019 12:47:37	0.0	0.0	0.0	0.0
309	9/5/2019 12:48:37	0.0	0.0	0.0	0.0
310	9/5/2019 12:49:37	0.0	0.0	0.0	0.0
311	9/5/2019 12:50:37	0.0	0.0	0.0	0.0
312	9/5/2019 12:51:37	0.0	0.0	0.0	0.0
313	9/5/2019 12:52:37	0.0	0.0	0.0	0.0
314	9/5/2019 12:53:37	0.0	0.0	0.0	0.0
315	9/5/2019 12:54:37	0.0	0.0	0.0	0.0
316	9/5/2019 12:55:37	0.0	0.0	0.0	0.0

317	9/5/2019 12:56:37	0.0	0.0	0.1	0.0
318	9/5/2019 12:57:37	0.0	0.0	0.0	0.0
319	9/5/2019 12:58:37	0.0	0.0	0.0	0.0
320	9/5/2019 12:59:37	0.0	0.0	0.0	0.0
321	9/5/2019 13:00:37	0.0	0.0	0.0	0.0
322	9/5/2019 13:01:37	0.0	0.0	0.0	0.0
323	9/5/2019 13:02:37	0.0	0.0	0.0	0.0
324	9/5/2019 13:03:37	0.0	0.0	0.0	0.0
325	9/5/2019 13:04:37	0.0	0.0	0.0	0.0
326	9/5/2019 13:05:37	0.0	0.0	0.0	0.0
327	9/5/2019 13:06:37	0.0	0.0	0.0	0.0
328	9/5/2019 13:07:37	0.0	0.0	0.0	0.0
329	9/5/2019 13:08:37	0.0	0.0	0.0	0.0
330	9/5/2019 13:09:37	0.0	0.0	0.0	0.0
331	9/5/2019 13:10:37	0.0	0.0	0.0	0.0
332	9/5/2019 13:11:37	0.0	0.0	0.1	0.0
333	9/5/2019 13:12:37	0.0	0.0	0.0	0.0
334	9/5/2019 13:13:37	0.0	0.0	0.0	0.0
335	9/5/2019 13:14:37	0.0	0.0	0.0	0.0
336	9/5/2019 13:15:37	0.0	0.0	0.0	0.0
337	9/5/2019 13:16:37	0.0	0.0	0.0	0.0
338	9/5/2019 13:17:37	0.0	0.0	0.0	0.0
339	9/5/2019 13:18:37	0.0	0.0	0.0	0.0
340	9/5/2019 13:19:37	0.0	0.0	0.0	0.0

341	9/5/2019 13:20:37	0.0	0.0	0.0	0.0
342	9/5/2019 13:21:37	0.0	0.0	0.0	0.0
343	9/5/2019 13:22:37	0.0	0.0	0.0	0.0
344	9/5/2019 13:23:37	0.0	0.0	0.0	0.0
345	9/5/2019 13:24:37	0.0	0.0	0.0	0.0
346	9/5/2019 13:25:37	0.0	0.0	0.1	0.0
347	9/5/2019 13:26:37	0.0	0.0	0.0	0.0
348	9/5/2019 13:27:37	0.0	0.0	0.0	0.0
349	9/5/2019 13:28:37	0.0	0.0	0.0	0.0
350	9/5/2019 13:29:37	0.0	0.0	0.0	0.0
351	9/5/2019 13:30:37	0.0	0.0	0.0	0.0
352	9/5/2019 13:31:37	0.0	0.0	0.0	0.0
353	9/5/2019 13:32:37	0.0	0.0	0.0	0.0
354	9/5/2019 13:33:37	0.0	0.0	0.0	0.0
355	9/5/2019 13:34:37	0.0	0.0	0.0	0.0
356	9/5/2019 13:35:37	0.0	0.0	0.0	0.0
357	9/5/2019 13:36:37	0.0	0.0	0.0	0.0
358	9/5/2019 13:37:37	0.0	0.0	0.0	0.0
359	9/5/2019 13:38:37	0.0	0.0	0.0	0.0
360	9/5/2019 13:39:37	0.0	0.0	0.0	0.0
361	9/5/2019 13:40:37	0.0	0.0	0.0	0.0
362	9/5/2019 13:41:37	0.0	0.0	0.0	0.0
363	9/5/2019 13:42:37	0.0	0.0	0.0	0.0
364	9/5/2019 13:43:37	0.0	0.0	0.0	0.0

365	9/5/2019 13:44:37	0.0	0.0	0.0	0.0
366	9/5/2019 13:45:37	0.0	0.0	0.0	0.0
367	9/5/2019 13:46:37	0.0	0.0	0.1	0.0
368	9/5/2019 13:47:37	0.0	0.0	0.0	0.0
369	9/5/2019 13:48:37	0.0	0.0	0.0	0.0
370	9/5/2019 13:49:37	0.0	0.0	0.0	0.0
371	9/5/2019 13:50:37	0.0	0.0	0.1	0.0
372	9/5/2019 13:51:37	0.0	0.0	0.0	0.0
373	9/5/2019 13:52:37	0.0	0.0	0.0	0.0
374	9/5/2019 13:53:37	0.0	0.0	0.0	0.0
375	9/5/2019 13:54:37	0.0	0.0	0.0	0.0
376	9/5/2019 13:55:37	0.0	0.0	0.0	0.0
377	9/5/2019 13:56:37	0.0	0.0	0.0	0.0
378	9/5/2019 13:57:37	0.0	0.0	0.0	0.0
379	9/5/2019 13:58:37	0.0	0.0	0.0	0.0
380	9/5/2019 13:59:37	0.0	0.0	0.0	0.0
381	9/5/2019 14:00:37	0.0	0.0	0.0	0.0
382	9/5/2019 14:01:37	0.0	0.0	0.0	0.0
383	9/5/2019 14:02:37	0.0	0.0	0.0	0.0
384	9/5/2019 14:03:37	0.0	0.0	0.0	0.0
385	9/5/2019 14:04:37	0.0	0.0	0.0	0.0
386	9/5/2019 14:05:37	0.0	0.0	0.0	0.0
387	9/5/2019 14:06:37	0.0	0.0	0.0	0.0
388	9/5/2019 14:07:37	0.0	0.0	0.0	0.0

389	9/5/2019 14:08:37	0.0	0.0	0.0	0.0
390	9/5/2019 14:09:37	0.0	0.0	0.0	0.0
391	9/5/2019 14:10:37	0.0	0.0	0.0	0.0
392	9/5/2019 14:11:37	0.0	0.0	0.1	0.0
393	9/5/2019 14:12:37	0.0	0.0	0.0	0.0
394	9/5/2019 14:13:37	0.0	0.0	0.0	0.0
395	9/5/2019 14:14:37	0.0	0.0	0.0	0.0
396	9/5/2019 14:15:37	0.0	0.0	0.0	0.0
397	9/5/2019 14:16:37	0.0	0.0	0.0	0.0
398	9/5/2019 14:17:37	0.0	0.0	0.0	0.0
399	9/5/2019 14:18:37	0.0	0.0	0.0	0.0
400	9/5/2019 14:19:37	0.0	0.0	0.0	0.0
401	9/5/2019 14:20:37	0.0	0.0	0.0	0.0
402	9/5/2019 14:21:37	0.0	0.0	0.0	0.0
403	9/5/2019 14:22:37	0.0	0.0	0.0	0.0
404	9/5/2019 14:23:37	0.0	0.0	0.0	0.0
405	9/5/2019 14:24:37	0.0	0.0	0.0	0.0
406	9/5/2019 14:25:37	0.0	0.0	0.0	0.0
407	9/5/2019 14:26:37	0.0	0.0	0.0	0.0
408	9/5/2019 14:27:37	0.0	0.0	0.0	0.0
409	9/5/2019 14:28:37	0.0	0.0	0.0	0.0
410	9/5/2019 14:29:37	0.0	0.0	0.0	0.0
411	9/5/2019 14:30:37	0.0	0.0	0.0	0.0
412	9/5/2019 14:31:37	0.0	0.0	0.0	0.0

413	9/5/2019 14:32:37	0.0	0.0	0.0	0.0
414	9/5/2019 14:33:37	0.0	0.0	0.0	0.0
415	9/5/2019 14:34:37	0.0	0.0	0.0	0.0
416	9/5/2019 14:35:37	0.0	0.0	0.0	0.0
417	9/5/2019 14:36:37	0.0	0.0	0.0	0.0
418	9/5/2019 14:37:37	0.0	0.0	0.0	0.0
419	9/5/2019 14:38:37	0.0	0.0	0.0	0.0
420	9/5/2019 14:39:37	0.0	0.0	0.0	0.0
421	9/5/2019 14:40:37	0.0	0.0	0.0	0.0
422	9/5/2019 14:41:37	0.0	0.0	0.0	0.0
423	9/5/2019 14:42:37	0.0	0.0	0.0	0.0
424	9/5/2019 14:43:37	0.0	0.0	0.0	0.0
425	9/5/2019 14:44:37	0.0	0.0	0.0	0.0
426	9/5/2019 14:45:37	0.0	0.0	0.0	0.0
427	9/5/2019 14:46:37	0.0	0.0	0.0	0.0
428	9/5/2019 14:47:37	0.0	0.0	0.0	0.0
429	9/5/2019 14:48:37	0.0	0.0	0.0	0.0
430	9/5/2019 14:49:37	0.0	0.0	0.0	0.0
431	9/5/2019 14:50:37	0.0	0.0	0.0	0.0
432	9/5/2019 14:51:37	0.0	0.0	0.0	0.0
433	9/5/2019 14:52:37	0.0	0.0	0.0	0.0
434	9/5/2019 14:53:37	0.0	0.0	0.0	0.0
435	9/5/2019 14:54:37	0.0	0.0	0.0	0.0
436	9/5/2019 14:55:37	0.0	0.0	0.0	0.0

437	9/5/2019 14:56:37	0.0	0.0	0.0	0.0
438	9/5/2019 14:57:37	0.0	0.0	0.0	0.0
439	9/5/2019 14:58:37	0.0	0.0	0.0	0.0
440	9/5/2019 14:59:37	0.0	0.0	0.0	0.0
441	9/5/2019 15:00:37	0.0	0.0	0.0	0.0
442	9/5/2019 15:01:37	0.0	0.0	0.0	0.0
443	9/5/2019 15:02:37	0.0	0.0	0.0	0.0
444	9/5/2019 15:03:37	0.0	0.0	0.0	0.0
445	9/5/2019 15:04:37	0.0	0.0	0.0	0.0
446	9/5/2019 15:05:37	0.0	0.0	0.0	0.0
447	9/5/2019 15:06:37	0.0	0.0	0.0	0.0
448	9/5/2019 15:07:37	0.0	0.0	0.0	0.0
449	9/5/2019 15:08:37	0.0	0.0	0.0	0.0
450	9/5/2019 15:09:37	0.0	0.0	0.0	0.0
451	9/5/2019 15:10:37	0.0	0.0	0.0	0.0
452	9/5/2019 15:11:37	0.0	0.0	0.0	0.0
453	9/5/2019 15:12:37	0.0	0.0	0.0	0.0
454	9/5/2019 15:13:37	0.0	0.0	0.0	0.0
455	9/5/2019 15:14:37	0.0	0.0	0.0	0.0
456	9/5/2019 15:15:37	0.0	0.0	0.0	0.0
457	9/5/2019 15:16:37	0.0	0.0	0.0	0.0
458	9/5/2019 15:17:37	0.0	0.0	0.0	0.0
459	9/5/2019 15:18:37	0.0	0.0	0.0	0.0
460	9/5/2019 15:19:37	0.0	0.0	0.0	0.0

461	9/5/2019 15:20:37	0.0	0.0	0.0	0.0
462	9/5/2019 15:21:37	0.0	0.0	0.0	0.0
463	9/5/2019 15:22:37	0.0	0.0	0.0	0.0
464	9/5/2019 15:23:37	0.0	0.0	0.0	0.0
465	9/5/2019 15:24:37	0.0	0.0	0.1	0.0
466	9/5/2019 15:25:37	0.0	0.0	0.0	0.0
467	9/5/2019 15:26:37	0.0	0.0	0.0	0.0
468	9/5/2019 15:27:37	0.0	0.0	0.0	0.0
469	9/5/2019 15:28:37	0.0	0.0	0.0	0.0
470	9/5/2019 15:29:37	0.0	0.0	0.0	0.0
471	9/5/2019 15:30:37	0.0	0.0	0.0	0.0
472	9/5/2019 15:31:37	0.0	0.0	0.0	0.0
473	9/5/2019 15:32:37	0.0	0.0	0.0	0.0
474	9/5/2019 15:33:37	0.0	0.0	0.0	0.0
475	9/5/2019 15:34:37	0.0	0.0	0.0	0.0
476	9/5/2019 15:35:37	0.0	0.0	0.0	0.0
477	9/5/2019 15:36:37	0.0	0.0	0.0	0.0
478	9/5/2019 15:37:37	0.0	0.0	0.0	0.0
479	9/5/2019 15:38:37	0.0	0.0	0.0	0.0
480	9/5/2019 15:39:37	0.0	0.0	0.0	0.0
481	9/5/2019 15:40:37	0.0	0.0	0.0	0.0
482	9/5/2019 15:41:37	0.0	0.0	0.0	0.0
483	9/5/2019 15:42:37	0.0	0.0	0.0	0.0
484	9/5/2019 15:43:37	0.0	0.0	0.0	0.0

485	9/5/2019 15:44:37	0.0	0.0	0.0	0.0
486	9/5/2019 15:45:37	0.0	0.0	0.0	0.0
487	9/5/2019 15:46:37	0.0	0.0	0.0	0.0
488	9/5/2019 15:47:37	0.0	0.0	0.0	0.0
489	9/5/2019 15:48:37	0.0	0.0	0.0	0.0
490	9/5/2019 15:49:37	0.0	0.0	0.0	0.0
491	9/5/2019 15:50:37	0.0	0.0	0.0	0.0
492	9/5/2019 15:51:37	0.0	0.0	0.0	0.0
493	9/5/2019 15:52:37	0.0	0.0	0.0	0.0
494	9/5/2019 15:53:37	0.0	0.0	0.0	0.0
495	9/5/2019 15:54:37	0.0	0.0	0.0	0.0
496	9/5/2019 15:55:37	0.0	0.0	0.0	0.0
497	9/5/2019 15:56:37	0.0	0.0	0.0	0.0
498	9/5/2019 15:57:37	0.0	0.0	0.0	0.0
499	9/5/2019 15:58:37	0.0	0.0	0.0	0.0
500	9/5/2019 15:59:37	0.0	0.0	0.0	0.0
501	9/5/2019 16:00:37	0.0	0.0	0.0	0.0
502	9/5/2019 16:01:37	0.0	0.0	0.0	0.0
Peak	0.5	0.7	1.6	1.0	
Min	0.0	0.0	0.0	0.0	
Average		0.1	0.1	0.1	0.1

****

TWA/STEL

Index	Date/Time	PID(ppm) (TWA)	PID(ppm) (STEL)	
001	9/5/2019 07:40:37	0.0	---	
002	9/5/2019 07:41:37	0.0	---	
003	9/5/2019 07:42:37	0.0	---	
004	9/5/2019 07:43:37	0.0	---	
005	9/5/2019 07:44:37	0.0	---	
006	9/5/2019 07:45:37	0.0	---	
007	9/5/2019 07:46:37	0.0	---	
008	9/5/2019 07:47:37	0.0	---	
009	9/5/2019 07:48:37	0.0	---	
010	9/5/2019 07:49:37	0.0	---	
011	9/5/2019 07:50:37	0.0	---	
012	9/5/2019 07:51:37	0.0	---	
013	9/5/2019 07:52:37	0.0	---	
014	9/5/2019 07:53:37	0.0	---	
015	9/5/2019 07:54:37	0.0	0.1	
016	9/5/2019 07:55:37	0.0	0.1	
017	9/5/2019 07:56:37	0.0	0.1	
018	9/5/2019 07:57:37	0.0	0.1	
019	9/5/2019 07:58:37	0.0	0.1	
020	9/5/2019 07:59:37	0.0	0.1	
021	9/5/2019 08:00:37	0.0	0.1	
022	9/5/2019 08:01:37	0.0	0.2	

023	9/5/2019 08:02:37	0.0	0.2
024	9/5/2019 08:03:37	0.0	0.2
025	9/5/2019 08:04:37	0.0	0.2
026	9/5/2019 08:05:37	0.0	0.2
027	9/5/2019 08:06:37	0.0	0.3
028	9/5/2019 08:07:37	0.0	0.3
029	9/5/2019 08:08:37	0.0	0.3
030	9/5/2019 08:09:37	0.0	0.3
031	9/5/2019 08:10:37	0.0	0.3
032	9/5/2019 08:11:37	0.0	0.3
033	9/5/2019 08:12:37	0.0	0.3
034	9/5/2019 08:13:37	0.0	0.3
035	9/5/2019 08:14:37	0.0	0.3
036	9/5/2019 08:15:37	0.0	0.3
037	9/5/2019 08:16:37	0.0	0.3
038	9/5/2019 08:17:37	0.0	0.3
039	9/5/2019 08:18:37	0.0	0.3
040	9/5/2019 08:19:37	0.0	0.3
041	9/5/2019 08:20:37	0.0	0.3
042	9/5/2019 08:21:37	0.0	0.3
043	9/5/2019 08:22:37	0.0	0.3
044	9/5/2019 08:23:37	0.0	0.3
045	9/5/2019 08:24:37	0.0	0.3
046	9/5/2019 08:25:37	0.0	0.4

047	9/5/2019 08:26:37	0.0	0.4
048	9/5/2019 08:27:37	0.0	0.4
049	9/5/2019 08:28:37	0.0	0.4
050	9/5/2019 08:29:37	0.0	0.4
051	9/5/2019 08:30:37	0.0	0.4
052	9/5/2019 08:31:37	0.0	0.4
053	9/5/2019 08:32:37	0.0	0.4
054	9/5/2019 08:33:37	0.0	0.4
055	9/5/2019 08:34:37	0.0	0.4
056	9/5/2019 08:35:37	0.0	0.4
057	9/5/2019 08:36:37	0.0	0.4
058	9/5/2019 08:37:37	0.0	0.4
059	9/5/2019 08:38:37	0.0	0.4
060	9/5/2019 08:39:37	0.0	0.4
061	9/5/2019 08:40:37	0.0	0.4
062	9/5/2019 08:41:37	0.0	0.4
063	9/5/2019 08:42:37	0.0	0.4
064	9/5/2019 08:43:37	0.0	0.4
065	9/5/2019 08:44:37	0.0	0.4
066	9/5/2019 08:45:37	0.0	0.4
067	9/5/2019 08:46:37	0.0	0.4
068	9/5/2019 08:47:37	0.0	0.4
069	9/5/2019 08:48:37	0.0	0.4
070	9/5/2019 08:49:37	0.0	0.4

071	9/5/2019 08:50:37	0.0	0.4
072	9/5/2019 08:51:37	0.0	0.3
073	9/5/2019 08:52:37	0.0	0.3
074	9/5/2019 08:53:37	0.0	0.3
075	9/5/2019 08:54:37	0.0	0.3
076	9/5/2019 08:55:37	0.0	0.3
077	9/5/2019 08:56:37	0.0	0.3
078	9/5/2019 08:57:37	0.0	0.3
079	9/5/2019 08:58:37	0.0	0.3
080	9/5/2019 08:59:37	0.0	0.3
081	9/5/2019 09:00:37	0.0	0.3
082	9/5/2019 09:01:37	0.0	0.3
083	9/5/2019 09:02:37	0.0	0.3
084	9/5/2019 09:03:37	0.1	0.3
085	9/5/2019 09:04:37	0.1	0.3
086	9/5/2019 09:05:37	0.1	0.3
087	9/5/2019 09:06:37	0.1	0.3
088	9/5/2019 09:07:37	0.1	0.3
089	9/5/2019 09:08:37	0.1	0.3
090	9/5/2019 09:09:37	0.1	0.3
091	9/5/2019 09:10:37	0.1	0.3
092	9/5/2019 09:11:37	0.1	0.3
093	9/5/2019 09:12:37	0.1	0.3
094	9/5/2019 09:13:37	0.1	0.3

095	9/5/2019 09:14:37	0.1	0.3
096	9/5/2019 09:15:37	0.1	0.2
097	9/5/2019 09:16:37	0.1	0.2
098	9/5/2019 09:17:37	0.1	0.2
099	9/5/2019 09:18:37	0.1	0.2
100	9/5/2019 09:19:37	0.1	0.2
101	9/5/2019 09:20:37	0.1	0.2
102	9/5/2019 09:21:37	0.1	0.2
103	9/5/2019 09:22:37	0.1	0.2
104	9/5/2019 09:23:37	0.1	0.2
105	9/5/2019 09:24:37	0.1	0.2
106	9/5/2019 09:25:37	0.1	0.2
107	9/5/2019 09:26:37	0.1	0.2
108	9/5/2019 09:27:37	0.1	0.2
109	9/5/2019 09:28:37	0.1	0.2
110	9/5/2019 09:29:37	0.1	0.2
111	9/5/2019 09:30:37	0.1	0.2
112	9/5/2019 09:31:37	0.1	0.2
113	9/5/2019 09:32:37	0.1	0.2
114	9/5/2019 09:33:37	0.1	0.2
115	9/5/2019 09:34:37	0.1	0.2
116	9/5/2019 09:35:37	0.1	0.2
117	9/5/2019 09:36:37	0.1	0.2
118	9/5/2019 09:37:37	0.1	0.2

119	9/5/2019 09:38:37	0.1	0.2
120	9/5/2019 09:39:37	0.1	0.2
121	9/5/2019 09:40:37	0.1	0.2
122	9/5/2019 09:41:37	0.1	0.2
123	9/5/2019 09:42:37	0.1	0.2
124	9/5/2019 09:43:37	0.1	0.2
125	9/5/2019 09:44:37	0.1	0.2
126	9/5/2019 09:45:37	0.1	0.2
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128	9/5/2019 09:47:37	0.1	0.2
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130	9/5/2019 09:49:37	0.1	0.2
131	9/5/2019 09:50:37	0.1	0.2
132	9/5/2019 09:51:37	0.1	0.2
133	9/5/2019 09:52:37	0.1	0.2
134	9/5/2019 09:53:37	0.1	0.1
135	9/5/2019 09:54:37	0.1	0.1
136	9/5/2019 09:55:37	0.1	0.1
137	9/5/2019 09:56:37	0.1	0.1
138	9/5/2019 09:57:37	0.1	0.1
139	9/5/2019 09:58:37	0.1	0.1
140	9/5/2019 09:59:37	0.1	0.1
141	9/5/2019 10:00:37	0.1	0.1
142	9/5/2019 10:01:37	0.1	0.1

143	9/5/2019 10:02:37	0.1	0.1
144	9/5/2019 10:03:37	0.1	0.1
145	9/5/2019 10:04:37	0.1	0.1
146	9/5/2019 10:05:37	0.1	0.1
147	9/5/2019 10:06:37	0.1	0.1
148	9/5/2019 10:07:37	0.1	0.1
149	9/5/2019 10:08:37	0.1	0.1
150	9/5/2019 10:09:37	0.1	0.1
151	9/5/2019 10:10:37	0.1	0.1
152	9/5/2019 10:11:37	0.1	0.1
153	9/5/2019 10:12:37	0.1	0.1
154	9/5/2019 10:13:37	0.1	0.1
155	9/5/2019 10:14:37	0.1	0.1
156	9/5/2019 10:15:37	0.1	0.1
157	9/5/2019 10:16:37	0.1	0.1
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161	9/5/2019 10:20:37	0.1	0.1
162	9/5/2019 10:21:37	0.1	0.1
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164	9/5/2019 10:23:37	0.1	0.1
165	9/5/2019 10:24:37	0.1	0.1
166	9/5/2019 10:25:37	0.1	0.0

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173	9/5/2019 10:32:37	0.1	0.0
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175	9/5/2019 10:34:37	0.1	0.0
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177	9/5/2019 10:36:37	0.1	0.0
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185	9/5/2019 10:44:37	0.1	0.0
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189	9/5/2019 10:48:37	0.1	0.0
190	9/5/2019 10:49:37	0.1	0.0

191	9/5/2019 10:50:37	0.1	0.0
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193	9/5/2019 10:52:37	0.1	0.0
194	9/5/2019 10:53:37	0.1	0.0
195	9/5/2019 10:54:37	0.1	0.0
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197	9/5/2019 10:56:37	0.1	0.0
198	9/5/2019 10:57:37	0.1	0.0
199	9/5/2019 10:58:37	0.1	0.0
200	9/5/2019 10:59:37	0.1	0.0
201	9/5/2019 11:00:37	0.1	0.0
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203	9/5/2019 11:02:37	0.1	0.0
204	9/5/2019 11:03:37	0.1	0.0
205	9/5/2019 11:04:37	0.1	0.0
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214	9/5/2019 11:13:37	0.1	0.0

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217	9/5/2019 11:16:37	0.1	0.0
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219	9/5/2019 11:18:37	0.1	0.0
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221	9/5/2019 11:20:37	0.1	0.0
222	9/5/2019 11:21:37	0.1	0.0
223	9/5/2019 11:22:37	0.1	0.0
224	9/5/2019 11:23:37	0.1	0.0
225	9/5/2019 11:24:37	0.1	0.0
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229	9/5/2019 11:28:37	0.1	0.0
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235	9/5/2019 11:34:37	0.1	0.0
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259	9/5/2019 11:58:37	0.1	0.0
260	9/5/2019 11:59:37	0.1	0.0
261	9/5/2019 12:00:37	0.1	0.0
262	9/5/2019 12:01:37	0.1	0.0

263	9/5/2019 12:02:37	0.1	0.0
264	9/5/2019 12:03:37	0.1	0.0
265	9/5/2019 12:04:37	0.1	0.0
266	9/5/2019 12:05:37	0.1	0.0
267	9/5/2019 12:06:37	0.1	0.0
268	9/5/2019 12:07:37	0.1	0.0
269	9/5/2019 12:08:37	0.1	0.0
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271	9/5/2019 12:10:37	0.1	0.0
272	9/5/2019 12:11:37	0.1	0.0
273	9/5/2019 12:12:37	0.1	0.0
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275	9/5/2019 12:14:37	0.1	0.0
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281	9/5/2019 12:20:37	0.1	0.0
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283	9/5/2019 12:22:37	0.1	0.0
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285	9/5/2019 12:24:37	0.1	0.0
286	9/5/2019 12:25:37	0.1	0.0

287	9/5/2019 12:26:37	0.1	0.0
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289	9/5/2019 12:28:37	0.1	0.0
290	9/5/2019 12:29:37	0.1	0.0
291	9/5/2019 12:30:37	0.1	0.0
292	9/5/2019 12:31:37	0.1	0.0
293	9/5/2019 12:32:37	0.1	0.0
294	9/5/2019 12:33:37	0.1	0.0
295	9/5/2019 12:34:37	0.1	0.0
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297	9/5/2019 12:36:37	0.1	0.0
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299	9/5/2019 12:38:37	0.1	0.0
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301	9/5/2019 12:40:37	0.1	0.0
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307	9/5/2019 12:46:37	0.1	0.0
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309	9/5/2019 12:48:37	0.1	0.0
310	9/5/2019 12:49:37	0.1	0.0

311	9/5/2019 12:50:37	0.1	0.0
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313	9/5/2019 12:52:37	0.1	0.0
314	9/5/2019 12:53:37	0.1	0.0
315	9/5/2019 12:54:37	0.1	0.0
316	9/5/2019 12:55:37	0.1	0.0
317	9/5/2019 12:56:37	0.1	0.0
318	9/5/2019 12:57:37	0.1	0.0
319	9/5/2019 12:58:37	0.1	0.0
320	9/5/2019 12:59:37	0.1	0.0
321	9/5/2019 13:00:37	0.1	0.0
322	9/5/2019 13:01:37	0.1	0.0
323	9/5/2019 13:02:37	0.1	0.0
324	9/5/2019 13:03:37	0.1	0.0
325	9/5/2019 13:04:37	0.1	0.0
326	9/5/2019 13:05:37	0.1	0.0
327	9/5/2019 13:06:37	0.1	0.0
328	9/5/2019 13:07:37	0.1	0.0
329	9/5/2019 13:08:37	0.1	0.0
330	9/5/2019 13:09:37	0.1	0.0
331	9/5/2019 13:10:37	0.1	0.0
332	9/5/2019 13:11:37	0.1	0.0
333	9/5/2019 13:12:37	0.1	0.0
334	9/5/2019 13:13:37	0.1	0.0

335	9/5/2019 13:14:37	0.1	0.0
336	9/5/2019 13:15:37	0.1	0.0
337	9/5/2019 13:16:37	0.1	0.0
338	9/5/2019 13:17:37	0.1	0.0
339	9/5/2019 13:18:37	0.1	0.0
340	9/5/2019 13:19:37	0.1	0.0
341	9/5/2019 13:20:37	0.1	0.0
342	9/5/2019 13:21:37	0.1	0.0
343	9/5/2019 13:22:37	0.1	0.0
344	9/5/2019 13:23:37	0.1	0.0
345	9/5/2019 13:24:37	0.1	0.0
346	9/5/2019 13:25:37	0.1	0.0
347	9/5/2019 13:26:37	0.1	0.0
348	9/5/2019 13:27:37	0.1	0.0
349	9/5/2019 13:28:37	0.1	0.0
350	9/5/2019 13:29:37	0.1	0.0
351	9/5/2019 13:30:37	0.1	0.0
352	9/5/2019 13:31:37	0.1	0.0
353	9/5/2019 13:32:37	0.1	0.0
354	9/5/2019 13:33:37	0.1	0.0
355	9/5/2019 13:34:37	0.1	0.0
356	9/5/2019 13:35:37	0.1	0.0
357	9/5/2019 13:36:37	0.1	0.0
358	9/5/2019 13:37:37	0.1	0.0

359	9/5/2019 13:38:37	0.1	0.0
360	9/5/2019 13:39:37	0.1	0.0
361	9/5/2019 13:40:37	0.1	0.0
362	9/5/2019 13:41:37	0.1	0.0
363	9/5/2019 13:42:37	0.1	0.0
364	9/5/2019 13:43:37	0.1	0.0
365	9/5/2019 13:44:37	0.1	0.0
366	9/5/2019 13:45:37	0.1	0.0
367	9/5/2019 13:46:37	0.1	0.0
368	9/5/2019 13:47:37	0.1	0.0
369	9/5/2019 13:48:37	0.1	0.0
370	9/5/2019 13:49:37	0.1	0.0
371	9/5/2019 13:50:37	0.1	0.0
372	9/5/2019 13:51:37	0.1	0.0
373	9/5/2019 13:52:37	0.1	0.0
374	9/5/2019 13:53:37	0.1	0.0
375	9/5/2019 13:54:37	0.1	0.0
376	9/5/2019 13:55:37	0.1	0.0
377	9/5/2019 13:56:37	0.1	0.0
378	9/5/2019 13:57:37	0.1	0.0
379	9/5/2019 13:58:37	0.1	0.0
380	9/5/2019 13:59:37	0.1	0.0
381	9/5/2019 14:00:37	0.1	0.0
382	9/5/2019 14:01:37	0.1	0.0

383	9/5/2019 14:02:37	0.1	0.0
384	9/5/2019 14:03:37	0.1	0.0
385	9/5/2019 14:04:37	0.1	0.0
386	9/5/2019 14:05:37	0.1	0.0
387	9/5/2019 14:06:37	0.1	0.0
388	9/5/2019 14:07:37	0.1	0.0
389	9/5/2019 14:08:37	0.1	0.0
390	9/5/2019 14:09:37	0.1	0.0
391	9/5/2019 14:10:37	0.1	0.0
392	9/5/2019 14:11:37	0.1	0.0
393	9/5/2019 14:12:37	0.1	0.0
394	9/5/2019 14:13:37	0.1	0.0
395	9/5/2019 14:14:37	0.1	0.0
396	9/5/2019 14:15:37	0.1	0.0
397	9/5/2019 14:16:37	0.1	0.0
398	9/5/2019 14:17:37	0.1	0.0
399	9/5/2019 14:18:37	0.1	0.0
400	9/5/2019 14:19:37	0.1	0.0
401	9/5/2019 14:20:37	0.1	0.0
402	9/5/2019 14:21:37	0.1	0.0
403	9/5/2019 14:22:37	0.1	0.0
404	9/5/2019 14:23:37	0.1	0.0
405	9/5/2019 14:24:37	0.1	0.0
406	9/5/2019 14:25:37	0.1	0.0

407	9/5/2019 14:26:37	0.1	0.0
408	9/5/2019 14:27:37	0.1	0.0
409	9/5/2019 14:28:37	0.1	0.0
410	9/5/2019 14:29:37	0.1	0.0
411	9/5/2019 14:30:37	0.1	0.0
412	9/5/2019 14:31:37	0.1	0.0
413	9/5/2019 14:32:37	0.1	0.0
414	9/5/2019 14:33:37	0.1	0.0
415	9/5/2019 14:34:37	0.1	0.0
416	9/5/2019 14:35:37	0.1	0.0
417	9/5/2019 14:36:37	0.1	0.0
418	9/5/2019 14:37:37	0.1	0.0
419	9/5/2019 14:38:37	0.1	0.0
420	9/5/2019 14:39:37	0.1	0.0
421	9/5/2019 14:40:37	0.1	0.0
422	9/5/2019 14:41:37	0.1	0.0
423	9/5/2019 14:42:37	0.1	0.0
424	9/5/2019 14:43:37	0.1	0.0
425	9/5/2019 14:44:37	0.1	0.0
426	9/5/2019 14:45:37	0.1	0.0
427	9/5/2019 14:46:37	0.1	0.0
428	9/5/2019 14:47:37	0.1	0.0
429	9/5/2019 14:48:37	0.1	0.0
430	9/5/2019 14:49:37	0.1	0.0

431	9/5/2019 14:50:37	0.1	0.0
432	9/5/2019 14:51:37	0.1	0.0
433	9/5/2019 14:52:37	0.1	0.0
434	9/5/2019 14:53:37	0.1	0.0
435	9/5/2019 14:54:37	0.1	0.0
436	9/5/2019 14:55:37	0.1	0.0
437	9/5/2019 14:56:37	0.1	0.0
438	9/5/2019 14:57:37	0.1	0.0
439	9/5/2019 14:58:37	0.1	0.0
440	9/5/2019 14:59:37	0.1	0.0
441	9/5/2019 15:00:37	0.1	0.0
442	9/5/2019 15:01:37	0.1	0.0
443	9/5/2019 15:02:37	0.1	0.0
444	9/5/2019 15:03:37	0.1	0.0
445	9/5/2019 15:04:37	0.1	0.0
446	9/5/2019 15:05:37	0.1	0.0
447	9/5/2019 15:06:37	0.1	0.0
448	9/5/2019 15:07:37	0.1	0.0
449	9/5/2019 15:08:37	0.1	0.0
450	9/5/2019 15:09:37	0.1	0.0
451	9/5/2019 15:10:37	0.1	0.0
452	9/5/2019 15:11:37	0.1	0.0
453	9/5/2019 15:12:37	0.1	0.0
454	9/5/2019 15:13:37	0.1	0.0

455	9/5/2019 15:14:37	0.1	0.0
456	9/5/2019 15:15:37	0.1	0.0
457	9/5/2019 15:16:37	0.1	0.0
458	9/5/2019 15:17:37	0.1	0.0
459	9/5/2019 15:18:37	0.1	0.0
460	9/5/2019 15:19:37	0.1	0.0
461	9/5/2019 15:20:37	0.1	0.0
462	9/5/2019 15:21:37	0.1	0.0
463	9/5/2019 15:22:37	0.1	0.0
464	9/5/2019 15:23:37	0.1	0.0
465	9/5/2019 15:24:37	0.1	0.0
466	9/5/2019 15:25:37	0.1	0.0
467	9/5/2019 15:26:37	0.1	0.0
468	9/5/2019 15:27:37	0.1	0.0
469	9/5/2019 15:28:37	0.1	0.0
470	9/5/2019 15:29:37	0.1	0.0
471	9/5/2019 15:30:37	0.1	0.0
472	9/5/2019 15:31:37	0.1	0.0
473	9/5/2019 15:32:37	0.1	0.0
474	9/5/2019 15:33:37	0.1	0.0
475	9/5/2019 15:34:37	0.1	0.0
476	9/5/2019 15:35:37	0.1	0.0
477	9/5/2019 15:36:37	0.1	0.0
478	9/5/2019 15:37:37	0.1	0.0

479	9/5/2019 15:38:37	0.1	0.0
480	9/5/2019 15:39:37	0.1	0.0
481	9/5/2019 15:40:37	0.1	0.0
482	9/5/2019 15:41:37	0.1	0.0
483	9/5/2019 15:42:37	0.1	0.0
484	9/5/2019 15:43:37	0.1	0.0
485	9/5/2019 15:44:37	0.1	0.0
486	9/5/2019 15:45:37	0.1	0.0
487	9/5/2019 15:46:37	0.1	0.0
488	9/5/2019 15:47:37	0.1	0.0
489	9/5/2019 15:48:37	0.1	0.0
490	9/5/2019 15:49:37	0.1	0.0
491	9/5/2019 15:50:37	0.1	0.0
492	9/5/2019 15:51:37	0.1	0.0
493	9/5/2019 15:52:37	0.1	0.0
494	9/5/2019 15:53:37	0.1	0.0
495	9/5/2019 15:54:37	0.1	0.0
496	9/5/2019 15:55:37	0.1	0.0
497	9/5/2019 15:56:37	0.1	0.0
498	9/5/2019 15:57:37	0.1	0.0
499	9/5/2019 15:58:37	0.1	0.0
500	9/5/2019 15:59:37	0.1	0.0
501	9/5/2019 16:00:37	0.1	0.0
502	9/5/2019 16:01:37	0.1	0.0

Test 018

Instrument		Data Properties	
Model	DustTrak DRX	Start Date	09/05/2019
Instrument S/N	8533151804	Start Time	07:26:24
		Stop Date	09/05/2019
		Stop Time	15:41:24
		Total Time	0:08:15:00
		Logging Interval	900 seconds

Test Data

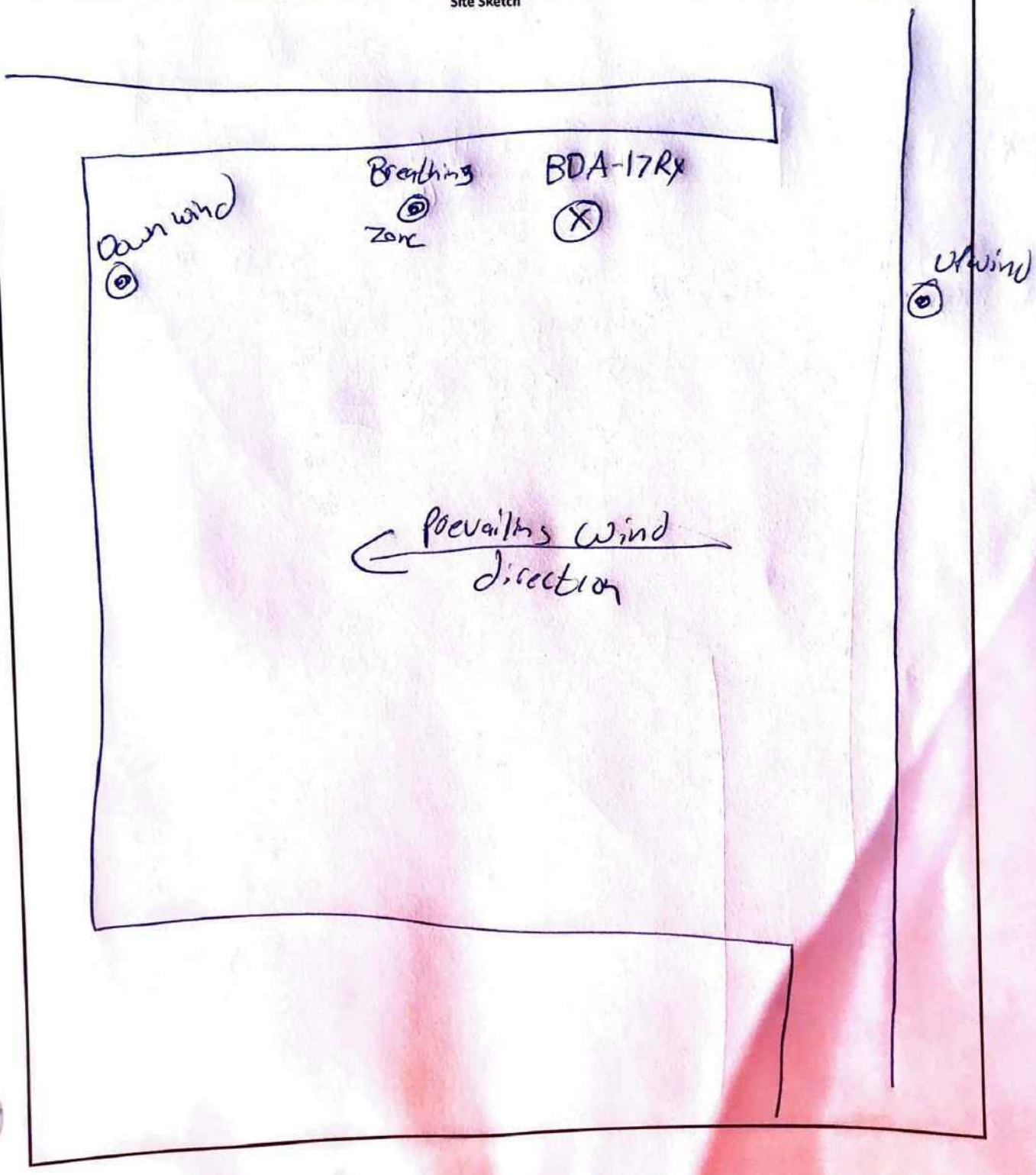
Data Point	Date	Time	PM1 mg/m^3	PM2.5 mg/m^3	RESP mg/m^3	PM10 mg/m^3	TOTAL mg/m^3
1	09/05/2019	07:41:24	0.008	0.008	0.009	0.011	0.013
2	09/05/2019	07:56:24	0.009	0.011	0.012	0.015	0.017
3	09/05/2019	08:11:24	0.009	0.011	0.012	0.014	0.016
4	09/05/2019	08:26:24	0.008	0.009	0.010	0.012	0.014
5	09/05/2019	08:41:24	0.006	0.007	0.007	0.008	0.009
6	09/05/2019	08:56:24	0.006	0.007	0.007	0.008	0.009
7	09/05/2019	09:11:24	0.005	0.006	0.006	0.007	0.007
8	09/05/2019	09:26:24	0.005	0.005	0.006	0.006	0.007
9	09/05/2019	09:41:24	0.005	0.006	0.006	0.007	0.007
10	09/05/2019	09:56:24	0.006	0.007	0.007	0.008	0.009
11	09/05/2019	10:11:24	0.005	0.006	0.006	0.007	0.008
12	09/05/2019	10:26:24	0.005	0.005	0.005	0.006	0.006
13	09/05/2019	10:41:24	0.006	0.006	0.006	0.007	0.007
14	09/05/2019	10:56:24	0.007	0.007	0.007	0.008	0.009
15	09/05/2019	11:11:24	0.007	0.007	0.008	0.008	0.009
16	09/05/2019	11:26:24	0.006	0.007	0.007	0.008	0.008
17	09/05/2019	11:41:24	0.007	0.007	0.007	0.008	0.009
18	09/05/2019	11:56:24	0.006	0.006	0.006	0.007	0.008
19	09/05/2019	12:11:24	0.007	0.007	0.007	0.007	0.008
20	09/05/2019	12:26:24	0.006	0.006	0.006	0.007	0.007
21	09/05/2019	12:41:24	0.007	0.007	0.007	0.007	0.008
22	09/05/2019	12:56:24	0.007	0.007	0.008	0.008	0.009
23	09/05/2019	13:11:24	0.009	0.010	0.010	0.011	0.012
24	09/05/2019	13:26:24	0.008	0.008	0.008	0.009	0.011
25	09/05/2019	13:41:24	0.008	0.008	0.008	0.009	0.009
26	09/05/2019	13:56:24	0.009	0.009	0.009	0.009	0.009
27	09/05/2019	14:11:24	0.009	0.009	0.009	0.009	0.010
28	09/05/2019	14:26:24	0.009	0.009	0.009	0.009	0.009
29	09/05/2019	14:41:24	0.011	0.011	0.012	0.012	0.013
30	09/05/2019	14:56:24	0.010	0.010	0.010	0.011	0.011
31	09/05/2019	15:11:24	0.010	0.010	0.010	0.011	0.011
32	09/05/2019	15:26:24	0.010	0.010	0.010	0.011	0.011
33	09/05/2019	15:41:24	0.010	0.010	0.010	0.010	0.010

ARCADIS | Design & Consultancy for natural and built assets

Daily CAMP Log

Project	Phase 2 Groundwater RI
Location	East Syracuse, NY
Date	9/5/19
Weather Conditions	70's Sunny
Upwind Monitor	592-914273
Downwind Monitor	592-914371
Start Time	0730
End Time	1535

Site Sketch



Anne Locke
Associate Manager, Environmental Protection
Environmental, Health and Safety Department
Bristol-Myers Squibb
P.O. Box 4755
Syracuse, NY 13221

Arcadis U.S., Inc.
One Lincoln Center
110 West Fayette Street
Suite 300
Syracuse
New York 13202
Tel 315 446 9120
Fax 315 449 0017
www.arcadis.com

Environmental North

Subject:
Community Air Monitoring During Phase II RI Well Installations Bristol-Myers Squibb Syracuse Facility – East Syracuse, New York 13057

Date:
September 6, 2019

Contact:
William McCune

Phone:
315-671-9172

Email:
William.McCune@arcadis.com

Our ref:
B0087363.0037

Dear Ms. Locke:

The following is a summary of the community air monitoring plan (CAMP) provided by Arcadis U.S., Inc. (Arcadis) during Phase II RI drilling activities conducted at the Bristol-Myers Squibb (BMS) Syracuse North Campus, East Syracuse, NY on September 6, 2019.

September 6, 2019: Parratt-Wolff Inc. (Parratt-Wolff) completed coring activities at BDA-17RX, drilling from 7:30 AM to 12:15 PM. CAMP monitoring included photo ionization detectors at upwind and downwind locations and a DustTrak at a breathing zone location. The prevailing wind direction was observed originating from the southeast through the day. Air quality parameters did not exceed CAMP standards at any time during work activities. Table 1 shows the serial numbers and associated CAMP stations locations.

CAMP Station Locations	Serial Number
Breathing Zone DustTrak	#8533151804
Upwind PID	#592-914273
Downwind PID	#592-914276

Anne Locke
Bristol-Myers Squibb
September 6, 2019

Please contact us with any questions or comments pertaining to this project.

Sincerely,

Arcadis U.S., Inc.

William McCune
Principal Geologist

Attachments

1 CAMP Data Logs
2 Site Sketches/Notes

==========

19/09/06 07:37

****

Summary

Unit Name MiniRAE 3000(PGM-7320)

Unit SN 592-914273

Unit Firmware Ver V1.20A

Running Mode Hygiene Mode

Measure Type Min; Avg; Max; Real

Datalog Mode Continuous

Datalog Type Manual

Diagnostic Mode No

Stop Reason Power Down

Site ID RAE00005

User ID 00000001

Begin 9/6/2019 07:37:31

End 9/6/2019 13:57:52

Sample Period(s) 60

Number of Records 380

Sensor	VOC(ppm)
Span	100.000
Span 2	N/A
Low Alarm	50.000
High Alarm	100.000
Over Alarm	2000.000
STEL Alarm	25.000
TWA Alarm	10.000
Measurement Gas	Isobutylene
Calibration Time	9/6/2019 07:28
Peak	0.000
Min	0.000
Average	0.000

****

Datalog

Index	Date/Time	VOC(ppm) (Min)	VOC(ppm) (Avg)	VOC(ppm) (Max)	VOC(ppm) (Real)	VOC(ppm)
001	9/6/2019 07:38:31	0.000	0.000	0.000	0.000	
002	9/6/2019 07:39:31	0.000	0.000	0.000	0.000	
003	9/6/2019 07:40:31	0.000	0.000	0.000	0.000	
004	9/6/2019 07:41:31	0.000	0.000	0.000	0.000	
005	9/6/2019 07:42:31	0.000	0.000	0.000	0.000	
006	9/6/2019 07:43:31	0.000	0.000	0.000	0.000	

007	9/6/2019 07:44:31	0.000	0.000	0.000	0.000
008	9/6/2019 07:45:31	0.000	0.000	0.000	0.000
009	9/6/2019 07:46:31	0.000	0.000	0.000	0.000
010	9/6/2019 07:47:31	0.000	0.000	0.000	0.000
011	9/6/2019 07:48:31	0.000	0.000	0.000	0.000
012	9/6/2019 07:49:31	0.000	0.000	0.000	0.000
013	9/6/2019 07:50:31	0.000	0.000	0.000	0.000
014	9/6/2019 07:51:31	0.000	0.000	0.000	0.000
015	9/6/2019 07:52:31	0.000	0.000	0.000	0.000
016	9/6/2019 07:53:31	0.000	0.000	0.000	0.000
017	9/6/2019 07:54:31	0.000	0.000	0.000	0.000
018	9/6/2019 07:55:31	0.000	0.000	0.000	0.000
019	9/6/2019 07:56:31	0.000	0.000	0.000	0.000
020	9/6/2019 07:57:31	0.000	0.000	0.000	0.000
021	9/6/2019 07:58:31	0.000	0.000	0.000	0.000
022	9/6/2019 07:59:31	0.000	0.000	0.000	0.000
023	9/6/2019 08:00:31	0.000	0.000	0.000	0.000
024	9/6/2019 08:01:31	0.000	0.000	0.000	0.000
025	9/6/2019 08:02:31	0.000	0.000	0.000	0.000
026	9/6/2019 08:03:31	0.000	0.000	0.000	0.000
027	9/6/2019 08:04:31	0.000	0.000	0.000	0.000
028	9/6/2019 08:05:31	0.000	0.000	0.000	0.000
029	9/6/2019 08:06:31	0.000	0.000	0.000	0.000
030	9/6/2019 08:07:31	0.000	0.000	0.000	0.000

031	9/6/2019 08:08:31	0.000	0.000	0.000	0.000
032	9/6/2019 08:09:31	0.000	0.000	0.000	0.000
033	9/6/2019 08:10:31	0.000	0.000	0.000	0.000
034	9/6/2019 08:11:31	0.000	0.000	0.000	0.000
035	9/6/2019 08:12:31	0.000	0.000	0.000	0.000
036	9/6/2019 08:13:31	0.000	0.000	0.000	0.000
037	9/6/2019 08:14:31	0.000	0.000	0.000	0.000
038	9/6/2019 08:15:31	0.000	0.000	0.000	0.000
039	9/6/2019 08:16:31	0.000	0.000	0.000	0.000
040	9/6/2019 08:17:31	0.000	0.000	0.000	0.000
041	9/6/2019 08:18:31	0.000	0.000	0.000	0.000
042	9/6/2019 08:19:31	0.000	0.000	0.000	0.000
043	9/6/2019 08:20:31	0.000	0.000	0.000	0.000
044	9/6/2019 08:21:31	0.000	0.000	0.000	0.000
045	9/6/2019 08:22:31	0.000	0.000	0.000	0.000
046	9/6/2019 08:23:31	0.000	0.000	0.000	0.000
047	9/6/2019 08:24:31	0.000	0.000	0.000	0.000
048	9/6/2019 08:25:31	0.000	0.000	0.000	0.000
049	9/6/2019 08:26:31	0.000	0.000	0.000	0.000
050	9/6/2019 08:27:31	0.000	0.000	0.000	0.000
051	9/6/2019 08:28:31	0.000	0.000	0.000	0.000
052	9/6/2019 08:29:31	0.000	0.000	0.000	0.000
053	9/6/2019 08:30:31	0.000	0.000	0.000	0.000
054	9/6/2019 08:31:31	0.000	0.000	0.000	0.000

055	9/6/2019 08:32:31	0.000	0.000	0.000	0.000
056	9/6/2019 08:33:31	0.000	0.000	0.000	0.000
057	9/6/2019 08:34:31	0.000	0.000	0.007	0.000
058	9/6/2019 08:35:31	0.000	0.000	0.000	0.000
059	9/6/2019 08:36:31	0.000	0.000	0.000	0.000
060	9/6/2019 08:37:31	0.000	0.000	0.000	0.000
061	9/6/2019 08:38:31	0.000	0.000	0.000	0.000
062	9/6/2019 08:39:31	0.000	0.000	0.000	0.000
063	9/6/2019 08:40:31	0.000	0.000	0.000	0.000
064	9/6/2019 08:41:31	0.000	0.000	0.000	0.000
065	9/6/2019 08:42:31	0.000	0.000	0.000	0.000
066	9/6/2019 08:43:31	0.000	0.000	0.000	0.000
067	9/6/2019 08:44:31	0.000	0.000	0.000	0.000
068	9/6/2019 08:45:31	0.000	0.000	0.000	0.000
069	9/6/2019 08:46:31	0.000	0.000	0.000	0.000
070	9/6/2019 08:47:31	0.000	0.000	0.000	0.000
071	9/6/2019 08:48:31	0.000	0.000	0.000	0.000
072	9/6/2019 08:49:31	0.000	0.000	0.000	0.000
073	9/6/2019 08:50:31	0.000	0.000	0.000	0.000
074	9/6/2019 08:51:31	0.000	0.000	0.000	0.000
075	9/6/2019 08:52:31	0.000	0.000	0.000	0.000
076	9/6/2019 08:53:31	0.000	0.000	0.000	0.000
077	9/6/2019 08:54:31	0.000	0.000	0.000	0.000
078	9/6/2019 08:55:31	0.000	0.000	0.000	0.000

079	9/6/2019 08:56:31	0.000	0.000	0.000	0.000
080	9/6/2019 08:57:31	0.000	0.000	0.001	0.000
081	9/6/2019 08:58:31	0.000	0.000	0.000	0.000
082	9/6/2019 08:59:31	0.000	0.000	0.000	0.000
083	9/6/2019 09:00:31	0.000	0.000	0.000	0.000
084	9/6/2019 09:01:31	0.000	0.000	0.000	0.000
085	9/6/2019 09:02:31	0.000	0.000	0.000	0.000
086	9/6/2019 09:03:31	0.000	0.000	0.000	0.000
087	9/6/2019 09:04:31	0.000	0.000	0.000	0.000
088	9/6/2019 09:05:31	0.000	0.000	0.000	0.000
089	9/6/2019 09:06:31	0.000	0.000	0.000	0.000
090	9/6/2019 09:07:31	0.000	0.000	0.000	0.000
091	9/6/2019 09:08:31	0.000	0.000	0.000	0.000
092	9/6/2019 09:09:31	0.000	0.000	0.000	0.000
093	9/6/2019 09:10:31	0.000	0.000	0.000	0.000
094	9/6/2019 09:11:31	0.000	0.000	0.000	0.000
095	9/6/2019 09:12:31	0.000	0.000	0.000	0.000
096	9/6/2019 09:13:31	0.000	0.000	0.000	0.000
097	9/6/2019 09:14:31	0.000	0.000	0.000	0.000
098	9/6/2019 09:15:31	0.000	0.000	0.000	0.000
099	9/6/2019 09:16:31	0.000	0.000	0.000	0.000
100	9/6/2019 09:17:31	0.000	0.000	0.000	0.000
101	9/6/2019 09:18:31	0.000	0.000	0.000	0.000
102	9/6/2019 09:19:31	0.000	0.000	0.000	0.000

103	9/6/2019 09:20:31	0.000	0.000	0.000	0.000
104	9/6/2019 09:21:31	0.000	0.000	0.000	0.000
105	9/6/2019 09:22:31	0.000	0.000	0.000	0.000
106	9/6/2019 09:23:31	0.000	0.000	0.000	0.000
107	9/6/2019 09:24:31	0.000	0.000	0.000	0.000
108	9/6/2019 09:25:31	0.000	0.000	0.000	0.000
109	9/6/2019 09:26:31	0.000	0.000	0.000	0.000
110	9/6/2019 09:27:31	0.000	0.000	0.000	0.000
111	9/6/2019 09:28:31	0.000	0.000	0.000	0.000
112	9/6/2019 09:29:31	0.000	0.000	0.000	0.000
113	9/6/2019 09:30:31	0.000	0.000	0.000	0.000
114	9/6/2019 09:31:31	0.000	0.000	0.000	0.000
115	9/6/2019 09:32:31	0.000	0.000	0.003	0.000
116	9/6/2019 09:33:31	0.000	0.000	0.000	0.000
117	9/6/2019 09:34:31	0.000	0.000	0.000	0.000
118	9/6/2019 09:35:31	0.000	0.000	0.000	0.000
119	9/6/2019 09:36:31	0.000	0.000	0.000	0.000
120	9/6/2019 09:37:31	0.000	0.000	0.000	0.000
121	9/6/2019 09:38:31	0.000	0.000	0.000	0.000
122	9/6/2019 09:39:31	0.000	0.000	0.000	0.000
123	9/6/2019 09:40:31	0.000	0.000	0.000	0.000
124	9/6/2019 09:41:31	0.000	0.000	0.000	0.000
125	9/6/2019 09:42:31	0.000	0.000	0.000	0.000
126	9/6/2019 09:43:31	0.000	0.000	0.000	0.000

127	9/6/2019 09:44:31	0.000	0.000	0.000	0.000
128	9/6/2019 09:45:31	0.000	0.000	0.000	0.000
129	9/6/2019 09:46:31	0.000	0.000	0.000	0.000
130	9/6/2019 09:47:31	0.000	0.000	0.000	0.000
131	9/6/2019 09:48:31	0.000	0.000	0.000	0.000
132	9/6/2019 09:49:31	0.000	0.000	0.000	0.000
133	9/6/2019 09:50:31	0.000	0.000	0.000	0.000
134	9/6/2019 09:51:31	0.000	0.000	0.000	0.000
135	9/6/2019 09:52:31	0.000	0.000	0.000	0.000
136	9/6/2019 09:53:31	0.000	0.000	0.000	0.000
137	9/6/2019 09:54:31	0.000	0.000	0.000	0.000
138	9/6/2019 09:55:31	0.000	0.000	0.000	0.000
139	9/6/2019 09:56:31	0.000	0.000	0.000	0.000
140	9/6/2019 09:57:31	0.000	0.000	0.000	0.000
141	9/6/2019 09:58:31	0.000	0.000	0.000	0.000
142	9/6/2019 09:59:31	0.000	0.000	0.000	0.000
143	9/6/2019 10:00:31	0.000	0.000	0.000	0.000
144	9/6/2019 10:01:31	0.000	0.000	0.000	0.000
145	9/6/2019 10:02:31	0.000	0.000	0.000	0.000
146	9/6/2019 10:03:31	0.000	0.000	0.000	0.000
147	9/6/2019 10:04:31	0.000	0.000	0.000	0.000
148	9/6/2019 10:05:31	0.000	0.000	0.000	0.000
149	9/6/2019 10:06:31	0.000	0.000	0.000	0.000
150	9/6/2019 10:07:31	0.000	0.000	0.000	0.000

151	9/6/2019 10:08:31	0.000	0.000	0.000	0.000
152	9/6/2019 10:09:31	0.000	0.000	0.000	0.000
153	9/6/2019 10:10:31	0.000	0.000	0.000	0.000
154	9/6/2019 10:11:31	0.000	0.000	0.000	0.000
155	9/6/2019 10:12:31	0.000	0.000	0.000	0.000
156	9/6/2019 10:13:31	0.000	0.000	0.000	0.000
157	9/6/2019 10:14:31	0.000	0.000	0.000	0.000
158	9/6/2019 10:15:31	0.000	0.000	0.000	0.000
159	9/6/2019 10:16:31	0.000	0.000	0.000	0.000
160	9/6/2019 10:17:31	0.000	0.000	0.000	0.000
161	9/6/2019 10:18:31	0.000	0.000	0.000	0.000
162	9/6/2019 10:19:31	0.000	0.000	0.000	0.000
163	9/6/2019 10:20:31	0.000	0.000	0.000	0.000
164	9/6/2019 10:21:31	0.000	0.000	0.000	0.000
165	9/6/2019 10:22:31	0.000	0.000	0.000	0.000
166	9/6/2019 10:23:31	0.000	0.000	0.000	0.000
167	9/6/2019 10:24:31	0.000	0.000	0.000	0.000
168	9/6/2019 10:25:31	0.000	0.000	0.000	0.000
169	9/6/2019 10:26:31	0.000	0.001	0.019	0.000
170	9/6/2019 10:27:31	0.000	0.000	0.000	0.000
171	9/6/2019 10:28:31	0.000	0.000	0.000	0.000
172	9/6/2019 10:29:31	0.000	0.000	0.000	0.000
173	9/6/2019 10:30:31	0.000	0.000	0.000	0.000
174	9/6/2019 10:31:31	0.000	0.000	0.000	0.000

175	9/6/2019 10:32:31	0.000	0.000	0.000	0.000
176	9/6/2019 10:33:31	0.000	0.000	0.000	0.000
177	9/6/2019 10:34:31	0.000	0.000	0.000	0.000
178	9/6/2019 10:35:31	0.000	0.000	0.000	0.000
179	9/6/2019 10:36:31	0.000	0.000	0.000	0.000
180	9/6/2019 10:37:31	0.000	0.000	0.000	0.000
181	9/6/2019 10:38:31	0.000	0.000	0.000	0.000
182	9/6/2019 10:39:31	0.000	0.000	0.000	0.000
183	9/6/2019 10:40:31	0.000	0.000	0.000	0.000
184	9/6/2019 10:41:31	0.000	0.000	0.000	0.000
185	9/6/2019 10:42:31	0.000	0.000	0.000	0.000
186	9/6/2019 10:43:31	0.000	0.000	0.000	0.000
187	9/6/2019 10:44:31	0.000	0.000	0.000	0.000
188	9/6/2019 10:45:31	0.000	0.000	0.000	0.000
189	9/6/2019 10:46:31	0.000	0.000	0.000	0.000
190	9/6/2019 10:47:31	0.000	0.000	0.000	0.000
191	9/6/2019 10:48:31	0.000	0.000	0.000	0.000
192	9/6/2019 10:49:31	0.000	0.000	0.000	0.000
193	9/6/2019 10:50:31	0.000	0.000	0.000	0.000
194	9/6/2019 10:51:31	0.000	0.000	0.000	0.000
195	9/6/2019 10:52:31	0.000	0.000	0.000	0.000
196	9/6/2019 10:53:31	0.000	0.000	0.000	0.000
197	9/6/2019 10:54:31	0.000	0.000	0.000	0.000
198	9/6/2019 10:55:31	0.000	0.000	0.000	0.000

199	9/6/2019 10:56:31	0.000	0.000	0.000	0.000
200	9/6/2019 10:57:31	0.000	0.000	0.000	0.000
201	9/6/2019 10:58:31	0.000	0.000	0.000	0.000
202	9/6/2019 10:59:31	0.000	0.000	0.000	0.000
203	9/6/2019 11:00:31	0.000	0.000	0.000	0.000
204	9/6/2019 11:01:31	0.000	0.000	0.000	0.000
205	9/6/2019 11:02:31	0.000	0.000	0.000	0.000
206	9/6/2019 11:03:31	0.000	0.000	0.000	0.000
207	9/6/2019 11:04:31	0.000	0.000	0.000	0.000
208	9/6/2019 11:05:31	0.000	0.000	0.000	0.000
209	9/6/2019 11:06:31	0.000	0.000	0.000	0.000
210	9/6/2019 11:07:31	0.000	0.000	0.000	0.000
211	9/6/2019 11:08:31	0.000	0.000	0.000	0.000
212	9/6/2019 11:09:31	0.000	0.000	0.000	0.000
213	9/6/2019 11:10:31	0.000	0.000	0.000	0.000
214	9/6/2019 11:11:31	0.000	0.000	0.000	0.000
215	9/6/2019 11:12:31	0.000	0.000	0.000	0.000
216	9/6/2019 11:13:31	0.000	0.000	0.000	0.000
217	9/6/2019 11:14:31	0.000	0.000	0.000	0.000
218	9/6/2019 11:15:31	0.000	0.000	0.000	0.000
219	9/6/2019 11:16:31	0.000	0.000	0.000	0.000
220	9/6/2019 11:17:31	0.000	0.000	0.000	0.000
221	9/6/2019 11:18:31	0.000	0.000	0.000	0.000
222	9/6/2019 11:19:31	0.000	0.000	0.000	0.000

223	9/6/2019 11:20:31	0.000	0.000	0.000	0.000
224	9/6/2019 11:21:31	0.000	0.000	0.000	0.000
225	9/6/2019 11:22:31	0.000	0.000	0.000	0.000
226	9/6/2019 11:23:31	0.000	0.000	0.000	0.000
227	9/6/2019 11:24:31	0.000	0.000	0.000	0.000
228	9/6/2019 11:25:31	0.000	0.000	0.000	0.000
229	9/6/2019 11:26:31	0.000	0.000	0.000	0.000
230	9/6/2019 11:27:31	0.000	0.000	0.000	0.000
231	9/6/2019 11:28:31	0.000	0.000	0.000	0.000
232	9/6/2019 11:29:31	0.000	0.000	0.000	0.000
233	9/6/2019 11:30:31	0.000	0.000	0.000	0.000
234	9/6/2019 11:31:31	0.000	0.000	0.000	0.000
235	9/6/2019 11:32:31	0.000	0.000	0.000	0.000
236	9/6/2019 11:33:31	0.000	0.000	0.000	0.000
237	9/6/2019 11:34:31	0.000	0.000	0.000	0.000
238	9/6/2019 11:35:31	0.000	0.000	0.000	0.000
239	9/6/2019 11:36:31	0.000	0.000	0.000	0.000
240	9/6/2019 11:37:31	0.000	0.000	0.000	0.000
241	9/6/2019 11:38:31	0.000	0.000	0.000	0.000
242	9/6/2019 11:39:31	0.000	0.000	0.000	0.000
243	9/6/2019 11:40:31	0.000	0.000	0.000	0.000
244	9/6/2019 11:41:31	0.000	0.000	0.000	0.000
245	9/6/2019 11:42:31	0.000	0.000	0.000	0.000
246	9/6/2019 11:43:31	0.000	0.000	0.000	0.000

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248	9/6/2019 11:45:31	0.000	0.000	0.000	0.000
249	9/6/2019 11:46:31	0.000	0.000	0.000	0.000
250	9/6/2019 11:47:31	0.000	0.000	0.000	0.000
251	9/6/2019 11:48:31	0.000	0.000	0.000	0.000
252	9/6/2019 11:49:31	0.000	0.000	0.000	0.000
253	9/6/2019 11:50:31	0.000	0.000	0.000	0.000
254	9/6/2019 11:51:31	0.000	0.000	0.000	0.000
255	9/6/2019 11:52:31	0.000	0.000	0.000	0.000
256	9/6/2019 11:53:31	0.000	0.000	0.000	0.000
257	9/6/2019 11:54:31	0.000	0.000	0.000	0.000
258	9/6/2019 11:55:31	0.000	0.000	0.000	0.000
259	9/6/2019 11:56:31	0.000	0.000	0.000	0.000
260	9/6/2019 11:57:31	0.000	0.000	0.000	0.000
261	9/6/2019 11:58:31	0.000	0.000	0.000	0.000
262	9/6/2019 11:59:31	0.000	0.000	0.000	0.000
263	9/6/2019 12:00:31	0.000	0.000	0.000	0.000
264	9/6/2019 12:01:31	0.000	0.000	0.000	0.000
265	9/6/2019 12:02:31	0.000	0.000	0.000	0.000
266	9/6/2019 12:03:31	0.000	0.000	0.000	0.000
267	9/6/2019 12:04:31	0.000	0.000	0.000	0.000
268	9/6/2019 12:05:31	0.000	0.000	0.000	0.000
269	9/6/2019 12:06:31	0.000	0.000	0.000	0.000
270	9/6/2019 12:07:31	0.000	0.000	0.000	0.000

271	9/6/2019 12:08:31	0.000	0.000	0.000	0.000
272	9/6/2019 12:09:31	0.000	0.000	0.000	0.000
273	9/6/2019 12:10:31	0.000	0.000	0.000	0.000
274	9/6/2019 12:11:31	0.000	0.000	0.000	0.000
275	9/6/2019 12:12:31	0.000	0.000	0.000	0.000
276	9/6/2019 12:13:31	0.000	0.000	0.000	0.000
277	9/6/2019 12:14:31	0.000	0.000	0.000	0.000
278	9/6/2019 12:15:31	0.000	0.000	0.000	0.000
279	9/6/2019 12:16:31	0.000	0.000	0.000	0.000
280	9/6/2019 12:17:31	0.000	0.000	0.000	0.000
281	9/6/2019 12:18:31	0.000	0.000	0.000	0.000
282	9/6/2019 12:19:31	0.000	0.000	0.000	0.000
283	9/6/2019 12:20:31	0.000	0.000	0.000	0.000
284	9/6/2019 12:21:31	0.000	0.000	0.000	0.000
285	9/6/2019 12:22:31	0.000	0.000	0.000	0.000
286	9/6/2019 12:23:31	0.000	0.000	0.000	0.000
287	9/6/2019 12:24:31	0.000	0.000	0.000	0.000
288	9/6/2019 12:25:31	0.000	0.000	0.000	0.000
289	9/6/2019 12:26:31	0.000	0.000	0.000	0.000
290	9/6/2019 12:27:31	0.000	0.000	0.000	0.000
291	9/6/2019 12:28:31	0.000	0.000	0.000	0.000
292	9/6/2019 12:29:31	0.000	0.000	0.000	0.000
293	9/6/2019 12:30:31	0.000	0.000	0.000	0.000
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299	9/6/2019 12:36:31	0.000	0.000	0.000	0.000
300	9/6/2019 12:37:31	0.000	0.000	0.000	0.000
301	9/6/2019 12:38:31	0.000	0.000	0.000	0.000
302	9/6/2019 12:39:31	0.000	0.000	0.000	0.000
303	9/6/2019 12:40:31	0.000	0.000	0.000	0.000
304	9/6/2019 12:41:31	0.000	0.000	0.000	0.000
305	9/6/2019 12:42:31	0.000	0.000	0.000	0.000
306	9/6/2019 12:43:31	0.000	0.000	0.000	0.000
307	9/6/2019 12:44:31	0.000	0.000	0.000	0.000
308	9/6/2019 12:45:31	0.000	0.000	0.000	0.000
309	9/6/2019 12:46:31	0.000	0.000	0.000	0.000
310	9/6/2019 12:47:31	0.000	0.000	0.000	0.000
311	9/6/2019 12:48:31	0.000	0.000	0.000	0.000
312	9/6/2019 12:49:31	0.000	0.000	0.000	0.000
313	9/6/2019 12:50:31	0.000	0.000	0.000	0.000
314	9/6/2019 12:51:31	0.000	0.000	0.000	0.000
315	9/6/2019 12:52:31	0.000	0.000	0.000	0.000
316	9/6/2019 12:53:31	0.000	0.000	0.000	0.000
317	9/6/2019 12:54:31	0.000	0.000	0.000	0.000
318	9/6/2019 12:55:31	0.000	0.000	0.000	0.000

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322	9/6/2019 12:59:31	0.000	0.000	0.000	0.000
323	9/6/2019 13:00:31	0.000	0.000	0.000	0.000
324	9/6/2019 13:01:31	0.000	0.000	0.000	0.000
325	9/6/2019 13:02:31	0.000	0.000	0.000	0.000
326	9/6/2019 13:03:31	0.000	0.000	0.000	0.000
327	9/6/2019 13:04:31	0.000	0.000	0.000	0.000
328	9/6/2019 13:05:31	0.000	0.000	0.000	0.000
329	9/6/2019 13:06:31	0.000	0.000	0.000	0.000
330	9/6/2019 13:07:31	0.000	0.000	0.000	0.000
331	9/6/2019 13:08:31	0.000	0.000	0.000	0.000
332	9/6/2019 13:09:31	0.000	0.000	0.000	0.000
333	9/6/2019 13:10:31	0.000	0.000	0.000	0.000
334	9/6/2019 13:11:31	0.000	0.000	0.000	0.000
335	9/6/2019 13:12:31	0.000	0.000	0.000	0.000
336	9/6/2019 13:13:31	0.000	0.000	0.000	0.000
337	9/6/2019 13:14:31	0.000	0.000	0.000	0.000
338	9/6/2019 13:15:31	0.000	0.000	0.000	0.000
339	9/6/2019 13:16:31	0.000	0.000	0.000	0.000
340	9/6/2019 13:17:31	0.000	0.000	0.000	0.000
341	9/6/2019 13:18:31	0.000	0.000	0.000	0.000
342	9/6/2019 13:19:31	0.000	0.000	0.000	0.000

343	9/6/2019 13:20:31	0.000	0.000	0.000	0.000
344	9/6/2019 13:21:31	0.000	0.000	0.000	0.000
345	9/6/2019 13:22:31	0.000	0.000	0.000	0.000
346	9/6/2019 13:23:31	0.000	0.000	0.000	0.000
347	9/6/2019 13:24:31	0.000	0.000	0.000	0.000
348	9/6/2019 13:25:31	0.000	0.000	0.000	0.000
349	9/6/2019 13:26:31	0.000	0.000	0.000	0.000
350	9/6/2019 13:27:31	0.000	0.000	0.000	0.000
351	9/6/2019 13:28:31	0.000	0.000	0.000	0.000
352	9/6/2019 13:29:31	0.000	0.000	0.000	0.000
353	9/6/2019 13:30:31	0.000	0.000	0.000	0.000
354	9/6/2019 13:31:31	0.000	0.000	0.000	0.000
355	9/6/2019 13:32:31	0.000	0.000	0.000	0.000
356	9/6/2019 13:33:31	0.000	0.000	0.000	0.000
357	9/6/2019 13:34:31	0.000	0.000	0.000	0.000
358	9/6/2019 13:35:31	0.000	0.000	0.000	0.000
359	9/6/2019 13:36:31	0.000	0.000	0.000	0.000
360	9/6/2019 13:37:31	0.000	0.000	0.000	0.000
361	9/6/2019 13:38:31	0.000	0.000	0.000	0.000
362	9/6/2019 13:39:31	0.000	0.000	0.000	0.000
363	9/6/2019 13:40:31	0.000	0.000	0.000	0.000
364	9/6/2019 13:41:31	0.000	0.000	0.000	0.000
365	9/6/2019 13:42:31	0.000	0.000	0.000	0.000
366	9/6/2019 13:43:31	0.000	0.000	0.000	0.000

367	9/6/2019 13:44:31	0.000	0.000	0.000	0.000
368	9/6/2019 13:45:31	0.000	0.000	0.000	0.000
369	9/6/2019 13:46:31	0.000	0.000	0.000	0.000
370	9/6/2019 13:47:31	0.000	0.000	0.000	0.000
371	9/6/2019 13:48:31	0.000	0.000	0.000	0.000
372	9/6/2019 13:49:31	0.000	0.000	0.000	0.000
373	9/6/2019 13:50:31	0.000	0.000	0.000	0.000
374	9/6/2019 13:51:31	0.000	0.000	0.000	0.000
375	9/6/2019 13:52:31	0.000	0.000	0.000	0.000
376	9/6/2019 13:53:31	0.000	0.000	0.000	0.000
377	9/6/2019 13:54:31	0.000	0.000	0.000	0.000
378	9/6/2019 13:55:31	0.000	0.000	0.000	0.000
379	9/6/2019 13:56:31	0.000	0.000	0.000	0.000
380	9/6/2019 13:57:31	0.000	0.000	0.000	0.000
Peak		0.000	0.001	0.019	0.000
Min		0.000	0.000	0.000	0.000
Average			0.000	0.000	0.000

****

TWA/STEL

Index	Date/Time	VOC(ppm) (TWA)	VOC(ppm) (STEL)	
001	9/6/2019 07:38:31	0.000	---	
002	9/6/2019 07:39:31	0.000	---	

003	9/6/2019 07:40:31	0.000	---
004	9/6/2019 07:41:31	0.000	---
005	9/6/2019 07:42:31	0.000	---
006	9/6/2019 07:43:31	0.000	---
007	9/6/2019 07:44:31	0.000	---
008	9/6/2019 07:45:31	0.000	---
009	9/6/2019 07:46:31	0.000	---
010	9/6/2019 07:47:31	0.000	---
011	9/6/2019 07:48:31	0.000	---
012	9/6/2019 07:49:31	0.000	---
013	9/6/2019 07:50:31	0.000	---
014	9/6/2019 07:51:31	0.000	---
015	9/6/2019 07:52:31	0.000	0.000
016	9/6/2019 07:53:31	0.000	0.000
017	9/6/2019 07:54:31	0.000	0.000
018	9/6/2019 07:55:31	0.000	0.000
019	9/6/2019 07:56:31	0.000	0.000
020	9/6/2019 07:57:31	0.000	0.000
021	9/6/2019 07:58:31	0.000	0.000
022	9/6/2019 07:59:31	0.000	0.000
023	9/6/2019 08:00:31	0.000	0.000
024	9/6/2019 08:01:31	0.000	0.000
025	9/6/2019 08:02:31	0.000	0.000
026	9/6/2019 08:03:31	0.000	0.000

027	9/6/2019 08:04:31	0.000	0.000
028	9/6/2019 08:05:31	0.000	0.000
029	9/6/2019 08:06:31	0.000	0.000
030	9/6/2019 08:07:31	0.000	0.000
031	9/6/2019 08:08:31	0.000	0.000
032	9/6/2019 08:09:31	0.000	0.000
033	9/6/2019 08:10:31	0.000	0.000
034	9/6/2019 08:11:31	0.000	0.000
035	9/6/2019 08:12:31	0.000	0.000
036	9/6/2019 08:13:31	0.000	0.000
037	9/6/2019 08:14:31	0.000	0.000
038	9/6/2019 08:15:31	0.000	0.000
039	9/6/2019 08:16:31	0.000	0.000
040	9/6/2019 08:17:31	0.000	0.000
041	9/6/2019 08:18:31	0.000	0.000
042	9/6/2019 08:19:31	0.000	0.000
043	9/6/2019 08:20:31	0.000	0.000
044	9/6/2019 08:21:31	0.000	0.000
045	9/6/2019 08:22:31	0.000	0.000
046	9/6/2019 08:23:31	0.000	0.000
047	9/6/2019 08:24:31	0.000	0.000
048	9/6/2019 08:25:31	0.000	0.000
049	9/6/2019 08:26:31	0.000	0.000
050	9/6/2019 08:27:31	0.000	0.000

051	9/6/2019 08:28:31	0.000	0.000
052	9/6/2019 08:29:31	0.000	0.000
053	9/6/2019 08:30:31	0.000	0.000
054	9/6/2019 08:31:31	0.000	0.000
055	9/6/2019 08:32:31	0.000	0.000
056	9/6/2019 08:33:31	0.000	0.000
057	9/6/2019 08:34:31	0.000	0.000
058	9/6/2019 08:35:31	0.000	0.000
059	9/6/2019 08:36:31	0.000	0.000
060	9/6/2019 08:37:31	0.000	0.000
061	9/6/2019 08:38:31	0.000	0.000
062	9/6/2019 08:39:31	0.000	0.000
063	9/6/2019 08:40:31	0.000	0.000
064	9/6/2019 08:41:31	0.000	0.000
065	9/6/2019 08:42:31	0.000	0.000
066	9/6/2019 08:43:31	0.000	0.000
067	9/6/2019 08:44:31	0.000	0.000
068	9/6/2019 08:45:31	0.000	0.000
069	9/6/2019 08:46:31	0.000	0.000
070	9/6/2019 08:47:31	0.000	0.000
071	9/6/2019 08:48:31	0.000	0.000
072	9/6/2019 08:49:31	0.000	0.000
073	9/6/2019 08:50:31	0.000	0.000
074	9/6/2019 08:51:31	0.000	0.000

075	9/6/2019 08:52:31	0.000	0.000
076	9/6/2019 08:53:31	0.000	0.000
077	9/6/2019 08:54:31	0.000	0.000
078	9/6/2019 08:55:31	0.000	0.000
079	9/6/2019 08:56:31	0.000	0.000
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082	9/6/2019 08:59:31	0.000	0.000
083	9/6/2019 09:00:31	0.000	0.000
084	9/6/2019 09:01:31	0.000	0.000
085	9/6/2019 09:02:31	0.000	0.000
086	9/6/2019 09:03:31	0.000	0.000
087	9/6/2019 09:04:31	0.000	0.000
088	9/6/2019 09:05:31	0.000	0.000
089	9/6/2019 09:06:31	0.000	0.000
090	9/6/2019 09:07:31	0.000	0.000
091	9/6/2019 09:08:31	0.000	0.000
092	9/6/2019 09:09:31	0.000	0.000
093	9/6/2019 09:10:31	0.000	0.000
094	9/6/2019 09:11:31	0.000	0.000
095	9/6/2019 09:12:31	0.000	0.000
096	9/6/2019 09:13:31	0.000	0.000
097	9/6/2019 09:14:31	0.000	0.000
098	9/6/2019 09:15:31	0.000	0.000

099	9/6/2019 09:16:31	0.000	0.000
100	9/6/2019 09:17:31	0.000	0.000
101	9/6/2019 09:18:31	0.000	0.000
102	9/6/2019 09:19:31	0.000	0.000
103	9/6/2019 09:20:31	0.000	0.000
104	9/6/2019 09:21:31	0.000	0.000
105	9/6/2019 09:22:31	0.000	0.000
106	9/6/2019 09:23:31	0.000	0.000
107	9/6/2019 09:24:31	0.000	0.000
108	9/6/2019 09:25:31	0.000	0.000
109	9/6/2019 09:26:31	0.000	0.000
110	9/6/2019 09:27:31	0.000	0.000
111	9/6/2019 09:28:31	0.000	0.000
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113	9/6/2019 09:30:31	0.000	0.000
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115	9/6/2019 09:32:31	0.000	0.000
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117	9/6/2019 09:34:31	0.000	0.000
118	9/6/2019 09:35:31	0.000	0.000
119	9/6/2019 09:36:31	0.000	0.000
120	9/6/2019 09:37:31	0.000	0.000
121	9/6/2019 09:38:31	0.000	0.000
122	9/6/2019 09:39:31	0.000	0.000

123	9/6/2019 09:40:31	0.000	0.000
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125	9/6/2019 09:42:31	0.000	0.000
126	9/6/2019 09:43:31	0.000	0.000
127	9/6/2019 09:44:31	0.000	0.000
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129	9/6/2019 09:46:31	0.000	0.000
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131	9/6/2019 09:48:31	0.000	0.000
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135	9/6/2019 09:52:31	0.000	0.000
136	9/6/2019 09:53:31	0.000	0.000
137	9/6/2019 09:54:31	0.000	0.000
138	9/6/2019 09:55:31	0.000	0.000
139	9/6/2019 09:56:31	0.000	0.000
140	9/6/2019 09:57:31	0.000	0.000
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142	9/6/2019 09:59:31	0.000	0.000
143	9/6/2019 10:00:31	0.000	0.000
144	9/6/2019 10:01:31	0.000	0.000
145	9/6/2019 10:02:31	0.000	0.000
146	9/6/2019 10:03:31	0.000	0.000

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149	9/6/2019 10:06:31	0.000	0.000
150	9/6/2019 10:07:31	0.000	0.000
151	9/6/2019 10:08:31	0.000	0.000
152	9/6/2019 10:09:31	0.000	0.000
153	9/6/2019 10:10:31	0.000	0.000
154	9/6/2019 10:11:31	0.000	0.000
155	9/6/2019 10:12:31	0.000	0.000
156	9/6/2019 10:13:31	0.000	0.000
157	9/6/2019 10:14:31	0.000	0.000
158	9/6/2019 10:15:31	0.000	0.000
159	9/6/2019 10:16:31	0.000	0.000
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161	9/6/2019 10:18:31	0.000	0.000
162	9/6/2019 10:19:31	0.000	0.000
163	9/6/2019 10:20:31	0.000	0.000
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165	9/6/2019 10:22:31	0.000	0.000
166	9/6/2019 10:23:31	0.000	0.000
167	9/6/2019 10:24:31	0.000	0.000
168	9/6/2019 10:25:31	0.000	0.000
169	9/6/2019 10:26:31	0.000	0.000
170	9/6/2019 10:27:31	0.000	0.000

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173	9/6/2019 10:30:31	0.000	0.000
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175	9/6/2019 10:32:31	0.000	0.000
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177	9/6/2019 10:34:31	0.000	0.000
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179	9/6/2019 10:36:31	0.000	0.000
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181	9/6/2019 10:38:31	0.000	0.000
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183	9/6/2019 10:40:31	0.000	0.000
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185	9/6/2019 10:42:31	0.000	0.000
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187	9/6/2019 10:44:31	0.000	0.000
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189	9/6/2019 10:46:31	0.000	0.000
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191	9/6/2019 10:48:31	0.000	0.000
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201	9/6/2019 10:58:31	0.000	0.000
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205	9/6/2019 11:02:31	0.000	0.000
206	9/6/2019 11:03:31	0.000	0.000
207	9/6/2019 11:04:31	0.000	0.000
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209	9/6/2019 11:06:31	0.000	0.000
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211	9/6/2019 11:08:31	0.000	0.000
212	9/6/2019 11:09:31	0.000	0.000
213	9/6/2019 11:10:31	0.000	0.000
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215	9/6/2019 11:12:31	0.000	0.000
216	9/6/2019 11:13:31	0.000	0.000
217	9/6/2019 11:14:31	0.000	0.000
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219	9/6/2019 11:16:31	0.000	0.000
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221	9/6/2019 11:18:31	0.000	0.000
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223	9/6/2019 11:20:31	0.000	0.000
224	9/6/2019 11:21:31	0.000	0.000
225	9/6/2019 11:22:31	0.000	0.000
226	9/6/2019 11:23:31	0.000	0.000
227	9/6/2019 11:24:31	0.000	0.000
228	9/6/2019 11:25:31	0.000	0.000
229	9/6/2019 11:26:31	0.000	0.000
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231	9/6/2019 11:28:31	0.000	0.000
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237	9/6/2019 11:34:31	0.000	0.000
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239	9/6/2019 11:36:31	0.000	0.000
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243	9/6/2019 11:40:31	0.000	0.000
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251	9/6/2019 11:48:31	0.000	0.000
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255	9/6/2019 11:52:31	0.000	0.000
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263	9/6/2019 12:00:31	0.000	0.000
264	9/6/2019 12:01:31	0.000	0.000
265	9/6/2019 12:02:31	0.000	0.000
266	9/6/2019 12:03:31	0.000	0.000

267	9/6/2019 12:04:31	0.000	0.000
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269	9/6/2019 12:06:31	0.000	0.000
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271	9/6/2019 12:08:31	0.000	0.000
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273	9/6/2019 12:10:31	0.000	0.000
274	9/6/2019 12:11:31	0.000	0.000
275	9/6/2019 12:12:31	0.000	0.000
276	9/6/2019 12:13:31	0.000	0.000
277	9/6/2019 12:14:31	0.000	0.000
278	9/6/2019 12:15:31	0.000	0.000
279	9/6/2019 12:16:31	0.000	0.000
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281	9/6/2019 12:18:31	0.000	0.000
282	9/6/2019 12:19:31	0.000	0.000
283	9/6/2019 12:20:31	0.000	0.000
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285	9/6/2019 12:22:31	0.000	0.000
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287	9/6/2019 12:24:31	0.000	0.000
288	9/6/2019 12:25:31	0.000	0.000
289	9/6/2019 12:26:31	0.000	0.000
290	9/6/2019 12:27:31	0.000	0.000

291	9/6/2019 12:28:31	0.000	0.000
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293	9/6/2019 12:30:31	0.000	0.000
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295	9/6/2019 12:32:31	0.000	0.000
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299	9/6/2019 12:36:31	0.000	0.000
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305	9/6/2019 12:42:31	0.000	0.000
306	9/6/2019 12:43:31	0.000	0.000
307	9/6/2019 12:44:31	0.000	0.000
308	9/6/2019 12:45:31	0.000	0.000
309	9/6/2019 12:46:31	0.000	0.000
310	9/6/2019 12:47:31	0.000	0.000
311	9/6/2019 12:48:31	0.000	0.000
312	9/6/2019 12:49:31	0.000	0.000
313	9/6/2019 12:50:31	0.000	0.000
314	9/6/2019 12:51:31	0.000	0.000

315	9/6/2019 12:52:31	0.000	0.000
316	9/6/2019 12:53:31	0.000	0.000
317	9/6/2019 12:54:31	0.000	0.000
318	9/6/2019 12:55:31	0.000	0.000
319	9/6/2019 12:56:31	0.000	0.000
320	9/6/2019 12:57:31	0.000	0.000
321	9/6/2019 12:58:31	0.000	0.000
322	9/6/2019 12:59:31	0.000	0.000
323	9/6/2019 13:00:31	0.000	0.000
324	9/6/2019 13:01:31	0.000	0.000
325	9/6/2019 13:02:31	0.000	0.000
326	9/6/2019 13:03:31	0.000	0.000
327	9/6/2019 13:04:31	0.000	0.000
328	9/6/2019 13:05:31	0.000	0.000
329	9/6/2019 13:06:31	0.000	0.000
330	9/6/2019 13:07:31	0.000	0.000
331	9/6/2019 13:08:31	0.000	0.000
332	9/6/2019 13:09:31	0.000	0.000
333	9/6/2019 13:10:31	0.000	0.000
334	9/6/2019 13:11:31	0.000	0.000
335	9/6/2019 13:12:31	0.000	0.000
336	9/6/2019 13:13:31	0.000	0.000
337	9/6/2019 13:14:31	0.000	0.000
338	9/6/2019 13:15:31	0.000	0.000

339	9/6/2019 13:16:31	0.000	0.000
340	9/6/2019 13:17:31	0.000	0.000
341	9/6/2019 13:18:31	0.000	0.000
342	9/6/2019 13:19:31	0.000	0.000
343	9/6/2019 13:20:31	0.000	0.000
344	9/6/2019 13:21:31	0.000	0.000
345	9/6/2019 13:22:31	0.000	0.000
346	9/6/2019 13:23:31	0.000	0.000
347	9/6/2019 13:24:31	0.000	0.000
348	9/6/2019 13:25:31	0.000	0.000
349	9/6/2019 13:26:31	0.000	0.000
350	9/6/2019 13:27:31	0.000	0.000
351	9/6/2019 13:28:31	0.000	0.000
352	9/6/2019 13:29:31	0.000	0.000
353	9/6/2019 13:30:31	0.000	0.000
354	9/6/2019 13:31:31	0.000	0.000
355	9/6/2019 13:32:31	0.000	0.000
356	9/6/2019 13:33:31	0.000	0.000
357	9/6/2019 13:34:31	0.000	0.000
358	9/6/2019 13:35:31	0.000	0.000
359	9/6/2019 13:36:31	0.000	0.000
360	9/6/2019 13:37:31	0.000	0.000
361	9/6/2019 13:38:31	0.000	0.000
362	9/6/2019 13:39:31	0.000	0.000

363	9/6/2019 13:40:31	0.000	0.000
364	9/6/2019 13:41:31	0.000	0.000
365	9/6/2019 13:42:31	0.000	0.000
366	9/6/2019 13:43:31	0.000	0.000
367	9/6/2019 13:44:31	0.000	0.000
368	9/6/2019 13:45:31	0.000	0.000
369	9/6/2019 13:46:31	0.000	0.000
370	9/6/2019 13:47:31	0.000	0.000
371	9/6/2019 13:48:31	0.000	0.000
372	9/6/2019 13:49:31	0.000	0.000
373	9/6/2019 13:50:31	0.000	0.000
374	9/6/2019 13:51:31	0.000	0.000
375	9/6/2019 13:52:31	0.000	0.000
376	9/6/2019 13:53:31	0.000	0.000
377	9/6/2019 13:54:31	0.000	0.000
378	9/6/2019 13:55:31	0.000	0.000
379	9/6/2019 13:56:31	0.000	0.000
380	9/6/2019 13:57:31	0.000	0.000

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19/09/06 07:48

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Summary

Unit Name MiniRAE 3000(PGM-7320)

Unit SN 592-914376

Unit Firmware Ver V2.14

Running Mode Hygiene Mode

Datalog Mode Auto

Diagnostic Mode No

Stop Reason Power Down

Site ID RAE00000

User ID 00000001

Begin 9/6/2019 07:48:26

End 9/6/2019 14:03:01

Sample Period(s) 60

Number of Records 374

Sensor PID(ppm)

Sensor SN S023030126S2

Measure Type Min; Avg; Max; Real

Span 100.0

Span 2 1000.0

Low Alarm 50.0

High Alarm 100.0

Over Alarm 2000.0

STEL Alarm	25.0
TWA Alarm	10.0
Measurement Gas	Isobutylene
Calibration Time	9/6/2019 07:47
Peak	0.1
Min	0.0
Average	0.0

****

Datalog

Index	Date/Time	PID(ppm) (Min)	PID(ppm) (Avg)	PID(ppm) (Max)	PID(ppm) (Real)	
001	9/6/2019 07:49:26	0.0	0.0	0.0	0.0	
002	9/6/2019 07:50:26	0.0	0.0	0.0	0.0	
003	9/6/2019 07:51:26	0.0	0.0	0.0	0.0	
004	9/6/2019 07:52:26	0.0	0.0	0.0	0.0	
005	9/6/2019 07:53:26	0.0	0.0	0.0	0.0	
006	9/6/2019 07:54:26	0.0	0.0	0.0	0.0	
007	9/6/2019 07:55:26	0.0	0.0	0.0	0.0	
008	9/6/2019 07:56:26	0.0	0.0	0.0	0.0	
009	9/6/2019 07:57:26	0.0	0.0	0.0	0.0	
010	9/6/2019 07:58:26	0.0	0.0	0.0	0.0	
011	9/6/2019 07:59:26	0.0	0.0	0.0	0.0	
012	9/6/2019 08:00:26	0.0	0.0	0.0	0.0	

013	9/6/2019 08:01:26	0.0	0.0	0.0	0.0
014	9/6/2019 08:02:26	0.0	0.0	0.0	0.0
015	9/6/2019 08:03:26	0.0	0.0	0.0	0.0
016	9/6/2019 08:04:26	0.0	0.0	0.0	0.0
017	9/6/2019 08:05:26	0.0	0.0	0.0	0.0
018	9/6/2019 08:06:26	0.0	0.0	0.0	0.0
019	9/6/2019 08:07:26	0.0	0.0	0.0	0.0
020	9/6/2019 08:08:26	0.0	0.0	0.0	0.0
021	9/6/2019 08:09:26	0.0	0.0	0.0	0.0
022	9/6/2019 08:10:26	0.0	0.0	0.0	0.0
023	9/6/2019 08:11:26	0.0	0.0	0.0	0.0
024	9/6/2019 08:12:26	0.0	0.0	0.0	0.0
025	9/6/2019 08:13:26	0.0	0.0	0.0	0.0
026	9/6/2019 08:14:26	0.0	0.0	0.0	0.0
027	9/6/2019 08:15:26	0.0	0.0	0.0	0.0
028	9/6/2019 08:16:26	0.0	0.0	0.0	0.0
029	9/6/2019 08:17:26	0.0	0.0	0.0	0.0
030	9/6/2019 08:18:26	0.0	0.0	0.0	0.0
031	9/6/2019 08:19:26	0.0	0.0	0.0	0.0
032	9/6/2019 08:20:26	0.0	0.0	0.0	0.0
033	9/6/2019 08:21:26	0.0	0.0	0.0	0.0
034	9/6/2019 08:22:26	0.0	0.0	0.0	0.0
035	9/6/2019 08:23:26	0.0	0.0	0.0	0.0
036	9/6/2019 08:24:26	0.0	0.0	0.0	0.0

037	9/6/2019 08:25:26	0.0	0.0	0.0	0.0
038	9/6/2019 08:26:26	0.0	0.0	0.0	0.0
039	9/6/2019 08:27:26	0.0	0.0	0.0	0.0
040	9/6/2019 08:28:26	0.0	0.0	0.0	0.0
041	9/6/2019 08:29:26	0.0	0.0	0.0	0.0
042	9/6/2019 08:30:26	0.0	0.0	0.0	0.0
043	9/6/2019 08:31:26	0.0	0.0	0.0	0.0
044	9/6/2019 08:32:26	0.0	0.0	0.0	0.0
045	9/6/2019 08:33:26	0.0	0.0	0.0	0.0
046	9/6/2019 08:34:26	0.0	0.0	0.0	0.0
047	9/6/2019 08:35:26	0.0	0.0	0.0	0.0
048	9/6/2019 08:36:26	0.0	0.0	0.0	0.0
049	9/6/2019 08:37:26	0.0	0.0	0.0	0.0
050	9/6/2019 08:38:26	0.0	0.0	0.0	0.0
051	9/6/2019 08:39:26	0.0	0.0	0.0	0.0
052	9/6/2019 08:40:26	0.0	0.0	0.0	0.0
053	9/6/2019 08:41:26	0.0	0.0	0.0	0.0
054	9/6/2019 08:42:26	0.0	0.0	0.0	0.0
055	9/6/2019 08:43:26	0.0	0.0	0.0	0.0
056	9/6/2019 08:44:26	0.0	0.0	0.0	0.0
057	9/6/2019 08:45:26	0.0	0.0	0.0	0.0
058	9/6/2019 08:46:26	0.0	0.0	0.0	0.0
059	9/6/2019 08:47:26	0.0	0.0	0.0	0.0
060	9/6/2019 08:48:26	0.0	0.0	0.1	0.0

061	9/6/2019 08:49:26	0.0	0.0	0.0	0.0
062	9/6/2019 08:50:26	0.0	0.0	0.0	0.0
063	9/6/2019 08:51:26	0.0	0.0	0.0	0.0
064	9/6/2019 08:52:26	0.0	0.0	0.0	0.0
065	9/6/2019 08:53:26	0.0	0.0	0.0	0.0
066	9/6/2019 08:54:26	0.0	0.0	0.0	0.0
067	9/6/2019 08:55:26	0.0	0.0	0.0	0.0
068	9/6/2019 08:56:26	0.0	0.0	0.0	0.0
069	9/6/2019 08:57:26	0.0	0.0	0.0	0.0
070	9/6/2019 08:58:26	0.0	0.0	0.0	0.0
071	9/6/2019 08:59:26	0.0	0.0	0.0	0.0
072	9/6/2019 09:00:26	0.0	0.0	0.0	0.0
073	9/6/2019 09:01:26	0.0	0.0	0.0	0.0
074	9/6/2019 09:02:26	0.0	0.0	0.0	0.0
075	9/6/2019 09:03:26	0.0	0.0	0.0	0.0
076	9/6/2019 09:04:26	0.0	0.0	0.0	0.0
077	9/6/2019 09:05:26	0.0	0.0	0.0	0.0
078	9/6/2019 09:06:26	0.0	0.0	0.0	0.0
079	9/6/2019 09:07:26	0.0	0.0	0.0	0.0
080	9/6/2019 09:08:26	0.0	0.0	0.0	0.0
081	9/6/2019 09:09:26	0.0	0.0	0.0	0.0
082	9/6/2019 09:10:26	0.0	0.0	0.0	0.0
083	9/6/2019 09:11:26	0.0	0.0	0.0	0.0
084	9/6/2019 09:12:26	0.0	0.0	0.0	0.0

085	9/6/2019 09:13:26	0.0	0.0	0.0	0.0
086	9/6/2019 09:14:26	0.0	0.0	0.0	0.0
087	9/6/2019 09:15:26	0.0	0.0	0.0	0.0
088	9/6/2019 09:16:26	0.0	0.0	0.0	0.0
089	9/6/2019 09:17:26	0.0	0.0	0.0	0.0
090	9/6/2019 09:18:26	0.0	0.0	0.0	0.0
091	9/6/2019 09:19:26	0.0	0.0	0.0	0.0
092	9/6/2019 09:20:26	0.0	0.0	0.0	0.0
093	9/6/2019 09:21:26	0.0	0.0	0.0	0.0
094	9/6/2019 09:22:26	0.0	0.0	0.0	0.0
095	9/6/2019 09:23:26	0.0	0.0	0.0	0.0
096	9/6/2019 09:24:26	0.0	0.0	0.0	0.0
097	9/6/2019 09:25:26	0.0	0.0	0.0	0.0
098	9/6/2019 09:26:26	0.0	0.0	0.0	0.0
099	9/6/2019 09:27:26	0.0	0.0	0.0	0.0
100	9/6/2019 09:28:26	0.0	0.0	0.0	0.0
101	9/6/2019 09:29:26	0.0	0.0	0.0	0.0
102	9/6/2019 09:30:26	0.0	0.0	0.0	0.0
103	9/6/2019 09:31:26	0.0	0.0	0.0	0.0
104	9/6/2019 09:32:26	0.0	0.0	0.0	0.0
105	9/6/2019 09:33:26	0.0	0.0	0.0	0.0
106	9/6/2019 09:34:26	0.0	0.0	0.0	0.0
107	9/6/2019 09:35:26	0.0	0.0	0.0	0.0
108	9/6/2019 09:36:26	0.0	0.0	0.0	0.0

109	9/6/2019 09:37:26	0.0	0.0	0.0	0.0
110	9/6/2019 09:38:26	0.0	0.0	0.0	0.0
111	9/6/2019 09:39:26	0.0	0.0	0.0	0.0
112	9/6/2019 09:40:26	0.0	0.0	0.0	0.0
113	9/6/2019 09:41:26	0.0	0.0	0.0	0.0
114	9/6/2019 09:42:26	0.0	0.0	0.0	0.0
115	9/6/2019 09:43:26	0.0	0.0	0.0	0.0
116	9/6/2019 09:44:26	0.0	0.0	0.0	0.0
117	9/6/2019 09:45:26	0.0	0.0	0.0	0.0
118	9/6/2019 09:46:26	0.0	0.0	0.0	0.0
119	9/6/2019 09:47:26	0.0	0.0	0.0	0.0
120	9/6/2019 09:48:26	0.0	0.0	0.0	0.0
121	9/6/2019 09:49:26	0.0	0.0	0.0	0.0
122	9/6/2019 09:50:26	0.0	0.0	0.0	0.0
123	9/6/2019 09:51:26	0.0	0.0	0.0	0.0
124	9/6/2019 09:52:26	0.0	0.0	0.0	0.0
125	9/6/2019 09:53:26	0.0	0.0	0.0	0.0
126	9/6/2019 09:54:26	0.0	0.0	0.0	0.0
127	9/6/2019 09:55:26	0.0	0.0	0.0	0.0
128	9/6/2019 09:56:26	0.0	0.0	0.0	0.0
129	9/6/2019 09:57:26	0.0	0.0	0.1	0.1
130	9/6/2019 09:58:26	0.0	0.1	0.1	0.1
131	9/6/2019 09:59:26	0.1	0.1	0.1	0.1
132	9/6/2019 10:00:26	0.1	0.1	0.1	0.1

133	9/6/2019 10:01:26	0.1	0.1	0.1	0.1
134	9/6/2019 10:02:26	0.1	0.1	0.1	0.1
135	9/6/2019 10:03:26	0.1	0.1	0.1	0.1
136	9/6/2019 10:04:26	0.1	0.1	0.1	0.1
137	9/6/2019 10:05:26	0.1	0.1	0.1	0.1
138	9/6/2019 10:06:26	0.1	0.1	0.1	0.1
139	9/6/2019 10:07:26	0.1	0.1	0.1	0.1
140	9/6/2019 10:08:26	0.1	0.1	0.1	0.1
141	9/6/2019 10:09:26	0.1	0.1	0.1	0.1
142	9/6/2019 10:10:26	0.1	0.1	0.1	0.1
143	9/6/2019 10:11:26	0.1	0.1	0.1	0.1
144	9/6/2019 10:12:26	0.1	0.1	0.1	0.1
145	9/6/2019 10:13:26	0.1	0.1	0.1	0.1
146	9/6/2019 10:14:26	0.1	0.1	0.1	0.1
147	9/6/2019 10:15:26	0.1	0.1	0.1	0.1
148	9/6/2019 10:16:26	0.1	0.1	0.1	0.1
149	9/6/2019 10:17:26	0.1	0.1	0.1	0.1
150	9/6/2019 10:18:26	0.1	0.1	0.1	0.1
151	9/6/2019 10:19:26	0.1	0.1	0.1	0.1
152	9/6/2019 10:20:26	0.1	0.1	0.1	0.1
153	9/6/2019 10:21:26	0.1	0.1	0.1	0.1
154	9/6/2019 10:22:26	0.1	0.1	0.1	0.1
155	9/6/2019 10:23:26	0.1	0.1	0.1	0.1
156	9/6/2019 10:24:26	0.1	0.1	0.1	0.1

157	9/6/2019 10:25:26	0.1	0.1	0.1	0.1
158	9/6/2019 10:26:26	0.1	0.1	0.1	0.1
159	9/6/2019 10:27:26	0.1	0.1	0.1	0.1
160	9/6/2019 10:28:26	0.1	0.1	0.1	0.1
161	9/6/2019 10:29:26	0.1	0.1	0.1	0.1
162	9/6/2019 10:30:26	0.1	0.1	0.1	0.1
163	9/6/2019 10:31:26	0.1	0.1	0.1	0.1
164	9/6/2019 10:32:26	0.1	0.1	0.1	0.1
165	9/6/2019 10:33:26	0.1	0.1	0.1	0.1
166	9/6/2019 10:34:26	0.1	0.1	0.1	0.1
167	9/6/2019 10:35:26	0.1	0.1	0.1	0.1
168	9/6/2019 10:36:26	0.0	0.1	0.1	0.1
169	9/6/2019 10:37:26	0.1	0.1	0.1	0.1
170	9/6/2019 10:38:26	0.1	0.1	0.1	0.1
171	9/6/2019 10:39:26	0.0	0.1	0.1	0.1
172	9/6/2019 10:40:26	0.0	0.1	0.1	0.1
173	9/6/2019 10:41:26	0.0	0.1	0.1	0.1
174	9/6/2019 10:42:26	0.0	0.1	0.1	0.1
175	9/6/2019 10:43:26	0.0	0.1	0.1	0.1
176	9/6/2019 10:44:26	0.0	0.1	0.1	0.0
177	9/6/2019 10:45:26	0.0	0.0	0.1	0.0
178	9/6/2019 10:46:26	0.0	0.0	0.1	0.0
179	9/6/2019 10:47:26	0.0	0.0	0.1	0.0
180	9/6/2019 10:48:26	0.0	0.0	0.1	0.0

181	9/6/2019 10:49:26	0.0	0.0	0.1	0.0
182	9/6/2019 10:50:26	0.0	0.1	0.1	0.1
183	9/6/2019 10:51:26	0.0	0.0	0.1	0.1
184	9/6/2019 10:52:26	0.0	0.0	0.1	0.0
185	9/6/2019 10:53:26	0.0	0.0	0.1	0.0
186	9/6/2019 10:54:26	0.0	0.0	0.1	0.0
187	9/6/2019 10:55:26	0.0	0.0	0.1	0.0
188	9/6/2019 10:56:26	0.0	0.0	0.1	0.0
189	9/6/2019 10:57:26	0.0	0.0	0.0	0.0
190	9/6/2019 10:58:26	0.0	0.0	0.1	0.0
191	9/6/2019 10:59:26	0.0	0.0	0.1	0.1
192	9/6/2019 11:00:26	0.0	0.0	0.1	0.0
193	9/6/2019 11:01:26	0.0	0.0	0.0	0.0
194	9/6/2019 11:02:26	0.0	0.0	0.0	0.0
195	9/6/2019 11:03:26	0.0	0.0	0.0	0.0
196	9/6/2019 11:04:26	0.0	0.0	0.0	0.0
197	9/6/2019 11:05:26	0.0	0.0	0.0	0.0
198	9/6/2019 11:06:26	0.0	0.0	0.0	0.0
199	9/6/2019 11:07:26	0.0	0.0	0.0	0.0
200	9/6/2019 11:08:26	0.0	0.0	0.0	0.0
201	9/6/2019 11:09:26	0.0	0.0	0.0	0.0
202	9/6/2019 11:10:26	0.0	0.0	0.0	0.0
203	9/6/2019 11:11:26	0.0	0.0	0.0	0.0
204	9/6/2019 11:12:26	0.0	0.0	0.1	0.0

205	9/6/2019 11:13:26	0.0	0.0	0.0	0.0
206	9/6/2019 11:14:26	0.0	0.0	0.0	0.0
207	9/6/2019 11:15:26	0.0	0.0	0.0	0.0
208	9/6/2019 11:16:26	0.0	0.0	0.0	0.0
209	9/6/2019 11:17:26	0.0	0.0	0.0	0.0
210	9/6/2019 11:18:26	0.0	0.0	0.0	0.0
211	9/6/2019 11:19:26	0.0	0.0	0.0	0.0
212	9/6/2019 11:20:26	0.0	0.0	0.0	0.0
213	9/6/2019 11:21:26	0.0	0.0	0.0	0.0
214	9/6/2019 11:22:26	0.0	0.0	0.0	0.0
215	9/6/2019 11:23:26	0.0	0.0	0.0	0.0
216	9/6/2019 11:24:26	0.0	0.0	0.0	0.0
217	9/6/2019 11:25:26	0.0	0.0	0.0	0.0
218	9/6/2019 11:26:26	0.0	0.0	0.1	0.0
219	9/6/2019 11:27:26	0.0	0.0	0.0	0.0
220	9/6/2019 11:28:26	0.0	0.0	0.0	0.0
221	9/6/2019 11:29:26	0.0	0.0	0.0	0.0
222	9/6/2019 11:30:26	0.0	0.0	0.0	0.0
223	9/6/2019 11:31:26	0.0	0.0	0.1	0.0
224	9/6/2019 11:32:26	0.0	0.0	0.0	0.0
225	9/6/2019 11:33:26	0.0	0.0	0.0	0.0
226	9/6/2019 11:34:26	0.0	0.0	0.0	0.0
227	9/6/2019 11:35:26	0.0	0.0	0.1	0.0
228	9/6/2019 11:36:26	0.0	0.0	0.0	0.0

229	9/6/2019 11:37:26	0.0	0.0	0.0	0.0
230	9/6/2019 11:38:26	0.0	0.0	0.0	0.0
231	9/6/2019 11:39:26	0.0	0.0	0.0	0.0
232	9/6/2019 11:40:26	0.0	0.0	0.0	0.0
233	9/6/2019 11:41:26	0.0	0.0	0.0	0.0
234	9/6/2019 11:42:26	0.0	0.0	0.0	0.0
235	9/6/2019 11:43:26	0.0	0.0	0.0	0.0
236	9/6/2019 11:44:26	0.0	0.0	0.0	0.0
237	9/6/2019 11:45:26	0.0	0.0	0.0	0.0
238	9/6/2019 11:46:26	0.0	0.0	0.0	0.0
239	9/6/2019 11:47:26	0.0	0.0	0.0	0.0
240	9/6/2019 11:48:26	0.0	0.0	0.0	0.0
241	9/6/2019 11:49:26	0.0	0.0	0.0	0.0
242	9/6/2019 11:50:26	0.0	0.0	0.0	0.0
243	9/6/2019 11:51:26	0.0	0.0	0.0	0.0
244	9/6/2019 11:52:26	0.0	0.0	0.0	0.0
245	9/6/2019 11:53:26	0.0	0.0	0.0	0.0
246	9/6/2019 11:54:26	0.0	0.0	0.0	0.0
247	9/6/2019 11:55:26	0.0	0.0	0.0	0.0
248	9/6/2019 11:56:26	0.0	0.0	0.0	0.0
249	9/6/2019 11:57:26	0.0	0.0	0.0	0.0
250	9/6/2019 11:58:26	0.0	0.0	0.0	0.0
251	9/6/2019 11:59:26	0.0	0.0	0.0	0.0
252	9/6/2019 12:00:26	0.0	0.0	0.0	0.0

253	9/6/2019 12:01:26	0.0	0.0	0.0	0.0
254	9/6/2019 12:02:26	0.0	0.0	0.0	0.0
255	9/6/2019 12:03:26	0.0	0.0	0.0	0.0
256	9/6/2019 12:04:26	0.0	0.0	0.0	0.0
257	9/6/2019 12:05:26	0.0	0.0	0.0	0.0
258	9/6/2019 12:06:26	0.0	0.0	0.0	0.0
259	9/6/2019 12:07:26	0.0	0.0	0.0	0.0
260	9/6/2019 12:08:26	0.0	0.0	0.0	0.0
261	9/6/2019 12:09:26	0.0	0.0	0.1	0.0
262	9/6/2019 12:10:26	0.0	0.0	0.0	0.0
263	9/6/2019 12:11:26	0.0	0.0	0.0	0.0
264	9/6/2019 12:12:26	0.0	0.0	0.0	0.0
265	9/6/2019 12:13:26	0.0	0.0	0.0	0.0
266	9/6/2019 12:14:26	0.0	0.0	0.1	0.0
267	9/6/2019 12:15:26	0.0	0.0	0.0	0.0
268	9/6/2019 12:16:26	0.0	0.0	0.0	0.0
269	9/6/2019 12:17:26	0.0	0.0	0.0	0.0
270	9/6/2019 12:18:26	0.0	0.0	0.0	0.0
271	9/6/2019 12:19:26	0.0	0.0	0.0	0.0
272	9/6/2019 12:20:26	0.0	0.0	0.0	0.0
273	9/6/2019 12:21:26	0.0	0.0	0.0	0.0
274	9/6/2019 12:22:26	0.0	0.0	0.0	0.0
275	9/6/2019 12:23:26	0.0	0.0	0.0	0.0
276	9/6/2019 12:24:26	0.0	0.0	0.0	0.0

277	9/6/2019 12:25:26	0.0	0.0	0.0	0.0
278	9/6/2019 12:26:26	0.0	0.0	0.0	0.0
279	9/6/2019 12:27:26	0.0	0.0	0.0	0.0
280	9/6/2019 12:28:26	0.0	0.0	0.0	0.0
281	9/6/2019 12:29:26	0.0	0.0	0.0	0.0
282	9/6/2019 12:30:26	0.0	0.0	0.0	0.0
283	9/6/2019 12:31:26	0.0	0.0	0.0	0.0
284	9/6/2019 12:32:26	0.0	0.0	0.0	0.0
285	9/6/2019 12:33:26	0.0	0.0	0.0	0.0
286	9/6/2019 12:34:26	0.0	0.0	0.0	0.0
287	9/6/2019 12:35:26	0.0	0.0	0.0	0.0
288	9/6/2019 12:36:26	0.0	0.0	0.0	0.0
289	9/6/2019 12:37:26	0.0	0.0	0.0	0.0
290	9/6/2019 12:38:26	0.0	0.0	0.0	0.0
291	9/6/2019 12:39:26	0.0	0.0	0.0	0.0
292	9/6/2019 12:40:26	0.0	0.0	0.0	0.0
293	9/6/2019 12:41:26	0.0	0.0	0.0	0.0
294	9/6/2019 12:42:26	0.0	0.0	0.0	0.0
295	9/6/2019 12:43:26	0.0	0.0	0.0	0.0
296	9/6/2019 12:44:26	0.0	0.0	0.0	0.0
297	9/6/2019 12:45:26	0.0	0.0	0.0	0.0
298	9/6/2019 12:46:26	0.0	0.0	0.0	0.0
299	9/6/2019 12:47:26	0.0	0.0	0.0	0.0
300	9/6/2019 12:48:26	0.0	0.0	0.0	0.0

301	9/6/2019 12:49:26	0.0	0.0	0.0	0.0
302	9/6/2019 12:50:26	0.0	0.0	0.0	0.0
303	9/6/2019 12:51:26	0.0	0.0	0.0	0.0
304	9/6/2019 12:52:26	0.0	0.0	0.0	0.0
305	9/6/2019 12:53:26	0.0	0.0	0.0	0.0
306	9/6/2019 12:54:26	0.0	0.0	0.0	0.0
307	9/6/2019 12:55:26	0.0	0.0	0.0	0.0
308	9/6/2019 12:56:26	0.0	0.0	0.0	0.0
309	9/6/2019 12:57:26	0.0	0.0	0.0	0.0
310	9/6/2019 12:58:26	0.0	0.0	0.0	0.0
311	9/6/2019 12:59:26	0.0	0.0	0.0	0.0
312	9/6/2019 13:00:26	0.0	0.0	0.0	0.0
313	9/6/2019 13:01:26	0.0	0.0	0.0	0.0
314	9/6/2019 13:02:26	0.0	0.0	0.0	0.0
315	9/6/2019 13:03:26	0.0	0.0	0.0	0.0
316	9/6/2019 13:04:26	0.0	0.0	0.0	0.0
317	9/6/2019 13:05:26	0.0	0.0	0.0	0.0
318	9/6/2019 13:06:26	0.0	0.0	0.0	0.0
319	9/6/2019 13:07:26	0.0	0.0	0.0	0.0
320	9/6/2019 13:08:26	0.0	0.0	0.0	0.0
321	9/6/2019 13:09:26	0.0	0.0	0.0	0.0
322	9/6/2019 13:10:26	0.0	0.0	0.0	0.0
323	9/6/2019 13:11:26	0.0	0.0	0.0	0.0
324	9/6/2019 13:12:26	0.0	0.0	0.0	0.0

325	9/6/2019 13:13:26	0.0	0.0	0.0	0.0
326	9/6/2019 13:14:26	0.0	0.0	0.0	0.0
327	9/6/2019 13:15:26	0.0	0.0	0.0	0.0
328	9/6/2019 13:16:26	0.0	0.0	0.0	0.0
329	9/6/2019 13:17:26	0.0	0.0	0.0	0.0
330	9/6/2019 13:18:26	0.0	0.0	0.0	0.0
331	9/6/2019 13:19:26	0.0	0.0	0.0	0.0
332	9/6/2019 13:20:26	0.0	0.0	0.0	0.0
333	9/6/2019 13:21:26	0.0	0.0	0.0	0.0
334	9/6/2019 13:22:26	0.0	0.0	0.0	0.0
335	9/6/2019 13:23:26	0.0	0.0	0.0	0.0
336	9/6/2019 13:24:26	0.0	0.0	0.0	0.0
337	9/6/2019 13:25:26	0.0	0.0	0.0	0.0
338	9/6/2019 13:26:26	0.0	0.0	0.0	0.0
339	9/6/2019 13:27:26	0.0	0.0	0.0	0.0
340	9/6/2019 13:28:26	0.0	0.0	0.0	0.0
341	9/6/2019 13:29:26	0.0	0.0	0.0	0.0
342	9/6/2019 13:30:26	0.0	0.0	0.0	0.0
343	9/6/2019 13:31:26	0.0	0.0	0.0	0.0
344	9/6/2019 13:32:26	0.0	0.0	0.0	0.0
345	9/6/2019 13:33:26	0.0	0.0	0.0	0.0
346	9/6/2019 13:34:26	0.0	0.0	0.0	0.0
347	9/6/2019 13:35:26	0.0	0.0	0.0	0.0
348	9/6/2019 13:36:26	0.0	0.0	0.0	0.0

349	9/6/2019 13:37:26	0.0	0.0	0.0	0.0
350	9/6/2019 13:38:26	0.0	0.0	0.0	0.0
351	9/6/2019 13:39:26	0.0	0.0	0.0	0.0
352	9/6/2019 13:40:26	0.0	0.0	0.0	0.0
353	9/6/2019 13:41:26	0.0	0.0	0.0	0.0
354	9/6/2019 13:42:26	0.0	0.0	0.0	0.0
355	9/6/2019 13:43:26	0.0	0.0	0.0	0.0
356	9/6/2019 13:44:26	0.0	0.0	0.0	0.0
357	9/6/2019 13:45:26	0.0	0.0	0.0	0.0
358	9/6/2019 13:46:26	0.0	0.0	0.0	0.0
359	9/6/2019 13:47:26	0.0	0.0	0.0	0.0
360	9/6/2019 13:48:26	0.0	0.0	0.0	0.0
361	9/6/2019 13:49:26	0.0	0.0	0.0	0.0
362	9/6/2019 13:50:26	0.0	0.0	0.0	0.0
363	9/6/2019 13:51:26	0.0	0.0	0.0	0.0
364	9/6/2019 13:52:26	0.0	0.0	0.0	0.0
365	9/6/2019 13:53:26	0.0	0.0	0.0	0.0
366	9/6/2019 13:54:26	0.0	0.0	0.0	0.0
367	9/6/2019 13:55:26	0.0	0.0	0.0	0.0
368	9/6/2019 13:56:26	0.0	0.0	0.0	0.0
369	9/6/2019 13:57:26	0.0	0.0	0.0	0.0
370	9/6/2019 13:58:26	0.0	0.0	0.0	0.0
371	9/6/2019 13:59:26	0.0	0.0	0.0	0.0
372	9/6/2019 14:00:26	0.0	0.0	0.1	0.0

373	9/6/2019 14:01:26		0.0	0.0	0.0	0.0
374	9/6/2019 14:02:26		0.0	0.0	0.0	0.0
Peak		0.1	0.1	0.1	0.1	
Min		0.0	0.0	0.0	0.0	
Average			0.0	0.0	0.0	0.0

****

TWA/STEL

Index	Date/Time	PID(ppm) (TWA)	PID(ppm) (STEL)	
001	9/6/2019 07:49:26		0.0	---
002	9/6/2019 07:50:26		0.0	---
003	9/6/2019 07:51:26		0.0	---
004	9/6/2019 07:52:26		0.0	---
005	9/6/2019 07:53:26		0.0	---
006	9/6/2019 07:54:26		0.0	---
007	9/6/2019 07:55:26		0.0	---
008	9/6/2019 07:56:26		0.0	---
009	9/6/2019 07:57:26		0.0	---
010	9/6/2019 07:58:26		0.0	---
011	9/6/2019 07:59:26		0.0	---
012	9/6/2019 08:00:26		0.0	---
013	9/6/2019 08:01:26		0.0	---
014	9/6/2019 08:02:26		0.0	---

015	9/6/2019 08:03:26	0.0	0.0
016	9/6/2019 08:04:26	0.0	0.0
017	9/6/2019 08:05:26	0.0	0.0
018	9/6/2019 08:06:26	0.0	0.0
019	9/6/2019 08:07:26	0.0	0.0
020	9/6/2019 08:08:26	0.0	0.0
021	9/6/2019 08:09:26	0.0	0.0
022	9/6/2019 08:10:26	0.0	0.0
023	9/6/2019 08:11:26	0.0	0.0
024	9/6/2019 08:12:26	0.0	0.0
025	9/6/2019 08:13:26	0.0	0.0
026	9/6/2019 08:14:26	0.0	0.0
027	9/6/2019 08:15:26	0.0	0.0
028	9/6/2019 08:16:26	0.0	0.0
029	9/6/2019 08:17:26	0.0	0.0
030	9/6/2019 08:18:26	0.0	0.0
031	9/6/2019 08:19:26	0.0	0.0
032	9/6/2019 08:20:26	0.0	0.0
033	9/6/2019 08:21:26	0.0	0.0
034	9/6/2019 08:22:26	0.0	0.0
035	9/6/2019 08:23:26	0.0	0.0
036	9/6/2019 08:24:26	0.0	0.0
037	9/6/2019 08:25:26	0.0	0.0
038	9/6/2019 08:26:26	0.0	0.0

039	9/6/2019 08:27:26	0.0	0.0
040	9/6/2019 08:28:26	0.0	0.0
041	9/6/2019 08:29:26	0.0	0.0
042	9/6/2019 08:30:26	0.0	0.0
043	9/6/2019 08:31:26	0.0	0.0
044	9/6/2019 08:32:26	0.0	0.0
045	9/6/2019 08:33:26	0.0	0.0
046	9/6/2019 08:34:26	0.0	0.0
047	9/6/2019 08:35:26	0.0	0.0
048	9/6/2019 08:36:26	0.0	0.0
049	9/6/2019 08:37:26	0.0	0.0
050	9/6/2019 08:38:26	0.0	0.0
051	9/6/2019 08:39:26	0.0	0.0
052	9/6/2019 08:40:26	0.0	0.0
053	9/6/2019 08:41:26	0.0	0.0
054	9/6/2019 08:42:26	0.0	0.0
055	9/6/2019 08:43:26	0.0	0.0
056	9/6/2019 08:44:26	0.0	0.0
057	9/6/2019 08:45:26	0.0	0.0
058	9/6/2019 08:46:26	0.0	0.0
059	9/6/2019 08:47:26	0.0	0.0
060	9/6/2019 08:48:26	0.0	0.0
061	9/6/2019 08:49:26	0.0	0.0
062	9/6/2019 08:50:26	0.0	0.0

063	9/6/2019 08:51:26	0.0	0.0
064	9/6/2019 08:52:26	0.0	0.0
065	9/6/2019 08:53:26	0.0	0.0
066	9/6/2019 08:54:26	0.0	0.0
067	9/6/2019 08:55:26	0.0	0.0
068	9/6/2019 08:56:26	0.0	0.0
069	9/6/2019 08:57:26	0.0	0.0
070	9/6/2019 08:58:26	0.0	0.0
071	9/6/2019 08:59:26	0.0	0.0
072	9/6/2019 09:00:26	0.0	0.0
073	9/6/2019 09:01:26	0.0	0.0
074	9/6/2019 09:02:26	0.0	0.0
075	9/6/2019 09:03:26	0.0	0.0
076	9/6/2019 09:04:26	0.0	0.0
077	9/6/2019 09:05:26	0.0	0.0
078	9/6/2019 09:06:26	0.0	0.0
079	9/6/2019 09:07:26	0.0	0.0
080	9/6/2019 09:08:26	0.0	0.0
081	9/6/2019 09:09:26	0.0	0.0
082	9/6/2019 09:10:26	0.0	0.0
083	9/6/2019 09:11:26	0.0	0.0
084	9/6/2019 09:12:26	0.0	0.0
085	9/6/2019 09:13:26	0.0	0.0
086	9/6/2019 09:14:26	0.0	0.0

087	9/6/2019 09:15:26	0.0	0.0
088	9/6/2019 09:16:26	0.0	0.0
089	9/6/2019 09:17:26	0.0	0.0
090	9/6/2019 09:18:26	0.0	0.0
091	9/6/2019 09:19:26	0.0	0.0
092	9/6/2019 09:20:26	0.0	0.0
093	9/6/2019 09:21:26	0.0	0.0
094	9/6/2019 09:22:26	0.0	0.0
095	9/6/2019 09:23:26	0.0	0.0
096	9/6/2019 09:24:26	0.0	0.0
097	9/6/2019 09:25:26	0.0	0.0
098	9/6/2019 09:26:26	0.0	0.0
099	9/6/2019 09:27:26	0.0	0.0
100	9/6/2019 09:28:26	0.0	0.0
101	9/6/2019 09:29:26	0.0	0.0
102	9/6/2019 09:30:26	0.0	0.0
103	9/6/2019 09:31:26	0.0	0.0
104	9/6/2019 09:32:26	0.0	0.0
105	9/6/2019 09:33:26	0.0	0.0
106	9/6/2019 09:34:26	0.0	0.0
107	9/6/2019 09:35:26	0.0	0.0
108	9/6/2019 09:36:26	0.0	0.0
109	9/6/2019 09:37:26	0.0	0.0
110	9/6/2019 09:38:26	0.0	0.0

111	9/6/2019 09:39:26	0.0	0.0
112	9/6/2019 09:40:26	0.0	0.0
113	9/6/2019 09:41:26	0.0	0.0
114	9/6/2019 09:42:26	0.0	0.0
115	9/6/2019 09:43:26	0.0	0.0
116	9/6/2019 09:44:26	0.0	0.0
117	9/6/2019 09:45:26	0.0	0.0
118	9/6/2019 09:46:26	0.0	0.0
119	9/6/2019 09:47:26	0.0	0.0
120	9/6/2019 09:48:26	0.0	0.0
121	9/6/2019 09:49:26	0.0	0.0
122	9/6/2019 09:50:26	0.0	0.0
123	9/6/2019 09:51:26	0.0	0.0
124	9/6/2019 09:52:26	0.0	0.0
125	9/6/2019 09:53:26	0.0	0.0
126	9/6/2019 09:54:26	0.0	0.0
127	9/6/2019 09:55:26	0.0	0.0
128	9/6/2019 09:56:26	0.0	0.0
129	9/6/2019 09:57:26	0.0	0.0
130	9/6/2019 09:58:26	0.0	0.0
131	9/6/2019 09:59:26	0.0	0.0
132	9/6/2019 10:00:26	0.0	0.0
133	9/6/2019 10:01:26	0.0	0.0
134	9/6/2019 10:02:26	0.0	0.0

135	9/6/2019 10:03:26	0.0	0.0
136	9/6/2019 10:04:26	0.0	0.1
137	9/6/2019 10:05:26	0.0	0.1
138	9/6/2019 10:06:26	0.0	0.1
139	9/6/2019 10:07:26	0.0	0.1
140	9/6/2019 10:08:26	0.0	0.1
141	9/6/2019 10:09:26	0.0	0.1
142	9/6/2019 10:10:26	0.0	0.1
143	9/6/2019 10:11:26	0.0	0.1
144	9/6/2019 10:12:26	0.0	0.1
145	9/6/2019 10:13:26	0.0	0.1
146	9/6/2019 10:14:26	0.0	0.1
147	9/6/2019 10:15:26	0.0	0.1
148	9/6/2019 10:16:26	0.0	0.1
149	9/6/2019 10:17:26	0.0	0.1
150	9/6/2019 10:18:26	0.0	0.1
151	9/6/2019 10:19:26	0.0	0.1
152	9/6/2019 10:20:26	0.0	0.1
153	9/6/2019 10:21:26	0.0	0.1
154	9/6/2019 10:22:26	0.0	0.1
155	9/6/2019 10:23:26	0.0	0.1
156	9/6/2019 10:24:26	0.0	0.1
157	9/6/2019 10:25:26	0.0	0.1
158	9/6/2019 10:26:26	0.0	0.1

159	9/6/2019 10:27:26	0.0	0.1
160	9/6/2019 10:28:26	0.0	0.1
161	9/6/2019 10:29:26	0.0	0.1
162	9/6/2019 10:30:26	0.0	0.1
163	9/6/2019 10:31:26	0.0	0.1
164	9/6/2019 10:32:26	0.0	0.1
165	9/6/2019 10:33:26	0.0	0.1
166	9/6/2019 10:34:26	0.0	0.1
167	9/6/2019 10:35:26	0.0	0.1
168	9/6/2019 10:36:26	0.0	0.1
169	9/6/2019 10:37:26	0.0	0.1
170	9/6/2019 10:38:26	0.0	0.1
171	9/6/2019 10:39:26	0.0	0.1
172	9/6/2019 10:40:26	0.0	0.1
173	9/6/2019 10:41:26	0.0	0.1
174	9/6/2019 10:42:26	0.0	0.1
175	9/6/2019 10:43:26	0.0	0.1
176	9/6/2019 10:44:26	0.0	0.1
177	9/6/2019 10:45:26	0.0	0.1
178	9/6/2019 10:46:26	0.0	0.1
179	9/6/2019 10:47:26	0.0	0.1
180	9/6/2019 10:48:26	0.0	0.1
181	9/6/2019 10:49:26	0.0	0.1
182	9/6/2019 10:50:26	0.0	0.1

183	9/6/2019 10:51:26	0.0	0.1
184	9/6/2019 10:52:26	0.0	0.1
185	9/6/2019 10:53:26	0.0	0.1
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189	9/6/2019 10:57:26	0.0	0.0
190	9/6/2019 10:58:26	0.0	0.0
191	9/6/2019 10:59:26	0.0	0.0
192	9/6/2019 11:00:26	0.0	0.0
193	9/6/2019 11:01:26	0.0	0.0
194	9/6/2019 11:02:26	0.0	0.0
195	9/6/2019 11:03:26	0.0	0.0
196	9/6/2019 11:04:26	0.0	0.0
197	9/6/2019 11:05:26	0.0	0.0
198	9/6/2019 11:06:26	0.0	0.0
199	9/6/2019 11:07:26	0.0	0.0
200	9/6/2019 11:08:26	0.0	0.0
201	9/6/2019 11:09:26	0.0	0.0
202	9/6/2019 11:10:26	0.0	0.0
203	9/6/2019 11:11:26	0.0	0.0
204	9/6/2019 11:12:26	0.0	0.0
205	9/6/2019 11:13:26	0.0	0.0
206	9/6/2019 11:14:26	0.0	0.0

207	9/6/2019 11:15:26	0.0	0.0
208	9/6/2019 11:16:26	0.0	0.0
209	9/6/2019 11:17:26	0.0	0.0
210	9/6/2019 11:18:26	0.0	0.0
211	9/6/2019 11:19:26	0.0	0.0
212	9/6/2019 11:20:26	0.0	0.0
213	9/6/2019 11:21:26	0.0	0.0
214	9/6/2019 11:22:26	0.0	0.0
215	9/6/2019 11:23:26	0.0	0.0
216	9/6/2019 11:24:26	0.0	0.0
217	9/6/2019 11:25:26	0.0	0.0
218	9/6/2019 11:26:26	0.0	0.0
219	9/6/2019 11:27:26	0.0	0.0
220	9/6/2019 11:28:26	0.0	0.0
221	9/6/2019 11:29:26	0.0	0.0
222	9/6/2019 11:30:26	0.0	0.0
223	9/6/2019 11:31:26	0.0	0.0
224	9/6/2019 11:32:26	0.0	0.0
225	9/6/2019 11:33:26	0.0	0.0
226	9/6/2019 11:34:26	0.0	0.0
227	9/6/2019 11:35:26	0.0	0.0
228	9/6/2019 11:36:26	0.0	0.0
229	9/6/2019 11:37:26	0.0	0.0
230	9/6/2019 11:38:26	0.0	0.0

231	9/6/2019 11:39:26	0.0	0.0
232	9/6/2019 11:40:26	0.0	0.0
233	9/6/2019 11:41:26	0.0	0.0
234	9/6/2019 11:42:26	0.0	0.0
235	9/6/2019 11:43:26	0.0	0.0
236	9/6/2019 11:44:26	0.0	0.0
237	9/6/2019 11:45:26	0.0	0.0
238	9/6/2019 11:46:26	0.0	0.0
239	9/6/2019 11:47:26	0.0	0.0
240	9/6/2019 11:48:26	0.0	0.0
241	9/6/2019 11:49:26	0.0	0.0
242	9/6/2019 11:50:26	0.0	0.0
243	9/6/2019 11:51:26	0.0	0.0
244	9/6/2019 11:52:26	0.0	0.0
245	9/6/2019 11:53:26	0.0	0.0
246	9/6/2019 11:54:26	0.0	0.0
247	9/6/2019 11:55:26	0.0	0.0
248	9/6/2019 11:56:26	0.0	0.0
249	9/6/2019 11:57:26	0.0	0.0
250	9/6/2019 11:58:26	0.0	0.0
251	9/6/2019 11:59:26	0.0	0.0
252	9/6/2019 12:00:26	0.0	0.0
253	9/6/2019 12:01:26	0.0	0.0
254	9/6/2019 12:02:26	0.0	0.0

255	9/6/2019 12:03:26	0.0	0.0
256	9/6/2019 12:04:26	0.0	0.0
257	9/6/2019 12:05:26	0.0	0.0
258	9/6/2019 12:06:26	0.0	0.0
259	9/6/2019 12:07:26	0.0	0.0
260	9/6/2019 12:08:26	0.0	0.0
261	9/6/2019 12:09:26	0.0	0.0
262	9/6/2019 12:10:26	0.0	0.0
263	9/6/2019 12:11:26	0.0	0.0
264	9/6/2019 12:12:26	0.0	0.0
265	9/6/2019 12:13:26	0.0	0.0
266	9/6/2019 12:14:26	0.0	0.0
267	9/6/2019 12:15:26	0.0	0.0
268	9/6/2019 12:16:26	0.0	0.0
269	9/6/2019 12:17:26	0.0	0.0
270	9/6/2019 12:18:26	0.0	0.0
271	9/6/2019 12:19:26	0.0	0.0
272	9/6/2019 12:20:26	0.0	0.0
273	9/6/2019 12:21:26	0.0	0.0
274	9/6/2019 12:22:26	0.0	0.0
275	9/6/2019 12:23:26	0.0	0.0
276	9/6/2019 12:24:26	0.0	0.0
277	9/6/2019 12:25:26	0.0	0.0
278	9/6/2019 12:26:26	0.0	0.0

279	9/6/2019 12:27:26	0.0	0.0
280	9/6/2019 12:28:26	0.0	0.0
281	9/6/2019 12:29:26	0.0	0.0
282	9/6/2019 12:30:26	0.0	0.0
283	9/6/2019 12:31:26	0.0	0.0
284	9/6/2019 12:32:26	0.0	0.0
285	9/6/2019 12:33:26	0.0	0.0
286	9/6/2019 12:34:26	0.0	0.0
287	9/6/2019 12:35:26	0.0	0.0
288	9/6/2019 12:36:26	0.0	0.0
289	9/6/2019 12:37:26	0.0	0.0
290	9/6/2019 12:38:26	0.0	0.0
291	9/6/2019 12:39:26	0.0	0.0
292	9/6/2019 12:40:26	0.0	0.0
293	9/6/2019 12:41:26	0.0	0.0
294	9/6/2019 12:42:26	0.0	0.0
295	9/6/2019 12:43:26	0.0	0.0
296	9/6/2019 12:44:26	0.0	0.0
297	9/6/2019 12:45:26	0.0	0.0
298	9/6/2019 12:46:26	0.0	0.0
299	9/6/2019 12:47:26	0.0	0.0
300	9/6/2019 12:48:26	0.0	0.0
301	9/6/2019 12:49:26	0.0	0.0
302	9/6/2019 12:50:26	0.0	0.0

303	9/6/2019 12:51:26	0.0	0.0
304	9/6/2019 12:52:26	0.0	0.0
305	9/6/2019 12:53:26	0.0	0.0
306	9/6/2019 12:54:26	0.0	0.0
307	9/6/2019 12:55:26	0.0	0.0
308	9/6/2019 12:56:26	0.0	0.0
309	9/6/2019 12:57:26	0.0	0.0
310	9/6/2019 12:58:26	0.0	0.0
311	9/6/2019 12:59:26	0.0	0.0
312	9/6/2019 13:00:26	0.0	0.0
313	9/6/2019 13:01:26	0.0	0.0
314	9/6/2019 13:02:26	0.0	0.0
315	9/6/2019 13:03:26	0.0	0.0
316	9/6/2019 13:04:26	0.0	0.0
317	9/6/2019 13:05:26	0.0	0.0
318	9/6/2019 13:06:26	0.0	0.0
319	9/6/2019 13:07:26	0.0	0.0
320	9/6/2019 13:08:26	0.0	0.0
321	9/6/2019 13:09:26	0.0	0.0
322	9/6/2019 13:10:26	0.0	0.0
323	9/6/2019 13:11:26	0.0	0.0
324	9/6/2019 13:12:26	0.0	0.0
325	9/6/2019 13:13:26	0.0	0.0
326	9/6/2019 13:14:26	0.0	0.0

327	9/6/2019 13:15:26	0.0	0.0
328	9/6/2019 13:16:26	0.0	0.0
329	9/6/2019 13:17:26	0.0	0.0
330	9/6/2019 13:18:26	0.0	0.0
331	9/6/2019 13:19:26	0.0	0.0
332	9/6/2019 13:20:26	0.0	0.0
333	9/6/2019 13:21:26	0.0	0.0
334	9/6/2019 13:22:26	0.0	0.0
335	9/6/2019 13:23:26	0.0	0.0
336	9/6/2019 13:24:26	0.0	0.0
337	9/6/2019 13:25:26	0.0	0.0
338	9/6/2019 13:26:26	0.0	0.0
339	9/6/2019 13:27:26	0.0	0.0
340	9/6/2019 13:28:26	0.0	0.0
341	9/6/2019 13:29:26	0.0	0.0
342	9/6/2019 13:30:26	0.0	0.0
343	9/6/2019 13:31:26	0.0	0.0
344	9/6/2019 13:32:26	0.0	0.0
345	9/6/2019 13:33:26	0.0	0.0
346	9/6/2019 13:34:26	0.0	0.0
347	9/6/2019 13:35:26	0.0	0.0
348	9/6/2019 13:36:26	0.0	0.0
349	9/6/2019 13:37:26	0.0	0.0
350	9/6/2019 13:38:26	0.0	0.0

351	9/6/2019 13:39:26	0.0	0.0
352	9/6/2019 13:40:26	0.0	0.0
353	9/6/2019 13:41:26	0.0	0.0
354	9/6/2019 13:42:26	0.0	0.0
355	9/6/2019 13:43:26	0.0	0.0
356	9/6/2019 13:44:26	0.0	0.0
357	9/6/2019 13:45:26	0.0	0.0
358	9/6/2019 13:46:26	0.0	0.0
359	9/6/2019 13:47:26	0.0	0.0
360	9/6/2019 13:48:26	0.0	0.0
361	9/6/2019 13:49:26	0.0	0.0
362	9/6/2019 13:50:26	0.0	0.0
363	9/6/2019 13:51:26	0.0	0.0
364	9/6/2019 13:52:26	0.0	0.0
365	9/6/2019 13:53:26	0.0	0.0
366	9/6/2019 13:54:26	0.0	0.0
367	9/6/2019 13:55:26	0.0	0.0
368	9/6/2019 13:56:26	0.0	0.0
369	9/6/2019 13:57:26	0.0	0.0
370	9/6/2019 13:58:26	0.0	0.0
371	9/6/2019 13:59:26	0.0	0.0
372	9/6/2019 14:00:26	0.0	0.0
373	9/6/2019 14:01:26	0.0	0.0
374	9/6/2019 14:02:26	0.0	0.0

Test 019

Instrument		Data Properties	
Model	DustTrak DRX	Start Date	09/06/2019
Instrument S/N	8533151804	Start Time	07:40:54
		Stop Date	09/06/2019
		Stop Time	13:10:54
		Total Time	0:05:30:00
		Logging Interval	900 seconds

Test Data

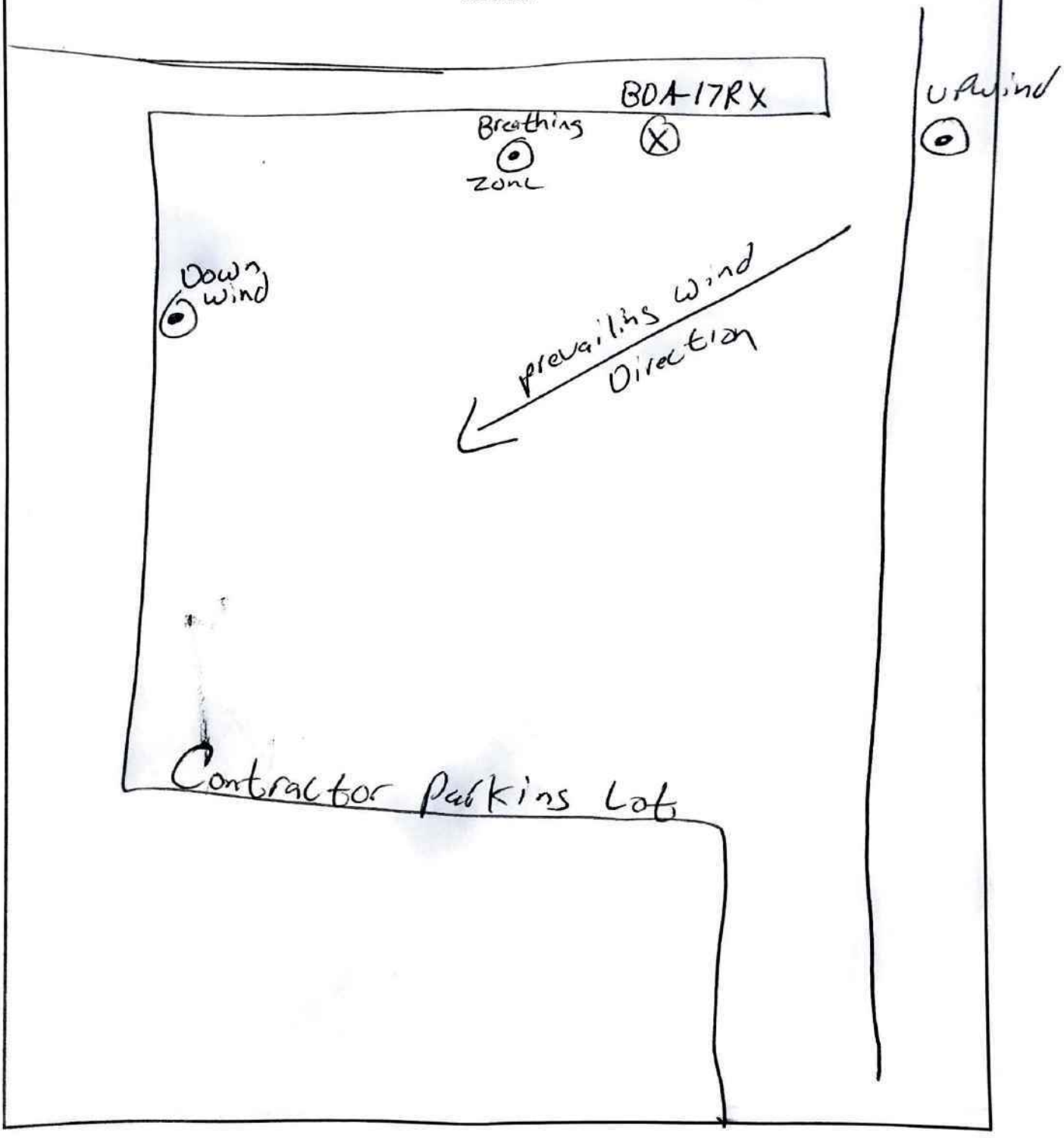
Data Point	Date	Time	PM1 mg/m^3	PM2.5 mg/m^3	RESP mg/m^3	PM10 mg/m^3	TOTAL mg/m^3
1	09/06/2019	07:55:54	0.016	0.017	0.018	0.021	0.023
2	09/06/2019	08:10:54	0.012	0.013	0.013	0.015	0.015
3	09/06/2019	08:25:54	0.009	0.010	0.010	0.012	0.012
4	09/06/2019	08:40:54	0.010	0.010	0.011	0.012	0.012
5	09/06/2019	08:55:54	0.007	0.007	0.008	0.009	0.009
6	09/06/2019	09:10:54	0.008	0.008	0.008	0.009	0.009
7	09/06/2019	09:25:54	0.011	0.011	0.012	0.015	0.017
8	09/06/2019	09:40:54	0.009	0.009	0.010	0.011	0.011
9	09/06/2019	09:55:54	0.008	0.008	0.008	0.009	0.009
10	09/06/2019	10:10:54	0.008	0.008	0.009	0.009	0.010
11	09/06/2019	10:25:54	0.008	0.008	0.008	0.009	0.009
12	09/06/2019	10:40:54	0.008	0.008	0.009	0.009	0.010
13	09/06/2019	10:55:54	0.008	0.008	0.009	0.010	0.010
14	09/06/2019	11:10:54	0.008	0.008	0.008	0.009	0.009
15	09/06/2019	11:25:54	0.008	0.008	0.008	0.008	0.009
16	09/06/2019	11:40:54	0.007	0.007	0.007	0.007	0.007
17	09/06/2019	11:55:54	0.006	0.006	0.006	0.007	0.007
18	09/06/2019	12:10:54	0.006	0.006	0.006	0.006	0.006
19	09/06/2019	12:25:54	0.006	0.006	0.007	0.007	0.007
20	09/06/2019	12:40:54	0.007	0.007	0.007	0.007	0.007
21	09/06/2019	12:55:54	0.008	0.008	0.008	0.008	0.008
22	09/06/2019	13:10:54	0.007	0.008	0.008	0.008	0.008

ARCADIS Design & Consultancy for natural and built assets

Daily CAMP Log

Project	Phase 2 Groundwater RI
Location	East Syracuse, NY
Date	9/6/14
Weather Conditions	High 70's Sunny
Upwind Monitor	392 - 914273
Downwind Monitor	392 - 914376
Start Time	0732
End Time	1315

Site Sketch



Anne Locke
Associate Manager, Environmental Protection
Environmental, Health and Safety Department
Bristol-Myers Squibb
P.O. Box 4755
Syracuse, NY 13221

Arcadis U.S., Inc.
One Lincoln Center
110 West Fayette Street
Suite 300
Syracuse
New York 13202
Tel 315 446 9120
Fax 315 449 0017
www.arcadis.com

Environmental North

Subject:
Community Air Monitoring During Phase II RI Well Installations Bristol-Myers Squibb Syracuse Facility – East Syracuse, New York 13057

Date:
September 9, 2019

Contact:
William McCune

Phone:
315-671-9172

Email:
William.McCune@arcadis.com

Our ref:
B0087363.0037

Dear Ms. Locke:

The following is a summary of the community air monitoring plan (CAMP) provided by Arcadis U.S., Inc. (Arcadis) during Phase II RI drilling activities conducted at the Bristol-Myers Squibb (BMS) Syracuse North Campus, East Syracuse, NY on September 9, 2019.

September 9, 2019: Parratt-Wolff Inc. (Parratt-Wolff) began coring activities at BDA-14RX, drilling from 10:00 AM to 4:15 PM. CAMP monitoring included photo ionization detectors at upwind and downwind locations and a DustTrak at a breathing zone location. The prevailing wind direction was observed originating from the southeast through the day. Air quality parameters did not exceed CAMP standards at any time during work activities. Table 1 shows the serial numbers and associated CAMP stations locations.

CAMP Station Locations	Serial Number
Breathing Zone DustTrak	#8533151804
Upwind PID	#592-914273
Downwind PID	#592-914276

Please contact us with any questions or comments pertaining to this project.

Sincerely,

Arcadis U.S., Inc.

William McCune
Principal Geologist

Attachments

1 CAMP Data Logs
2 Site Sketches/Notes

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19/09/09 07:50

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Summary

Unit Name MiniRAE 3000(PGM-7320)

Unit SN 592-914273

Unit Firmware Ver V1.20A

Running Mode Hygiene Mode

Measure Type Min; Avg; Max; Real

Datalog Mode Continuous

Datalog Type Manual

Diagnostic Mode No

Stop Reason Power Down

Site ID RAE00005

User ID 00000001

Begin 9/9/2019 07:50:27

End 9/9/2019 16:20:45

Sample Period(s) 60

Number of Records 510

Sensor	VOC(ppm)
Span	100.000
Span 2	N/A
Low Alarm	50.000
High Alarm	100.000
Over Alarm	2000.000
STEL Alarm	25.000
TWA Alarm	10.000
Measurement Gas	Isobutylene
Calibration Time	9/9/2019 07:41
Peak	0.000
Min	0.000
Average	0.000

****

Datalog

Index	Date/Time	VOC(ppm) (Min)	VOC(ppm) (Avg)	VOC(ppm) (Max)	VOC(ppm) (Real)	VOC(ppm)
001	9/9/2019 07:51:27	0.000	0.000	0.000	0.000	
002	9/9/2019 07:52:27	0.000	0.000	0.000	0.000	
003	9/9/2019 07:53:27	0.000	0.000	0.000	0.000	
004	9/9/2019 07:54:27	0.000	0.000	0.000	0.000	
005	9/9/2019 07:55:27	0.000	0.000	0.000	0.000	
006	9/9/2019 07:56:27	0.000	0.000	0.000	0.000	

007	9/9/2019 07:57:27	0.000	0.000	0.000	0.000
008	9/9/2019 07:58:27	0.000	0.000	0.000	0.000
009	9/9/2019 07:59:27	0.000	0.000	0.000	0.000
010	9/9/2019 08:00:27	0.000	0.000	0.000	0.000
011	9/9/2019 08:01:27	0.000	0.000	0.000	0.000
012	9/9/2019 08:02:27	0.000	0.000	0.000	0.000
013	9/9/2019 08:03:27	0.000	0.000	0.000	0.000
014	9/9/2019 08:04:27	0.000	0.000	0.000	0.000
015	9/9/2019 08:05:27	0.000	0.000	0.000	0.000
016	9/9/2019 08:06:27	0.000	0.000	0.000	0.000
017	9/9/2019 08:07:27	0.000	0.000	0.000	0.000
018	9/9/2019 08:08:27	0.000	0.000	0.000	0.000
019	9/9/2019 08:09:27	0.000	0.000	0.000	0.000
020	9/9/2019 08:10:27	0.000	0.000	0.000	0.000
021	9/9/2019 08:11:27	0.000	0.000	0.000	0.000
022	9/9/2019 08:12:27	0.000	0.000	0.000	0.000
023	9/9/2019 08:13:27	0.000	0.000	0.000	0.000
024	9/9/2019 08:14:27	0.000	0.000	0.000	0.000
025	9/9/2019 08:15:27	0.000	0.000	0.000	0.000
026	9/9/2019 08:16:27	0.000	0.000	0.000	0.000
027	9/9/2019 08:17:27	0.000	0.000	0.000	0.000
028	9/9/2019 08:18:27	0.000	0.000	0.000	0.000
029	9/9/2019 08:19:27	0.000	0.000	0.000	0.000
030	9/9/2019 08:20:27	0.000	0.000	0.000	0.000

031	9/9/2019 08:21:27	0.000	0.000	0.000	0.000
032	9/9/2019 08:22:27	0.000	0.000	0.000	0.000
033	9/9/2019 08:23:27	0.000	0.000	0.000	0.000
034	9/9/2019 08:24:27	0.000	0.000	0.000	0.000
035	9/9/2019 08:25:27	0.000	0.000	0.000	0.000
036	9/9/2019 08:26:27	0.000	0.000	0.000	0.000
037	9/9/2019 08:27:27	0.000	0.000	0.000	0.000
038	9/9/2019 08:28:27	0.000	0.000	0.000	0.000
039	9/9/2019 08:29:27	0.000	0.000	0.000	0.000
040	9/9/2019 08:30:27	0.000	0.000	0.000	0.000
041	9/9/2019 08:31:27	0.000	0.000	0.000	0.000
042	9/9/2019 08:32:27	0.000	0.000	0.000	0.000
043	9/9/2019 08:33:27	0.000	0.000	0.000	0.000
044	9/9/2019 08:34:27	0.000	0.000	0.000	0.000
045	9/9/2019 08:35:27	0.000	0.000	0.000	0.000
046	9/9/2019 08:36:27	0.000	0.000	0.000	0.000
047	9/9/2019 08:37:27	0.000	0.000	0.000	0.000
048	9/9/2019 08:38:27	0.000	0.000	0.000	0.000
049	9/9/2019 08:39:27	0.000	0.000	0.000	0.000
050	9/9/2019 08:40:27	0.000	0.000	0.000	0.000
051	9/9/2019 08:41:27	0.000	0.000	0.000	0.000
052	9/9/2019 08:42:27	0.000	0.000	0.000	0.000
053	9/9/2019 08:43:27	0.000	0.000	0.000	0.000
054	9/9/2019 08:44:27	0.000	0.000	0.000	0.000

055	9/9/2019 08:45:27	0.000	0.000	0.000	0.000
056	9/9/2019 08:46:27	0.000	0.000	0.000	0.000
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059	9/9/2019 08:49:27	0.000	0.000	0.000	0.000
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061	9/9/2019 08:51:27	0.000	0.000	0.000	0.000
062	9/9/2019 08:52:27	0.000	0.000	0.000	0.000
063	9/9/2019 08:53:27	0.000	0.000	0.000	0.000
064	9/9/2019 08:54:27	0.000	0.000	0.000	0.000
065	9/9/2019 08:55:27	0.000	0.000	0.000	0.000
066	9/9/2019 08:56:27	0.000	0.000	0.000	0.000
067	9/9/2019 08:57:27	0.000	0.000	0.000	0.000
068	9/9/2019 08:58:27	0.000	0.000	0.000	0.000
069	9/9/2019 08:59:27	0.000	0.000	0.000	0.000
070	9/9/2019 09:00:27	0.000	0.000	0.000	0.000
071	9/9/2019 09:01:27	0.000	0.000	0.000	0.000
072	9/9/2019 09:02:27	0.000	0.000	0.000	0.000
073	9/9/2019 09:03:27	0.000	0.000	0.000	0.000
074	9/9/2019 09:04:27	0.000	0.000	0.000	0.000
075	9/9/2019 09:05:27	0.000	0.000	0.000	0.000
076	9/9/2019 09:06:27	0.000	0.000	0.000	0.000
077	9/9/2019 09:07:27	0.000	0.000	0.000	0.000
078	9/9/2019 09:08:27	0.000	0.000	0.000	0.000

079	9/9/2019 09:09:27	0.000	0.000	0.000	0.000
080	9/9/2019 09:10:27	0.000	0.000	0.000	0.000
081	9/9/2019 09:11:27	0.000	0.000	0.000	0.000
082	9/9/2019 09:12:27	0.000	0.000	0.000	0.000
083	9/9/2019 09:13:27	0.000	0.000	0.000	0.000
084	9/9/2019 09:14:27	0.000	0.000	0.000	0.000
085	9/9/2019 09:15:27	0.000	0.000	0.000	0.000
086	9/9/2019 09:16:27	0.000	0.000	0.000	0.000
087	9/9/2019 09:17:27	0.000	0.000	0.000	0.000
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090	9/9/2019 09:20:27	0.000	0.000	0.000	0.000
091	9/9/2019 09:21:27	0.000	0.000	0.000	0.000
092	9/9/2019 09:22:27	0.000	0.000	0.000	0.000
093	9/9/2019 09:23:27	0.000	0.000	0.000	0.000
094	9/9/2019 09:24:27	0.000	0.000	0.000	0.000
095	9/9/2019 09:25:27	0.000	0.000	0.000	0.000
096	9/9/2019 09:26:27	0.000	0.000	0.000	0.000
097	9/9/2019 09:27:27	0.000	0.000	0.000	0.000
098	9/9/2019 09:28:27	0.000	0.000	0.000	0.000
099	9/9/2019 09:29:27	0.000	0.000	0.000	0.000
100	9/9/2019 09:30:27	0.000	0.000	0.000	0.000
101	9/9/2019 09:31:27	0.000	0.000	0.000	0.000
102	9/9/2019 09:32:27	0.000	0.000	0.000	0.000

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107	9/9/2019 09:37:27	0.000	0.000	0.000	0.000
108	9/9/2019 09:38:27	0.000	0.000	0.000	0.000
109	9/9/2019 09:39:27	0.000	0.000	0.000	0.000
110	9/9/2019 09:40:27	0.000	0.000	0.000	0.000
111	9/9/2019 09:41:27	0.000	0.000	0.000	0.000
112	9/9/2019 09:42:27	0.000	0.000	0.000	0.000
113	9/9/2019 09:43:27	0.000	0.000	0.000	0.000
114	9/9/2019 09:44:27	0.000	0.000	0.000	0.000
115	9/9/2019 09:45:27	0.000	0.000	0.000	0.000
116	9/9/2019 09:46:27	0.000	0.000	0.000	0.000
117	9/9/2019 09:47:27	0.000	0.000	0.000	0.000
118	9/9/2019 09:48:27	0.000	0.000	0.000	0.000
119	9/9/2019 09:49:27	0.000	0.000	0.000	0.000
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122	9/9/2019 09:52:27	0.000	0.000	0.000	0.000
123	9/9/2019 09:53:27	0.000	0.000	0.000	0.000
124	9/9/2019 09:54:27	0.000	0.000	0.000	0.000
125	9/9/2019 09:55:27	0.000	0.000	0.000	0.000
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133	9/9/2019 10:03:27	0.000	0.000	0.000	0.000
134	9/9/2019 10:04:27	0.000	0.000	0.000	0.000
135	9/9/2019 10:05:27	0.000	0.000	0.000	0.000
136	9/9/2019 10:06:27	0.000	0.000	0.000	0.000
137	9/9/2019 10:07:27	0.000	0.000	0.000	0.000
138	9/9/2019 10:08:27	0.000	0.000	0.000	0.000
139	9/9/2019 10:09:27	0.000	0.000	0.000	0.000
140	9/9/2019 10:10:27	0.000	0.000	0.000	0.000
141	9/9/2019 10:11:27	0.000	0.000	0.000	0.000
142	9/9/2019 10:12:27	0.000	0.000	0.000	0.000
143	9/9/2019 10:13:27	0.000	0.000	0.000	0.000
144	9/9/2019 10:14:27	0.000	0.000	0.000	0.000
145	9/9/2019 10:15:27	0.000	0.000	0.000	0.000
146	9/9/2019 10:16:27	0.000	0.000	0.000	0.000
147	9/9/2019 10:17:27	0.000	0.000	0.000	0.000
148	9/9/2019 10:18:27	0.000	0.000	0.000	0.000
149	9/9/2019 10:19:27	0.000	0.000	0.000	0.000
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155	9/9/2019 10:25:27	0.000	0.000	0.000	0.000
156	9/9/2019 10:26:27	0.000	0.000	0.000	0.000
157	9/9/2019 10:27:27	0.000	0.000	0.000	0.000
158	9/9/2019 10:28:27	0.000	0.000	0.000	0.000
159	9/9/2019 10:29:27	0.000	0.000	0.000	0.000
160	9/9/2019 10:30:27	0.000	0.000	0.000	0.000
161	9/9/2019 10:31:27	0.000	0.000	0.000	0.000
162	9/9/2019 10:32:27	0.000	0.000	0.000	0.000
163	9/9/2019 10:33:27	0.000	0.000	0.000	0.000
164	9/9/2019 10:34:27	0.000	0.000	0.000	0.000
165	9/9/2019 10:35:27	0.000	0.000	0.000	0.000
166	9/9/2019 10:36:27	0.000	0.000	0.000	0.000
167	9/9/2019 10:37:27	0.000	0.000	0.000	0.000
168	9/9/2019 10:38:27	0.000	0.000	0.000	0.000
169	9/9/2019 10:39:27	0.000	0.000	0.000	0.000
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171	9/9/2019 10:41:27	0.000	0.000	0.000	0.000
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183	9/9/2019 10:53:27	0.000	0.000	0.000	0.000
184	9/9/2019 10:54:27	0.000	0.000	0.000	0.000
185	9/9/2019 10:55:27	0.000	0.000	0.000	0.000
186	9/9/2019 10:56:27	0.000	0.000	0.000	0.000
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189	9/9/2019 10:59:27	0.000	0.000	0.000	0.000
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191	9/9/2019 11:01:27	0.000	0.000	0.000	0.000
192	9/9/2019 11:02:27	0.000	0.000	0.000	0.000
193	9/9/2019 11:03:27	0.000	0.000	0.000	0.000
194	9/9/2019 11:04:27	0.000	0.000	0.000	0.000
195	9/9/2019 11:05:27	0.000	0.000	0.000	0.000
196	9/9/2019 11:06:27	0.000	0.000	0.000	0.000
197	9/9/2019 11:07:27	0.000	0.000	0.000	0.000
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202	9/9/2019 11:12:27	0.000	0.000	0.000	0.000
203	9/9/2019 11:13:27	0.000	0.000	0.000	0.000
204	9/9/2019 11:14:27	0.000	0.000	0.000	0.000
205	9/9/2019 11:15:27	0.000	0.000	0.000	0.000
206	9/9/2019 11:16:27	0.000	0.000	0.000	0.000
207	9/9/2019 11:17:27	0.000	0.000	0.000	0.000
208	9/9/2019 11:18:27	0.000	0.000	0.000	0.000
209	9/9/2019 11:19:27	0.000	0.000	0.000	0.000
210	9/9/2019 11:20:27	0.000	0.000	0.000	0.000
211	9/9/2019 11:21:27	0.000	0.000	0.000	0.000
212	9/9/2019 11:22:27	0.000	0.000	0.000	0.000
213	9/9/2019 11:23:27	0.000	0.000	0.000	0.000
214	9/9/2019 11:24:27	0.000	0.000	0.000	0.000
215	9/9/2019 11:25:27	0.000	0.000	0.000	0.000
216	9/9/2019 11:26:27	0.000	0.000	0.000	0.000
217	9/9/2019 11:27:27	0.000	0.000	0.000	0.000
218	9/9/2019 11:28:27	0.000	0.000	0.000	0.000
219	9/9/2019 11:29:27	0.000	0.000	0.000	0.000
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227	9/9/2019 11:37:27	0.000	0.000	0.000	0.000
228	9/9/2019 11:38:27	0.000	0.000	0.000	0.000
229	9/9/2019 11:39:27	0.000	0.000	0.000	0.000
230	9/9/2019 11:40:27	0.000	0.000	0.000	0.000
231	9/9/2019 11:41:27	0.000	0.000	0.000	0.000
232	9/9/2019 11:42:27	0.000	0.000	0.000	0.000
233	9/9/2019 11:43:27	0.000	0.000	0.000	0.000
234	9/9/2019 11:44:27	0.000	0.000	0.000	0.000
235	9/9/2019 11:45:27	0.000	0.000	0.000	0.000
236	9/9/2019 11:46:27	0.000	0.000	0.000	0.000
237	9/9/2019 11:47:27	0.000	0.000	0.000	0.000
238	9/9/2019 11:48:27	0.000	0.000	0.000	0.000
239	9/9/2019 11:49:27	0.000	0.000	0.000	0.000
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242	9/9/2019 11:52:27	0.000	0.000	0.000	0.000
243	9/9/2019 11:53:27	0.000	0.000	0.000	0.000
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251	9/9/2019 12:01:27	0.000	0.000	0.000	0.000
252	9/9/2019 12:02:27	0.000	0.000	0.000	0.000
253	9/9/2019 12:03:27	0.000	0.000	0.000	0.000
254	9/9/2019 12:04:27	0.000	0.000	0.000	0.000
255	9/9/2019 12:05:27	0.000	0.000	0.000	0.000
256	9/9/2019 12:06:27	0.000	0.000	0.000	0.000
257	9/9/2019 12:07:27	0.000	0.000	0.000	0.000
258	9/9/2019 12:08:27	0.000	0.000	0.000	0.000
259	9/9/2019 12:09:27	0.000	0.000	0.000	0.000
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261	9/9/2019 12:11:27	0.000	0.000	0.000	0.000
262	9/9/2019 12:12:27	0.000	0.000	0.000	0.000
263	9/9/2019 12:13:27	0.000	0.000	0.000	0.000
264	9/9/2019 12:14:27	0.000	0.000	0.000	0.000
265	9/9/2019 12:15:27	0.000	0.000	0.000	0.000
266	9/9/2019 12:16:27	0.000	0.000	0.000	0.000
267	9/9/2019 12:17:27	0.000	0.000	0.000	0.000
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274	9/9/2019 12:24:27	0.000	0.000	0.000	0.000
275	9/9/2019 12:25:27	0.000	0.000	0.000	0.000
276	9/9/2019 12:26:27	0.000	0.000	0.000	0.000
277	9/9/2019 12:27:27	0.000	0.000	0.000	0.000
278	9/9/2019 12:28:27	0.000	0.000	0.000	0.000
279	9/9/2019 12:29:27	0.000	0.000	0.000	0.000
280	9/9/2019 12:30:27	0.000	0.000	0.000	0.000
281	9/9/2019 12:31:27	0.000	0.000	0.000	0.000
282	9/9/2019 12:32:27	0.000	0.000	0.000	0.000
283	9/9/2019 12:33:27	0.000	0.000	0.000	0.000
284	9/9/2019 12:34:27	0.000	0.000	0.000	0.000
285	9/9/2019 12:35:27	0.000	0.000	0.000	0.000
286	9/9/2019 12:36:27	0.000	0.000	0.000	0.000
287	9/9/2019 12:37:27	0.000	0.000	0.000	0.000
288	9/9/2019 12:38:27	0.000	0.000	0.000	0.000
289	9/9/2019 12:39:27	0.000	0.000	0.000	0.000
290	9/9/2019 12:40:27	0.000	0.000	0.000	0.000
291	9/9/2019 12:41:27	0.000	0.000	0.000	0.000
292	9/9/2019 12:42:27	0.000	0.000	0.000	0.000
293	9/9/2019 12:43:27	0.000	0.000	0.000	0.000
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299	9/9/2019 12:49:27	0.000	0.000	0.000	0.000
300	9/9/2019 12:50:27	0.000	0.000	0.000	0.000
301	9/9/2019 12:51:27	0.000	0.000	0.000	0.000
302	9/9/2019 12:52:27	0.000	0.000	0.000	0.000
303	9/9/2019 12:53:27	0.000	0.000	0.000	0.000
304	9/9/2019 12:54:27	0.000	0.000	0.000	0.000
305	9/9/2019 12:55:27	0.000	0.000	0.000	0.000
306	9/9/2019 12:56:27	0.000	0.000	0.000	0.000
307	9/9/2019 12:57:27	0.000	0.000	0.000	0.000
308	9/9/2019 12:58:27	0.000	0.000	0.000	0.000
309	9/9/2019 12:59:27	0.000	0.000	0.000	0.000
310	9/9/2019 13:00:27	0.000	0.000	0.000	0.000
311	9/9/2019 13:01:27	0.000	0.000	0.000	0.000
312	9/9/2019 13:02:27	0.000	0.000	0.000	0.000
313	9/9/2019 13:03:27	0.000	0.000	0.000	0.000
314	9/9/2019 13:04:27	0.000	0.000	0.000	0.000
315	9/9/2019 13:05:27	0.000	0.000	0.000	0.000
316	9/9/2019 13:06:27	0.000	0.000	0.000	0.000
317	9/9/2019 13:07:27	0.000	0.000	0.000	0.000
318	9/9/2019 13:08:27	0.000	0.000	0.000	0.000

319	9/9/2019 13:09:27	0.000	0.000	0.000	0.000
320	9/9/2019 13:10:27	0.000	0.000	0.000	0.000
321	9/9/2019 13:11:27	0.000	0.000	0.000	0.000
322	9/9/2019 13:12:27	0.000	0.000	0.000	0.000
323	9/9/2019 13:13:27	0.000	0.000	0.000	0.000
324	9/9/2019 13:14:27	0.000	0.000	0.000	0.000
325	9/9/2019 13:15:27	0.000	0.000	0.000	0.000
326	9/9/2019 13:16:27	0.000	0.000	0.000	0.000
327	9/9/2019 13:17:27	0.000	0.000	0.000	0.000
328	9/9/2019 13:18:27	0.000	0.000	0.000	0.000
329	9/9/2019 13:19:27	0.000	0.000	0.000	0.000
330	9/9/2019 13:20:27	0.000	0.000	0.000	0.000
331	9/9/2019 13:21:27	0.000	0.000	0.000	0.000
332	9/9/2019 13:22:27	0.000	0.000	0.000	0.000
333	9/9/2019 13:23:27	0.000	0.000	0.000	0.000
334	9/9/2019 13:24:27	0.000	0.000	0.000	0.000
335	9/9/2019 13:25:27	0.000	0.000	0.000	0.000
336	9/9/2019 13:26:27	0.000	0.000	0.000	0.000
337	9/9/2019 13:27:27	0.000	0.000	0.000	0.000
338	9/9/2019 13:28:27	0.000	0.000	0.000	0.000
339	9/9/2019 13:29:27	0.000	0.000	0.000	0.000
340	9/9/2019 13:30:27	0.000	0.000	0.000	0.000
341	9/9/2019 13:31:27	0.000	0.000	0.000	0.000
342	9/9/2019 13:32:27	0.000	0.000	0.000	0.000

343	9/9/2019 13:33:27	0.000	0.000	0.000	0.000
344	9/9/2019 13:34:27	0.000	0.000	0.000	0.000
345	9/9/2019 13:35:27	0.000	0.000	0.000	0.000
346	9/9/2019 13:36:27	0.000	0.000	0.000	0.000
347	9/9/2019 13:37:27	0.000	0.000	0.000	0.000
348	9/9/2019 13:38:27	0.000	0.000	0.000	0.000
349	9/9/2019 13:39:27	0.000	0.000	0.000	0.000
350	9/9/2019 13:40:27	0.000	0.000	0.000	0.000
351	9/9/2019 13:41:27	0.000	0.000	0.000	0.000
352	9/9/2019 13:42:27	0.000	0.000	0.000	0.000
353	9/9/2019 13:43:27	0.000	0.000	0.000	0.000
354	9/9/2019 13:44:27	0.000	0.000	0.000	0.000
355	9/9/2019 13:45:27	0.000	0.000	0.000	0.000
356	9/9/2019 13:46:27	0.000	0.000	0.000	0.000
357	9/9/2019 13:47:27	0.000	0.000	0.000	0.000
358	9/9/2019 13:48:27	0.000	0.000	0.000	0.000
359	9/9/2019 13:49:27	0.000	0.000	0.000	0.000
360	9/9/2019 13:50:27	0.000	0.000	0.000	0.000
361	9/9/2019 13:51:27	0.000	0.000	0.000	0.000
362	9/9/2019 13:52:27	0.000	0.000	0.000	0.000
363	9/9/2019 13:53:27	0.000	0.000	0.000	0.000
364	9/9/2019 13:54:27	0.000	0.000	0.000	0.000
365	9/9/2019 13:55:27	0.000	0.000	0.000	0.000
366	9/9/2019 13:56:27	0.000	0.000	0.000	0.000

367	9/9/2019 13:57:27	0.000	0.000	0.000	0.000
368	9/9/2019 13:58:27	0.000	0.000	0.000	0.000
369	9/9/2019 13:59:27	0.000	0.000	0.000	0.000
370	9/9/2019 14:00:27	0.000	0.000	0.000	0.000
371	9/9/2019 14:01:27	0.000	0.000	0.000	0.000
372	9/9/2019 14:02:27	0.000	0.000	0.000	0.000
373	9/9/2019 14:03:27	0.000	0.000	0.000	0.000
374	9/9/2019 14:04:27	0.000	0.000	0.000	0.000
375	9/9/2019 14:05:27	0.000	0.000	0.000	0.000
376	9/9/2019 14:06:27	0.000	0.000	0.000	0.000
377	9/9/2019 14:07:27	0.000	0.000	0.000	0.000
378	9/9/2019 14:08:27	0.000	0.000	0.000	0.000
379	9/9/2019 14:09:27	0.000	0.000	0.000	0.000
380	9/9/2019 14:10:27	0.000	0.000	0.000	0.000
381	9/9/2019 14:11:27	0.000	0.000	0.000	0.000
382	9/9/2019 14:12:27	0.000	0.000	0.000	0.000
383	9/9/2019 14:13:27	0.000	0.000	0.000	0.000
384	9/9/2019 14:14:27	0.000	0.000	0.000	0.000
385	9/9/2019 14:15:27	0.000	0.000	0.000	0.000
386	9/9/2019 14:16:27	0.000	0.000	0.000	0.000
387	9/9/2019 14:17:27	0.000	0.000	0.000	0.000
388	9/9/2019 14:18:27	0.000	0.000	0.000	0.000
389	9/9/2019 14:19:27	0.000	0.000	0.000	0.000
390	9/9/2019 14:20:27	0.000	0.000	0.000	0.000

391	9/9/2019 14:21:27	0.000	0.000	0.000	0.000
392	9/9/2019 14:22:27	0.000	0.000	0.000	0.000
393	9/9/2019 14:23:27	0.000	0.000	0.000	0.000
394	9/9/2019 14:24:27	0.000	0.000	0.000	0.000
395	9/9/2019 14:25:27	0.000	0.000	0.000	0.000
396	9/9/2019 14:26:27	0.000	0.000	0.000	0.000
397	9/9/2019 14:27:27	0.000	0.000	0.000	0.000
398	9/9/2019 14:28:27	0.000	0.000	0.000	0.000
399	9/9/2019 14:29:27	0.000	0.000	0.000	0.000
400	9/9/2019 14:30:27	0.000	0.000	0.000	0.000
401	9/9/2019 14:31:27	0.000	0.000	0.000	0.000
402	9/9/2019 14:32:27	0.000	0.000	0.000	0.000
403	9/9/2019 14:33:27	0.000	0.000	0.000	0.000
404	9/9/2019 14:34:27	0.000	0.000	0.000	0.000
405	9/9/2019 14:35:27	0.000	0.000	0.000	0.000
406	9/9/2019 14:36:27	0.000	0.000	0.000	0.000
407	9/9/2019 14:37:27	0.000	0.000	0.000	0.000
408	9/9/2019 14:38:27	0.000	0.000	0.000	0.000
409	9/9/2019 14:39:27	0.000	0.000	0.000	0.000
410	9/9/2019 14:40:27	0.000	0.000	0.000	0.000
411	9/9/2019 14:41:27	0.000	0.000	0.000	0.000
412	9/9/2019 14:42:27	0.000	0.000	0.000	0.000
413	9/9/2019 14:43:27	0.000	0.000	0.000	0.000
414	9/9/2019 14:44:27	0.000	0.000	0.000	0.000

415	9/9/2019 14:45:27	0.000	0.000	0.000	0.000
416	9/9/2019 14:46:27	0.000	0.000	0.000	0.000
417	9/9/2019 14:47:27	0.000	0.000	0.000	0.000
418	9/9/2019 14:48:27	0.000	0.000	0.000	0.000
419	9/9/2019 14:49:27	0.000	0.000	0.000	0.000
420	9/9/2019 14:50:27	0.000	0.000	0.000	0.000
421	9/9/2019 14:51:27	0.000	0.000	0.000	0.000
422	9/9/2019 14:52:27	0.000	0.000	0.000	0.000
423	9/9/2019 14:53:27	0.000	0.000	0.000	0.000
424	9/9/2019 14:54:27	0.000	0.000	0.000	0.000
425	9/9/2019 14:55:27	0.000	0.000	0.000	0.000
426	9/9/2019 14:56:27	0.000	0.000	0.000	0.000
427	9/9/2019 14:57:27	0.000	0.000	0.000	0.000
428	9/9/2019 14:58:27	0.000	0.000	0.000	0.000
429	9/9/2019 14:59:27	0.000	0.000	0.000	0.000
430	9/9/2019 15:00:27	0.000	0.000	0.000	0.000
431	9/9/2019 15:01:27	0.000	0.000	0.000	0.000
432	9/9/2019 15:02:27	0.000	0.000	0.000	0.000
433	9/9/2019 15:03:27	0.000	0.000	0.000	0.000
434	9/9/2019 15:04:27	0.000	0.000	0.000	0.000
435	9/9/2019 15:05:27	0.000	0.000	0.000	0.000
436	9/9/2019 15:06:27	0.000	0.000	0.000	0.000
437	9/9/2019 15:07:27	0.000	0.000	0.000	0.000
438	9/9/2019 15:08:27	0.000	0.000	0.000	0.000

439	9/9/2019 15:09:27	0.000	0.000	0.000	0.000
440	9/9/2019 15:10:27	0.000	0.000	0.000	0.000
441	9/9/2019 15:11:27	0.000	0.000	0.000	0.000
442	9/9/2019 15:12:27	0.000	0.000	0.000	0.000
443	9/9/2019 15:13:27	0.000	0.000	0.000	0.000
444	9/9/2019 15:14:27	0.000	0.000	0.000	0.000
445	9/9/2019 15:15:27	0.000	0.000	0.000	0.000
446	9/9/2019 15:16:27	0.000	0.000	0.000	0.000
447	9/9/2019 15:17:27	0.000	0.000	0.000	0.000
448	9/9/2019 15:18:27	0.000	0.000	0.000	0.000
449	9/9/2019 15:19:27	0.000	0.000	0.000	0.000
450	9/9/2019 15:20:27	0.000	0.000	0.000	0.000
451	9/9/2019 15:21:27	0.000	0.000	0.000	0.000
452	9/9/2019 15:22:27	0.000	0.000	0.000	0.000
453	9/9/2019 15:23:27	0.000	0.000	0.000	0.000
454	9/9/2019 15:24:27	0.000	0.000	0.000	0.000
455	9/9/2019 15:25:27	0.000	0.000	0.000	0.000
456	9/9/2019 15:26:27	0.000	0.000	0.000	0.000
457	9/9/2019 15:27:27	0.000	0.000	0.000	0.000
458	9/9/2019 15:28:27	0.000	0.000	0.000	0.000
459	9/9/2019 15:29:27	0.000	0.000	0.000	0.000
460	9/9/2019 15:30:27	0.000	0.000	0.000	0.000
461	9/9/2019 15:31:27	0.000	0.000	0.000	0.000
462	9/9/2019 15:32:27	0.000	0.000	0.000	0.000

463	9/9/2019 15:33:27	0.000	0.000	0.000	0.000
464	9/9/2019 15:34:27	0.000	0.000	0.000	0.000
465	9/9/2019 15:35:27	0.000	0.000	0.000	0.000
466	9/9/2019 15:36:27	0.000	0.000	0.000	0.000
467	9/9/2019 15:37:27	0.000	0.000	0.000	0.000
468	9/9/2019 15:38:27	0.000	0.000	0.000	0.000
469	9/9/2019 15:39:27	0.000	0.000	0.000	0.000
470	9/9/2019 15:40:27	0.000	0.000	0.000	0.000
471	9/9/2019 15:41:27	0.000	0.000	0.000	0.000
472	9/9/2019 15:42:27	0.000	0.000	0.000	0.000
473	9/9/2019 15:43:27	0.000	0.000	0.000	0.000
474	9/9/2019 15:44:27	0.000	0.000	0.000	0.000
475	9/9/2019 15:45:27	0.000	0.000	0.000	0.000
476	9/9/2019 15:46:27	0.000	0.000	0.000	0.000
477	9/9/2019 15:47:27	0.000	0.000	0.000	0.000
478	9/9/2019 15:48:27	0.000	0.000	0.000	0.000
479	9/9/2019 15:49:27	0.000	0.000	0.000	0.000
480	9/9/2019 15:50:27	0.000	0.000	0.000	0.000
481	9/9/2019 15:51:27	0.000	0.000	0.000	0.000
482	9/9/2019 15:52:27	0.000	0.000	0.000	0.000
483	9/9/2019 15:53:27	0.000	0.000	0.000	0.000
484	9/9/2019 15:54:27	0.000	0.000	0.000	0.000
485	9/9/2019 15:55:27	0.000	0.000	0.000	0.000
486	9/9/2019 15:56:27	0.000	0.000	0.000	0.000

487	9/9/2019 15:57:27	0.000	0.000	0.000	0.000
488	9/9/2019 15:58:27	0.000	0.000	0.000	0.000
489	9/9/2019 15:59:27	0.000	0.000	0.000	0.000
490	9/9/2019 16:00:27	0.000	0.000	0.000	0.000
491	9/9/2019 16:01:27	0.000	0.000	0.000	0.000
492	9/9/2019 16:02:27	0.000	0.000	0.000	0.000
493	9/9/2019 16:03:27	0.000	0.000	0.000	0.000
494	9/9/2019 16:04:27	0.000	0.000	0.000	0.000
495	9/9/2019 16:05:27	0.000	0.000	0.000	0.000
496	9/9/2019 16:06:27	0.000	0.000	0.000	0.000
497	9/9/2019 16:07:27	0.000	0.000	0.000	0.000
498	9/9/2019 16:08:27	0.000	0.000	0.000	0.000
499	9/9/2019 16:09:27	0.000	0.000	0.000	0.000
500	9/9/2019 16:10:27	0.000	0.000	0.000	0.000
501	9/9/2019 16:11:27	0.000	0.000	0.000	0.000
502	9/9/2019 16:12:27	0.000	0.000	0.000	0.000
503	9/9/2019 16:13:27	0.000	0.000	0.000	0.000
504	9/9/2019 16:14:27	0.000	0.000	0.000	0.000
505	9/9/2019 16:15:27	0.000	0.000	0.000	0.000
506	9/9/2019 16:16:27	0.000	0.000	0.000	0.000
507	9/9/2019 16:17:27	0.000	0.000	0.000	0.000
508	9/9/2019 16:18:27	0.000	0.000	0.000	0.000
509	9/9/2019 16:19:27	0.000	0.000	0.000	0.000
510	9/9/2019 16:20:27	0.000	0.000	0.000	0.000

Peak	0.000	0.000	0.000	0.000	
Min	0.000	0.000	0.000	0.000	
Average		0.000	0.000	0.000	0.000

****

TWA/STEL

Index	Date/Time	VOC(ppm) (TWA)	VOC(ppm) (STEL)	
001	9/9/2019 07:51:27	0.000	---	
002	9/9/2019 07:52:27	0.000	---	
003	9/9/2019 07:53:27	0.000	---	
004	9/9/2019 07:54:27	0.000	---	
005	9/9/2019 07:55:27	0.000	---	
006	9/9/2019 07:56:27	0.000	---	
007	9/9/2019 07:57:27	0.000	---	
008	9/9/2019 07:58:27	0.000	---	
009	9/9/2019 07:59:27	0.000	---	
010	9/9/2019 08:00:27	0.000	---	
011	9/9/2019 08:01:27	0.000	---	
012	9/9/2019 08:02:27	0.000	---	
013	9/9/2019 08:03:27	0.000	---	
014	9/9/2019 08:04:27	0.000	---	
015	9/9/2019 08:05:27	0.000	0.000	
016	9/9/2019 08:06:27	0.000	0.000	

017	9/9/2019 08:07:27	0.000	0.000
018	9/9/2019 08:08:27	0.000	0.000
019	9/9/2019 08:09:27	0.000	0.000
020	9/9/2019 08:10:27	0.000	0.000
021	9/9/2019 08:11:27	0.000	0.000
022	9/9/2019 08:12:27	0.000	0.000
023	9/9/2019 08:13:27	0.000	0.000
024	9/9/2019 08:14:27	0.000	0.000
025	9/9/2019 08:15:27	0.000	0.000
026	9/9/2019 08:16:27	0.000	0.000
027	9/9/2019 08:17:27	0.000	0.000
028	9/9/2019 08:18:27	0.000	0.000
029	9/9/2019 08:19:27	0.000	0.000
030	9/9/2019 08:20:27	0.000	0.000
031	9/9/2019 08:21:27	0.000	0.000
032	9/9/2019 08:22:27	0.000	0.000
033	9/9/2019 08:23:27	0.000	0.000
034	9/9/2019 08:24:27	0.000	0.000
035	9/9/2019 08:25:27	0.000	0.000
036	9/9/2019 08:26:27	0.000	0.000
037	9/9/2019 08:27:27	0.000	0.000
038	9/9/2019 08:28:27	0.000	0.000
039	9/9/2019 08:29:27	0.000	0.000
040	9/9/2019 08:30:27	0.000	0.000

041	9/9/2019 08:31:27	0.000	0.000
042	9/9/2019 08:32:27	0.000	0.000
043	9/9/2019 08:33:27	0.000	0.000
044	9/9/2019 08:34:27	0.000	0.000
045	9/9/2019 08:35:27	0.000	0.000
046	9/9/2019 08:36:27	0.000	0.000
047	9/9/2019 08:37:27	0.000	0.000
048	9/9/2019 08:38:27	0.000	0.000
049	9/9/2019 08:39:27	0.000	0.000
050	9/9/2019 08:40:27	0.000	0.000
051	9/9/2019 08:41:27	0.000	0.000
052	9/9/2019 08:42:27	0.000	0.000
053	9/9/2019 08:43:27	0.000	0.000
054	9/9/2019 08:44:27	0.000	0.000
055	9/9/2019 08:45:27	0.000	0.000
056	9/9/2019 08:46:27	0.000	0.000
057	9/9/2019 08:47:27	0.000	0.000
058	9/9/2019 08:48:27	0.000	0.000
059	9/9/2019 08:49:27	0.000	0.000
060	9/9/2019 08:50:27	0.000	0.000
061	9/9/2019 08:51:27	0.000	0.000
062	9/9/2019 08:52:27	0.000	0.000
063	9/9/2019 08:53:27	0.000	0.000
064	9/9/2019 08:54:27	0.000	0.000

065	9/9/2019 08:55:27	0.000	0.000
066	9/9/2019 08:56:27	0.000	0.000
067	9/9/2019 08:57:27	0.000	0.000
068	9/9/2019 08:58:27	0.000	0.000
069	9/9/2019 08:59:27	0.000	0.000
070	9/9/2019 09:00:27	0.000	0.000
071	9/9/2019 09:01:27	0.000	0.000
072	9/9/2019 09:02:27	0.000	0.000
073	9/9/2019 09:03:27	0.000	0.000
074	9/9/2019 09:04:27	0.000	0.000
075	9/9/2019 09:05:27	0.000	0.000
076	9/9/2019 09:06:27	0.000	0.000
077	9/9/2019 09:07:27	0.000	0.000
078	9/9/2019 09:08:27	0.000	0.000
079	9/9/2019 09:09:27	0.000	0.000
080	9/9/2019 09:10:27	0.000	0.000
081	9/9/2019 09:11:27	0.000	0.000
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450	9/9/2019 15:20:27	0.000	0.000
451	9/9/2019 15:21:27	0.000	0.000
452	9/9/2019 15:22:27	0.000	0.000
453	9/9/2019 15:23:27	0.000	0.000
454	9/9/2019 15:24:27	0.000	0.000
455	9/9/2019 15:25:27	0.000	0.000
456	9/9/2019 15:26:27	0.000	0.000
457	9/9/2019 15:27:27	0.000	0.000
458	9/9/2019 15:28:27	0.000	0.000
459	9/9/2019 15:29:27	0.000	0.000
460	9/9/2019 15:30:27	0.000	0.000
461	9/9/2019 15:31:27	0.000	0.000
462	9/9/2019 15:32:27	0.000	0.000
463	9/9/2019 15:33:27	0.000	0.000
464	9/9/2019 15:34:27	0.000	0.000
465	9/9/2019 15:35:27	0.000	0.000
466	9/9/2019 15:36:27	0.000	0.000
467	9/9/2019 15:37:27	0.000	0.000
468	9/9/2019 15:38:27	0.000	0.000
469	9/9/2019 15:39:27	0.000	0.000
470	9/9/2019 15:40:27	0.000	0.000
471	9/9/2019 15:41:27	0.000	0.000
472	9/9/2019 15:42:27	0.000	0.000

473	9/9/2019 15:43:27	0.000	0.000
474	9/9/2019 15:44:27	0.000	0.000
475	9/9/2019 15:45:27	0.000	0.000
476	9/9/2019 15:46:27	0.000	0.000
477	9/9/2019 15:47:27	0.000	0.000
478	9/9/2019 15:48:27	0.000	0.000
479	9/9/2019 15:49:27	0.000	0.000
480	9/9/2019 15:50:27	0.000	0.000
481	9/9/2019 15:51:27	0.000	0.000
482	9/9/2019 15:52:27	0.000	0.000
483	9/9/2019 15:53:27	0.000	0.000
484	9/9/2019 15:54:27	0.000	0.000
485	9/9/2019 15:55:27	0.000	0.000
486	9/9/2019 15:56:27	0.000	0.000
487	9/9/2019 15:57:27	0.000	0.000
488	9/9/2019 15:58:27	0.000	0.000
489	9/9/2019 15:59:27	0.000	0.000
490	9/9/2019 16:00:27	0.000	0.000
491	9/9/2019 16:01:27	0.000	0.000
492	9/9/2019 16:02:27	0.000	0.000
493	9/9/2019 16:03:27	0.000	0.000
494	9/9/2019 16:04:27	0.000	0.000
495	9/9/2019 16:05:27	0.000	0.000
496	9/9/2019 16:06:27	0.000	0.000

497	9/9/2019 16:07:27	0.000	0.000
498	9/9/2019 16:08:27	0.000	0.000
499	9/9/2019 16:09:27	0.000	0.000
500	9/9/2019 16:10:27	0.000	0.000
501	9/9/2019 16:11:27	0.000	0.000
502	9/9/2019 16:12:27	0.000	0.000
503	9/9/2019 16:13:27	0.000	0.000
504	9/9/2019 16:14:27	0.000	0.000
505	9/9/2019 16:15:27	0.000	0.000
506	9/9/2019 16:16:27	0.000	0.000
507	9/9/2019 16:17:27	0.000	0.000
508	9/9/2019 16:18:27	0.000	0.000
509	9/9/2019 16:19:27	0.000	0.000
510	9/9/2019 16:20:27	0.000	0.000

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19/09/09 07:50

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Summary

Unit Name MiniRAE 3000(PGM-7320)

Unit SN 592-914376

Unit Firmware Ver V2.14

Running Mode Hygiene Mode

Datalog Mode Auto

Diagnostic Mode No

Stop Reason Power Down

Site ID RAE00000

User ID 00000001

Begin 9/9/2019 07:50:02

End 9/9/2019 16:24:12

Sample Period(s) 60

Number of Records 514

Sensor PID(ppm)

Sensor SN S023030126S2

Measure Type Min; Avg; Max; Real

Span 100.0

Span 2 1000.0

Low Alarm 50.0

High Alarm 100.0

Over Alarm 2000.0

STEL Alarm 25.0

TWA Alarm 10.0

Measurement Gas Isobutylene

Calibration Time 9/9/2019 07:49

Peak 0.7

Min 0.0

Average 0.3

****

Datalog

Index	Date/Time	PID(ppm) (Min)	PID(ppm) (Avg)	PID(ppm) (Max)	PID(ppm) (Real)	PID(ppm)
001	9/9/2019 07:51:02	0.0	0.4	1.7	0.3	
002	9/9/2019 07:52:02	0.0	0.1	0.3	0.1	
003	9/9/2019 07:53:02	0.0	0.1	0.2	0.0	
004	9/9/2019 07:54:02	0.0	0.0	0.1	0.1	
005	9/9/2019 07:55:02	0.0	0.1	0.1	0.1	
006	9/9/2019 07:56:02	0.1	0.1	0.1	0.1	
007	9/9/2019 07:57:02	0.1	0.1	0.1	0.1	
008	9/9/2019 07:58:02	0.1	0.1	0.2	0.1	
009	9/9/2019 07:59:02	0.1	0.1	0.2	0.2	
010	9/9/2019 08:00:02	0.1	0.2	0.2	0.2	
011	9/9/2019 08:01:02	0.2	0.2	0.2	0.2	
012	9/9/2019 08:02:02	0.2	0.2	0.2	0.2	
013	9/9/2019 08:03:02	0.2	0.2	0.2	0.2	
014	9/9/2019 08:04:02	0.2	0.2	0.2	0.2	
015	9/9/2019 08:05:02	0.2	0.2	0.2	0.2	
016	9/9/2019 08:06:02	0.2	0.2	0.2	0.2	

017	9/9/2019 08:07:02	0.2	0.2	0.2	0.2
018	9/9/2019 08:08:02	0.2	0.2	0.2	0.2
019	9/9/2019 08:09:02	0.2	0.2	0.2	0.2
020	9/9/2019 08:10:02	0.2	0.2	0.2	0.2
021	9/9/2019 08:11:02	0.2	0.2	0.2	0.2
022	9/9/2019 08:12:02	0.2	0.2	0.2	0.2
023	9/9/2019 08:13:02	0.2	0.2	0.2	0.2
024	9/9/2019 08:14:02	0.2	0.2	0.2	0.2
025	9/9/2019 08:15:02	0.2	0.2	0.2	0.2
026	9/9/2019 08:16:02	0.2	0.2	0.3	0.2
027	9/9/2019 08:17:02	0.2	0.2	0.3	0.3
028	9/9/2019 08:18:02	0.2	0.2	0.3	0.2
029	9/9/2019 08:19:02	0.2	0.2	0.3	0.2
030	9/9/2019 08:20:02	0.2	0.3	0.3	0.2
031	9/9/2019 08:21:02	0.2	0.3	0.3	0.3
032	9/9/2019 08:22:02	0.2	0.3	0.3	0.3
033	9/9/2019 08:23:02	0.2	0.3	0.3	0.3
034	9/9/2019 08:24:02	0.3	0.3	0.3	0.3
035	9/9/2019 08:25:02	0.3	0.3	0.3	0.3
036	9/9/2019 08:26:02	0.3	0.3	0.3	0.3
037	9/9/2019 08:27:02	0.3	0.3	0.3	0.3
038	9/9/2019 08:28:02	0.3	0.3	0.3	0.3
039	9/9/2019 08:29:02	0.3	0.3	0.3	0.3
040	9/9/2019 08:30:02	0.3	0.3	0.3	0.3

041	9/9/2019 08:31:02	0.3	0.3	0.3	0.3
042	9/9/2019 08:32:02	0.3	0.3	0.4	0.4
043	9/9/2019 08:33:02	0.3	0.3	0.4	0.3
044	9/9/2019 08:34:02	0.3	0.3	0.4	0.3
045	9/9/2019 08:35:02	0.3	0.3	0.4	0.3
046	9/9/2019 08:36:02	0.3	0.3	0.4	0.3
047	9/9/2019 08:37:02	0.3	0.3	0.4	0.4
048	9/9/2019 08:38:02	0.3	0.4	0.4	0.4
049	9/9/2019 08:39:02	0.3	0.4	0.6	0.3
050	9/9/2019 08:40:02	0.3	0.4	0.4	0.4
051	9/9/2019 08:41:02	0.4	0.4	0.6	0.4
052	9/9/2019 08:42:02	0.4	0.4	0.4	0.4
053	9/9/2019 08:43:02	0.4	0.4	0.5	0.4
054	9/9/2019 08:44:02	0.4	0.4	0.5	0.4
055	9/9/2019 08:45:02	0.4	0.4	0.5	0.4
056	9/9/2019 08:46:02	0.4	0.5	0.7	0.5
057	9/9/2019 08:47:02	0.4	0.4	0.5	0.4
058	9/9/2019 08:48:02	0.4	0.4	0.4	0.4
059	9/9/2019 08:49:02	0.4	0.4	0.4	0.4
060	9/9/2019 08:50:02	0.4	0.4	0.5	0.4
061	9/9/2019 08:51:02	0.4	0.5	0.7	0.5
062	9/9/2019 08:52:02	0.4	0.5	0.5	0.5
063	9/9/2019 08:53:02	0.4	0.5	0.8	0.5
064	9/9/2019 08:54:02	0.5	0.5	0.5	0.5

065	9/9/2019 08:55:02	0.5	0.5	0.5	0.5
066	9/9/2019 08:56:02	0.5	0.5	0.6	0.6
067	9/9/2019 08:57:02	0.5	0.6	0.7	0.5
068	9/9/2019 08:58:02	0.5	0.5	0.5	0.5
069	9/9/2019 08:59:02	0.5	0.5	0.5	0.5
070	9/9/2019 09:00:02	0.5	0.5	0.5	0.5
071	9/9/2019 09:01:02	0.5	0.5	0.5	0.5
072	9/9/2019 09:02:02	0.5	0.5	0.6	0.5
073	9/9/2019 09:03:02	0.5	0.5	0.6	0.6
074	9/9/2019 09:04:02	0.5	0.6	0.6	0.6
075	9/9/2019 09:05:02	0.6	0.6	0.6	0.6
076	9/9/2019 09:06:02	0.5	0.6	0.6	0.6
077	9/9/2019 09:07:02	0.6	0.6	0.6	0.6
078	9/9/2019 09:08:02	0.5	0.6	0.6	0.6
079	9/9/2019 09:09:02	0.6	0.6	0.6	0.6
080	9/9/2019 09:10:02	0.6	0.6	0.6	0.6
081	9/9/2019 09:11:02	0.6	0.6	0.6	0.6
082	9/9/2019 09:12:02	0.6	0.6	0.6	0.6
083	9/9/2019 09:13:02	0.6	0.6	0.6	0.6
084	9/9/2019 09:14:02	0.6	0.6	0.6	0.6
085	9/9/2019 09:15:02	0.6	0.6	0.6	0.6
086	9/9/2019 09:16:02	0.6	0.6	0.6	0.6
087	9/9/2019 09:17:02	0.6	0.6	0.6	0.6
088	9/9/2019 09:18:02	0.6	0.6	0.7	0.7

089	9/9/2019 09:19:02	0.6	0.6	0.7	0.7
090	9/9/2019 09:20:02	0.6	0.6	0.7	0.6
091	9/9/2019 09:21:02	0.6	0.6	0.7	0.7
092	9/9/2019 09:22:02	0.7	0.7	0.7	0.7
093	9/9/2019 09:23:02	0.6	0.7	0.7	0.7
094	9/9/2019 09:24:02	0.7	0.7	0.7	0.7
095	9/9/2019 09:25:02	0.7	0.7	0.9	0.7
096	9/9/2019 09:26:02	0.7	0.7	0.9	0.7
097	9/9/2019 09:27:02	0.7	0.7	0.7	0.7
098	9/9/2019 09:28:02	0.7	0.7	0.7	0.7
099	9/9/2019 09:29:02	0.7	0.7	0.7	0.7
100	9/9/2019 09:30:02	0.7	0.7	0.7	0.7
101	9/9/2019 09:31:02	0.7	0.7	0.7	0.7
102	9/9/2019 09:32:02	0.7	0.7	0.8	0.7
103	9/9/2019 09:33:02	0.7	0.7	0.7	0.7
104	9/9/2019 09:34:02	0.7	0.7	0.7	0.7
105	9/9/2019 09:35:02	0.7	0.7	0.7	0.7
106	9/9/2019 09:36:02	0.7	0.7	0.7	0.7
107	9/9/2019 09:37:02	0.7	0.7	0.7	0.7
108	9/9/2019 09:38:02	0.7	0.7	0.7	0.7
109	9/9/2019 09:39:02	0.7	0.7	0.7	0.7
110	9/9/2019 09:40:02	0.6	0.7	0.7	0.6
111	9/9/2019 09:41:02	0.6	0.7	0.7	0.7
112	9/9/2019 09:42:02	0.7	0.7	0.9	0.7

113	9/9/2019 09:43:02	0.6	0.7	0.7	0.7
114	9/9/2019 09:44:02	0.6	0.7	0.7	0.6
115	9/9/2019 09:45:02	0.6	0.6	0.7	0.7
116	9/9/2019 09:46:02	0.6	0.6	0.7	0.6
117	9/9/2019 09:47:02	0.6	0.6	0.7	0.6
118	9/9/2019 09:48:02	0.6	0.6	0.6	0.6
119	9/9/2019 09:49:02	0.6	0.6	0.6	0.6
120	9/9/2019 09:50:02	0.6	0.6	0.6	0.6
121	9/9/2019 09:51:02	0.6	0.6	0.6	0.6
122	9/9/2019 09:52:02	0.6	0.6	0.6	0.6
123	9/9/2019 09:53:02	0.6	0.6	0.6	0.6
124	9/9/2019 09:54:02	0.6	0.6	0.6	0.6
125	9/9/2019 09:55:02	0.6	0.6	0.6	0.6
126	9/9/2019 09:56:02	0.6	0.6	0.6	0.6
127	9/9/2019 09:57:02	0.6	0.6	0.6	0.6
128	9/9/2019 09:58:02	0.5	0.6	0.6	0.5
129	9/9/2019 09:59:02	0.5	0.5	0.6	0.5
130	9/9/2019 10:00:02	0.5	0.5	0.6	0.6
131	9/9/2019 10:01:02	0.5	0.5	0.6	0.5
132	9/9/2019 10:02:02	0.5	0.5	0.5	0.5
133	9/9/2019 10:03:02	0.5	0.5	0.6	0.5
134	9/9/2019 10:04:02	0.4	0.5	0.7	0.6
135	9/9/2019 10:05:02	0.4	0.5	0.7	0.4
136	9/9/2019 10:06:02	0.4	0.5	0.7	0.6

137	9/9/2019 10:07:02	0.5	0.6	0.7	0.6
138	9/9/2019 10:08:02	0.5	0.5	0.6	0.5
139	9/9/2019 10:09:02	0.4	0.5	0.6	0.6
140	9/9/2019 10:10:02	0.5	0.5	0.5	0.5
141	9/9/2019 10:11:02	0.5	0.5	0.5	0.5
142	9/9/2019 10:12:02	0.5	0.5	0.6	0.5
143	9/9/2019 10:13:02	0.5	0.5	0.6	0.5
144	9/9/2019 10:14:02	0.5	0.5	0.5	0.5
145	9/9/2019 10:15:02	0.5	0.5	0.5	0.5
146	9/9/2019 10:16:02	0.5	0.5	0.5	0.5
147	9/9/2019 10:17:02	0.5	0.5	0.5	0.5
148	9/9/2019 10:18:02	0.5	0.5	0.6	0.5
149	9/9/2019 10:19:02	0.5	0.5	0.5	0.5
150	9/9/2019 10:20:02	0.5	0.5	0.5	0.5
151	9/9/2019 10:21:02	0.5	0.5	0.5	0.5
152	9/9/2019 10:22:02	0.4	0.5	0.6	0.4
153	9/9/2019 10:23:02	0.4	0.4	0.5	0.4
154	9/9/2019 10:24:02	0.4	0.4	0.5	0.4
155	9/9/2019 10:25:02	0.4	0.4	0.6	0.4
156	9/9/2019 10:26:02	0.4	0.4	0.4	0.4
157	9/9/2019 10:27:02	0.4	0.4	0.4	0.4
158	9/9/2019 10:28:02	0.4	0.4	0.5	0.4
159	9/9/2019 10:29:02	0.3	0.4	0.5	0.3
160	9/9/2019 10:30:02	0.3	0.4	0.5	0.4

161	9/9/2019 10:31:02	0.3	0.4	0.5	0.4
162	9/9/2019 10:32:02	0.3	0.4	0.5	0.3
163	9/9/2019 10:33:02	0.3	0.4	0.5	0.4
164	9/9/2019 10:34:02	0.3	0.4	0.4	0.3
165	9/9/2019 10:35:02	0.3	0.4	0.5	0.3
166	9/9/2019 10:36:02	0.3	0.4	0.4	0.4
167	9/9/2019 10:37:02	0.3	0.4	0.5	0.4
168	9/9/2019 10:38:02	0.3	0.4	0.4	0.3
169	9/9/2019 10:39:02	0.3	0.4	0.5	0.4
170	9/9/2019 10:40:02	0.3	0.3	0.5	0.4
171	9/9/2019 10:41:02	0.3	0.4	0.5	0.3
172	9/9/2019 10:42:02	0.3	0.3	0.4	0.3
173	9/9/2019 10:43:02	0.2	0.3	0.5	0.3
174	9/9/2019 10:44:02	0.3	0.3	0.3	0.3
175	9/9/2019 10:45:02	0.2	0.3	0.4	0.3
176	9/9/2019 10:46:02	0.3	0.3	0.4	0.4
177	9/9/2019 10:47:02	0.2	0.3	0.4	0.3
178	9/9/2019 10:48:02	0.2	0.3	0.4	0.3
179	9/9/2019 10:49:02	0.2	0.3	0.4	0.3
180	9/9/2019 10:50:02	0.2	0.4	0.5	0.3
181	9/9/2019 10:51:02	0.2	0.3	0.5	0.4
182	9/9/2019 10:52:02	0.2	0.3	0.4	0.3
183	9/9/2019 10:53:02	0.1	0.3	0.5	0.3
184	9/9/2019 10:54:02	0.2	0.3	0.4	0.3

185	9/9/2019 10:55:02	0.2	0.3	0.5	0.3
186	9/9/2019 10:56:02	0.2	0.3	0.5	0.3
187	9/9/2019 10:57:02	0.2	0.3	0.4	0.3
188	9/9/2019 10:58:02	0.2	0.3	0.5	0.2
189	9/9/2019 10:59:02	0.2	0.3	0.5	0.3
190	9/9/2019 11:00:02	0.2	0.3	0.5	0.3
191	9/9/2019 11:01:02	0.2	0.3	0.4	0.3
192	9/9/2019 11:02:02	0.2	0.3	0.4	0.3
193	9/9/2019 11:03:02	0.2	0.3	0.5	0.2
194	9/9/2019 11:04:02	0.1	0.3	0.4	0.3
195	9/9/2019 11:05:02	0.2	0.3	0.5	0.3
196	9/9/2019 11:06:02	0.2	0.3	0.5	0.3
197	9/9/2019 11:07:02	0.2	0.3	0.5	0.2
198	9/9/2019 11:08:02	0.2	0.3	0.4	0.4
199	9/9/2019 11:09:02	0.1	0.3	0.4	0.4
200	9/9/2019 11:10:02	0.0	0.3	0.5	0.2
201	9/9/2019 11:11:02	0.1	0.3	0.5	0.3
202	9/9/2019 11:12:02	0.1	0.3	0.5	0.4
203	9/9/2019 11:13:02	0.2	0.3	0.4	0.3
204	9/9/2019 11:14:02	0.2	0.3	0.4	0.2
205	9/9/2019 11:15:02	0.0	0.2	0.4	0.3
206	9/9/2019 11:16:02	0.1	0.2	0.4	0.2
207	9/9/2019 11:17:02	0.1	0.3	0.5	0.4
208	9/9/2019 11:18:02	0.1	0.2	0.4	0.1

209	9/9/2019 11:19:02	0.1	0.2	0.3	0.2
210	9/9/2019 11:20:02	0.1	0.2	0.4	0.2
211	9/9/2019 11:21:02	0.1	0.2	0.4	0.3
212	9/9/2019 11:22:02	0.1	0.2	0.3	0.3
213	9/9/2019 11:23:02	0.0	0.2	0.5	0.1
214	9/9/2019 11:24:02	0.1	0.2	0.4	0.2
215	9/9/2019 11:25:02	0.1	0.2	0.4	0.4
216	9/9/2019 11:26:02	0.1	0.2	0.4	0.2
217	9/9/2019 11:27:02	0.2	0.2	0.3	0.2
218	9/9/2019 11:28:02	0.1	0.2	0.2	0.2
219	9/9/2019 11:29:02	0.1	0.2	0.3	0.2
220	9/9/2019 11:30:02	0.1	0.2	0.4	0.2
221	9/9/2019 11:31:02	0.1	0.2	0.4	0.3
222	9/9/2019 11:32:02	0.0	0.2	0.3	0.2
223	9/9/2019 11:33:02	0.0	0.2	0.3	0.1
224	9/9/2019 11:34:02	0.1	0.2	0.3	0.2
225	9/9/2019 11:35:02	0.1	0.2	0.3	0.2
226	9/9/2019 11:36:02	0.1	0.2	0.3	0.2
227	9/9/2019 11:37:02	0.1	0.2	0.2	0.2
228	9/9/2019 11:38:02	0.1	0.2	0.3	0.2
229	9/9/2019 11:39:02	0.0	0.1	0.2	0.1
230	9/9/2019 11:40:02	0.1	0.1	0.2	0.1
231	9/9/2019 11:41:02	0.1	0.1	0.2	0.1
232	9/9/2019 11:42:02	0.1	0.1	0.2	0.1

233	9/9/2019 11:43:02	0.1	0.1	0.2	0.1
234	9/9/2019 11:44:02	0.1	0.1	0.2	0.1
235	9/9/2019 11:45:02	0.1	0.1	0.2	0.2
236	9/9/2019 11:46:02	0.1	0.1	0.2	0.1
237	9/9/2019 11:47:02	0.1	0.1	0.2	0.1
238	9/9/2019 11:48:02	0.1	0.1	0.2	0.1
239	9/9/2019 11:49:02	0.1	0.1	0.2	0.1
240	9/9/2019 11:50:02	0.1	0.1	0.2	0.1
241	9/9/2019 11:51:02	0.0	0.1	0.2	0.2
242	9/9/2019 11:52:02	0.1	0.1	0.2	0.2
243	9/9/2019 11:53:02	0.1	0.1	0.2	0.1
244	9/9/2019 11:54:02	0.0	0.1	0.3	0.1
245	9/9/2019 11:55:02	0.0	0.1	0.2	0.1
246	9/9/2019 11:56:02	0.1	0.1	0.2	0.2
247	9/9/2019 11:57:02	0.0	0.1	0.3	0.1
248	9/9/2019 11:58:02	0.0	0.1	0.3	0.1
249	9/9/2019 11:59:02	0.1	0.2	0.3	0.1
250	9/9/2019 12:00:02	0.0	0.1	0.2	0.1
251	9/9/2019 12:01:02	0.0	0.1	0.2	0.1
252	9/9/2019 12:02:02	0.1	0.1	0.2	0.1
253	9/9/2019 12:03:02	0.1	0.1	0.2	0.1
254	9/9/2019 12:04:02	0.1	0.1	0.2	0.2
255	9/9/2019 12:05:02	0.1	0.1	0.2	0.1
256	9/9/2019 12:06:02	0.1	0.1	0.2	0.1

257	9/9/2019 12:07:02	0.0	0.1	0.1	0.1
258	9/9/2019 12:08:02	0.1	0.1	0.2	0.1
259	9/9/2019 12:09:02	0.1	0.1	0.2	0.1
260	9/9/2019 12:10:02	0.0	0.1	0.2	0.1
261	9/9/2019 12:11:02	0.1	0.1	0.3	0.1
262	9/9/2019 12:12:02	0.1	0.1	0.2	0.1
263	9/9/2019 12:13:02	0.0	0.1	0.2	0.1
264	9/9/2019 12:14:02	0.0	0.1	0.2	0.1
265	9/9/2019 12:15:02	0.0	0.1	0.2	0.1
266	9/9/2019 12:16:02	0.0	0.1	0.2	0.1
267	9/9/2019 12:17:02	0.0	0.1	0.3	0.0
268	9/9/2019 12:18:02	0.0	0.1	0.2	0.1
269	9/9/2019 12:19:02	0.0	0.1	0.2	0.1
270	9/9/2019 12:20:02	0.0	0.1	0.2	0.1
271	9/9/2019 12:21:02	0.0	0.1	0.2	0.1
272	9/9/2019 12:22:02	0.0	0.1	0.1	0.1
273	9/9/2019 12:23:02	0.0	0.1	0.1	0.1
274	9/9/2019 12:24:02	0.0	0.0	0.1	0.1
275	9/9/2019 12:25:02	0.0	0.1	0.1	0.0
276	9/9/2019 12:26:02	0.0	0.1	0.2	0.1
277	9/9/2019 12:27:02	0.0	0.1	0.2	0.1
278	9/9/2019 12:28:02	0.0	0.1	0.1	0.1
279	9/9/2019 12:29:02	0.0	0.1	0.1	0.0
280	9/9/2019 12:30:02	0.0	0.1	0.1	0.1

281	9/9/2019 12:31:02	0.0	0.1	0.2	0.1
282	9/9/2019 12:32:02	0.0	0.0	0.1	0.1
283	9/9/2019 12:33:02	0.0	0.1	0.1	0.1
284	9/9/2019 12:34:02	0.0	0.1	0.1	0.0
285	9/9/2019 12:35:02	0.0	0.1	0.2	0.1
286	9/9/2019 12:36:02	0.0	0.1	0.2	0.1
287	9/9/2019 12:37:02	0.0	0.1	0.1	0.1
288	9/9/2019 12:38:02	0.0	0.1	0.2	0.1
289	9/9/2019 12:39:02	0.0	0.0	0.1	0.1
290	9/9/2019 12:40:02	0.0	0.1	0.2	0.1
291	9/9/2019 12:41:02	0.0	0.1	0.1	0.1
292	9/9/2019 12:42:02	0.0	0.1	0.1	0.1
293	9/9/2019 12:43:02	0.0	0.1	0.2	0.0
294	9/9/2019 12:44:02	0.0	0.1	0.2	0.1
295	9/9/2019 12:45:02	0.0	0.1	0.1	0.1
296	9/9/2019 12:46:02	0.0	0.1	0.2	0.1
297	9/9/2019 12:47:02	0.0	0.1	0.1	0.1
298	9/9/2019 12:48:02	0.1	0.1	0.2	0.1
299	9/9/2019 12:49:02	0.1	0.1	0.2	0.1
300	9/9/2019 12:50:02	0.1	0.1	0.2	0.2
301	9/9/2019 12:51:02	0.1	0.1	0.2	0.2
302	9/9/2019 12:52:02	0.1	0.1	0.2	0.1
303	9/9/2019 12:53:02	0.1	0.1	0.3	0.2
304	9/9/2019 12:54:02	0.1	0.1	0.2	0.2

305	9/9/2019 12:55:02	0.1	0.1	0.2	0.1
306	9/9/2019 12:56:02	0.1	0.1	0.2	0.2
307	9/9/2019 12:57:02	0.1	0.2	0.2	0.2
308	9/9/2019 12:58:02	0.1	0.1	0.2	0.2
309	9/9/2019 12:59:02	0.1	0.2	0.3	0.1
310	9/9/2019 13:00:02	0.1	0.1	0.2	0.1
311	9/9/2019 13:01:02	0.1	0.2	0.3	0.2
312	9/9/2019 13:02:02	0.1	0.2	0.3	0.2
313	9/9/2019 13:03:02	0.1	0.2	0.3	0.2
314	9/9/2019 13:04:02	0.1	0.2	0.3	0.2
315	9/9/2019 13:05:02	0.1	0.2	0.3	0.2
316	9/9/2019 13:06:02	0.1	0.2	0.3	0.2
317	9/9/2019 13:07:02	0.1	0.2	0.2	0.1
318	9/9/2019 13:08:02	0.1	0.2	0.3	0.2
319	9/9/2019 13:09:02	0.1	0.2	0.2	0.1
320	9/9/2019 13:10:02	0.1	0.2	0.2	0.1
321	9/9/2019 13:11:02	0.1	0.2	0.3	0.2
322	9/9/2019 13:12:02	0.1	0.2	0.2	0.1
323	9/9/2019 13:13:02	0.1	0.2	0.3	0.2
324	9/9/2019 13:14:02	0.1	0.2	0.2	0.1
325	9/9/2019 13:15:02	0.1	0.2	0.2	0.2
326	9/9/2019 13:16:02	0.1	0.2	0.2	0.2
327	9/9/2019 13:17:02	0.1	0.2	0.2	0.2
328	9/9/2019 13:18:02	0.1	0.2	0.2	0.2

329	9/9/2019 13:19:02	0.1	0.2	0.3	0.2
330	9/9/2019 13:20:02	0.1	0.2	0.2	0.1
331	9/9/2019 13:21:02	0.1	0.2	0.3	0.1
332	9/9/2019 13:22:02	0.1	0.2	0.2	0.1
333	9/9/2019 13:23:02	0.1	0.2	0.3	0.2
334	9/9/2019 13:24:02	0.1	0.2	0.2	0.1
335	9/9/2019 13:25:02	0.1	0.2	0.3	0.1
336	9/9/2019 13:26:02	0.1	0.1	0.2	0.1
337	9/9/2019 13:27:02	0.1	0.2	0.2	0.2
338	9/9/2019 13:28:02	0.1	0.1	0.2	0.2
339	9/9/2019 13:29:02	0.1	0.2	0.3	0.1
340	9/9/2019 13:30:02	0.0	0.1	0.2	0.1
341	9/9/2019 13:31:02	0.1	0.1	0.2	0.2
342	9/9/2019 13:32:02	0.1	0.1	0.2	0.1
343	9/9/2019 13:33:02	0.0	0.1	0.2	0.1
344	9/9/2019 13:34:02	0.1	0.8	1.6	0.7
345	9/9/2019 13:35:02	0.2	0.3	1.1	0.2
346	9/9/2019 13:36:02	0.1	0.2	0.3	0.1
347	9/9/2019 13:37:02	0.1	0.2	0.3	0.2
348	9/9/2019 13:38:02	0.1	0.3	0.5	0.3
349	9/9/2019 13:39:02	0.1	0.2	0.4	0.2
350	9/9/2019 13:40:02	0.1	0.1	0.2	0.1
351	9/9/2019 13:41:02	0.1	0.2	0.3	0.1
352	9/9/2019 13:42:02	0.1	0.2	0.2	0.2

353	9/9/2019 13:43:02	0.1	0.2	0.2	0.2
354	9/9/2019 13:44:02	0.0	0.1	0.1	0.1
355	9/9/2019 13:45:02	0.1	0.1	0.2	0.2
356	9/9/2019 13:46:02	0.0	0.1	0.2	0.1
357	9/9/2019 13:47:02	0.0	0.1	0.2	0.0
358	9/9/2019 13:48:02	0.1	0.1	0.1	0.1
359	9/9/2019 13:49:02	0.0	0.1	0.2	0.1
360	9/9/2019 13:50:02	0.0	0.1	0.1	0.1
361	9/9/2019 13:51:02	0.1	0.1	0.2	0.2
362	9/9/2019 13:52:02	0.0	0.1	0.3	0.1
363	9/9/2019 13:53:02	0.1	0.1	0.2	0.1
364	9/9/2019 13:54:02	0.0	0.1	0.2	0.1
365	9/9/2019 13:55:02	0.0	0.1	0.2	0.2
366	9/9/2019 13:56:02	0.0	0.1	0.2	0.1
367	9/9/2019 13:57:02	0.1	0.1	0.2	0.1
368	9/9/2019 13:58:02	0.0	0.1	0.2	0.2
369	9/9/2019 13:59:02	0.1	0.1	0.2	0.2
370	9/9/2019 14:00:02	0.1	0.2	0.2	0.1
371	9/9/2019 14:01:02	0.1	0.1	0.2	0.1
372	9/9/2019 14:02:02	0.1	0.1	0.2	0.1
373	9/9/2019 14:03:02	0.1	0.1	0.2	0.1
374	9/9/2019 14:04:02	0.1	0.1	0.3	0.1
375	9/9/2019 14:05:02	0.1	0.1	0.2	0.2
376	9/9/2019 14:06:02	0.1	0.2	0.2	0.2

377	9/9/2019 14:07:02	0.1	0.2	0.3	0.1
378	9/9/2019 14:08:02	0.1	0.2	0.2	0.1
379	9/9/2019 14:09:02	0.1	0.2	0.2	0.2
380	9/9/2019 14:10:02	0.0	0.2	0.4	0.1
381	9/9/2019 14:11:02	0.1	0.2	0.2	0.2
382	9/9/2019 14:12:02	0.1	0.2	0.2	0.2
383	9/9/2019 14:13:02	0.2	0.2	0.3	0.2
384	9/9/2019 14:14:02	0.1	0.2	0.2	0.2
385	9/9/2019 14:15:02	0.1	0.2	0.2	0.1
386	9/9/2019 14:16:02	0.1	0.2	0.3	0.3
387	9/9/2019 14:17:02	0.2	0.2	0.3	0.2
388	9/9/2019 14:18:02	0.2	0.2	0.2	0.2
389	9/9/2019 14:19:02	0.1	0.4	0.8	0.5
390	9/9/2019 14:20:02	0.2	0.3	0.5	0.3
391	9/9/2019 14:21:02	0.2	0.2	0.3	0.2
392	9/9/2019 14:22:02	0.2	0.3	0.5	0.3
393	9/9/2019 14:23:02	0.2	0.3	0.3	0.3
394	9/9/2019 14:24:02	0.2	0.2	0.3	0.2
395	9/9/2019 14:25:02	0.1	0.2	0.2	0.2
396	9/9/2019 14:26:02	0.2	0.2	0.3	0.2
397	9/9/2019 14:27:02	0.1	0.2	0.3	0.2
398	9/9/2019 14:28:02	0.1	0.2	0.4	0.2
399	9/9/2019 14:29:02	0.1	0.2	0.2	0.2
400	9/9/2019 14:30:02	0.2	0.2	0.3	0.2

401	9/9/2019 14:31:02	0.2	0.2	0.3	0.2
402	9/9/2019 14:32:02	0.1	0.2	0.3	0.2
403	9/9/2019 14:33:02	0.1	0.2	0.2	0.2
404	9/9/2019 14:34:02	0.2	0.2	0.2	0.2
405	9/9/2019 14:35:02	0.1	0.2	0.2	0.2
406	9/9/2019 14:36:02	0.1	0.2	0.3	0.2
407	9/9/2019 14:37:02	0.1	0.2	0.2	0.2
408	9/9/2019 14:38:02	0.1	0.2	0.3	0.2
409	9/9/2019 14:39:02	0.2	0.2	0.3	0.2
410	9/9/2019 14:40:02	0.1	0.2	0.2	0.2
411	9/9/2019 14:41:02	0.1	0.2	0.2	0.2
412	9/9/2019 14:42:02	0.1	0.2	0.3	0.2
413	9/9/2019 14:43:02	0.1	0.2	0.3	0.2
414	9/9/2019 14:44:02	0.1	0.2	0.2	0.2
415	9/9/2019 14:45:02	0.2	0.2	0.2	0.2
416	9/9/2019 14:46:02	0.2	0.2	0.3	0.2
417	9/9/2019 14:47:02	0.1	0.2	0.3	0.2
418	9/9/2019 14:48:02	0.2	0.2	0.3	0.3
419	9/9/2019 14:49:02	0.1	0.3	0.3	0.1
420	9/9/2019 14:50:02	0.1	0.2	0.3	0.2
421	9/9/2019 14:51:02	0.2	0.2	0.3	0.2
422	9/9/2019 14:52:02	0.2	0.2	0.3	0.2
423	9/9/2019 14:53:02	0.2	0.2	0.3	0.2
424	9/9/2019 14:54:02	0.2	0.2	0.3	0.2

425	9/9/2019 14:55:02	0.2	0.2	0.3	0.2
426	9/9/2019 14:56:02	0.2	0.2	0.3	0.2
427	9/9/2019 14:57:02	0.2	0.2	0.3	0.2
428	9/9/2019 14:58:02	0.2	0.2	0.3	0.2
429	9/9/2019 14:59:02	0.2	0.2	0.4	0.2
430	9/9/2019 15:00:02	0.2	0.2	0.2	0.2
431	9/9/2019 15:01:02	0.2	0.2	0.3	0.2
432	9/9/2019 15:02:02	0.1	0.2	0.3	0.2
433	9/9/2019 15:03:02	0.2	0.2	0.2	0.2
434	9/9/2019 15:04:02	0.2	0.2	0.3	0.2
435	9/9/2019 15:05:02	0.2	0.2	0.3	0.2
436	9/9/2019 15:06:02	0.2	0.2	0.3	0.2
437	9/9/2019 15:07:02	0.1	0.2	0.3	0.2
438	9/9/2019 15:08:02	0.2	0.2	0.3	0.3
439	9/9/2019 15:09:02	0.2	0.2	0.3	0.2
440	9/9/2019 15:10:02	0.2	0.2	0.3	0.2
441	9/9/2019 15:11:02	0.1	0.2	0.3	0.2
442	9/9/2019 15:12:02	0.1	0.2	0.2	0.2
443	9/9/2019 15:13:02	0.1	0.2	0.2	0.2
444	9/9/2019 15:14:02	0.1	0.2	0.2	0.2
445	9/9/2019 15:15:02	0.1	0.2	0.2	0.1
446	9/9/2019 15:16:02	0.1	0.2	0.2	0.2
447	9/9/2019 15:17:02	0.1	0.2	0.2	0.2
448	9/9/2019 15:18:02	0.1	0.2	0.3	0.3

449	9/9/2019 15:19:02	0.1	0.2	0.3	0.2
450	9/9/2019 15:20:02	0.1	0.2	0.3	0.1
451	9/9/2019 15:21:02	0.1	0.2	0.4	0.1
452	9/9/2019 15:22:02	0.1	0.2	0.3	0.2
453	9/9/2019 15:23:02	0.1	0.2	0.4	0.2
454	9/9/2019 15:24:02	0.1	0.2	0.4	0.2
455	9/9/2019 15:25:02	0.2	0.2	0.3	0.2
456	9/9/2019 15:26:02	0.2	0.2	0.3	0.2
457	9/9/2019 15:27:02	0.2	0.2	0.3	0.2
458	9/9/2019 15:28:02	0.1	0.2	0.3	0.2
459	9/9/2019 15:29:02	0.2	0.2	0.2	0.2
460	9/9/2019 15:30:02	0.2	0.2	0.2	0.2
461	9/9/2019 15:31:02	0.2	0.2	0.3	0.2
462	9/9/2019 15:32:02	0.1	0.2	0.3	0.2
463	9/9/2019 15:33:02	0.2	0.2	0.2	0.2
464	9/9/2019 15:34:02	0.2	0.2	0.2	0.2
465	9/9/2019 15:35:02	0.2	0.2	0.3	0.3
466	9/9/2019 15:36:02	0.2	0.2	0.3	0.2
467	9/9/2019 15:37:02	0.2	0.2	0.2	0.2
468	9/9/2019 15:38:02	0.2	0.2	0.2	0.2
469	9/9/2019 15:39:02	0.2	0.2	0.3	0.2
470	9/9/2019 15:40:02	0.2	0.2	0.3	0.2
471	9/9/2019 15:41:02	0.2	0.2	0.2	0.2
472	9/9/2019 15:42:02	0.2	0.2	0.3	0.2

473	9/9/2019 15:43:02	0.2	0.2	0.3	0.2
474	9/9/2019 15:44:02	0.2	0.2	0.3	0.2
475	9/9/2019 15:45:02	0.2	0.2	0.3	0.2
476	9/9/2019 15:46:02	0.1	0.2	0.3	0.2
477	9/9/2019 15:47:02	0.1	0.2	0.3	0.2
478	9/9/2019 15:48:02	0.1	0.2	0.2	0.2
479	9/9/2019 15:49:02	0.2	0.2	0.2	0.2
480	9/9/2019 15:50:02	0.1	0.2	0.2	0.2
481	9/9/2019 15:51:02	0.1	0.2	0.3	0.2
482	9/9/2019 15:52:02	0.1	0.2	0.2	0.2
483	9/9/2019 15:53:02	0.1	0.2	0.2	0.2
484	9/9/2019 15:54:02	0.1	0.2	0.2	0.2
485	9/9/2019 15:55:02	0.2	0.2	0.2	0.2
486	9/9/2019 15:56:02	0.2	0.2	0.3	0.2
487	9/9/2019 15:57:02	0.1	0.2	0.3	0.3
488	9/9/2019 15:58:02	0.1	0.2	0.3	0.2
489	9/9/2019 15:59:02	0.1	0.2	0.3	0.3
490	9/9/2019 16:00:02	0.2	0.2	0.3	0.2
491	9/9/2019 16:01:02	0.1	0.2	0.3	0.2
492	9/9/2019 16:02:02	0.1	0.2	0.3	0.1
493	9/9/2019 16:03:02	0.1	0.2	0.2	0.2
494	9/9/2019 16:04:02	0.1	0.2	0.2	0.2
495	9/9/2019 16:05:02	0.1	0.2	0.2	0.2
496	9/9/2019 16:06:02	0.1	0.2	0.2	0.2

497	9/9/2019 16:07:02		0.1	0.2	0.2	0.2
498	9/9/2019 16:08:02		0.2	0.2	0.2	0.2
499	9/9/2019 16:09:02		0.1	0.2	0.2	0.1
500	9/9/2019 16:10:02		0.1	0.2	0.2	0.2
501	9/9/2019 16:11:02		0.2	0.2	0.2	0.2
502	9/9/2019 16:12:02		0.1	0.2	0.2	0.2
503	9/9/2019 16:13:02		0.1	0.2	0.3	0.2
504	9/9/2019 16:14:02		0.1	0.2	0.2	0.2
505	9/9/2019 16:15:02		0.1	0.2	0.2	0.2
506	9/9/2019 16:16:02		0.1	0.2	0.2	0.2
507	9/9/2019 16:17:02		0.2	0.2	0.2	0.2
508	9/9/2019 16:18:02		0.2	0.2	0.2	0.2
509	9/9/2019 16:19:02		0.1	0.2	0.3	0.2
510	9/9/2019 16:20:02		0.2	0.2	0.3	0.2
511	9/9/2019 16:21:02		0.2	0.2	0.3	0.2
512	9/9/2019 16:22:02		0.2	0.2	0.3	0.3
513	9/9/2019 16:23:02		0.2	0.2	0.3	0.2
514	9/9/2019 16:24:02		0.1	0.2	0.3	0.2
Peak		0.7	0.8	1.7	0.7	
Min		0.0	0.0	0.1	0.0	
Average			0.2	0.3	0.4	0.3

****

TWA/STEL

Index	Date/Time	PID(ppm) (TWA)	PID(ppm) (STEL)
001	9/9/2019 07:51:02	0.0	---
002	9/9/2019 07:52:02	0.0	---
003	9/9/2019 07:53:02	0.0	---
004	9/9/2019 07:54:02	0.0	---
005	9/9/2019 07:55:02	0.0	---
006	9/9/2019 07:56:02	0.0	---
007	9/9/2019 07:57:02	0.0	---
008	9/9/2019 07:58:02	0.0	---
009	9/9/2019 07:59:02	0.0	---
010	9/9/2019 08:00:02	0.0	---
011	9/9/2019 08:01:02	0.0	---
012	9/9/2019 08:02:02	0.0	---
013	9/9/2019 08:03:02	0.0	---
014	9/9/2019 08:04:02	0.0	---
015	9/9/2019 08:05:02	0.0	0.2
016	9/9/2019 08:06:02	0.0	0.2
017	9/9/2019 08:07:02	0.0	0.2
018	9/9/2019 08:08:02	0.0	0.2
019	9/9/2019 08:09:02	0.0	0.2
020	9/9/2019 08:10:02	0.0	0.2
021	9/9/2019 08:11:02	0.0	0.2
022	9/9/2019 08:12:02	0.0	0.2

023	9/9/2019 08:13:02	0.0	0.2
024	9/9/2019 08:14:02	0.0	0.2
025	9/9/2019 08:15:02	0.0	0.2
026	9/9/2019 08:16:02	0.0	0.2
027	9/9/2019 08:17:02	0.0	0.2
028	9/9/2019 08:18:02	0.0	0.2
029	9/9/2019 08:19:02	0.0	0.2
030	9/9/2019 08:20:02	0.0	0.2
031	9/9/2019 08:21:02	0.0	0.2
032	9/9/2019 08:22:02	0.0	0.2
033	9/9/2019 08:23:02	0.0	0.2
034	9/9/2019 08:24:02	0.0	0.2
035	9/9/2019 08:25:02	0.0	0.3
036	9/9/2019 08:26:02	0.0	0.3
037	9/9/2019 08:27:02	0.0	0.3
038	9/9/2019 08:28:02	0.0	0.3
039	9/9/2019 08:29:02	0.0	0.3
040	9/9/2019 08:30:02	0.0	0.3
041	9/9/2019 08:31:02	0.0	0.3
042	9/9/2019 08:32:02	0.0	0.3
043	9/9/2019 08:33:02	0.0	0.3
044	9/9/2019 08:34:02	0.0	0.3
045	9/9/2019 08:35:02	0.0	0.3
046	9/9/2019 08:36:02	0.0	0.3

047	9/9/2019 08:37:02	0.0	0.3
048	9/9/2019 08:38:02	0.0	0.3
049	9/9/2019 08:39:02	0.0	0.3
050	9/9/2019 08:40:02	0.0	0.3
051	9/9/2019 08:41:02	0.0	0.4
052	9/9/2019 08:42:02	0.0	0.4
053	9/9/2019 08:43:02	0.0	0.4
054	9/9/2019 08:44:02	0.0	0.4
055	9/9/2019 08:45:02	0.0	0.4
056	9/9/2019 08:46:02	0.0	0.4
057	9/9/2019 08:47:02	0.0	0.4
058	9/9/2019 08:48:02	0.0	0.4
059	9/9/2019 08:49:02	0.0	0.4
060	9/9/2019 08:50:02	0.0	0.4
061	9/9/2019 08:51:02	0.0	0.4
062	9/9/2019 08:52:02	0.0	0.4
063	9/9/2019 08:53:02	0.0	0.4
064	9/9/2019 08:54:02	0.0	0.5
065	9/9/2019 08:55:02	0.0	0.5
066	9/9/2019 08:56:02	0.0	0.5
067	9/9/2019 08:57:02	0.0	0.5
068	9/9/2019 08:58:02	0.0	0.5
069	9/9/2019 08:59:02	0.0	0.5
070	9/9/2019 09:00:02	0.0	0.5

071	9/9/2019 09:01:02	0.0	0.5
072	9/9/2019 09:02:02	0.0	0.5
073	9/9/2019 09:03:02	0.0	0.5
074	9/9/2019 09:04:02	0.0	0.5
075	9/9/2019 09:05:02	0.0	0.6
076	9/9/2019 09:06:02	0.1	0.6
077	9/9/2019 09:07:02	0.1	0.6
078	9/9/2019 09:08:02	0.1	0.6
079	9/9/2019 09:09:02	0.1	0.6
080	9/9/2019 09:10:02	0.1	0.6
081	9/9/2019 09:11:02	0.1	0.6
082	9/9/2019 09:12:02	0.1	0.6
083	9/9/2019 09:13:02	0.1	0.6
084	9/9/2019 09:14:02	0.1	0.6
085	9/9/2019 09:15:02	0.1	0.6
086	9/9/2019 09:16:02	0.1	0.6
087	9/9/2019 09:17:02	0.1	0.6
088	9/9/2019 09:18:02	0.1	0.6
089	9/9/2019 09:19:02	0.1	0.7
090	9/9/2019 09:20:02	0.1	0.7
091	9/9/2019 09:21:02	0.1	0.7
092	9/9/2019 09:22:02	0.1	0.7
093	9/9/2019 09:23:02	0.1	0.7
094	9/9/2019 09:24:02	0.1	0.7

095	9/9/2019 09:25:02	0.1	0.7
096	9/9/2019 09:26:02	0.1	0.7
097	9/9/2019 09:27:02	0.1	0.7
098	9/9/2019 09:28:02	0.1	0.7
099	9/9/2019 09:29:02	0.1	0.7
100	9/9/2019 09:30:02	0.1	0.7
101	9/9/2019 09:31:02	0.1	0.7
102	9/9/2019 09:32:02	0.1	0.7
103	9/9/2019 09:33:02	0.1	0.7
104	9/9/2019 09:34:02	0.1	0.7
105	9/9/2019 09:35:02	0.1	0.7
106	9/9/2019 09:36:02	0.1	0.7
107	9/9/2019 09:37:02	0.1	0.7
108	9/9/2019 09:38:02	0.1	0.7
109	9/9/2019 09:39:02	0.1	0.7
110	9/9/2019 09:40:02	0.1	0.7
111	9/9/2019 09:41:02	0.1	0.7
112	9/9/2019 09:42:02	0.1	0.7
113	9/9/2019 09:43:02	0.1	0.7
114	9/9/2019 09:44:02	0.1	0.7
115	9/9/2019 09:45:02	0.1	0.7
116	9/9/2019 09:46:02	0.1	0.7
117	9/9/2019 09:47:02	0.1	0.7
118	9/9/2019 09:48:02	0.1	0.7

119	9/9/2019 09:49:02	0.1	0.7
120	9/9/2019 09:50:02	0.1	0.7
121	9/9/2019 09:51:02	0.1	0.7
122	9/9/2019 09:52:02	0.1	0.7
123	9/9/2019 09:53:02	0.1	0.7
124	9/9/2019 09:54:02	0.1	0.7
125	9/9/2019 09:55:02	0.1	0.7
126	9/9/2019 09:56:02	0.1	0.7
127	9/9/2019 09:57:02	0.1	0.7
128	9/9/2019 09:58:02	0.1	0.6
129	9/9/2019 09:59:02	0.1	0.6
130	9/9/2019 10:00:02	0.1	0.6
131	9/9/2019 10:01:02	0.1	0.6
132	9/9/2019 10:02:02	0.1	0.6
133	9/9/2019 10:03:02	0.1	0.6
134	9/9/2019 10:04:02	0.1	0.6
135	9/9/2019 10:05:02	0.1	0.6
136	9/9/2019 10:06:02	0.1	0.6
137	9/9/2019 10:07:02	0.1	0.6
138	9/9/2019 10:08:02	0.1	0.6
139	9/9/2019 10:09:02	0.1	0.6
140	9/9/2019 10:10:02	0.1	0.6
141	9/9/2019 10:11:02	0.1	0.6
142	9/9/2019 10:12:02	0.1	0.6

143	9/9/2019 10:13:02	0.1	0.6
144	9/9/2019 10:14:02	0.1	0.6
145	9/9/2019 10:15:02	0.1	0.6
146	9/9/2019 10:16:02	0.1	0.6
147	9/9/2019 10:17:02	0.1	0.6
148	9/9/2019 10:18:02	0.1	0.6
149	9/9/2019 10:19:02	0.1	0.6
150	9/9/2019 10:20:02	0.1	0.5
151	9/9/2019 10:21:02	0.1	0.6
152	9/9/2019 10:22:02	0.1	0.5
153	9/9/2019 10:23:02	0.1	0.5
154	9/9/2019 10:24:02	0.1	0.5
155	9/9/2019 10:25:02	0.1	0.5
156	9/9/2019 10:26:02	0.1	0.5
157	9/9/2019 10:27:02	0.2	0.5
158	9/9/2019 10:28:02	0.2	0.5
159	9/9/2019 10:29:02	0.2	0.5
160	9/9/2019 10:30:02	0.2	0.5
161	9/9/2019 10:31:02	0.2	0.5
162	9/9/2019 10:32:02	0.2	0.4
163	9/9/2019 10:33:02	0.2	0.4
164	9/9/2019 10:34:02	0.2	0.4
165	9/9/2019 10:35:02	0.2	0.4
166	9/9/2019 10:36:02	0.2	0.4

167	9/9/2019 10:37:02	0.2	0.4
168	9/9/2019 10:38:02	0.2	0.4
169	9/9/2019 10:39:02	0.2	0.4
170	9/9/2019 10:40:02	0.2	0.4
171	9/9/2019 10:41:02	0.2	0.4
172	9/9/2019 10:42:02	0.2	0.4
173	9/9/2019 10:43:02	0.2	0.4
174	9/9/2019 10:44:02	0.2	0.4
175	9/9/2019 10:45:02	0.2	0.4
176	9/9/2019 10:46:02	0.2	0.4
177	9/9/2019 10:47:02	0.2	0.4
178	9/9/2019 10:48:02	0.2	0.4
179	9/9/2019 10:49:02	0.2	0.4
180	9/9/2019 10:50:02	0.2	0.4
181	9/9/2019 10:51:02	0.2	0.4
182	9/9/2019 10:52:02	0.2	0.4
183	9/9/2019 10:53:02	0.2	0.3
184	9/9/2019 10:54:02	0.2	0.3
185	9/9/2019 10:55:02	0.2	0.3
186	9/9/2019 10:56:02	0.2	0.3
187	9/9/2019 10:57:02	0.2	0.3
188	9/9/2019 10:58:02	0.2	0.3
189	9/9/2019 10:59:02	0.2	0.3
190	9/9/2019 11:00:02	0.2	0.3

191	9/9/2019 11:01:02	0.2	0.3
192	9/9/2019 11:02:02	0.2	0.3
193	9/9/2019 11:03:02	0.2	0.3
194	9/9/2019 11:04:02	0.2	0.3
195	9/9/2019 11:05:02	0.2	0.3
196	9/9/2019 11:06:02	0.2	0.3
197	9/9/2019 11:07:02	0.2	0.3
198	9/9/2019 11:08:02	0.2	0.3
199	9/9/2019 11:09:02	0.2	0.3
200	9/9/2019 11:10:02	0.2	0.3
201	9/9/2019 11:11:02	0.2	0.3
202	9/9/2019 11:12:02	0.2	0.3
203	9/9/2019 11:13:02	0.2	0.3
204	9/9/2019 11:14:02	0.2	0.3
205	9/9/2019 11:15:02	0.2	0.3
206	9/9/2019 11:16:02	0.2	0.3
207	9/9/2019 11:17:02	0.2	0.3
208	9/9/2019 11:18:02	0.2	0.3
209	9/9/2019 11:19:02	0.2	0.3
210	9/9/2019 11:20:02	0.2	0.3
211	9/9/2019 11:21:02	0.2	0.3
212	9/9/2019 11:22:02	0.2	0.3
213	9/9/2019 11:23:02	0.2	0.3
214	9/9/2019 11:24:02	0.2	0.3

215	9/9/2019 11:25:02	0.2	0.3
216	9/9/2019 11:26:02	0.2	0.3
217	9/9/2019 11:27:02	0.2	0.3
218	9/9/2019 11:28:02	0.2	0.3
219	9/9/2019 11:29:02	0.2	0.2
220	9/9/2019 11:30:02	0.2	0.2
221	9/9/2019 11:31:02	0.2	0.2
222	9/9/2019 11:32:02	0.2	0.2
223	9/9/2019 11:33:02	0.2	0.2
224	9/9/2019 11:34:02	0.2	0.2
225	9/9/2019 11:35:02	0.2	0.2
226	9/9/2019 11:36:02	0.2	0.2
227	9/9/2019 11:37:02	0.2	0.2
228	9/9/2019 11:38:02	0.2	0.2
229	9/9/2019 11:39:02	0.2	0.2
230	9/9/2019 11:40:02	0.2	0.2
231	9/9/2019 11:41:02	0.2	0.2
232	9/9/2019 11:42:02	0.2	0.2
233	9/9/2019 11:43:02	0.2	0.2
234	9/9/2019 11:44:02	0.2	0.2
235	9/9/2019 11:45:02	0.2	0.2
236	9/9/2019 11:46:02	0.2	0.2
237	9/9/2019 11:47:02	0.2	0.2
238	9/9/2019 11:48:02	0.2	0.1

239	9/9/2019 11:49:02	0.2	0.1
240	9/9/2019 11:50:02	0.2	0.1
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243	9/9/2019 11:53:02	0.2	0.1
244	9/9/2019 11:54:02	0.2	0.1
245	9/9/2019 11:55:02	0.2	0.1
246	9/9/2019 11:56:02	0.2	0.1
247	9/9/2019 11:57:02	0.2	0.1
248	9/9/2019 11:58:02	0.2	0.1
249	9/9/2019 11:59:02	0.2	0.1
250	9/9/2019 12:00:02	0.2	0.1
251	9/9/2019 12:01:02	0.2	0.1
252	9/9/2019 12:02:02	0.2	0.1
253	9/9/2019 12:03:02	0.2	0.1
254	9/9/2019 12:04:02	0.2	0.1
255	9/9/2019 12:05:02	0.2	0.1
256	9/9/2019 12:06:02	0.2	0.1
257	9/9/2019 12:07:02	0.2	0.1
258	9/9/2019 12:08:02	0.2	0.1
259	9/9/2019 12:09:02	0.2	0.1
260	9/9/2019 12:10:02	0.2	0.1
261	9/9/2019 12:11:02	0.2	0.1
262	9/9/2019 12:12:02	0.2	0.1

263	9/9/2019 12:13:02	0.2	0.1
264	9/9/2019 12:14:02	0.2	0.1
265	9/9/2019 12:15:02	0.2	0.1
266	9/9/2019 12:16:02	0.2	0.1
267	9/9/2019 12:17:02	0.2	0.1
268	9/9/2019 12:18:02	0.2	0.1
269	9/9/2019 12:19:02	0.2	0.1
270	9/9/2019 12:20:02	0.2	0.1
271	9/9/2019 12:21:02	0.2	0.1
272	9/9/2019 12:22:02	0.2	0.1
273	9/9/2019 12:23:02	0.2	0.1
274	9/9/2019 12:24:02	0.2	0.1
275	9/9/2019 12:25:02	0.2	0.1
276	9/9/2019 12:26:02	0.2	0.1
277	9/9/2019 12:27:02	0.2	0.1
278	9/9/2019 12:28:02	0.2	0.1
279	9/9/2019 12:29:02	0.2	0.1
280	9/9/2019 12:30:02	0.2	0.1
281	9/9/2019 12:31:02	0.2	0.1
282	9/9/2019 12:32:02	0.2	0.1
283	9/9/2019 12:33:02	0.2	0.1
284	9/9/2019 12:34:02	0.2	0.1
285	9/9/2019 12:35:02	0.2	0.1
286	9/9/2019 12:36:02	0.2	0.1

287	9/9/2019 12:37:02	0.2	0.1
288	9/9/2019 12:38:02	0.2	0.1
289	9/9/2019 12:39:02	0.2	0.1
290	9/9/2019 12:40:02	0.2	0.1
291	9/9/2019 12:41:02	0.2	0.1
292	9/9/2019 12:42:02	0.2	0.1
293	9/9/2019 12:43:02	0.2	0.1
294	9/9/2019 12:44:02	0.2	0.1
295	9/9/2019 12:45:02	0.2	0.1
296	9/9/2019 12:46:02	0.2	0.1
297	9/9/2019 12:47:02	0.2	0.1
298	9/9/2019 12:48:02	0.2	0.1
299	9/9/2019 12:49:02	0.2	0.1
300	9/9/2019 12:50:02	0.2	0.1
301	9/9/2019 12:51:02	0.2	0.1
302	9/9/2019 12:52:02	0.2	0.1
303	9/9/2019 12:53:02	0.2	0.1
304	9/9/2019 12:54:02	0.2	0.1
305	9/9/2019 12:55:02	0.2	0.1
306	9/9/2019 12:56:02	0.2	0.1
307	9/9/2019 12:57:02	0.2	0.1
308	9/9/2019 12:58:02	0.2	0.1
309	9/9/2019 12:59:02	0.2	0.2
310	9/9/2019 13:00:02	0.2	0.2

311	9/9/2019 13:01:02	0.2	0.2
312	9/9/2019 13:02:02	0.2	0.2
313	9/9/2019 13:03:02	0.2	0.2
314	9/9/2019 13:04:02	0.2	0.2
315	9/9/2019 13:05:02	0.2	0.2
316	9/9/2019 13:06:02	0.2	0.2
317	9/9/2019 13:07:02	0.2	0.2
318	9/9/2019 13:08:02	0.2	0.2
319	9/9/2019 13:09:02	0.2	0.2
320	9/9/2019 13:10:02	0.2	0.2
321	9/9/2019 13:11:02	0.2	0.2
322	9/9/2019 13:12:02	0.2	0.2
323	9/9/2019 13:13:02	0.2	0.2
324	9/9/2019 13:14:02	0.2	0.2
325	9/9/2019 13:15:02	0.2	0.2
326	9/9/2019 13:16:02	0.2	0.2
327	9/9/2019 13:17:02	0.2	0.2
328	9/9/2019 13:18:02	0.2	0.2
329	9/9/2019 13:19:02	0.2	0.2
330	9/9/2019 13:20:02	0.2	0.2
331	9/9/2019 13:21:02	0.2	0.2
332	9/9/2019 13:22:02	0.2	0.2
333	9/9/2019 13:23:02	0.2	0.2
334	9/9/2019 13:24:02	0.2	0.2

335	9/9/2019 13:25:02	0.2	0.2
336	9/9/2019 13:26:02	0.2	0.2
337	9/9/2019 13:27:02	0.2	0.2
338	9/9/2019 13:28:02	0.2	0.2
339	9/9/2019 13:29:02	0.2	0.2
340	9/9/2019 13:30:02	0.2	0.2
341	9/9/2019 13:31:02	0.2	0.2
342	9/9/2019 13:32:02	0.2	0.2
343	9/9/2019 13:33:02	0.2	0.1
344	9/9/2019 13:34:02	0.2	0.2
345	9/9/2019 13:35:02	0.2	0.2
346	9/9/2019 13:36:02	0.2	0.2
347	9/9/2019 13:37:02	0.2	0.2
348	9/9/2019 13:38:02	0.2	0.2
349	9/9/2019 13:39:02	0.2	0.2
350	9/9/2019 13:40:02	0.2	0.2
351	9/9/2019 13:41:02	0.2	0.2
352	9/9/2019 13:42:02	0.2	0.2
353	9/9/2019 13:43:02	0.2	0.2
354	9/9/2019 13:44:02	0.2	0.2
355	9/9/2019 13:45:02	0.2	0.2
356	9/9/2019 13:46:02	0.2	0.2
357	9/9/2019 13:47:02	0.2	0.2
358	9/9/2019 13:48:02	0.2	0.2

359	9/9/2019 13:49:02	0.2	0.2
360	9/9/2019 13:50:02	0.2	0.2
361	9/9/2019 13:51:02	0.2	0.2
362	9/9/2019 13:52:02	0.2	0.2
363	9/9/2019 13:53:02	0.2	0.1
364	9/9/2019 13:54:02	0.2	0.1
365	9/9/2019 13:55:02	0.2	0.1
366	9/9/2019 13:56:02	0.2	0.1
367	9/9/2019 13:57:02	0.2	0.1
368	9/9/2019 13:58:02	0.2	0.1
369	9/9/2019 13:59:02	0.2	0.1
370	9/9/2019 14:00:02	0.2	0.1
371	9/9/2019 14:01:02	0.2	0.1
372	9/9/2019 14:02:02	0.2	0.1
373	9/9/2019 14:03:02	0.2	0.1
374	9/9/2019 14:04:02	0.2	0.1
375	9/9/2019 14:05:02	0.2	0.1
376	9/9/2019 14:06:02	0.2	0.1
377	9/9/2019 14:07:02	0.2	0.1
378	9/9/2019 14:08:02	0.2	0.1
379	9/9/2019 14:09:02	0.2	0.1
380	9/9/2019 14:10:02	0.2	0.1
381	9/9/2019 14:11:02	0.2	0.1
382	9/9/2019 14:12:02	0.2	0.2

383	9/9/2019 14:13:02	0.2	0.2
384	9/9/2019 14:14:02	0.2	0.2
385	9/9/2019 14:15:02	0.2	0.2
386	9/9/2019 14:16:02	0.2	0.2
387	9/9/2019 14:17:02	0.2	0.2
388	9/9/2019 14:18:02	0.2	0.2
389	9/9/2019 14:19:02	0.2	0.2
390	9/9/2019 14:20:02	0.2	0.2
391	9/9/2019 14:21:02	0.2	0.2
392	9/9/2019 14:22:02	0.2	0.2
393	9/9/2019 14:23:02	0.2	0.2
394	9/9/2019 14:24:02	0.2	0.2
395	9/9/2019 14:25:02	0.2	0.2
396	9/9/2019 14:26:02	0.2	0.3
397	9/9/2019 14:27:02	0.2	0.3
398	9/9/2019 14:28:02	0.2	0.3
399	9/9/2019 14:29:02	0.2	0.3
400	9/9/2019 14:30:02	0.2	0.3
401	9/9/2019 14:31:02	0.2	0.3
402	9/9/2019 14:32:02	0.2	0.3
403	9/9/2019 14:33:02	0.2	0.3
404	9/9/2019 14:34:02	0.2	0.3
405	9/9/2019 14:35:02	0.2	0.2
406	9/9/2019 14:36:02	0.2	0.2

407	9/9/2019 14:37:02	0.2	0.2
408	9/9/2019 14:38:02	0.2	0.2
409	9/9/2019 14:39:02	0.2	0.2
410	9/9/2019 14:40:02	0.2	0.2
411	9/9/2019 14:41:02	0.2	0.2
412	9/9/2019 14:42:02	0.2	0.2
413	9/9/2019 14:43:02	0.2	0.2
414	9/9/2019 14:44:02	0.2	0.2
415	9/9/2019 14:45:02	0.2	0.2
416	9/9/2019 14:46:02	0.3	0.2
417	9/9/2019 14:47:02	0.3	0.2
418	9/9/2019 14:48:02	0.3	0.2
419	9/9/2019 14:49:02	0.3	0.2
420	9/9/2019 14:50:02	0.3	0.2
421	9/9/2019 14:51:02	0.3	0.2
422	9/9/2019 14:52:02	0.3	0.2
423	9/9/2019 14:53:02	0.3	0.2
424	9/9/2019 14:54:02	0.3	0.2
425	9/9/2019 14:55:02	0.3	0.2
426	9/9/2019 14:56:02	0.3	0.2
427	9/9/2019 14:57:02	0.3	0.2
428	9/9/2019 14:58:02	0.3	0.2
429	9/9/2019 14:59:02	0.3	0.2
430	9/9/2019 15:00:02	0.3	0.2

431	9/9/2019 15:01:02	0.3	0.2
432	9/9/2019 15:02:02	0.3	0.2
433	9/9/2019 15:03:02	0.3	0.2
434	9/9/2019 15:04:02	0.3	0.2
435	9/9/2019 15:05:02	0.3	0.2
436	9/9/2019 15:06:02	0.3	0.2
437	9/9/2019 15:07:02	0.3	0.2
438	9/9/2019 15:08:02	0.3	0.2
439	9/9/2019 15:09:02	0.3	0.2
440	9/9/2019 15:10:02	0.3	0.2
441	9/9/2019 15:11:02	0.3	0.2
442	9/9/2019 15:12:02	0.3	0.2
443	9/9/2019 15:13:02	0.3	0.2
444	9/9/2019 15:14:02	0.3	0.2
445	9/9/2019 15:15:02	0.3	0.2
446	9/9/2019 15:16:02	0.3	0.2
447	9/9/2019 15:17:02	0.3	0.2
448	9/9/2019 15:18:02	0.3	0.2
449	9/9/2019 15:19:02	0.3	0.2
450	9/9/2019 15:20:02	0.3	0.2
451	9/9/2019 15:21:02	0.3	0.2
452	9/9/2019 15:22:02	0.3	0.2
453	9/9/2019 15:23:02	0.3	0.2
454	9/9/2019 15:24:02	0.3	0.2

455	9/9/2019 15:25:02	0.3	0.2
456	9/9/2019 15:26:02	0.3	0.2
457	9/9/2019 15:27:02	0.3	0.2
458	9/9/2019 15:28:02	0.3	0.2
459	9/9/2019 15:29:02	0.3	0.2
460	9/9/2019 15:30:02	0.3	0.2
461	9/9/2019 15:31:02	0.3	0.2
462	9/9/2019 15:32:02	0.3	0.2
463	9/9/2019 15:33:02	0.3	0.2
464	9/9/2019 15:34:02	0.3	0.2
465	9/9/2019 15:35:02	0.3	0.2
466	9/9/2019 15:36:02	0.3	0.2
467	9/9/2019 15:37:02	0.3	0.2
468	9/9/2019 15:38:02	0.3	0.2
469	9/9/2019 15:39:02	0.3	0.2
470	9/9/2019 15:40:02	0.3	0.2
471	9/9/2019 15:41:02	0.3	0.2
472	9/9/2019 15:42:02	0.3	0.2
473	9/9/2019 15:43:02	0.3	0.2
474	9/9/2019 15:44:02	0.3	0.2
475	9/9/2019 15:45:02	0.3	0.2
476	9/9/2019 15:46:02	0.3	0.2
477	9/9/2019 15:47:02	0.3	0.2
478	9/9/2019 15:48:02	0.3	0.2

479	9/9/2019 15:49:02	0.3	0.2
480	9/9/2019 15:50:02	0.3	0.2
481	9/9/2019 15:51:02	0.3	0.2
482	9/9/2019 15:52:02	0.3	0.2
483	9/9/2019 15:53:02	0.3	0.2
484	9/9/2019 15:54:02	0.3	0.2
485	9/9/2019 15:55:02	0.3	0.2
486	9/9/2019 15:56:02	0.3	0.2
487	9/9/2019 15:57:02	0.3	0.2
488	9/9/2019 15:58:02	0.3	0.2
489	9/9/2019 15:59:02	0.3	0.2
490	9/9/2019 16:00:02	0.3	0.2
491	9/9/2019 16:01:02	0.3	0.2
492	9/9/2019 16:02:02	0.3	0.2
493	9/9/2019 16:03:02	0.3	0.2
494	9/9/2019 16:04:02	0.3	0.2
495	9/9/2019 16:05:02	0.3	0.2
496	9/9/2019 16:06:02	0.3	0.2
497	9/9/2019 16:07:02	0.3	0.2
498	9/9/2019 16:08:02	0.3	0.2
499	9/9/2019 16:09:02	0.3	0.2
500	9/9/2019 16:10:02	0.3	0.2
501	9/9/2019 16:11:02	0.3	0.2
502	9/9/2019 16:12:02	0.3	0.2

503	9/9/2019 16:13:02	0.3	0.2
504	9/9/2019 16:14:02	0.3	0.2
505	9/9/2019 16:15:02	0.3	0.2
506	9/9/2019 16:16:02	0.3	0.2
507	9/9/2019 16:17:02	0.3	0.2
508	9/9/2019 16:18:02	0.3	0.2
509	9/9/2019 16:19:02	0.3	0.2
510	9/9/2019 16:20:02	0.3	0.2
511	9/9/2019 16:21:02	0.3	0.2
512	9/9/2019 16:22:02	0.3	0.2
513	9/9/2019 16:23:02	0.3	0.2
514	9/9/2019 16:24:02	0.3	0.2

Test 020

ERROR: FLOW,

Instrument		Data Properties	
Model	DustTrak DRX	Start Date	09/09/2019
Instrument S/N	8533151804	Start Time	07:44:39
		Stop Date	09/09/2019
		Stop Time	15:59:39
		Total Time	0:08:15:00
		Logging Interval	900 seconds

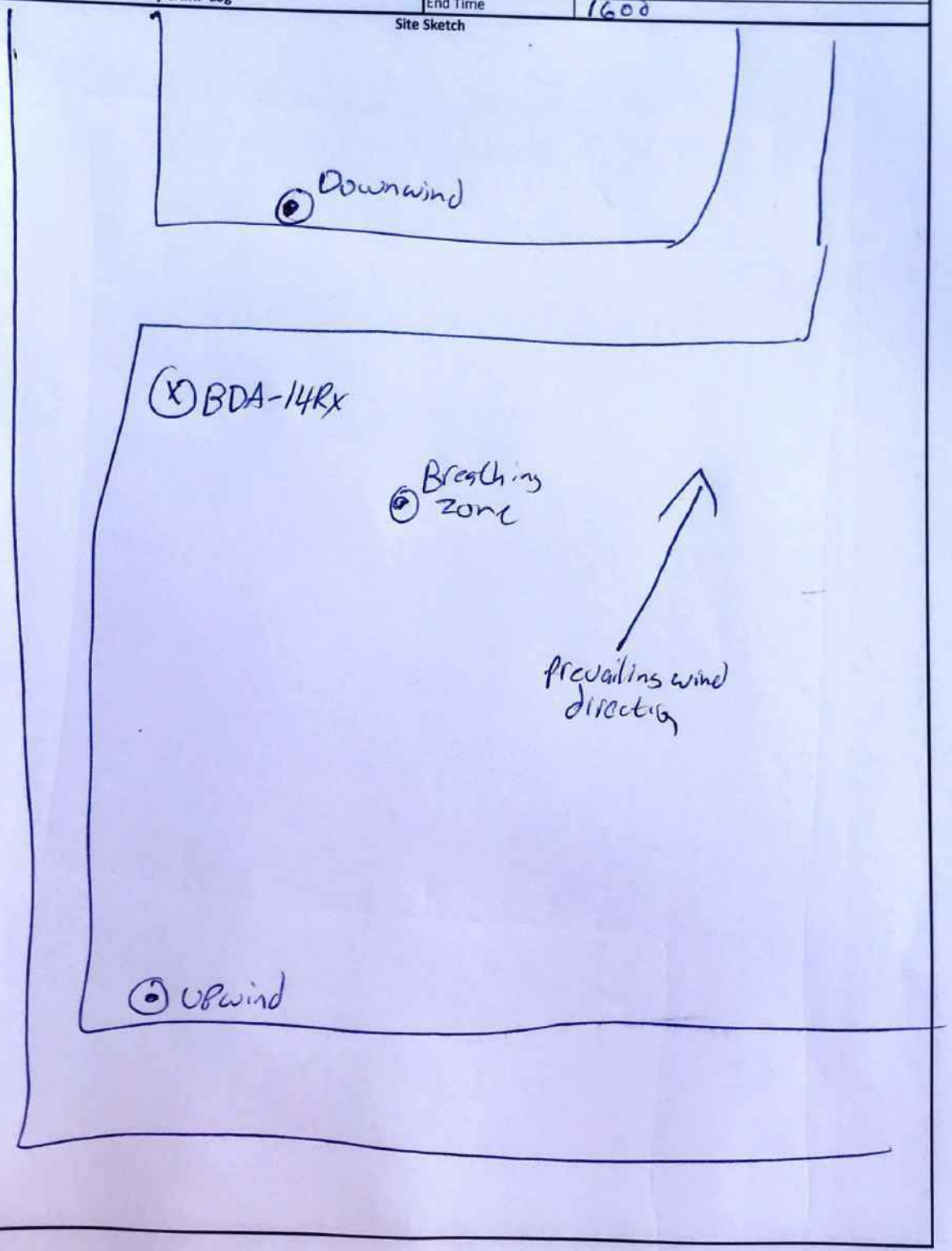
Test Data							
Data Point	Date	Time	PM1 mg/m^3	PM2.5 mg/m^3	RESP mg/m^3	PM10 mg/m^3	TOTAL mg/m^3
1	09/09/2019	07:59:39	0.009	0.009	0.010	0.013	0.015
2	09/09/2019	08:14:39	0.010	0.011	0.012	0.017	0.020
3	09/09/2019	08:29:39	0.019	0.020	0.022	0.032	0.042
4	09/09/2019	08:44:39	0.012	0.013	0.015	0.022	0.028
5	09/09/2019	08:59:39	0.011	0.012	0.013	0.019	0.024
6	09/09/2019	09:14:39	0.007	0.008	0.008	0.011	0.012
7	09/09/2019	09:29:39	0.009	0.010	0.010	0.012	0.013
8	09/09/2019	09:44:39	0.009	0.009	0.010	0.011	0.012
9	09/09/2019	09:59:39	0.010	0.010	0.011	0.012	0.014
10	09/09/2019	10:14:39	0.282	0.283	0.284	0.295	0.309
11	09/09/2019	10:29:39	0.012	0.013	0.013	0.015	0.018
12	09/09/2019	10:44:39	0.010	0.011	0.011	0.012	0.014
13	09/09/2019	10:59:39	0.011	0.011	0.011	0.013	0.014
14	09/09/2019	11:14:39	0.010	0.010	0.010	0.011	0.012
15	09/09/2019	11:29:39	0.022	0.023	0.024	0.032	0.043
16	09/09/2019	11:44:39	0.035	0.035	0.035	0.036	0.037
17	09/09/2019	11:59:39	0.077	0.078	0.079	0.089	0.096
18	09/09/2019	12:14:39	0.091	0.091	0.092	0.102	0.111
19	09/09/2019	12:29:39	0.070	0.071	0.072	0.078	0.084
20	09/09/2019	12:44:39	0.027	0.027	0.028	0.034	0.039
21	09/09/2019	12:59:39	0.008	0.009	0.009	0.010	0.011
22	09/09/2019	13:14:39	0.341	0.342	0.344	0.356	0.369
23	09/09/2019	13:29:39	0.042	0.045	0.050	0.082	0.122
24	09/09/2019	13:44:39	0.093	0.094	0.096	0.108	0.117
25	09/09/2019	13:59:39	0.010	0.011	0.011	0.013	0.015
26	09/09/2019	14:14:39	0.014	0.015	0.015	0.020	0.028
27	09/09/2019	14:29:39	0.024	0.024	0.025	0.034	0.044
28	09/09/2019	14:44:39	0.024	0.024	0.026	0.034	0.044
29	09/09/2019	14:59:39	0.010	0.010	0.010	0.013	0.016
30	09/09/2019	15:14:39	0.008	0.009	0.009	0.011	0.012
31	09/09/2019	15:29:39	0.009	0.009	0.009	0.010	0.012
32	09/09/2019	15:44:39	0.008	0.008	0.009	0.010	0.010
33	09/09/2019	15:59:39	0.010	0.010	0.011	0.014	0.018

ARCADIS Design & Consultancy for natural and built assets

Daily CAMP Log

Project	Phase 2 Groundwater RI
Location	East Syracuse, NY
Date	9/9/14
Weather Conditions	70s & Sunny
Upwind Monitor	SA2-914273
Downwind Monitor	SA2-914376
Start Time	1000
End Time	1600

Site Sketch



Anne Locke
Associate Manager, Environmental Protection
Environmental, Health and Safety Department
Bristol-Myers Squibb
P.O. Box 4755
Syracuse, NY 13221

Arcadis U.S., Inc.
One Lincoln Center
110 West Fayette Street
Suite 300
Syracuse
New York 13202
Tel 315 446 9120
Fax 315 449 0017
www.arcadis.com

Environmental North

Subject:
Community Air Monitoring During Phase II RI Well Installations Bristol-Myers Squibb Syracuse Facility – East Syracuse, New York 13057

Date:
September 10, 2019

Contact:
William McCune

Phone:
315-671-9172

Email:
William.McCune@arcadis.com

Our ref:
B0087363.0037

Dear Ms. Locke:

The following is a summary of the community air monitoring plan (CAMP) provided by Arcadis U.S., Inc. (Arcadis) during Phase II RI drilling activities conducted at the Bristol-Myers Squibb (BMS) Syracuse North Campus, East Syracuse, NY on September 10, 2019.

September 10, 2019: Parratt-Wolff Inc. (Parratt-Wolff) completed coring activities at BDA-14RX, drilling from 7:30 AM to 12:15 PM. CAMP monitoring included photo ionization detectors at upwind and downwind locations and a DustTrak at a breathing zone location. The prevailing wind direction was observed originating from the southeast through the day. Air quality parameters did not exceed CAMP standards at any time during work activities. Table 1 shows the serial numbers and associated CAMP stations locations.

CAMP Station Locations	Serial Number
Breathing Zone DustTrak	#8533151804
Upwind PID	#592-914273
Downwind PID	#592-914276

Please contact us with any questions or comments pertaining to this project.

Sincerely,

Arcadis U.S., Inc.

William McCune
Principal Geologist

Attachments

1 CAMP Data Logs
2 Site Sketches/Notes

==========

19/09/10 07:38

****

Summary

Unit Name MiniRAE 3000(PGM-7320)

Unit SN 592-914273

Unit Firmware Ver V1.20A

Running Mode Hygiene Mode

Measure Type Min; Avg; Max; Real

Datalog Mode Continuous

Datalog Type Manual

Diagnostic Mode No

Stop Reason Power Down

Site ID RAE00005

User ID 00000001

Begin 9/10/2019 07:38:36

End 9/10/2019 13:34:54

Sample Period(s) 60

Number of Records 356

Sensor	VOC(ppm)
Span	100.000
Span 2	N/A
Low Alarm	50.000
High Alarm	100.000
Over Alarm	2000.000
STEL Alarm	25.000
TWA Alarm	10.000
Measurement Gas	Isobutylene
Calibration Time	9/10/2019 07:28
Peak	0.000
Min	0.000
Average	0.000

****

Datalog

Index	Date/Time	VOC(ppm) (Min)	VOC(ppm) (Avg)	VOC(ppm) (Max)	VOC(ppm) (Real)	VOC(ppm)
001	9/10/2019 07:39:36	0.000	0.000	0.000	0.000	
002	9/10/2019 07:40:36	0.000	0.000	0.000	0.000	
003	9/10/2019 07:41:36	0.000	0.000	0.000	0.000	
004	9/10/2019 07:42:36	0.000	0.000	0.000	0.000	
005	9/10/2019 07:43:36	0.000	0.000	0.000	0.000	
006	9/10/2019 07:44:36	0.000	0.000	0.000	0.000	

007	9/10/2019 07:45:36	0.000	0.000	0.000	0.000
008	9/10/2019 07:46:36	0.000	0.000	0.000	0.000
009	9/10/2019 07:47:36	0.000	0.000	0.000	0.000
010	9/10/2019 07:48:36	0.000	0.000	0.000	0.000
011	9/10/2019 07:49:36	0.000	0.000	0.000	0.000
012	9/10/2019 07:50:36	0.000	0.000	0.000	0.000
013	9/10/2019 07:51:36	0.000	0.000	0.000	0.000
014	9/10/2019 07:52:36	0.000	0.000	0.000	0.000
015	9/10/2019 07:53:36	0.000	0.000	0.000	0.000
016	9/10/2019 07:54:36	0.000	0.000	0.000	0.000
017	9/10/2019 07:55:36	0.000	0.000	0.000	0.000
018	9/10/2019 07:56:36	0.000	0.000	0.000	0.000
019	9/10/2019 07:57:36	0.000	0.000	0.000	0.000
020	9/10/2019 07:58:36	0.000	0.000	0.000	0.000
021	9/10/2019 07:59:36	0.000	0.000	0.000	0.000
022	9/10/2019 08:00:36	0.000	0.000	0.000	0.000
023	9/10/2019 08:01:36	0.000	0.000	0.000	0.000
024	9/10/2019 08:02:36	0.000	0.000	0.000	0.000
025	9/10/2019 08:03:36	0.000	0.000	0.000	0.000
026	9/10/2019 08:04:36	0.000	0.000	0.000	0.000
027	9/10/2019 08:05:36	0.000	0.000	0.000	0.000
028	9/10/2019 08:06:36	0.000	0.000	0.000	0.000
029	9/10/2019 08:07:36	0.000	0.000	0.000	0.000
030	9/10/2019 08:08:36	0.000	0.000	0.000	0.000

031	9/10/2019 08:09:36	0.000	0.000	0.000	0.000
032	9/10/2019 08:10:36	0.000	0.000	0.000	0.000
033	9/10/2019 08:11:36	0.000	0.000	0.000	0.000
034	9/10/2019 08:12:36	0.000	0.000	0.000	0.000
035	9/10/2019 08:13:36	0.000	0.000	0.000	0.000
036	9/10/2019 08:14:36	0.000	0.000	0.000	0.000
037	9/10/2019 08:15:36	0.000	0.000	0.000	0.000
038	9/10/2019 08:16:36	0.000	0.000	0.000	0.000
039	9/10/2019 08:17:36	0.000	0.000	0.000	0.000
040	9/10/2019 08:18:36	0.000	0.000	0.000	0.000
041	9/10/2019 08:19:36	0.000	0.000	0.000	0.000
042	9/10/2019 08:20:36	0.000	0.000	0.000	0.000
043	9/10/2019 08:21:36	0.000	0.000	0.000	0.000
044	9/10/2019 08:22:36	0.000	0.000	0.000	0.000
045	9/10/2019 08:23:36	0.000	0.000	0.000	0.000
046	9/10/2019 08:24:36	0.000	0.000	0.000	0.000
047	9/10/2019 08:25:36	0.000	0.000	0.000	0.000
048	9/10/2019 08:26:36	0.000	0.000	0.000	0.000
049	9/10/2019 08:27:36	0.000	0.000	0.000	0.000
050	9/10/2019 08:28:36	0.000	0.000	0.000	0.000
051	9/10/2019 08:29:36	0.000	0.000	0.000	0.000
052	9/10/2019 08:30:36	0.000	0.000	0.000	0.000
053	9/10/2019 08:31:36	0.000	0.000	0.000	0.000
054	9/10/2019 08:32:36	0.000	0.000	0.000	0.000

055	9/10/2019 08:33:36	0.000	0.000	0.000	0.000
056	9/10/2019 08:34:36	0.000	0.000	0.000	0.000
057	9/10/2019 08:35:36	0.000	0.000	0.000	0.000
058	9/10/2019 08:36:36	0.000	0.000	0.000	0.000
059	9/10/2019 08:37:36	0.000	0.000	0.000	0.000
060	9/10/2019 08:38:36	0.000	0.000	0.000	0.000
061	9/10/2019 08:39:36	0.000	0.000	0.000	0.000
062	9/10/2019 08:40:36	0.000	0.000	0.000	0.000
063	9/10/2019 08:41:36	0.000	0.000	0.000	0.000
064	9/10/2019 08:42:36	0.000	0.000	0.000	0.000
065	9/10/2019 08:43:36	0.000	0.000	0.000	0.000
066	9/10/2019 08:44:36	0.000	0.000	0.000	0.000
067	9/10/2019 08:45:36	0.000	0.000	0.000	0.000
068	9/10/2019 08:46:36	0.000	0.000	0.000	0.000
069	9/10/2019 08:47:36	0.000	0.000	0.000	0.000
070	9/10/2019 08:48:36	0.000	0.000	0.000	0.000
071	9/10/2019 08:49:36	0.000	0.000	0.000	0.000
072	9/10/2019 08:50:36	0.000	0.000	0.000	0.000
073	9/10/2019 08:51:36	0.000	0.000	0.000	0.000
074	9/10/2019 08:52:36	0.000	0.000	0.000	0.000
075	9/10/2019 08:53:36	0.000	0.000	0.000	0.000
076	9/10/2019 08:54:36	0.000	0.000	0.000	0.000
077	9/10/2019 08:55:36	0.000	0.000	0.000	0.000
078	9/10/2019 08:56:36	0.000	0.000	0.000	0.000

079	9/10/2019 08:57:36	0.000	0.000	0.000	0.000
080	9/10/2019 08:58:36	0.000	0.000	0.000	0.000
081	9/10/2019 08:59:36	0.000	0.000	0.000	0.000
082	9/10/2019 09:00:36	0.000	0.000	0.000	0.000
083	9/10/2019 09:01:36	0.000	0.000	0.000	0.000
084	9/10/2019 09:02:36	0.000	0.000	0.000	0.000
085	9/10/2019 09:03:36	0.000	0.000	0.000	0.000
086	9/10/2019 09:04:36	0.000	0.000	0.000	0.000
087	9/10/2019 09:05:36	0.000	0.000	0.000	0.000
088	9/10/2019 09:06:36	0.000	0.000	0.000	0.000
089	9/10/2019 09:07:36	0.000	0.000	0.000	0.000
090	9/10/2019 09:08:36	0.000	0.000	0.000	0.000
091	9/10/2019 09:09:36	0.000	0.000	0.000	0.000
092	9/10/2019 09:10:36	0.000	0.000	0.000	0.000
093	9/10/2019 09:11:36	0.000	0.000	0.000	0.000
094	9/10/2019 09:12:36	0.000	0.000	0.000	0.000
095	9/10/2019 09:13:36	0.000	0.000	0.000	0.000
096	9/10/2019 09:14:36	0.000	0.000	0.000	0.000
097	9/10/2019 09:15:36	0.000	0.000	0.000	0.000
098	9/10/2019 09:16:36	0.000	0.000	0.000	0.000
099	9/10/2019 09:17:36	0.000	0.000	0.000	0.000
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101	9/10/2019 09:19:36	0.000	0.000	0.000	0.000
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107	9/10/2019 09:25:36	0.000	0.000	0.000	0.000
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110	9/10/2019 09:28:36	0.000	0.000	0.000	0.000
111	9/10/2019 09:29:36	0.000	0.000	0.000	0.000
112	9/10/2019 09:30:36	0.000	0.000	0.000	0.000
113	9/10/2019 09:31:36	0.000	0.000	0.000	0.000
114	9/10/2019 09:32:36	0.000	0.000	0.000	0.000
115	9/10/2019 09:33:36	0.000	0.000	0.000	0.000
116	9/10/2019 09:34:36	0.000	0.000	0.000	0.000
117	9/10/2019 09:35:36	0.000	0.000	0.000	0.000
118	9/10/2019 09:36:36	0.000	0.000	0.000	0.000
119	9/10/2019 09:37:36	0.000	0.000	0.000	0.000
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121	9/10/2019 09:39:36	0.000	0.000	0.000	0.000
122	9/10/2019 09:40:36	0.000	0.000	0.000	0.000
123	9/10/2019 09:41:36	0.000	0.000	0.000	0.000
124	9/10/2019 09:42:36	0.000	0.000	0.000	0.000
125	9/10/2019 09:43:36	0.000	0.000	0.000	0.000
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131	9/10/2019 09:49:36	0.000	0.000	0.000	0.000
132	9/10/2019 09:50:36	0.000	0.000	0.000	0.000
133	9/10/2019 09:51:36	0.000	0.000	0.000	0.000
134	9/10/2019 09:52:36	0.000	0.000	0.000	0.000
135	9/10/2019 09:53:36	0.000	0.000	0.000	0.000
136	9/10/2019 09:54:36	0.000	0.000	0.000	0.000
137	9/10/2019 09:55:36	0.000	0.000	0.000	0.000
138	9/10/2019 09:56:36	0.000	0.000	0.000	0.000
139	9/10/2019 09:57:36	0.000	0.000	0.000	0.000
140	9/10/2019 09:58:36	0.000	0.000	0.000	0.000
141	9/10/2019 09:59:36	0.000	0.000	0.000	0.000
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143	9/10/2019 10:01:36	0.000	0.000	0.000	0.000
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145	9/10/2019 10:03:36	0.000	0.000	0.000	0.000
146	9/10/2019 10:04:36	0.000	0.000	0.000	0.000
147	9/10/2019 10:05:36	0.000	0.000	0.000	0.000
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149	9/10/2019 10:07:36	0.000	0.000	0.000	0.000
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156	9/10/2019 10:14:36	0.000	0.000	0.000	0.000
157	9/10/2019 10:15:36	0.000	0.000	0.000	0.000
158	9/10/2019 10:16:36	0.000	0.000	0.000	0.000
159	9/10/2019 10:17:36	0.000	0.000	0.000	0.000
160	9/10/2019 10:18:36	0.000	0.000	0.000	0.000
161	9/10/2019 10:19:36	0.000	0.000	0.000	0.000
162	9/10/2019 10:20:36	0.000	0.000	0.000	0.000
163	9/10/2019 10:21:36	0.000	0.000	0.000	0.000
164	9/10/2019 10:22:36	0.000	0.000	0.000	0.000
165	9/10/2019 10:23:36	0.000	0.000	0.000	0.000
166	9/10/2019 10:24:36	0.000	0.000	0.000	0.000
167	9/10/2019 10:25:36	0.000	0.000	0.000	0.000
168	9/10/2019 10:26:36	0.000	0.000	0.000	0.000
169	9/10/2019 10:27:36	0.000	0.000	0.000	0.000
170	9/10/2019 10:28:36	0.000	0.000	0.000	0.000
171	9/10/2019 10:29:36	0.000	0.000	0.000	0.000
172	9/10/2019 10:30:36	0.000	0.000	0.000	0.000
173	9/10/2019 10:31:36	0.000	0.000	0.000	0.000
174	9/10/2019 10:32:36	0.000	0.000	0.000	0.000

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180	9/10/2019 10:38:36	0.000	0.000	0.000	0.000
181	9/10/2019 10:39:36	0.000	0.000	0.000	0.000
182	9/10/2019 10:40:36	0.000	0.000	0.000	0.000
183	9/10/2019 10:41:36	0.000	0.000	0.000	0.000
184	9/10/2019 10:42:36	0.000	0.000	0.000	0.000
185	9/10/2019 10:43:36	0.000	0.000	0.000	0.000
186	9/10/2019 10:44:36	0.000	0.000	0.000	0.000
187	9/10/2019 10:45:36	0.000	0.000	0.000	0.000
188	9/10/2019 10:46:36	0.000	0.000	0.000	0.000
189	9/10/2019 10:47:36	0.000	0.000	0.000	0.000
190	9/10/2019 10:48:36	0.000	0.000	0.000	0.000
191	9/10/2019 10:49:36	0.000	0.000	0.000	0.000
192	9/10/2019 10:50:36	0.000	0.000	0.000	0.000
193	9/10/2019 10:51:36	0.000	0.000	0.000	0.000
194	9/10/2019 10:52:36	0.000	0.000	0.000	0.000
195	9/10/2019 10:53:36	0.000	0.000	0.000	0.000
196	9/10/2019 10:54:36	0.000	0.000	0.000	0.000
197	9/10/2019 10:55:36	0.000	0.000	0.000	0.000
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202	9/10/2019 11:00:36	0.000	0.000	0.000	0.000
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206	9/10/2019 11:04:36	0.000	0.000	0.000	0.000
207	9/10/2019 11:05:36	0.000	0.000	0.000	0.000
208	9/10/2019 11:06:36	0.000	0.000	0.000	0.000
209	9/10/2019 11:07:36	0.000	0.000	0.000	0.000
210	9/10/2019 11:08:36	0.000	0.000	0.000	0.000
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213	9/10/2019 11:11:36	0.000	0.000	0.000	0.000
214	9/10/2019 11:12:36	0.000	0.000	0.000	0.000
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216	9/10/2019 11:14:36	0.000	0.000	0.000	0.000
217	9/10/2019 11:15:36	0.000	0.000	0.000	0.000
218	9/10/2019 11:16:36	0.000	0.000	0.000	0.000
219	9/10/2019 11:17:36	0.000	0.000	0.000	0.000
220	9/10/2019 11:18:36	0.000	0.000	0.000	0.000
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222	9/10/2019 11:20:36	0.000	0.000	0.000	0.000

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227	9/10/2019 11:25:36	0.000	0.000	0.000	0.000
228	9/10/2019 11:26:36	0.000	0.000	0.000	0.000
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233	9/10/2019 11:31:36	0.000	0.000	0.000	0.000
234	9/10/2019 11:32:36	0.000	0.000	0.000	0.000
235	9/10/2019 11:33:36	0.000	0.000	0.000	0.000
236	9/10/2019 11:34:36	0.000	0.000	0.000	0.000
237	9/10/2019 11:35:36	0.000	0.000	0.000	0.000
238	9/10/2019 11:36:36	0.000	0.000	0.000	0.000
239	9/10/2019 11:37:36	0.000	0.000	0.000	0.000
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241	9/10/2019 11:39:36	0.000	0.000	0.000	0.000
242	9/10/2019 11:40:36	0.000	0.000	0.000	0.000
243	9/10/2019 11:41:36	0.000	0.000	0.000	0.000
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265	9/10/2019 12:03:36	0.000	0.000	0.000	0.000
266	9/10/2019 12:04:36	0.000	0.000	0.000	0.000
267	9/10/2019 12:05:36	0.000	0.000	0.000	0.000
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276	9/10/2019 12:14:36	0.000	0.000	0.000	0.000
277	9/10/2019 12:15:36	0.000	0.000	0.000	0.000
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279	9/10/2019 12:17:36	0.000	0.000	0.000	0.000
280	9/10/2019 12:18:36	0.000	0.000	0.000	0.000
281	9/10/2019 12:19:36	0.000	0.000	0.000	0.000
282	9/10/2019 12:20:36	0.000	0.000	0.000	0.000
283	9/10/2019 12:21:36	0.000	0.000	0.000	0.000
284	9/10/2019 12:22:36	0.000	0.000	0.000	0.000
285	9/10/2019 12:23:36	0.000	0.000	0.000	0.000
286	9/10/2019 12:24:36	0.000	0.000	0.000	0.000
287	9/10/2019 12:25:36	0.000	0.000	0.000	0.000
288	9/10/2019 12:26:36	0.000	0.000	0.000	0.000
289	9/10/2019 12:27:36	0.000	0.000	0.000	0.000
290	9/10/2019 12:28:36	0.000	0.000	0.000	0.000
291	9/10/2019 12:29:36	0.000	0.000	0.000	0.000
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301	9/10/2019 12:39:36	0.000	0.000	0.000	0.000
302	9/10/2019 12:40:36	0.000	0.000	0.000	0.000
303	9/10/2019 12:41:36	0.000	0.000	0.000	0.000
304	9/10/2019 12:42:36	0.000	0.000	0.000	0.000
305	9/10/2019 12:43:36	0.000	0.000	0.000	0.000
306	9/10/2019 12:44:36	0.000	0.000	0.000	0.000
307	9/10/2019 12:45:36	0.000	0.000	0.000	0.000
308	9/10/2019 12:46:36	0.000	0.000	0.000	0.000
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312	9/10/2019 12:50:36	0.000	0.000	0.000	0.000
313	9/10/2019 12:51:36	0.000	0.000	0.000	0.000
314	9/10/2019 12:52:36	0.000	0.000	0.000	0.000
315	9/10/2019 12:53:36	0.000	0.000	0.000	0.000
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323	9/10/2019 13:01:36	0.000	0.000	0.000	0.000
324	9/10/2019 13:02:36	0.000	0.000	0.000	0.000
325	9/10/2019 13:03:36	0.000	0.000	0.000	0.000
326	9/10/2019 13:04:36	0.000	0.000	0.000	0.000
327	9/10/2019 13:05:36	0.000	0.000	0.000	0.000
328	9/10/2019 13:06:36	0.000	0.000	0.000	0.000
329	9/10/2019 13:07:36	0.000	0.000	0.000	0.000
330	9/10/2019 13:08:36	0.000	0.000	0.000	0.000
331	9/10/2019 13:09:36	0.000	0.000	0.000	0.000
332	9/10/2019 13:10:36	0.000	0.000	0.000	0.000
333	9/10/2019 13:11:36	0.000	0.000	0.000	0.000
334	9/10/2019 13:12:36	0.000	0.000	0.000	0.000
335	9/10/2019 13:13:36	0.000	0.000	0.000	0.000
336	9/10/2019 13:14:36	0.000	0.000	0.000	0.000
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340	9/10/2019 13:18:36	0.000	0.000	0.000	0.000
341	9/10/2019 13:19:36	0.000	0.000	0.000	0.000
342	9/10/2019 13:20:36	0.000	0.000	0.000	0.000

343	9/10/2019 13:21:36	0.000	0.000	0.000	0.000
344	9/10/2019 13:22:36	0.000	0.000	0.000	0.000
345	9/10/2019 13:23:36	0.000	0.000	0.000	0.000
346	9/10/2019 13:24:36	0.000	0.000	0.000	0.000
347	9/10/2019 13:25:36	0.000	0.000	0.000	0.000
348	9/10/2019 13:26:36	0.000	0.000	0.000	0.000
349	9/10/2019 13:27:36	0.000	0.000	0.000	0.000
350	9/10/2019 13:28:36	0.000	0.000	0.000	0.000
351	9/10/2019 13:29:36	0.000	0.000	0.000	0.000
352	9/10/2019 13:30:36	0.000	0.000	0.000	0.000
353	9/10/2019 13:31:36	0.000	0.000	0.000	0.000
354	9/10/2019 13:32:36	0.000	0.000	0.000	0.000
355	9/10/2019 13:33:36	0.000	0.000	0.000	0.000
356	9/10/2019 13:34:36	0.000	0.000	0.000	0.000
Peak		0.000	0.000	0.000	0.000
Min		0.000	0.000	0.000	0.000
Average			0.000	0.000	0.000

****

TWA/STEL

Index	Date/Time	VOC(ppm) (TWA)	VOC(ppm) (STEL)
001	9/10/2019 07:39:36	0.000	---
002	9/10/2019 07:40:36	0.000	---

003	9/10/2019 07:41:36	0.000	---
004	9/10/2019 07:42:36	0.000	---
005	9/10/2019 07:43:36	0.000	---
006	9/10/2019 07:44:36	0.000	---
007	9/10/2019 07:45:36	0.000	---
008	9/10/2019 07:46:36	0.000	---
009	9/10/2019 07:47:36	0.000	---
010	9/10/2019 07:48:36	0.000	---
011	9/10/2019 07:49:36	0.000	---
012	9/10/2019 07:50:36	0.000	---
013	9/10/2019 07:51:36	0.000	---
014	9/10/2019 07:52:36	0.000	---
015	9/10/2019 07:53:36	0.000	0.000
016	9/10/2019 07:54:36	0.000	0.000
017	9/10/2019 07:55:36	0.000	0.000
018	9/10/2019 07:56:36	0.000	0.000
019	9/10/2019 07:57:36	0.000	0.000
020	9/10/2019 07:58:36	0.000	0.000
021	9/10/2019 07:59:36	0.000	0.000
022	9/10/2019 08:00:36	0.000	0.000
023	9/10/2019 08:01:36	0.000	0.000
024	9/10/2019 08:02:36	0.000	0.000
025	9/10/2019 08:03:36	0.000	0.000
026	9/10/2019 08:04:36	0.000	0.000

027	9/10/2019 08:05:36	0.000	0.000
028	9/10/2019 08:06:36	0.000	0.000
029	9/10/2019 08:07:36	0.000	0.000
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034	9/10/2019 08:12:36	0.000	0.000
035	9/10/2019 08:13:36	0.000	0.000
036	9/10/2019 08:14:36	0.000	0.000
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038	9/10/2019 08:16:36	0.000	0.000
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040	9/10/2019 08:18:36	0.000	0.000
041	9/10/2019 08:19:36	0.000	0.000
042	9/10/2019 08:20:36	0.000	0.000
043	9/10/2019 08:21:36	0.000	0.000
044	9/10/2019 08:22:36	0.000	0.000
045	9/10/2019 08:23:36	0.000	0.000
046	9/10/2019 08:24:36	0.000	0.000
047	9/10/2019 08:25:36	0.000	0.000
048	9/10/2019 08:26:36	0.000	0.000
049	9/10/2019 08:27:36	0.000	0.000
050	9/10/2019 08:28:36	0.000	0.000

051	9/10/2019 08:29:36	0.000	0.000
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055	9/10/2019 08:33:36	0.000	0.000
056	9/10/2019 08:34:36	0.000	0.000
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084	9/10/2019 09:02:36	0.000	0.000
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090	9/10/2019 09:08:36	0.000	0.000
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326	9/10/2019 13:04:36	0.000	0.000
327	9/10/2019 13:05:36	0.000	0.000
328	9/10/2019 13:06:36	0.000	0.000
329	9/10/2019 13:07:36	0.000	0.000
330	9/10/2019 13:08:36	0.000	0.000
331	9/10/2019 13:09:36	0.000	0.000
332	9/10/2019 13:10:36	0.000	0.000
333	9/10/2019 13:11:36	0.000	0.000
334	9/10/2019 13:12:36	0.000	0.000
335	9/10/2019 13:13:36	0.000	0.000
336	9/10/2019 13:14:36	0.000	0.000
337	9/10/2019 13:15:36	0.000	0.000
338	9/10/2019 13:16:36	0.000	0.000

339	9/10/2019 13:17:36	0.000	0.000
340	9/10/2019 13:18:36	0.000	0.000
341	9/10/2019 13:19:36	0.000	0.000
342	9/10/2019 13:20:36	0.000	0.000
343	9/10/2019 13:21:36	0.000	0.000
344	9/10/2019 13:22:36	0.000	0.000
345	9/10/2019 13:23:36	0.000	0.000
346	9/10/2019 13:24:36	0.000	0.000
347	9/10/2019 13:25:36	0.000	0.000
348	9/10/2019 13:26:36	0.000	0.000
349	9/10/2019 13:27:36	0.000	0.000
350	9/10/2019 13:28:36	0.000	0.000
351	9/10/2019 13:29:36	0.000	0.000
352	9/10/2019 13:30:36	0.000	0.000
353	9/10/2019 13:31:36	0.000	0.000
354	9/10/2019 13:32:36	0.000	0.000
355	9/10/2019 13:33:36	0.000	0.000
356	9/10/2019 13:34:36	0.000	0.000

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19/09/10 07:35

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Summary

Unit Name MiniRAE 3000(PGM-7320)

Unit SN 592-914376

Unit Firmware Ver V2.14

Running Mode Hygiene Mode

Datalog Mode Auto

Diagnostic Mode No

Stop Reason Power Down

Site ID RAE00000

User ID 00000001

Begin 9/10/2019 07:35:27

End 9/10/2019 13:39:18

Sample Period(s) 60

Number of Records 363

Sensor PID(ppm)

Sensor SN S023030126S2

Measure Type Min; Avg; Max; Real

Span 100.0

Span 2 1000.0

Low Alarm 50.0

High Alarm 100.0

Over Alarm 2000.0

STEL Alarm	25.0
TWA Alarm	10.0
Measurement Gas	Isobutylene
Calibration Time	9/10/2019 07:35
Peak	0.2
Min	0.0
Average	0.1

****

Datalog

Index	Date/Time	PID(ppm) (Min)	PID(ppm) (Avg)	PID(ppm) (Max)	PID(ppm) (Real)	PID(ppm)
001	9/10/2019 07:36:27	0.0	0.0	0.3	0.0	
002	9/10/2019 07:37:27	0.0	0.0	0.0	0.0	
003	9/10/2019 07:38:27	0.0	0.0	0.0	0.0	
004	9/10/2019 07:39:27	0.0	0.0	0.0	0.0	
005	9/10/2019 07:40:27	0.0	0.0	0.0	0.0	
006	9/10/2019 07:41:27	0.0	0.0	0.0	0.0	
007	9/10/2019 07:42:27	0.0	0.0	0.0	0.0	
008	9/10/2019 07:43:27	0.0	0.0	0.0	0.0	
009	9/10/2019 07:44:27	0.0	0.0	0.0	0.0	
010	9/10/2019 07:45:27	0.0	0.0	0.0	0.0	
011	9/10/2019 07:46:27	0.0	0.0	0.0	0.0	
012	9/10/2019 07:47:27	0.0	0.0	0.0	0.0	

013	9/10/2019 07:48:27	0.0	0.0	0.0	0.0
014	9/10/2019 07:49:27	0.0	0.0	0.1	0.0
015	9/10/2019 07:50:27	0.0	0.0	0.1	0.1
016	9/10/2019 07:51:27	0.0	0.0	0.1	0.1
017	9/10/2019 07:52:27	0.1	0.1	0.1	0.1
018	9/10/2019 07:53:27	0.1	0.1	0.1	0.1
019	9/10/2019 07:54:27	0.1	0.1	0.1	0.1
020	9/10/2019 07:55:27	0.1	0.1	0.1	0.1
021	9/10/2019 07:56:27	0.1	0.1	0.1	0.1
022	9/10/2019 07:57:27	0.1	0.1	0.1	0.1
023	9/10/2019 07:58:27	0.1	0.1	0.1	0.1
024	9/10/2019 07:59:27	0.1	0.1	0.1	0.1
025	9/10/2019 08:00:27	0.1	0.1	0.1	0.1
026	9/10/2019 08:01:27	0.1	0.1	0.1	0.1
027	9/10/2019 08:02:27	0.1	0.1	0.1	0.1
028	9/10/2019 08:03:27	0.1	0.1	0.1	0.1
029	9/10/2019 08:04:27	0.1	0.1	0.1	0.1
030	9/10/2019 08:05:27	0.1	0.1	0.1	0.1
031	9/10/2019 08:06:27	0.1	0.1	0.1	0.1
032	9/10/2019 08:07:27	0.1	0.1	0.1	0.1
033	9/10/2019 08:08:27	0.1	0.1	0.1	0.1
034	9/10/2019 08:09:27	0.1	0.1	0.1	0.1
035	9/10/2019 08:10:27	0.1	0.1	0.1	0.1
036	9/10/2019 08:11:27	0.1	0.1	0.1	0.1

037	9/10/2019 08:12:27	0.1	0.1	0.1	0.1
038	9/10/2019 08:13:27	0.1	0.1	0.1	0.1
039	9/10/2019 08:14:27	0.1	0.1	0.1	0.1
040	9/10/2019 08:15:27	0.1	0.1	0.1	0.1
041	9/10/2019 08:16:27	0.1	0.1	0.1	0.1
042	9/10/2019 08:17:27	0.1	0.1	0.1	0.1
043	9/10/2019 08:18:27	0.1	0.1	0.1	0.1
044	9/10/2019 08:19:27	0.1	0.1	0.1	0.1
045	9/10/2019 08:20:27	0.1	0.1	0.1	0.1
046	9/10/2019 08:21:27	0.1	0.1	0.1	0.1
047	9/10/2019 08:22:27	0.1	0.1	0.1	0.1
048	9/10/2019 08:23:27	0.1	0.1	0.1	0.1
049	9/10/2019 08:24:27	0.1	0.1	0.1	0.1
050	9/10/2019 08:25:27	0.1	0.1	0.1	0.1
051	9/10/2019 08:26:27	0.1	0.1	0.1	0.1
052	9/10/2019 08:27:27	0.1	0.1	0.1	0.1
053	9/10/2019 08:28:27	0.1	0.1	0.1	0.1
054	9/10/2019 08:29:27	0.1	0.1	0.1	0.1
055	9/10/2019 08:30:27	0.1	0.1	0.1	0.1
056	9/10/2019 08:31:27	0.1	0.1	0.1	0.1
057	9/10/2019 08:32:27	0.1	0.1	0.1	0.1
058	9/10/2019 08:33:27	0.1	0.1	0.1	0.1
059	9/10/2019 08:34:27	0.1	0.1	0.1	0.1
060	9/10/2019 08:35:27	0.1	0.1	0.1	0.1

061	9/10/2019 08:36:27	0.1	0.1	0.1	0.1
062	9/10/2019 08:37:27	0.1	0.1	0.1	0.1
063	9/10/2019 08:38:27	0.1	0.1	0.1	0.1
064	9/10/2019 08:39:27	0.1	0.1	0.1	0.1
065	9/10/2019 08:40:27	0.1	0.1	0.1	0.1
066	9/10/2019 08:41:27	0.1	0.1	0.1	0.1
067	9/10/2019 08:42:27	0.1	0.1	0.1	0.1
068	9/10/2019 08:43:27	0.1	0.1	0.1	0.1
069	9/10/2019 08:44:27	0.1	0.1	0.1	0.1
070	9/10/2019 08:45:27	0.1	0.1	0.1	0.1
071	9/10/2019 08:46:27	0.1	0.1	0.1	0.1
072	9/10/2019 08:47:27	0.1	0.1	0.1	0.1
073	9/10/2019 08:48:27	0.1	0.1	0.1	0.1
074	9/10/2019 08:49:27	0.1	0.1	0.1	0.1
075	9/10/2019 08:50:27	0.1	0.1	0.1	0.1
076	9/10/2019 08:51:27	0.1	0.1	0.1	0.1
077	9/10/2019 08:52:27	0.1	0.1	0.2	0.1
078	9/10/2019 08:53:27	0.1	0.1	0.1	0.1
079	9/10/2019 08:54:27	0.1	0.1	0.1	0.1
080	9/10/2019 08:55:27	0.1	0.1	0.1	0.1
081	9/10/2019 08:56:27	0.1	0.1	0.1	0.1
082	9/10/2019 08:57:27	0.1	0.1	0.1	0.1
083	9/10/2019 08:58:27	0.1	0.1	0.1	0.1
084	9/10/2019 08:59:27	0.1	0.1	0.1	0.1

085	9/10/2019 09:00:27	0.1	0.1	0.1	0.1
086	9/10/2019 09:01:27	0.1	0.1	0.2	0.2
087	9/10/2019 09:02:27	0.1	0.1	0.2	0.2
088	9/10/2019 09:03:27	0.1	0.2	0.2	0.2
089	9/10/2019 09:04:27	0.1	0.2	0.2	0.2
090	9/10/2019 09:05:27	0.1	0.2	0.2	0.2
091	9/10/2019 09:06:27	0.1	0.2	0.2	0.2
092	9/10/2019 09:07:27	0.2	0.2	0.2	0.2
093	9/10/2019 09:08:27	0.2	0.2	0.2	0.2
094	9/10/2019 09:09:27	0.2	0.2	0.2	0.2
095	9/10/2019 09:10:27	0.2	0.2	0.2	0.2
096	9/10/2019 09:11:27	0.2	0.2	0.2	0.2
097	9/10/2019 09:12:27	0.2	0.2	0.2	0.2
098	9/10/2019 09:13:27	0.2	0.2	0.2	0.2
099	9/10/2019 09:14:27	0.2	0.2	0.2	0.2
100	9/10/2019 09:15:27	0.2	0.2	0.2	0.2
101	9/10/2019 09:16:27	0.2	0.2	0.2	0.2
102	9/10/2019 09:17:27	0.2	0.2	0.2	0.2
103	9/10/2019 09:18:27	0.2	0.2	0.2	0.2
104	9/10/2019 09:19:27	0.2	0.2	0.2	0.2
105	9/10/2019 09:20:27	0.2	0.2	0.2	0.2
106	9/10/2019 09:21:27	0.2	0.2	0.2	0.2
107	9/10/2019 09:22:27	0.2	0.2	0.2	0.2
108	9/10/2019 09:23:27	0.2	0.2	0.2	0.2

109	9/10/2019 09:24:27	0.2	0.2	0.2	0.2
110	9/10/2019 09:25:27	0.2	0.2	0.2	0.2
111	9/10/2019 09:26:27	0.2	0.2	0.2	0.2
112	9/10/2019 09:27:27	0.2	0.2	0.2	0.2
113	9/10/2019 09:28:27	0.2	0.2	0.2	0.2
114	9/10/2019 09:29:27	0.2	0.2	0.2	0.2
115	9/10/2019 09:30:27	0.2	0.2	0.2	0.2
116	9/10/2019 09:31:27	0.2	0.2	0.2	0.2
117	9/10/2019 09:32:27	0.2	0.2	0.2	0.2
118	9/10/2019 09:33:27	0.2	0.2	0.2	0.2
119	9/10/2019 09:34:27	0.2	0.2	0.2	0.2
120	9/10/2019 09:35:27	0.2	0.2	0.2	0.2
121	9/10/2019 09:36:27	0.2	0.2	0.2	0.2
122	9/10/2019 09:37:27	0.2	0.2	0.2	0.2
123	9/10/2019 09:38:27	0.2	0.2	0.2	0.2
124	9/10/2019 09:39:27	0.2	0.2	0.2	0.2
125	9/10/2019 09:40:27	0.2	0.2	0.2	0.2
126	9/10/2019 09:41:27	0.1	0.1	0.2	0.1
127	9/10/2019 09:42:27	0.1	0.1	0.2	0.2
128	9/10/2019 09:43:27	0.1	0.1	0.2	0.1
129	9/10/2019 09:44:27	0.1	0.1	0.1	0.1
130	9/10/2019 09:45:27	0.1	0.1	0.2	0.1
131	9/10/2019 09:46:27	0.1	0.1	0.1	0.1
132	9/10/2019 09:47:27	0.1	0.1	0.2	0.1

133	9/10/2019 09:48:27	0.1	0.1	0.2	0.2
134	9/10/2019 09:49:27	0.1	0.1	0.2	0.1
135	9/10/2019 09:50:27	0.1	0.1	0.2	0.2
136	9/10/2019 09:51:27	0.1	0.1	0.2	0.1
137	9/10/2019 09:52:27	0.1	0.1	0.1	0.1
138	9/10/2019 09:53:27	0.1	0.1	0.1	0.1
139	9/10/2019 09:54:27	0.1	0.1	0.1	0.1
140	9/10/2019 09:55:27	0.1	0.1	0.1	0.1
141	9/10/2019 09:56:27	0.1	0.1	0.1	0.1
142	9/10/2019 09:57:27	0.1	0.1	0.1	0.1
143	9/10/2019 09:58:27	0.1	0.1	0.1	0.1
144	9/10/2019 09:59:27	0.1	0.1	0.1	0.1
145	9/10/2019 10:00:27	0.1	0.1	0.1	0.1
146	9/10/2019 10:01:27	0.1	0.1	0.1	0.1
147	9/10/2019 10:02:27	0.1	0.1	0.1	0.1
148	9/10/2019 10:03:27	0.1	0.1	0.1	0.1
149	9/10/2019 10:04:27	0.1	0.1	0.1	0.1
150	9/10/2019 10:05:27	0.1	0.1	0.1	0.1
151	9/10/2019 10:06:27	0.1	0.1	0.1	0.1
152	9/10/2019 10:07:27	0.1	0.1	0.1	0.1
153	9/10/2019 10:08:27	0.1	0.1	0.1	0.1
154	9/10/2019 10:09:27	0.1	0.1	0.1	0.1
155	9/10/2019 10:10:27	0.1	0.1	0.1	0.1
156	9/10/2019 10:11:27	0.1	0.1	0.1	0.1

157	9/10/2019 10:12:27	0.1	0.1	0.1	0.1
158	9/10/2019 10:13:27	0.1	0.1	0.1	0.1
159	9/10/2019 10:14:27	0.1	0.1	0.1	0.1
160	9/10/2019 10:15:27	0.1	0.1	0.1	0.1
161	9/10/2019 10:16:27	0.1	0.1	0.1	0.1
162	9/10/2019 10:17:27	0.1	0.1	0.1	0.1
163	9/10/2019 10:18:27	0.1	0.1	0.1	0.1
164	9/10/2019 10:19:27	0.1	0.1	0.1	0.1
165	9/10/2019 10:20:27	0.1	0.1	0.1	0.1
166	9/10/2019 10:21:27	0.1	0.1	0.1	0.1
167	9/10/2019 10:22:27	0.1	0.1	0.1	0.1
168	9/10/2019 10:23:27	0.1	0.1	0.1	0.1
169	9/10/2019 10:24:27	0.1	0.1	0.1	0.1
170	9/10/2019 10:25:27	0.0	0.1	0.1	0.1
171	9/10/2019 10:26:27	0.1	0.1	0.1	0.1
172	9/10/2019 10:27:27	0.1	0.1	0.1	0.1
173	9/10/2019 10:28:27	0.1	0.1	0.1	0.1
174	9/10/2019 10:29:27	0.0	0.1	0.1	0.1
175	9/10/2019 10:30:27	0.1	0.1	0.1	0.1
176	9/10/2019 10:31:27	0.0	0.0	0.1	0.0
177	9/10/2019 10:32:27	0.0	0.1	0.1	0.1
178	9/10/2019 10:33:27	0.0	0.1	0.1	0.1
179	9/10/2019 10:34:27	0.0	0.1	0.1	0.1
180	9/10/2019 10:35:27	0.0	0.1	0.2	0.1

181	9/10/2019 10:36:27	0.0	0.1	0.1	0.0
182	9/10/2019 10:37:27	0.0	0.1	0.1	0.1
183	9/10/2019 10:38:27	0.0	0.1	0.1	0.1
184	9/10/2019 10:39:27	0.0	0.1	0.1	0.1
185	9/10/2019 10:40:27	0.0	0.1	0.1	0.1
186	9/10/2019 10:41:27	0.0	0.1	0.1	0.1
187	9/10/2019 10:42:27	0.0	0.1	0.1	0.0
188	9/10/2019 10:43:27	0.0	0.1	0.1	0.0
189	9/10/2019 10:44:27	0.0	0.0	0.1	0.0
190	9/10/2019 10:45:27	0.0	0.0	0.1	0.0
191	9/10/2019 10:46:27	0.0	0.0	0.1	0.1
192	9/10/2019 10:47:27	0.0	0.0	0.1	0.0
193	9/10/2019 10:48:27	0.0	0.0	0.1	0.0
194	9/10/2019 10:49:27	0.0	0.0	0.1	0.0
195	9/10/2019 10:50:27	0.0	0.0	0.1	0.0
196	9/10/2019 10:51:27	0.0	0.0	0.0	0.0
197	9/10/2019 10:52:27	0.0	0.0	0.0	0.0
198	9/10/2019 10:53:27	0.0	0.0	0.0	0.0
199	9/10/2019 10:54:27	0.0	0.0	0.0	0.0
200	9/10/2019 10:55:27	0.0	0.0	0.0	0.0
201	9/10/2019 10:56:27	0.0	0.0	0.0	0.0
202	9/10/2019 10:57:27	0.0	0.0	0.0	0.0
203	9/10/2019 10:58:27	0.0	0.0	0.0	0.0
204	9/10/2019 10:59:27	0.0	0.0	0.0	0.0

205	9/10/2019 11:00:27	0.0	0.0	0.0	0.0
206	9/10/2019 11:01:27	0.0	0.0	0.0	0.0
207	9/10/2019 11:02:27	0.0	0.0	0.0	0.0
208	9/10/2019 11:03:27	0.0	0.0	0.0	0.0
209	9/10/2019 11:04:27	0.0	0.0	0.0	0.0
210	9/10/2019 11:05:27	0.0	0.0	0.0	0.0
211	9/10/2019 11:06:27	0.0	0.0	0.0	0.0
212	9/10/2019 11:07:27	0.0	0.0	0.0	0.0
213	9/10/2019 11:08:27	0.0	0.0	0.0	0.0
214	9/10/2019 11:09:27	0.0	0.0	0.0	0.0
215	9/10/2019 11:10:27	0.0	0.0	0.0	0.0
216	9/10/2019 11:11:27	0.0	0.0	0.0	0.0
217	9/10/2019 11:12:27	0.0	0.0	0.0	0.0
218	9/10/2019 11:13:27	0.0	0.0	0.0	0.0
219	9/10/2019 11:14:27	0.0	0.0	0.0	0.0
220	9/10/2019 11:15:27	0.0	0.0	0.0	0.0
221	9/10/2019 11:16:27	0.0	0.0	0.0	0.0
222	9/10/2019 11:17:27	0.0	0.0	0.0	0.0
223	9/10/2019 11:18:27	0.0	0.0	0.0	0.0
224	9/10/2019 11:19:27	0.0	0.0	0.0	0.0
225	9/10/2019 11:20:27	0.0	0.0	0.0	0.0
226	9/10/2019 11:21:27	0.0	0.0	0.0	0.0
227	9/10/2019 11:22:27	0.0	0.0	0.0	0.0
228	9/10/2019 11:23:27	0.0	0.0	0.0	0.0

229	9/10/2019 11:24:27	0.0	0.0	0.0	0.0
230	9/10/2019 11:25:27	0.0	0.0	0.0	0.0
231	9/10/2019 11:26:27	0.0	0.0	0.0	0.0
232	9/10/2019 11:27:27	0.0	0.0	0.0	0.0
233	9/10/2019 11:28:27	0.0	0.0	0.0	0.0
234	9/10/2019 11:29:27	0.0	0.0	0.0	0.0
235	9/10/2019 11:30:27	0.0	0.0	0.0	0.0
236	9/10/2019 11:31:27	0.0	0.0	0.0	0.0
237	9/10/2019 11:32:27	0.0	0.0	0.0	0.0
238	9/10/2019 11:33:27	0.0	0.0	0.0	0.0
239	9/10/2019 11:34:27	0.0	0.0	0.0	0.0
240	9/10/2019 11:35:27	0.0	0.0	0.0	0.0
241	9/10/2019 11:36:27	0.0	0.0	0.0	0.0
242	9/10/2019 11:37:27	0.0	0.0	0.0	0.0
243	9/10/2019 11:38:27	0.0	0.0	0.0	0.0
244	9/10/2019 11:39:27	0.0	0.0	0.0	0.0
245	9/10/2019 11:40:27	0.0	0.0	0.0	0.0
246	9/10/2019 11:41:27	0.0	0.0	0.0	0.0
247	9/10/2019 11:42:27	0.0	0.0	0.0	0.0
248	9/10/2019 11:43:27	0.0	0.0	0.0	0.0
249	9/10/2019 11:44:27	0.0	0.0	0.0	0.0
250	9/10/2019 11:45:27	0.0	0.0	0.0	0.0
251	9/10/2019 11:46:27	0.0	0.0	0.0	0.0
252	9/10/2019 11:47:27	0.0	0.0	0.0	0.0

253	9/10/2019 11:48:27	0.0	0.0	0.0	0.0
254	9/10/2019 11:49:27	0.0	0.0	0.0	0.0
255	9/10/2019 11:50:27	0.0	0.0	0.0	0.0
256	9/10/2019 11:51:27	0.0	0.0	0.0	0.0
257	9/10/2019 11:52:27	0.0	0.0	0.0	0.0
258	9/10/2019 11:53:27	0.0	0.0	0.0	0.0
259	9/10/2019 11:54:27	0.0	0.0	0.0	0.0
260	9/10/2019 11:55:27	0.0	0.0	0.0	0.0
261	9/10/2019 11:56:27	0.0	0.0	0.0	0.0
262	9/10/2019 11:57:27	0.0	0.0	0.0	0.0
263	9/10/2019 11:58:27	0.0	0.0	0.0	0.0
264	9/10/2019 11:59:27	0.0	0.0	0.0	0.0
265	9/10/2019 12:00:27	0.0	0.0	0.0	0.0
266	9/10/2019 12:01:27	0.0	0.0	0.0	0.0
267	9/10/2019 12:02:27	0.0	0.0	0.0	0.0
268	9/10/2019 12:03:27	0.0	0.0	0.0	0.0
269	9/10/2019 12:04:27	0.0	0.0	0.0	0.0
270	9/10/2019 12:05:27	0.0	0.0	0.0	0.0
271	9/10/2019 12:06:27	0.0	0.0	0.1	0.0
272	9/10/2019 12:07:27	0.0	0.0	0.0	0.0
273	9/10/2019 12:08:27	0.0	0.0	0.0	0.0
274	9/10/2019 12:09:27	0.0	0.0	0.0	0.0
275	9/10/2019 12:10:27	0.0	0.0	0.0	0.0
276	9/10/2019 12:11:27	0.0	0.0	0.0	0.0

277	9/10/2019 12:12:27	0.0	0.0	0.0	0.0
278	9/10/2019 12:13:27	0.0	0.0	0.0	0.0
279	9/10/2019 12:14:27	0.0	0.0	0.0	0.0
280	9/10/2019 12:15:27	0.0	0.0	0.0	0.0
281	9/10/2019 12:16:27	0.0	0.0	0.0	0.0
282	9/10/2019 12:17:27	0.0	0.0	0.0	0.0
283	9/10/2019 12:18:27	0.0	0.0	0.0	0.0
284	9/10/2019 12:19:27	0.0	0.0	0.0	0.0
285	9/10/2019 12:20:27	0.0	0.0	0.0	0.0
286	9/10/2019 12:21:27	0.0	0.0	0.0	0.0
287	9/10/2019 12:22:27	0.0	0.0	0.0	0.0
288	9/10/2019 12:23:27	0.0	0.0	0.0	0.0
289	9/10/2019 12:24:27	0.0	0.0	0.0	0.0
290	9/10/2019 12:25:27	0.0	0.0	0.0	0.0
291	9/10/2019 12:26:27	0.0	0.0	0.0	0.0
292	9/10/2019 12:27:27	0.0	0.0	0.0	0.0
293	9/10/2019 12:28:27	0.0	0.0	0.0	0.0
294	9/10/2019 12:29:27	0.0	0.0	0.0	0.0
295	9/10/2019 12:30:27	0.0	0.0	0.0	0.0
296	9/10/2019 12:31:27	0.0	0.0	0.0	0.0
297	9/10/2019 12:32:27	0.0	0.0	0.0	0.0
298	9/10/2019 12:33:27	0.0	0.0	0.0	0.0
299	9/10/2019 12:34:27	0.0	0.0	0.0	0.0
300	9/10/2019 12:35:27	0.0	0.0	0.0	0.0

301	9/10/2019 12:36:27	0.0	0.0	0.0	0.0
302	9/10/2019 12:37:27	0.0	0.0	0.0	0.0
303	9/10/2019 12:38:27	0.0	0.0	0.0	0.0
304	9/10/2019 12:39:27	0.0	0.0	0.0	0.0
305	9/10/2019 12:40:27	0.0	0.0	0.0	0.0
306	9/10/2019 12:41:27	0.0	0.0	0.0	0.0
307	9/10/2019 12:42:27	0.0	0.0	0.0	0.0
308	9/10/2019 12:43:27	0.0	0.0	0.0	0.0
309	9/10/2019 12:44:27	0.0	0.0	0.0	0.0
310	9/10/2019 12:45:27	0.0	0.0	0.0	0.0
311	9/10/2019 12:46:27	0.0	0.0	0.0	0.0
312	9/10/2019 12:47:27	0.0	0.0	0.0	0.0
313	9/10/2019 12:48:27	0.0	0.0	0.0	0.0
314	9/10/2019 12:49:27	0.0	0.0	0.0	0.0
315	9/10/2019 12:50:27	0.0	0.0	0.0	0.0
316	9/10/2019 12:51:27	0.0	0.0	0.0	0.0
317	9/10/2019 12:52:27	0.0	0.0	0.0	0.0
318	9/10/2019 12:53:27	0.0	0.0	0.0	0.0
319	9/10/2019 12:54:27	0.0	0.0	0.0	0.0
320	9/10/2019 12:55:27	0.0	0.0	0.0	0.0
321	9/10/2019 12:56:27	0.0	0.0	0.0	0.0
322	9/10/2019 12:57:27	0.0	0.0	0.0	0.0
323	9/10/2019 12:58:27	0.0	0.0	0.0	0.0
324	9/10/2019 12:59:27	0.0	0.0	0.0	0.0

325	9/10/2019 13:00:27	0.0	0.0	0.0	0.0
326	9/10/2019 13:01:27	0.0	0.0	0.0	0.0
327	9/10/2019 13:02:27	0.0	0.0	0.0	0.0
328	9/10/2019 13:03:27	0.0	0.0	0.0	0.0
329	9/10/2019 13:04:27	0.0	0.0	0.0	0.0
330	9/10/2019 13:05:27	0.0	0.0	0.0	0.0
331	9/10/2019 13:06:27	0.0	0.0	0.0	0.0
332	9/10/2019 13:07:27	0.0	0.0	0.0	0.0
333	9/10/2019 13:08:27	0.0	0.0	0.0	0.0
334	9/10/2019 13:09:27	0.0	0.0	0.0	0.0
335	9/10/2019 13:10:27	0.0	0.0	0.0	0.0
336	9/10/2019 13:11:27	0.0	0.0	0.0	0.0
337	9/10/2019 13:12:27	0.0	0.0	0.0	0.0
338	9/10/2019 13:13:27	0.0	0.0	0.0	0.0
339	9/10/2019 13:14:27	0.0	0.0	0.0	0.0
340	9/10/2019 13:15:27	0.0	0.0	0.0	0.0
341	9/10/2019 13:16:27	0.0	0.0	0.0	0.0
342	9/10/2019 13:17:27	0.0	0.0	0.0	0.0
343	9/10/2019 13:18:27	0.0	0.0	0.0	0.0
344	9/10/2019 13:19:27	0.0	0.0	0.0	0.0
345	9/10/2019 13:20:27	0.0	0.0	0.0	0.0
346	9/10/2019 13:21:27	0.0	0.0	0.0	0.0
347	9/10/2019 13:22:27	0.0	0.0	0.0	0.0
348	9/10/2019 13:23:27	0.0	0.0	0.0	0.0

349	9/10/2019 13:24:27	0.0	0.0	0.0	0.0
350	9/10/2019 13:25:27	0.0	0.0	0.0	0.0
351	9/10/2019 13:26:27	0.0	0.0	0.0	0.0
352	9/10/2019 13:27:27	0.0	0.0	0.0	0.0
353	9/10/2019 13:28:27	0.0	0.0	0.0	0.0
354	9/10/2019 13:29:27	0.0	0.0	0.0	0.0
355	9/10/2019 13:30:27	0.0	0.0	0.0	0.0
356	9/10/2019 13:31:27	0.0	0.0	0.0	0.0
357	9/10/2019 13:32:27	0.0	0.0	0.0	0.0
358	9/10/2019 13:33:27	0.0	0.0	0.0	0.0
359	9/10/2019 13:34:27	0.0	0.0	0.0	0.0
360	9/10/2019 13:35:27	0.0	0.0	0.0	0.0
361	9/10/2019 13:36:27	0.0	0.0	0.0	0.0
362	9/10/2019 13:37:27	0.0	0.0	0.0	0.0
363	9/10/2019 13:38:27	0.0	0.0	0.0	0.0
Peak		0.2	0.2	0.3	0.2
Min		0.0	0.0	0.0	0.0
Average			0.1	0.1	0.1	0.1

****

TWA/STEL

Index	Date/Time	PID(ppm) (TWA)	PID(ppm) (STEL)
001	9/10/2019 07:36:27	0.0	---

002	9/10/2019 07:37:27	0.0	---
003	9/10/2019 07:38:27	0.0	---
004	9/10/2019 07:39:27	0.0	---
005	9/10/2019 07:40:27	0.0	---
006	9/10/2019 07:41:27	0.0	---
007	9/10/2019 07:42:27	0.0	---
008	9/10/2019 07:43:27	0.0	---
009	9/10/2019 07:44:27	0.0	---
010	9/10/2019 07:45:27	0.0	---
011	9/10/2019 07:46:27	0.0	---
012	9/10/2019 07:47:27	0.0	---
013	9/10/2019 07:48:27	0.0	---
014	9/10/2019 07:49:27	0.0	---
015	9/10/2019 07:50:27	0.0	0.0
016	9/10/2019 07:51:27	0.0	0.0
017	9/10/2019 07:52:27	0.0	0.0
018	9/10/2019 07:53:27	0.0	0.0
019	9/10/2019 07:54:27	0.0	0.0
020	9/10/2019 07:55:27	0.0	0.0
021	9/10/2019 07:56:27	0.0	0.0
022	9/10/2019 07:57:27	0.0	0.1
023	9/10/2019 07:58:27	0.0	0.1
024	9/10/2019 07:59:27	0.0	0.1
025	9/10/2019 08:00:27	0.0	0.1

026	9/10/2019 08:01:27	0.0	0.1
027	9/10/2019 08:02:27	0.0	0.1
028	9/10/2019 08:03:27	0.0	0.1
029	9/10/2019 08:04:27	0.0	0.1
030	9/10/2019 08:05:27	0.0	0.1
031	9/10/2019 08:06:27	0.0	0.1
032	9/10/2019 08:07:27	0.0	0.1
033	9/10/2019 08:08:27	0.0	0.1
034	9/10/2019 08:09:27	0.0	0.1
035	9/10/2019 08:10:27	0.0	0.1
036	9/10/2019 08:11:27	0.0	0.1
037	9/10/2019 08:12:27	0.0	0.1
038	9/10/2019 08:13:27	0.0	0.1
039	9/10/2019 08:14:27	0.0	0.1
040	9/10/2019 08:15:27	0.0	0.1
041	9/10/2019 08:16:27	0.0	0.1
042	9/10/2019 08:17:27	0.0	0.1
043	9/10/2019 08:18:27	0.0	0.1
044	9/10/2019 08:19:27	0.0	0.1
045	9/10/2019 08:20:27	0.0	0.1
046	9/10/2019 08:21:27	0.0	0.1
047	9/10/2019 08:22:27	0.0	0.1
048	9/10/2019 08:23:27	0.0	0.1
049	9/10/2019 08:24:27	0.0	0.1

050	9/10/2019 08:25:27	0.0	0.1
051	9/10/2019 08:26:27	0.0	0.1
052	9/10/2019 08:27:27	0.0	0.1
053	9/10/2019 08:28:27	0.0	0.1
054	9/10/2019 08:29:27	0.0	0.1
055	9/10/2019 08:30:27	0.0	0.1
056	9/10/2019 08:31:27	0.0	0.1
057	9/10/2019 08:32:27	0.0	0.1
058	9/10/2019 08:33:27	0.0	0.1
059	9/10/2019 08:34:27	0.0	0.1
060	9/10/2019 08:35:27	0.0	0.1
061	9/10/2019 08:36:27	0.0	0.1
062	9/10/2019 08:37:27	0.0	0.1
063	9/10/2019 08:38:27	0.0	0.1
064	9/10/2019 08:39:27	0.0	0.1
065	9/10/2019 08:40:27	0.0	0.1
066	9/10/2019 08:41:27	0.0	0.1
067	9/10/2019 08:42:27	0.0	0.1
068	9/10/2019 08:43:27	0.0	0.1
069	9/10/2019 08:44:27	0.0	0.1
070	9/10/2019 08:45:27	0.0	0.1
071	9/10/2019 08:46:27	0.0	0.1
072	9/10/2019 08:47:27	0.0	0.1
073	9/10/2019 08:48:27	0.0	0.1

074	9/10/2019 08:49:27	0.0	0.1
075	9/10/2019 08:50:27	0.0	0.1
076	9/10/2019 08:51:27	0.0	0.1
077	9/10/2019 08:52:27	0.0	0.1
078	9/10/2019 08:53:27	0.0	0.1
079	9/10/2019 08:54:27	0.0	0.1
080	9/10/2019 08:55:27	0.0	0.1
081	9/10/2019 08:56:27	0.0	0.1
082	9/10/2019 08:57:27	0.0	0.1
083	9/10/2019 08:58:27	0.0	0.1
084	9/10/2019 08:59:27	0.0	0.1
085	9/10/2019 09:00:27	0.0	0.1
086	9/10/2019 09:01:27	0.0	0.1
087	9/10/2019 09:02:27	0.0	0.1
088	9/10/2019 09:03:27	0.0	0.1
089	9/10/2019 09:04:27	0.0	0.1
090	9/10/2019 09:05:27	0.0	0.1
091	9/10/2019 09:06:27	0.0	0.1
092	9/10/2019 09:07:27	0.0	0.2
093	9/10/2019 09:08:27	0.0	0.2
094	9/10/2019 09:09:27	0.0	0.2
095	9/10/2019 09:10:27	0.0	0.2
096	9/10/2019 09:11:27	0.0	0.2
097	9/10/2019 09:12:27	0.0	0.2

098	9/10/2019 09:13:27	0.0	0.2
099	9/10/2019 09:14:27	0.0	0.2
100	9/10/2019 09:15:27	0.0	0.2
101	9/10/2019 09:16:27	0.0	0.2
102	9/10/2019 09:17:27	0.0	0.2
103	9/10/2019 09:18:27	0.0	0.2
104	9/10/2019 09:19:27	0.0	0.2
105	9/10/2019 09:20:27	0.0	0.2
106	9/10/2019 09:21:27	0.0	0.2
107	9/10/2019 09:22:27	0.0	0.2
108	9/10/2019 09:23:27	0.0	0.2
109	9/10/2019 09:24:27	0.0	0.2
110	9/10/2019 09:25:27	0.0	0.2
111	9/10/2019 09:26:27	0.0	0.2
112	9/10/2019 09:27:27	0.0	0.2
113	9/10/2019 09:28:27	0.0	0.2
114	9/10/2019 09:29:27	0.0	0.2
115	9/10/2019 09:30:27	0.0	0.2
116	9/10/2019 09:31:27	0.0	0.2
117	9/10/2019 09:32:27	0.0	0.2
118	9/10/2019 09:33:27	0.0	0.2
119	9/10/2019 09:34:27	0.0	0.2
120	9/10/2019 09:35:27	0.0	0.2
121	9/10/2019 09:36:27	0.0	0.2

122	9/10/2019 09:37:27	0.0	0.2
123	9/10/2019 09:38:27	0.0	0.2
124	9/10/2019 09:39:27	0.0	0.2
125	9/10/2019 09:40:27	0.0	0.2
126	9/10/2019 09:41:27	0.0	0.2
127	9/10/2019 09:42:27	0.0	0.2
128	9/10/2019 09:43:27	0.0	0.2
129	9/10/2019 09:44:27	0.0	0.2
130	9/10/2019 09:45:27	0.0	0.2
131	9/10/2019 09:46:27	0.0	0.2
132	9/10/2019 09:47:27	0.0	0.2
133	9/10/2019 09:48:27	0.0	0.2
134	9/10/2019 09:49:27	0.0	0.2
135	9/10/2019 09:50:27	0.0	0.2
136	9/10/2019 09:51:27	0.0	0.2
137	9/10/2019 09:52:27	0.0	0.2
138	9/10/2019 09:53:27	0.0	0.1
139	9/10/2019 09:54:27	0.0	0.1
140	9/10/2019 09:55:27	0.0	0.1
141	9/10/2019 09:56:27	0.0	0.1
142	9/10/2019 09:57:27	0.0	0.1
143	9/10/2019 09:58:27	0.0	0.1
144	9/10/2019 09:59:27	0.0	0.1
145	9/10/2019 10:00:27	0.0	0.1

146	9/10/2019 10:01:27	0.0	0.1
147	9/10/2019 10:02:27	0.0	0.1
148	9/10/2019 10:03:27	0.0	0.1
149	9/10/2019 10:04:27	0.0	0.1
150	9/10/2019 10:05:27	0.0	0.1
151	9/10/2019 10:06:27	0.0	0.1
152	9/10/2019 10:07:27	0.0	0.1
153	9/10/2019 10:08:27	0.0	0.1
154	9/10/2019 10:09:27	0.0	0.1
155	9/10/2019 10:10:27	0.0	0.1
156	9/10/2019 10:11:27	0.0	0.1
157	9/10/2019 10:12:27	0.0	0.1
158	9/10/2019 10:13:27	0.0	0.1
159	9/10/2019 10:14:27	0.0	0.1
160	9/10/2019 10:15:27	0.0	0.1
161	9/10/2019 10:16:27	0.0	0.1
162	9/10/2019 10:17:27	0.0	0.1
163	9/10/2019 10:18:27	0.0	0.1
164	9/10/2019 10:19:27	0.0	0.1
165	9/10/2019 10:20:27	0.0	0.1
166	9/10/2019 10:21:27	0.0	0.1
167	9/10/2019 10:22:27	0.0	0.1
168	9/10/2019 10:23:27	0.0	0.1
169	9/10/2019 10:24:27	0.0	0.1

170	9/10/2019 10:25:27	0.0	0.1
171	9/10/2019 10:26:27	0.0	0.1
172	9/10/2019 10:27:27	0.0	0.1
173	9/10/2019 10:28:27	0.0	0.1
174	9/10/2019 10:29:27	0.0	0.1
175	9/10/2019 10:30:27	0.0	0.1
176	9/10/2019 10:31:27	0.0	0.1
177	9/10/2019 10:32:27	0.0	0.1
178	9/10/2019 10:33:27	0.0	0.1
179	9/10/2019 10:34:27	0.0	0.1
180	9/10/2019 10:35:27	0.0	0.1
181	9/10/2019 10:36:27	0.0	0.1
182	9/10/2019 10:37:27	0.0	0.1
183	9/10/2019 10:38:27	0.0	0.1
184	9/10/2019 10:39:27	0.0	0.1
185	9/10/2019 10:40:27	0.0	0.1
186	9/10/2019 10:41:27	0.0	0.1
187	9/10/2019 10:42:27	0.0	0.1
188	9/10/2019 10:43:27	0.0	0.1
189	9/10/2019 10:44:27	0.0	0.1
190	9/10/2019 10:45:27	0.0	0.1
191	9/10/2019 10:46:27	0.0	0.1
192	9/10/2019 10:47:27	0.0	0.1
193	9/10/2019 10:48:27	0.0	0.1

194	9/10/2019 10:49:27	0.0	0.1
195	9/10/2019 10:50:27	0.0	0.0
196	9/10/2019 10:51:27	0.0	0.0
197	9/10/2019 10:52:27	0.0	0.0
198	9/10/2019 10:53:27	0.0	0.0
199	9/10/2019 10:54:27	0.0	0.0
200	9/10/2019 10:55:27	0.0	0.0
201	9/10/2019 10:56:27	0.0	0.0
202	9/10/2019 10:57:27	0.0	0.0
203	9/10/2019 10:58:27	0.0	0.0
204	9/10/2019 10:59:27	0.0	0.0
205	9/10/2019 11:00:27	0.0	0.0
206	9/10/2019 11:01:27	0.0	0.0
207	9/10/2019 11:02:27	0.0	0.0
208	9/10/2019 11:03:27	0.0	0.0
209	9/10/2019 11:04:27	0.0	0.0
210	9/10/2019 11:05:27	0.0	0.0
211	9/10/2019 11:06:27	0.0	0.0
212	9/10/2019 11:07:27	0.0	0.0
213	9/10/2019 11:08:27	0.0	0.0
214	9/10/2019 11:09:27	0.0	0.0
215	9/10/2019 11:10:27	0.0	0.0
216	9/10/2019 11:11:27	0.0	0.0
217	9/10/2019 11:12:27	0.0	0.0

218	9/10/2019 11:13:27	0.0	0.0
219	9/10/2019 11:14:27	0.0	0.0
220	9/10/2019 11:15:27	0.0	0.0
221	9/10/2019 11:16:27	0.0	0.0
222	9/10/2019 11:17:27	0.0	0.0
223	9/10/2019 11:18:27	0.0	0.0
224	9/10/2019 11:19:27	0.0	0.0
225	9/10/2019 11:20:27	0.0	0.0
226	9/10/2019 11:21:27	0.0	0.0
227	9/10/2019 11:22:27	0.0	0.0
228	9/10/2019 11:23:27	0.0	0.0
229	9/10/2019 11:24:27	0.0	0.0
230	9/10/2019 11:25:27	0.0	0.0
231	9/10/2019 11:26:27	0.0	0.0
232	9/10/2019 11:27:27	0.0	0.0
233	9/10/2019 11:28:27	0.0	0.0
234	9/10/2019 11:29:27	0.0	0.0
235	9/10/2019 11:30:27	0.0	0.0
236	9/10/2019 11:31:27	0.0	0.0
237	9/10/2019 11:32:27	0.0	0.0
238	9/10/2019 11:33:27	0.0	0.0
239	9/10/2019 11:34:27	0.0	0.0
240	9/10/2019 11:35:27	0.0	0.0
241	9/10/2019 11:36:27	0.0	0.0

242	9/10/2019 11:37:27	0.0	0.0
243	9/10/2019 11:38:27	0.0	0.0
244	9/10/2019 11:39:27	0.0	0.0
245	9/10/2019 11:40:27	0.0	0.0
246	9/10/2019 11:41:27	0.0	0.0
247	9/10/2019 11:42:27	0.0	0.0
248	9/10/2019 11:43:27	0.0	0.0
249	9/10/2019 11:44:27	0.0	0.0
250	9/10/2019 11:45:27	0.0	0.0
251	9/10/2019 11:46:27	0.0	0.0
252	9/10/2019 11:47:27	0.0	0.0
253	9/10/2019 11:48:27	0.0	0.0
254	9/10/2019 11:49:27	0.0	0.0
255	9/10/2019 11:50:27	0.0	0.0
256	9/10/2019 11:51:27	0.0	0.0
257	9/10/2019 11:52:27	0.0	0.0
258	9/10/2019 11:53:27	0.0	0.0
259	9/10/2019 11:54:27	0.0	0.0
260	9/10/2019 11:55:27	0.0	0.0
261	9/10/2019 11:56:27	0.0	0.0
262	9/10/2019 11:57:27	0.0	0.0
263	9/10/2019 11:58:27	0.0	0.0
264	9/10/2019 11:59:27	0.0	0.0
265	9/10/2019 12:00:27	0.0	0.0

266	9/10/2019 12:01:27	0.0	0.0
267	9/10/2019 12:02:27	0.0	0.0
268	9/10/2019 12:03:27	0.0	0.0
269	9/10/2019 12:04:27	0.0	0.0
270	9/10/2019 12:05:27	0.0	0.0
271	9/10/2019 12:06:27	0.0	0.0
272	9/10/2019 12:07:27	0.0	0.0
273	9/10/2019 12:08:27	0.0	0.0
274	9/10/2019 12:09:27	0.0	0.0
275	9/10/2019 12:10:27	0.0	0.0
276	9/10/2019 12:11:27	0.0	0.0
277	9/10/2019 12:12:27	0.0	0.0
278	9/10/2019 12:13:27	0.0	0.0
279	9/10/2019 12:14:27	0.0	0.0
280	9/10/2019 12:15:27	0.0	0.0
281	9/10/2019 12:16:27	0.0	0.0
282	9/10/2019 12:17:27	0.0	0.0
283	9/10/2019 12:18:27	0.0	0.0
284	9/10/2019 12:19:27	0.0	0.0
285	9/10/2019 12:20:27	0.0	0.0
286	9/10/2019 12:21:27	0.0	0.0
287	9/10/2019 12:22:27	0.0	0.0
288	9/10/2019 12:23:27	0.0	0.0
289	9/10/2019 12:24:27	0.0	0.0

290	9/10/2019 12:25:27	0.0	0.0
291	9/10/2019 12:26:27	0.0	0.0
292	9/10/2019 12:27:27	0.0	0.0
293	9/10/2019 12:28:27	0.0	0.0
294	9/10/2019 12:29:27	0.0	0.0
295	9/10/2019 12:30:27	0.0	0.0
296	9/10/2019 12:31:27	0.0	0.0
297	9/10/2019 12:32:27	0.0	0.0
298	9/10/2019 12:33:27	0.0	0.0
299	9/10/2019 12:34:27	0.0	0.0
300	9/10/2019 12:35:27	0.0	0.0
301	9/10/2019 12:36:27	0.0	0.0
302	9/10/2019 12:37:27	0.0	0.0
303	9/10/2019 12:38:27	0.0	0.0
304	9/10/2019 12:39:27	0.0	0.0
305	9/10/2019 12:40:27	0.0	0.0
306	9/10/2019 12:41:27	0.0	0.0
307	9/10/2019 12:42:27	0.0	0.0
308	9/10/2019 12:43:27	0.0	0.0
309	9/10/2019 12:44:27	0.0	0.0
310	9/10/2019 12:45:27	0.0	0.0
311	9/10/2019 12:46:27	0.0	0.0
312	9/10/2019 12:47:27	0.0	0.0
313	9/10/2019 12:48:27	0.0	0.0

314	9/10/2019 12:49:27	0.0	0.0
315	9/10/2019 12:50:27	0.0	0.0
316	9/10/2019 12:51:27	0.0	0.0
317	9/10/2019 12:52:27	0.0	0.0
318	9/10/2019 12:53:27	0.0	0.0
319	9/10/2019 12:54:27	0.0	0.0
320	9/10/2019 12:55:27	0.0	0.0
321	9/10/2019 12:56:27	0.0	0.0
322	9/10/2019 12:57:27	0.0	0.0
323	9/10/2019 12:58:27	0.0	0.0
324	9/10/2019 12:59:27	0.0	0.0
325	9/10/2019 13:00:27	0.0	0.0
326	9/10/2019 13:01:27	0.0	0.0
327	9/10/2019 13:02:27	0.0	0.0
328	9/10/2019 13:03:27	0.0	0.0
329	9/10/2019 13:04:27	0.0	0.0
330	9/10/2019 13:05:27	0.0	0.0
331	9/10/2019 13:06:27	0.0	0.0
332	9/10/2019 13:07:27	0.0	0.0
333	9/10/2019 13:08:27	0.0	0.0
334	9/10/2019 13:09:27	0.0	0.0
335	9/10/2019 13:10:27	0.0	0.0
336	9/10/2019 13:11:27	0.0	0.0
337	9/10/2019 13:12:27	0.0	0.0

338	9/10/2019 13:13:27	0.0	0.0
339	9/10/2019 13:14:27	0.0	0.0
340	9/10/2019 13:15:27	0.0	0.0
341	9/10/2019 13:16:27	0.0	0.0
342	9/10/2019 13:17:27	0.0	0.0
343	9/10/2019 13:18:27	0.0	0.0
344	9/10/2019 13:19:27	0.0	0.0
345	9/10/2019 13:20:27	0.0	0.0
346	9/10/2019 13:21:27	0.0	0.0
347	9/10/2019 13:22:27	0.0	0.0
348	9/10/2019 13:23:27	0.0	0.0
349	9/10/2019 13:24:27	0.0	0.0
350	9/10/2019 13:25:27	0.0	0.0
351	9/10/2019 13:26:27	0.0	0.0
352	9/10/2019 13:27:27	0.0	0.0
353	9/10/2019 13:28:27	0.0	0.0
354	9/10/2019 13:29:27	0.0	0.0
355	9/10/2019 13:30:27	0.0	0.0
356	9/10/2019 13:31:27	0.0	0.0
357	9/10/2019 13:32:27	0.0	0.0
358	9/10/2019 13:33:27	0.0	0.0
359	9/10/2019 13:34:27	0.0	0.0
360	9/10/2019 13:35:27	0.0	0.0
361	9/10/2019 13:36:27	0.0	0.0

362	9/10/2019 13:37:27	0.0	0.0
363	9/10/2019 13:38:27	0.0	0.0

Test 021

Instrument		Data Properties	
Model	DustTrak DRX	Start Date	09/10/2019
Instrument S/N	8533151804	Start Time	07:34:15
		Stop Date	09/10/2019
		Stop Time	13:19:15
		Total Time	0:05:45:00
		Logging Interval	900 seconds

Test Data

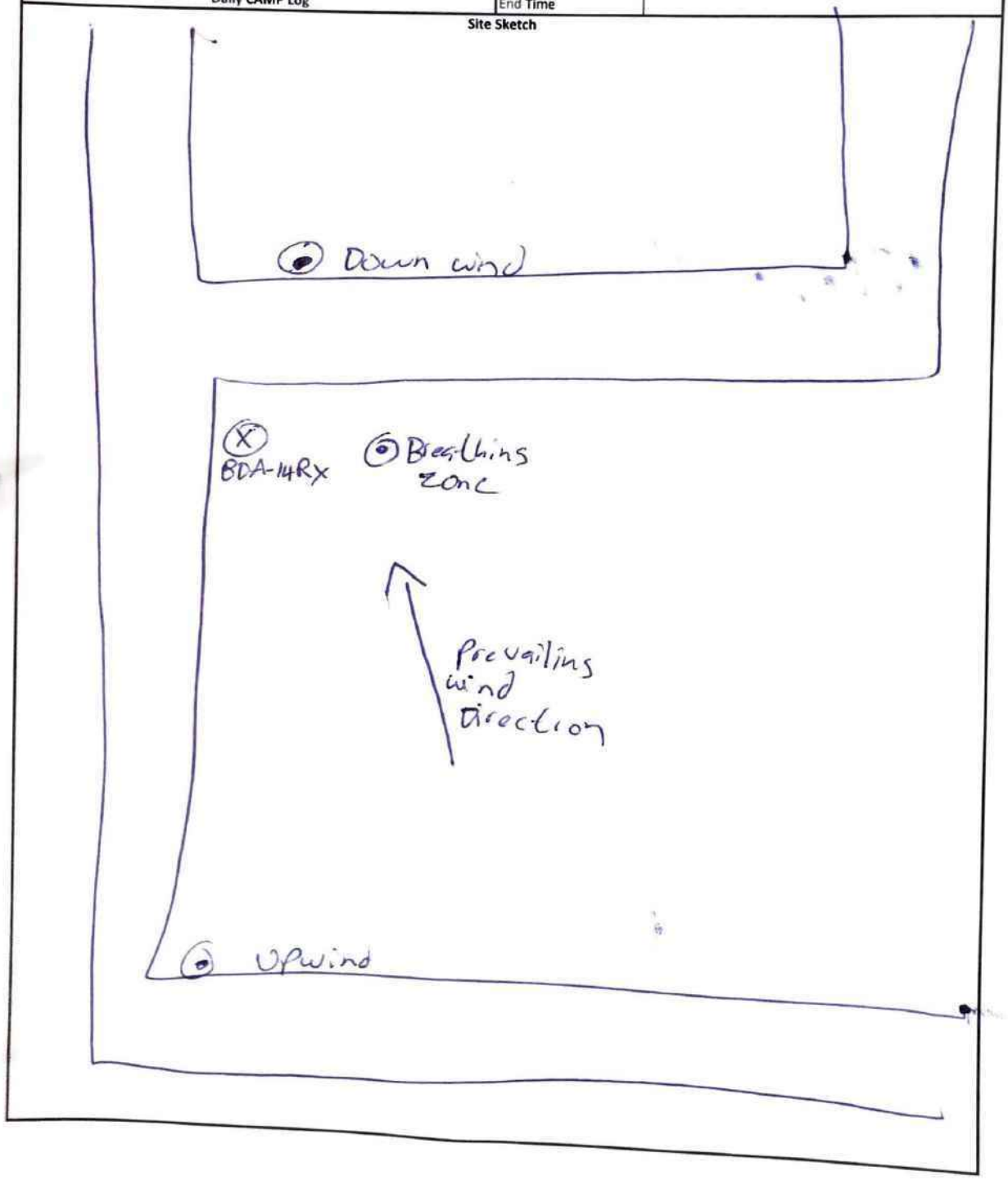
Data Point	Date	Time	PM1 mg/m^3	PM2.5 mg/m^3	RESP mg/m^3	PM10 mg/m^3	TOTAL mg/m^3
1	09/10/2019	07:49:15	0.014	0.016	0.019	0.025	0.032
2	09/10/2019	08:04:15	0.014	0.017	0.019	0.026	0.033
3	09/10/2019	08:19:15	0.008	0.009	0.009	0.012	0.013
4	09/10/2019	08:34:15	0.011	0.012	0.013	0.018	0.021
5	09/10/2019	08:49:15	0.013	0.014	0.015	0.021	0.025
6	09/10/2019	09:04:15	0.012	0.012	0.013	0.017	0.018
7	09/10/2019	09:19:15	0.012	0.012	0.013	0.016	0.018
8	09/10/2019	09:34:15	0.012	0.013	0.014	0.017	0.019
9	09/10/2019	09:49:15	0.013	0.013	0.014	0.017	0.018
10	09/10/2019	10:04:15	0.014	0.014	0.015	0.018	0.020
11	09/10/2019	10:19:15	0.014	0.015	0.015	0.017	0.019
12	09/10/2019	10:34:15	0.018	0.018	0.019	0.023	0.025
13	09/10/2019	10:49:15	0.017	0.018	0.018	0.022	0.025
14	09/10/2019	11:04:15	0.015	0.016	0.016	0.018	0.019
15	09/10/2019	11:19:15	0.016	0.016	0.017	0.018	0.019
16	09/10/2019	11:34:15	0.017	0.017	0.018	0.020	0.021
17	09/10/2019	11:49:15	0.017	0.017	0.018	0.020	0.022
18	09/10/2019	12:04:15	0.018	0.019	0.019	0.021	0.022
19	09/10/2019	12:19:15	0.018	0.018	0.018	0.019	0.020
20	09/10/2019	12:34:15	0.018	0.018	0.019	0.020	0.021
21	09/10/2019	12:49:15	0.018	0.019	0.019	0.020	0.021
22	09/10/2019	13:04:15	0.018	0.018	0.019	0.020	0.020
23	09/10/2019	13:19:15	0.017	0.017	0.017	0.019	0.020

ARCADIS Design & Consultancy for natural and built assets

Daily CAMP Log

Project	Phase 2 Groundwater RI
Location	East Syracuse, NY
Date	9/10/14
Weather Conditions	60's F Sunny
Upwind Monitor	592-9142?5
Downwind Monitor	592-9143?2
Start Time	0730
End Time	

Site Sketch



ATTACHMENT 7

Groundwater Sampling Logs

Site: BMS East Syracuse | Event:

GROUND-WATER SAMPLING LOG

Sampling Personnel: A George | Well ID: BDA-14RX
Client / Job Number: Bristol-Myers Squib / 30033396 | Date: 10/29/13
Weather: 55, sunny | Time In: 0930 | Time Out: 1210

Well Information

Depth to Water:	(feet)	7.84	(from MP)
Total Depth:	(feet)	99.85	(from MP)
Length of Water Column:	(feet)	92.01	
Volume of Water in Well:	(gal)	15.00	
Three Well Volumes:	(gal)	44.99	

Well Type:	Flushmount		Stick-Up
Well Material:	Stainless Steel		PVC
Well Locked:	Yes		No
Measuring Point Marked:	Yes		No
Well Diameter:	1"	2"	Other:

Purging Information

Purging Method:	Bailer	Peristaltic	Waterra	Other: Bladder
Tubing/Bailer Material:	Steel	Polyethylene	Teflon	Other: HDPE
Sampling Method:	Bailer	Peristaltic	Waterra	Other: Bladder
Duration of Pumping: (min)	1013 → 1145			
Average Pumping Rate: (ml/min)		Water-Quality Meter Type:		YSI ProPlus
Total Volume Removed: (gal)		Did well go dry:	Yes	No

Conversion Factors

gal / ft. of water	1" ID	2" ID	4" ID	6" ID
	0.041	0.163	0.653	1.469

1 gal = 3.785 L = 3785 ml = 0.1337 cubic feet

Unit Stability

pH	DO	Cond.	ORP
± 0.1	±10%	± 3.0%	± 10 mV

Parameter:	1020 (1)	1025 (2)	1030 (3)	1035 (4)	1040 (5)	1045 (6)	1050 (7)	1055 (8)	1100 (9)
Volume Purged (gal)	~~1020 0.15~~	0.3	0.45	0.6	0.75	0.90	1.05	1.20	1.35
Rate (mL/min)	125	125	125	125	125	125	125	125	125
Depth to Water (ft.)	7.95	8.00	8.04	8.04	8.04	8.04	8.04	8.04	8.04
pH	8.42	9.65	9.71	9.67	9.63	9.65	9.65	9.63	9.58
Temp. (C)	16.4	16.2	16.8	15.9	16.1	15.9	15.9	15.9	15.9
Conductivity (mS/cm)	9.99	9.74	9.84	9.81	9.85	9.82	9.81	9.81	9.83
Dissolved Oxygen (mg/L)	1.14	0.71	0.60	0.59	0.57	0.51	0.44	0.42	0.41
ORP (mV)	-86.4	-119.5	-132.2	-138.7	-141.7	-144.8	-145.7	-148.0	-150.2
Turbidity (NTU)	14.9	17.0	20.1	17.4	16.2	15.9	15.3	14.9	14.1
Notes:									

1105 sample

Sampling Information

Analyses	#	Laboratory
VOC	(3) HCl VOAs	Eurofins
SVOC	2 250mL amber	Eurofins
Glycols	(2) VOA	Eurofins
Alcohols	(2) HCl VOA	Eurofins
Aldehydes	(1 250mL glass	Eurofins
1,4 Dioxane	(2) 250mL amber	"
PFAS	(2) 250mL HDPE	"
Geochem indicators *		" Pace
Sample ID: BDA-14R	Sample Time: 1105	
MS/MSD: Yes / No		
Duplicate: Yes / No		
Duplicate ID	Dup. Time:	
Chain of Custody Signed By:		

Problems / Observations

PID = 0.2 ppm
Initial purge: colorless, odorless
Final: same

Geochem = N as NH_3, Metals, Metals (filtered), Nitrite, Nitrate, Chloride, Fluoride, Sulfate, Alkalinity, TOC, P, COD, BOD, methane, ethane, ethene, acetylene

28 bottles total

Site: BMS East Syracuse

Event:

GROUND-WATER SAMPLING LOG

Sampling Personnel: A. Geux
Well ID: BOA-17RX
Client / Job Number: Bristol-Myers Squib / 30033396
Date: 10/29/19
Weather: 65, sunny
Time In: 1300 Time Out: 1600

Well Information

Depth to Water:	111.56 (feet)	(from MP)
Total Depth:	151.22 (feet)	(from MP)
Length of Water Column:	(feet) 42.66	
Volume of Water in Well:	(gal) 6.95	
Three Well Volumes:	(gal) 20.86	

Well Type:	(Flushmount)		Stick-Up
Well Material:	(Stainless Steel)		PVC
Well Locked:	Yes		(No)
Measuring Point Marked:	(Yes)		No
Well Diameter:	1"	(2")	Other:

Purging Information

Purging Method:	Bailer	Peristaltic	Waterra	Other: Bladder
Tubing/Bailer Material:	Steel	Polyethylene	Teflon	Other: HDPE
Sampling Method:	Bailer	Peristaltic	Waterra	Other: Bladder

Duration of Pumping: 104 (min) 1356 → 1540
Average Pumping Rate: 100 (ml/min) 100
Water-Quality Meter Type: YSI Pro Plus
Total Volume Removed: 2.75 (gal)
Did well go dry: Yes (No)

Conversion Factors

gal / ft. of water	1" ID	2" ID	4" ID	6" ID
	0.041	0.163	0.653	1.469

1 gal = 3.785 L = 3785 ml = 0.1337 cubic feet

Unit Stability

pH	DO	Cond.	ORP
± 0.1	±10%	± 3.0%	± 10 mV

Parameter:	1 1410	2 1415	3 1420	4 1425	5 1430	6 1435	7 1440	8 1445	9
Volume Purged (gal)	0.13	0.26	0.39					sampled	
Rate (mL/min)	100	100	100	100	100	100	100		
Depth to Water (ft.)	111.09	111.69	112.40	112.95	113.27	113.51	113.95		
pH	11.97	11.26	9.96	10.07	10.12	10.10	10.05		
Temp. (C)	17.5	17.1	17.0	16.9	16.9	16.9	16.9		
Conductivity (mS/cm)	17.84	19.92	19.33	17.60	17.49	17.35	17.10		
Dissolved Oxygen (mg/L)	3.74	1.90	0.94	0.92	0.91	0.88	0.86		
ORP (mV)	80.4	88.0	91.9	95.0	99.7	102.1	105.5		
Turbidity (NTU)	11.0	54.9	30.0	20.4	18.8	17.5	18.8		
Notes:	Reduced to 1 cycle/min to get flow								

Sampling Information

Analyses	#	Laboratory
VOC	(3) 40mL VOA + HCl	Eurofins
SVOC	(2) 250mL amber	Eurofins
Glycols	(2) 40mL VOA	Eurofins
Alcohols	(2) 40mL VOA + HCl	Eurofins
Aldehydes	(1) 250mL glass	Eurofins
1,4-Dioxane	(2) 250mL amber	"
PFAS	(2) 250mL HDPE	"
Geochem indicators → 14 total		" + Pace
Sample ID: BOA-17RX	Sample Time: 1445	
MS/MSD: Yes (No)		
Duplicate: Yes (No)		
Duplicate ID: /	Dup. Time: /	
Chain of Custody Signed By:		

28 total bottles

Problems / Observations

PID = 26.0 ppm
Initial purge: colorless, odorless, lightly cloudy
Final purge: colorless, odorless, clear

Collected Matrix Batch QC here

Site: BMS East Syracuse

Event:

GROUND-WATER SAMPLING LOG

Sampling Personnel: T Green
Well ID: BOA-17T
Client / Job Number: Bristol-Myers Squib / 30033396
Date: 10/29/19
Weather: 50's / Sunny / Windy
Time In: 0945 Time Out: 1330

Well Information

Depth to Water:	13.37 (feet)	(from MP)
Total Depth:	39.08 (feet)	(from MP)
Length of Water Column:	(feet) 25.71	
Volume of Water in Well:	(gal) 4.19	
Three Well Volumes:	(gal) 12.57	

Well Type:	(Flushmount)		Stick-Up
Well Material:	Stainless Steel		PVC
Well Locked:	Yes		(No)
Measuring Point Marked:	(Yes)		No
Well Diameter:	1"	(2")	Other:

Purging Information

Purging Method:	Bailer	(Peristaltic)	Waterra	Other:
Tubing/Bailer Material:	Steel	(Polyethylene)	Teflon	Other: HDPE
Sampling Method:	Bailer	(Peristaltic)	Waterra	Other:

Duration of Pumping: 60 (min)
Average Pumping Rate: 120 (ml/min)
Water-Quality Meter Type: YSI
Total Volume Removed: 1.75 (gal)
Did well go dry: (No)

Conversion Factors

gal / ft. of water	1" ID	2" ID	4" ID	6" ID
	0.041	0.163	0.653	1.469

1 gal = 3.785 L = 3785 ml = 0.1337 cubic feet

Unit Stability

pH	DO	Cond.	ORP
± 0.1	±10%	± 3.0%	± 10 mV

Parameter:	1010	1015 (2)	1020 (3)	1025 (4)	1030 (5)	1035 (6)	1040 (7)	1045 (8)	1050 (9)
Volume Purged (gal)	0	0.225	0.39	0.55	0.715	0.86	1.00	1.14	1.29
Rate (mL/min)	170	140	125	125	130	110	110	110	[redacted]
Depth to Water (ft.)	13.81	14.66	15.29	16.10	16.40	17.11	17.50	18	
pH	8.32	7.84	7.82	7.79	7.77	7.81	7.83	7.84	7.88
Temp. (C)	16.6	16.8	16.6	16.9	17.0	16.9	17.4	17.2	17.5
Conductivity (mS/cm)	317	3.26	3.24	3.22	3.20	3.15	3.08	3.02	299
Dissolved Oxygen (mg/L)	1.30	0.28	0.24	0.21	0.21	0.20	0.21	0.22	0.23
ORP (mV)	113.7	110.6	122.5	126.2	126.8	129.5	129.7	130.3	132.9
Turbidity (NTU)	429	271	93	79	56	37	22	16	14
Notes:									

Sampling Information

Analyses	#	Laboratory
VOC		Eurofins
SVOC		Eurofins
Glycols		Eurofins
Alcohols		Eurofins
Aldehydes		Eurofins
1,4 Dioxane		
PFAS		
Geochem Indicators + PACE		

Sample ID: BOA-17T Sample Time: 1110
MS/MSD: Yes (No)
Duplicate: (Yes) No
Duplicate ID: DUP-102919 Dup. Time: 1115
Chain of Custody Signed By:

Problems / Observations

PID = 0.9 ppm

* Well went dry so we were unable to collect complete duplicate set

Site: BMS East Syracuse

Event:

GROUND-WATER SAMPLING LOG

Sampling Personnel: EGreen **Well ID:** BDA-17T

Client / Job Number: Bristol-Myers Squib / 30033396 **Date:**

Weather: **Time In:** **Time Out:**

Well Information

See Page 1

Depth to Water	(feet)	(from MP)
Total Depth:	(feet)	(from MP)
Length of Water Column:	(feet)	
Volume of Water in Well:	(gal)	
Three Well Volumes:	(gal)	

Well Type:	Flushmount		Stick-Up
Well Material:	Stainless Steel		PVC
Well Locked:	Yes		No
Measuring Point Marked:	Yes		No
Well Diameter:	1"	2"	Other:

Purging Information

Purging Method:	Bailer	Peristaltic	Waterra	Other:
Tubing/Bailer Material:	Steel	Polyethylene	Teflon	Other:
Sampling Method:	Bailer	Peristaltic	Waterra	Other:

Duration of Pumping: (min)

Average Pumping Rate: (ml/min) Water-Quality Meter Type:

Total Volume Removed: (gal) Did well go dry: Yes No

Conversion Factors

gal / ft. of water	1" ID	2" ID	4" ID	6" ID
	0.041	0.163	0.653	1.469

1 gal = 3.785 L =3785 ml = 0.1337 cubic feet

Unit Stability

pH	DO	Cond.	ORP
± 0.1	±10%	± 3.0%	± 10 mV

Parameter:	1	2	3	4	5	6	7	8	9
	1055	1100	1110						
Volume Purged (gal)	~~1.40~~	1.52							
Rate (mL/min)	105	105							
Depth to Water (ft.)	18.84	19.01							
pH	7.91	7.91							
Temp. (C)	17.4	17.5							
Conductivity (mS/cm)	2.95	2.94							
Dissolved Oxygen (mg/L)	0.24	0.24							
ORP (mV)	131.1	131.3							
Turbidity (NTU)	10	9							
Notes:			Sampled						

Sampling Information

Analyses	#	Laboratory
VOC		Eurofins
SVOC		Eurofins
Glycols		Eurofins
Alcohols		Eurofins
Aldehydes		Eurofins

Sample ID:		Sample Time:	
MS/MSD:	Yes	No	
Duplicate:	Yes	No	
Duplicate ID		Dup. Time:	
Chain of Custody Signed By:			

Problems / Observations

Event

Site
BMS East Syracuse

GROUND-WATER SAMPLING LOG

Sampling Personnel: Josh Sinay
Client / Job Number: Bristol-Myers Squibb / 30033396
Weather:

Well ID: BDA-17 WT
Date: 10/29/19
Time In: 0915 Time Out: 1700

Well Information

Depth to Water:	7.37 (feet)	(from MP)
Total Depth:	14.95 (feet)	(from MP)
Length of Water Column:	(feet) 7.58	
Volume of Water in Well:	(gal) 1.2	
Three Well Volumes:	(gal) 3.71	

Well Type:	(Flushmount)	Stick-Up	
Well Material:	Stainless Steel	(PVC)	
Well Locked:	(Yes)	No	
Measuring Point Marked:	Yes	(No)	
Well Diameter:	1"	(2")	Other:

Purging Information

Purging Method:	Bailer	(Peristaltic)	Waterra	Other:
Tubing/Bailer Material:	Steel	Polyethylene	Teflon	Other: HDPE
Sampling Method:	Bailer	(Peristaltic)	Waterra	Other:

Duration of Pumping: 200 (min)
Average Pumping Rate: 140 (ml/min) Water-Quality Meter Type: YSI
Total Volume Removed: 4 (gal) Did well go dry: (Yes) No

Conversion Factors

gal / ft. of water	1" ID	2" ID	4" ID	6" ID
	0.041	0.163	0.653	1.469

1 gal = 3.785 L = 3785 ml = 0.1337 cubic feet

Unit Stability

pH	DO	Cond.	ORP
± 0.1	±10%	± 3.0%	± 10 mV

Parameter:	1 1025	2 1030	3 1035	4 1040	5 1045	6 1050	7 1055	8 1100	9 1105
Volume Purged (gal)	0.0	0.20	0.55	0.75	0.95	1.20	1.35	1.55	1.70
Rate (mL/min)	160	200	175	175	175	175	175	130	130
Depth to Water (ft.)	7.60	7.98	8.48	8.77	9.12	9.55	9.81	10.00	10.13
pH	6.99	7.06	7.07	7.06	7.04	7.00	7.01	7.02	7.02
Temp. (C)	17.8	17.8	18.1	18.1	18.0	18.1	18.2	18.5	18.5
Conductivity (mS/cm)	2.12	2.10	2.10	2.07	1.96	1.37	1.20	1.30	1.42
Dissolved Oxygen (mg/L)	0.44	0.34	0.27	0.25	0.23	0.21	0.23	0.22	0.23
ORP (mV)	109	86.3	71.4	65.8	59.9	56.4	57.2	58.4	59.1
Turbidity (NTU)	71000	92	60.5	30.4	10.88	15.1	13.3	11.2	11.9
Notes:									

Sampling Information

Analyses	#	Laboratory
VOC		Eurofins
SVOC		Eurofins
Glycols		Eurofins
Alcohols		Eurofins
Aldehydes		Eurofins
PFAS + 1,4 Dioxane		
Geochem Indicators *		
PACE		

Sample ID: BDA-17WT Sample Time: 1148
MS/MSD: (Yes) No
Duplicate: Yes (No)
Duplicate ID: / Dup. Time: /
Chain of Custody Signed By:

Problems / Observations

* Was unable to sample for • Nitrogen, Ammonia • Chemical oxygen demand will do 10/30

PID = 2.0 ppm

MS/MSD Collected

Well went dry during sampling, allowed to recharge to complete sampling

Site: BMS East Syracuse | Event:

GROUND-WATER SAMPLING LOG

Sampling Personnel: Josh Sinay | Well ID: BDA-17WT
Client / Job Number: Bristol-Myers Squib / 80033396 | Date: 10/29/19
Weather: 65°F Clear | Time In: 0915 | Time Out:

Well Information

Depth to Water:	(feet)	(from MP)
Total Depth:	(feet)	(from MP)
Length of Water Column:	(feet)	
Volume of Water in Well:	(gal)	
Three Well Volumes:	(gal)	

Well Type:	(Flushmount)		Stick-Up
Well Material:	Stainless Steel		(PVC)
Well Locked:	(Yes)		No
Measuring Point Marked:	Yes		(No)
Well Diameter:	1"	(2")	Other:

Purging Information

Purging Method:	Bailer	Peristaltic	Waterra	Other:
Tubing/Bailer Material:	Steel	Polyethylene	Teflon	Other:
Sampling Method:	Bailer	Peristaltic	Waterra	Other:
Duration of Pumping:	(min)			
Average Pumping Rate:	(ml/min)	Water-Quality Meter Type:		
Total Volume Removed:	(gal)	Did well go dry:	Yes	No

Conversion Factors				
gal / ft. of water	1" ID	2" ID	4" ID	6" ID
	0.041	0.163	0.653	1.469
1 gal = 3.785 L = 3785 ml = 0.1337 cubic feet				

Unit Stability			
pH	DO	Cond.	ORP
± 0.1	±10%	± 3.0%	± 10 mV

Parameter:	1 11.10	2 11.15	3 11.20	4 11.25	5 11.30	6 11.35	7 11.40	8 11.45	9 11.48
Volume Purged (gal)	1.85	2.00	2.15	2.30	2.45	2.60	2.75	2.90	SAMPLE
Rate (mL/min)	130	130	130	130	130	130	130	130	
Depth to Water (ft.)	10.31	10.42	10.56	10.71	10.89	11.05	11.18	11.30	
pH	7.03	7.03	7.04	7.05	7.05	7.06	7.06	7.06	
Temp. (C)	18.6	18.6	18.6	18.7	18.7	18.6	18.7	18.7	
Conductivity (mS/cm)	1.52	1.61	1.68	1.74	1.84	1.87	1.90	1.92	
Dissolved Oxygen (mg/L)	0.24	0.23	0.23	0.22	0.21	0.21	0.22	0.22	
ORP (mV)	60.3	61.0	62.7	63.9	65.6	66.9	67.9	68.6	
Turbidity (NTU)	12.5	11.6	11.1	10.9	9.66	9.84	9.51	9.73	
Notes:									

Sampling Information

Analyses	#	Laboratory
VOC		Eurofins
SVOC		Eurofins
Glycols		Eurofins
Alcohols		Eurofins
Aldehydes		Eurofins

Sample ID:	Sample Time:	
MS/MSD:	Yes	No
Duplicate:	Yes	No
Duplicate ID	Dup. Time:	
Chain of Custody Signed By:		

Problems / Observations

Site: BMS East Syracuse

Event:

GROUND-WATER SAMPLING LOG

Sampling Personnel: EGreen
Well ID: BDA-17WR
Client / Job Number: BMS Bristol-Myers Squib / 30033396
Date: 10/29/19
Weather: 60's / rainy
Time In: 1425
Time Out: 1630

Well Information

Depth to Water:	12.56 (feet)	(from MP)
Total Depth:	103.82 (feet)	(from MP)
Length of Water Column:	(feet) 91.26	
Volume of Water in Well:	(gal) 14.88	
Three Well Volumes:	(gal) 44.63	

Well Type: (Flushmount) Stick-Up
Well Material: Stainless Steel / PVC
Well Locked: Yes / (No)
Measuring Point Marked: (Yes) / No
Well Diameter: 1" Other:

Purging Information

Purging Method: Bailer / Steel / Peristaltic / (Polyethylene) / Waterra / Other: Bladder
Tubing/Bailer Material: HDPE / Teflon / Other:
Sampling Method: Bailer / Peristaltic / Waterra / (Other: Bladder)
Duration of Pumping: 60 (min)
Average Pumping Rate: 155 (ml/min)
Water-Quality Meter Type: YSI
Total Volume Removed: 2.2 (gal)
Did well go dry: Yes / (No)

Conversion Factors				
gal / ft. of water	1" ID	2" ID	4" ID	6" ID
	0.041	0.163	0.653	1.469
1 gal = 3.785 L = 3785 ml = 0.1337 cubic feet				

Unit Stability			
pH	DO	Cond.	ORP
± 0.1	±10%	± 3.0%	± 10 mV

Parameter	1 1426	2 1435	3 1430	4 1445	5 1500	6 1505	7 1510	8 1515	9 1520
Volume Purged (gal)	0	0.22	0.44	0.65	0.86	1.07	1.28	1.49	1.70
Rate (mL/min)	150	165	165	155	155	155	155	155	155
Depth to Water (ft.)	12.86	12.98	12.96	12.97	12.97	12.97	12.98	12.99	13.00
pH	11.31	11.91	11.23	11.28	11.41	11.36	11.37	11.39	11.37
Temp. (C)	16.7	16.7	16.6	16.5	16.6	16.5	16.6	16.5	16.5
Conductivity (mS/cm)	11.46	11.80	11.93	12.03	12.07	12.25	12.61	13.60	13.80
Dissolved Oxygen (mg/L)	0.62	0.36	0.31	0.28	0.23	0.23	0.21	0.21	0.20
ORP (mV)	119.9	122.2	124.7	127.3	129.7	131.1	131.5	131.5	136.9
Turbidity (NTU)	121	105	67	51	46	40	36	32	31
Notes:									

Sampling Information

Analyses	#	Laboratory
VOC		Eurofins
SVOC		Eurofins
Glycols		Eurofins
Alcohols		Eurofins
Aldehydes		Eurofins
1,4 Dioxane		
PFAs		
Geochem Indicators + PACE		

Sample ID: BDA-17WR Sample Time: 1540
MS/MSD: (Yes) / No
Duplicate: Yes / (No)
Duplicate ID: DUP102919-02 Dup. Time: 1540
Chain of Custody Signed By:

Problems / Observations

PID = 4.0 ppm

DUP-102919-02 collected (Finished set after DUP-102919)

Site: BMS East Syracuse

Event:

GROUND-WATER SAMPLING LOG

Samp Ing Personnel: EGreen

Well ID: BDA-14WR

Client / Job Number: Bristol-Myers Squib / 30033396

Date: 10/29/19

Weather:

Time In: Time Out:

Well Information

See Page 1

Depth to Water:	(feet)	(from MP)
Total Depth:	(feet)	(from MP)
Length of Water Column:	(feet)	
Volume of Water in Well:	(gal)	
Three Well Volumes:	(gal)	

Well Type:	Flushmount		Stick-Up
Well Material:	Stainless Steel		PVC
Well Locked:	Yes		No
Measuring Point Marked:	Yes		No
Well Diameter:	1"	2"	Other:

Purging Information

Purging Method:	Bailer	Peristaltic	Waterra	Other:
Tubing/Bailer Material:	Steel	Polyethylene	Teflon	Other:
Sampling Method:	Bailer	Peristaltic	Waterra	Other:

Duration of Pumping: (min)

Average Pumping Rate: (ml/min) Water-Quality Meter Type:

Total Volume Removed: (gal) Did well go dry: Yes No

Conversion Factors

gal / ft. of water	1" ID	2" ID	4" ID	6" ID
	0.041	0.163	0.653	1.469

1 gal = 3.785 L =3785 ml = 0.1337 cubic feet

Unit Stability

pH	DO	Cond.	ORP
± 0.1	±10%	± 3.0%	± 10 mV

Parameter:	1	2	3	4	5	6	7	8	9
	1525	1530	1540						
Volume Purged (gal)	1.91	2.12							
Rate (mL/min)	155	155							
Depth to Water (ft.)	13.00	13.01							
pH	11.37	11.37							
Temp. (C)	16.3	16.4							
Conductivity (mS/cm)	13.85	13.86							
Dissolved Oxygen (mg/L)	0.19	0.18							
ORP (mV)	131.1	131.4							
Turbidity (NTU)	24	27							
Notes:			Sampled						

Sampling Information

Analyses	#	Laboratory
VOC		Eurofins
SVOC		Eurofins
Glycols		Eurofins
Alcohols		Eurofins
Aldehydes		Eurofins

Sample ID:	Sample Time:	
MS/MSD:	Yes	No
Duplicate:	Yes	No
Duplicate ID	Dup. Time:	
Chain of Custody Signed By:		

Problems / Observations

ATTACHMENT 8

Waste Management Documents

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ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

ARCADIS U.S., Inc.
630 Plaza Drive
Suite 600
Highlands Ranch CO 80129

Report Date: October 03, 2019 17:33

Project: Bristol-Myers Squibb

Account #: 03074
Group Number: 2065288
SDG: BMS79
PO Number: 30033396
State of Sample Origin: NY

Electronic Copy To	Arcadis	Attn: William McCune
Electronic Copy To	Arcadis	Attn: Lawrence Carey Healy

Respectfully Submitted,

Megan A. Moeller
Senior Specialist

(717) 556-7261

To view our laboratory's current scopes of accreditation please go to https://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/certifications-and-accreditations-eurofins-lancaster-laboratories-environmental/ . Historical copies may be requested through your project manager.



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SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
HVE-DVE-WC Grab Groundwater	09/20/2019 14:00	1156994
HVE-DW-WC Grab Groundwater	09/20/2019 14:15	1156995
BDA-14-DW-WC Grab Groundwater	09/20/2019 14:45	1156996
BDA-14-COR-WC Grab Groundwater	09/20/2019 14:55	1156997
BDA-17-COR-WC Grab Groundwater	09/20/2019 15:55	1156998
BDA-17-DW-WC Grab Groundwater	09/20/2019 16:10	1156999
Trip Blank Water	09/20/2019	1157000

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

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Project Name: Bristol-Myers Squibb
ELLE Group #: 2065288

General Comments:

Through our technical processes and second person review of data, we have established that our data/deliverables are in compliance with the methods and project requirements unless otherwise noted or previously resolved with the client. The compliance signature is located on the cover page of the Analysis Reports.

See the Laboratory Sample Analysis Record section of the Analysis Report for the method references.

All QC met criteria unless otherwise noted in an Analysis Specific Comment below.

Refer to the QC Summary for specific values and acceptance criteria.

Project specific QC samples are not included in this data set.

Matrix QC may not be reported if site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

Surrogate recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in an Analysis Specific Comment below.

The samples were received at the appropriate temperature and in accordance with the chain of custody unless otherwise noted.

Analysis Specific Comments:

SW-846 8260C, GC/MS Volatiles

Sample #s: 1156995

The concentration reported for Methylene Chloride is estimated since it exceeds the calibration range of the instrument. A further diluted analysis was performed from a previously opened container with headspace. The result for Methylene Chloride was 2800 ug/l.

Preservation requirements were not met.
A preserved vial was submitted for analysis. However, the pH at the time of analysis was 7.

SW-846 8270D, GC/MS Semivolatiles

Sample #s: 1156994, 1156996, 1156997, 1156998, 1156999

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. Since the recovery is high and the target analyte(s) was not detected in the sample, the data is reported.

Sample #s: 1156995

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. Since the recovery is high and the target analyte(s) was not detected in the sample, the data is reported.

The recovery for the sample surrogate(s) is outside the QC

acceptance limits as noted on the QC Summary. The client was contacted and the data reported.

Batch #: 19269WAL026 (Sample number(s): 1156994-1156999)

The recovery(ies) for the following analyte(s) in the LCS and/or LCSD exceeded the acceptance window indicating a positive bias: Dicyclohexylamine

The recovery(ies) for one or more surrogates were below the acceptance window for sample(s) 1156995

SW-846 6010D Rev.4, July 2014, Metals

Batch #: 192691404402 (Sample number(s): 1156995 UNSPK: 1156995 BKG: 1156995)

The recovery(ies) for the following analyte(s) in the MS and/or MSD exceeded the acceptance window indicating a positive bias: Aluminum, Calcium, Iron, Magnesium, Potassium, Sodium, Copper, Manganese

The recovery(ies) for the following analyte(s) in the MS and/or MSD were below the acceptance window: Antimony, Silver

SW-846 Chapter 7, Wet Chemistry

Sample #s: 1156997

The pH of the sample is 11.92 indicating that the sample is not corrosive. A sample is corrosive if it exhibits a pH equal to or less than 2 or equal to or greater than 12.5.

Sample #s: 1156999

The pH of the sample is 12.09 indicating that the sample is not corrosive. A sample is corrosive if it exhibits a pH equal to or less than 2 or equal to or greater than 12.5.

Sample #s: 1156998

The pH of the sample is 12.25 indicating that the sample is not corrosive. A sample is corrosive if it exhibits a pH equal to or less than 2 or equal to or greater than 12.5.

Sample #s: 1156994

The pH of the sample is 7.15 indicating that the sample is not corrosive. A sample is corrosive if it exhibits a pH equal to or less than 2 or equal to or greater than 12.5.

Sample #s: 1156996

The pH of the sample is 8.00 indicating that the sample is not corrosive. A sample is corrosive if it exhibits a pH equal to or less than 2 or equal to or greater than 12.5.

Sample #s: 1156995

The pH of the sample is 9.90 indicating that the sample is not corrosive. A sample is corrosive if it exhibits a pH equal to or less than 2 or equal to or greater than 12.5.

SW-846 Chapter 7.3, Wet Chemistry

Sample #s: 1156994, 1156995, 1156996, 1156997, 1156998, 1156999

Reactivity:
This sample was extracted and analyzed by the interim method described in SW-846 Revision 3, December 1996 - Chapter 7.3. The Interim Guidance for Reactive Cyanide and Reactive Sulfide (SW-846 Sections 7.3.3 and 7.3.4 of

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Chapter 7 - December 1996) identifies a reactive material as generating more than 250 mg/kg of hydrogen cyanide or 500 mg/kg of hydrogen sulfide. This waste is not considered hazardous due to reactivity based on that standard. These results do not reflect total cyanide or total sulfide. On July 14, 2005, EPA published a rule in the Federal Register that removed the Interim Guidance and the method referenced above. At this time there is no specific guidance or a method to be used to evaluate "Reactivity".

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Sample Description: **HVE-DVE-WC Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 09/21/2019 09:51
Collection Date/Time: 09/20/2019 14:00
SDG#: BMS79-01

ARCADIS U.S., Inc.
ELLE Sample #: GW 1156994
ELLE Group #: 2065288
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	2,000	70	100
11997	Acetonitrile	75-05-8	N.D.	10,000	1,600	100
11997	Benzene	71-43-2	N.D.	100	20	100
11997	Bromochloromethane	74-97-5	N.D.	500	20	100
11997	Bromodichloromethane	75-27-4	N.D.	100	20	100
11997	Bromoform	75-25-2	N.D.	400	100	100
11997	Bromomethane	74-83-9	N.D.	100	30	100
11997	n-Butanol	71-36-3	N.D.	25,000	6,100	100
11997	2-Butanone	78-93-3	N.D.	1,000	30	100
11997	t-Butyl alcohol	75-65-0	N.D.	5,000	1,200	100
11997	n-Butylbenzene	104-51-8	N.D.	500	20	100
11997	sec-Butylbenzene	135-98-8	N.D.	500	20	100
11997	tert-Butylbenzene	98-06-6	N.D.	500	30	100
11997	Carbon Disulfide	75-15-0	N.D.	500	20	100
11997	Carbon Tetrachloride	56-23-5	N.D.	100	20	100
11997	Chlorobenzene	108-90-7	N.D.	100	20	100
11997	Chlorodifluoromethane[1]	75-45-6	N.D.	500	200	100
11997	Chloroethane	75-00-3	N.D.	100	20	100
11997	Chloroform	67-66-3	N.D.	100	20	100
11997	Chloromethane	74-87-3	N.D.	100	20	100
11997	Cyclohexane	110-82-7	N.D.	500	100	100
11997	Cyclohexanone[1]	108-94-1	N.D.	10,000	2,500	100
11997	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	500	30	100
11997	Dibromochloromethane	124-48-1	N.D.	100	20	100
11997	1,2-Dibromoethane	106-93-4	N.D.	100	20	100
11997	1,2-Dichlorobenzene	95-50-1	N.D.	500	20	100
11997	1,3-Dichlorobenzene	541-73-1	N.D.	500	20	100
11997	1,4-Dichlorobenzene	106-46-7	N.D.	500	20	100
11997	Dichlorodifluoromethane	75-71-8	N.D.	100	20	100
11997	1,1-Dichloroethane	75-34-3	N.D.	100	20	100
11997	1,2-Dichloroethane	107-06-2	N.D.	100	30	100
11997	1,1-Dichloroethene	75-35-4	N.D.	100	20	100
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	100	20	100
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	100	20	100
11997	1,2-Dichloropropane	78-87-5	N.D.	100	20	100
11997	cis-1,3-Dichloropropene	10061-01-5	N.D.	100	20	100
11997	trans-1,3-Dichloropropene	10061-02-6	N.D.	100	20	100
11997	1,4-Dioxane	123-91-1	N.D.	25,000	2,900	100
11997	Ethyl Acetate	141-78-6	N.D.	500	70	100
11997	Ethyl ether	60-29-7	N.D.	500	20	100
11997	Ethylbenzene	100-41-4	N.D.	100	40	100

*=This limit was used in the evaluation of the final result

Sample Description: **HVE-DVE-WC Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 09/21/2019 09:51
Collection Date/Time: 09/20/2019 14:00
SDG#: BMS79-01

ARCADIS U.S., Inc.
ELLE Sample #: GW 1156994
ELLE Group #: 2065288
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Freon 113	76-13-1	N.D.	1,000	20	100
11997	n-Heptane[1]	142-82-5	N.D.	500	200	100
11997	n-Hexane[1]	110-54-3	N.D.	500	200	100
11997	2-Hexanone	591-78-6	N.D.	1,000	30	100
11997	Isobutyl Alcohol	78-83-1	N.D.	25,000	3,600	100
11997	Isopropylbenzene	98-82-8	N.D.	500	20	100
11997	p-Isopropyltoluene	99-87-6	N.D.	500	20	100
11997	Methyl Acetate	79-20-9	N.D.	500	20	100
11997	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	100	20	100
11997	4-Methyl-2-pentanone	108-10-1	N.D.	1,000	50	100
11997	Methylcyclohexane	108-87-2	N.D.	500	50	100
11997	Methylene Chloride	75-09-2	81,000	1,000	300	1000
11997	Naphthalene	91-20-3	N.D.	500	100	100
11997	2-Nitropropane	79-46-9	N.D.	1,000	80	100
11997	Styrene	100-42-5	N.D.	500	20	100
11997	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	100	20	100
11997	Tetrachloroethene	127-18-4	N.D.	100	20	100
11997	Tetrahydrofuran	109-99-9	N.D.	1,000	70	100
11997	Toluene	108-88-3	N.D.	100	20	100
11997	1,2,3-Trichlorobenzene	87-61-6	N.D.	500	40	100
11997	1,2,4-Trichlorobenzene	120-82-1	N.D.	500	30	100
11997	1,1,1-Trichloroethane	71-55-6	N.D.	100	30	100
11997	1,1,2-Trichloroethane	79-00-5	N.D.	100	20	100
11997	Trichloroethene	79-01-6	N.D.	100	20	100
11997	Trichlorofluoromethane	75-69-4	N.D.	100	20	100
11997	1,2,4-Trimethylbenzene	95-63-6	N.D.	500	100	100
11997	1,3,5-Trimethylbenzene	108-67-8	N.D.	500	30	100
11997	Vinyl Chloride	75-01-4	N.D.	100	20	100
11997	m+p-Xylene	179601-23-1	N.D.	500	100	100
11997	o-Xylene	95-47-6	N.D.	100	40	100
11997	Xylene (Total)	1330-20-7	N.D.	600	140	100

12027 VOA Interp. Library Search-20

The results from the volatile library search are listed on the attached FORM 1 - VOA-TIC. The qualifiers appearing in the "Q" column are defined at the end of the report.

GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	Acenaphthene	83-32-9	N.D.	0.53	0.11	1
14241	Acenaphthylene	208-96-8	N.D.	0.53	0.11	1
14241	Acetophenone	98-86-2	N.D.	11	4.2	1
14241	Aniline	62-53-3	N.D.	11	3.2	1

*=This limit was used in the evaluation of the final result

Sample Description: **HVE-DVE-WC Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 09/21/2019 09:51
Collection Date/Time: 09/20/2019 14:00
SDG#: BMS79-01

ARCADIS U.S., Inc.
ELLE Sample #: GW 1156994
ELLE Group #: 2065288
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	Anthracene	120-12-7	N.D.	0.53	0.11	1
14241	Atrazine	1912-24-9	N.D.	5.3	2.1	1
14241	Benzaldehyde	100-52-7	N.D.	11	3.2	1
14241	Benzo(a)anthracene	56-55-3	N.D.	0.53	0.11	1
14241	Benzo(a)pyrene	50-32-8	N.D.	0.53	0.11	1
14241	Benzo(b)fluoranthene	205-99-2	N.D.	0.53	0.11	1
14241	Benzo(g,h,i)perylene	191-24-2	N.D.	0.53	0.11	1
14241	Benzo(k)fluoranthene	207-08-9	N.D.	0.53	0.11	1
14241	Benzyl alcohol	100-51-6	N.D.	32	11	1
14241	1,1'-Biphenyl	92-52-4	N.D.	11	3.2	1
14241	4-Bromophenyl-phenylether	101-55-3	N.D.	2.1	0.53	1
14241	Butylbenzylphthalate	85-68-7	N.D.	5.3	2.1	1
14241	Di-n-butylphthalate	84-74-2	N.D.	5.3	2.1	1
14241	Caprolactam	105-60-2	N.D.	12	5.3	1
14241	Carbazole	86-74-8	N.D.	2.1	0.53	1
14241	4-Chloro-3-methylphenol	59-50-7	N.D.	2.1	0.53	1
14241	4-Chloroaniline	106-47-8	N.D.	11	4.2	1
14241	bis(2-Chloroethoxy)methane	111-91-1	N.D.	2.1	0.53	1
14241	bis(2-Chloroethyl)ether	111-44-4	N.D.	2.1	0.53	1
14241	bis(2-Chloroisopropyl)ether[1]	39638-32-9	N.D.	2.1	0.53	1
	Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.					
14241	2-Chloronaphthalene	91-58-7	N.D.	1.1	0.42	1
14241	2-Chlorophenol	95-57-8	N.D.	2.1	0.53	1
14241	4-Chlorophenyl-phenylether	7005-72-3	N.D.	2.1	0.53	1
14241	Chrysene	218-01-9	N.D.	0.53	0.11	1
14241	Dibenz(a,h)anthracene	53-70-3	N.D.	0.53	0.11	1
14241	Dibenzofuran	132-64-9	N.D.	2.1	0.53	1
14241	3,3'-Dichlorobenzidine	91-94-1	N.D.	11	3.2	1
14241	2,4-Dichlorophenol	120-83-2	N.D.	2.1	0.53	1
14241	Dicyclohexylamine[1]	101-83-7	N.D.	11	11	1
14241	Diethylphthalate	84-66-2	N.D.	5.3	2.1	1
14241	N,N-Dimethylaniline[1]	121-69-7	15	1.1	0.53	1
14241	2,4-Dimethylphenol	105-67-9	N.D.	11	3.2	1
14241	Dimethylphthalate	131-11-3	N.D.	5.3	2.1	1
14241	4,6-Dinitro-2-methylphenol	534-52-1	N.D.	22	8.4	1
14241	2,4-Dinitrophenol	51-28-5	N.D.	32	15	1
14241	2,4-Dinitrotoluene	121-14-2	N.D.	5.3	1.1	1
14241	2,6-Dinitrotoluene	606-20-2	N.D.	2.1	0.53	1
14241	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	12	5.3	1

*=This limit was used in the evaluation of the final result

Sample Description: **HVE-DVE-WC Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 09/21/2019 09:51
Collection Date/Time: 09/20/2019 14:00
SDG#: BMS79-01

ARCADIS U.S., Inc.
ELLE Sample #: GW 1156994
ELLE Group #: 2065288
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	Fluoranthene	206-44-0	N.D.	0.53	0.11	1
14241	Fluorene	86-73-7	N.D.	0.53	0.11	1
14241	Hexachlorobenzene	118-74-1	N.D.	0.53	0.11	1
14241	Hexachlorobutadiene	87-68-3	N.D.	2.1	0.53	1
14241	Hexachlorocyclopentadiene	77-47-4	N.D.	12	5.3	1
14241	Hexachloroethane	67-72-1	N.D.	5.3	1.1	1
14241	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.53	0.11	1
14241	Isophorone	78-59-1	N.D.	2.1	0.53	1
14241	2-Methylnaphthalene	91-57-6	N.D.	0.53	0.11	1
14241	2-Methylphenol	95-48-7	N.D.	2.1	0.53	1
14241	4-Methylphenol	65794-96-9	N.D.	2.1	0.53	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
14241	Naphthalene	91-20-3	N.D.	0.53	0.11	1
14241	2-Nitroaniline	88-74-4	N.D.	7.4	2.1	1
14241	3-Nitroaniline	99-09-2	N.D.	7.4	3.2	1
14241	4-Nitroaniline	100-01-6	N.D.	3.2	0.95	1
14241	Nitrobenzene	98-95-3	N.D.	2.1	0.53	1
14241	2-Nitrophenol	88-75-5	N.D.	11	3.2	1
14241	4-Nitrophenol	100-02-7	N.D.	32	11	1
14241	N-Nitroso-di-n-propylamine	621-64-7	N.D.	3.2	0.74	1
14241	N-Nitrosodiphenylamine	86-30-6	N.D.	3.2	0.74	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.					
14241	Di-n-octylphthalate	117-84-0	N.D.	12	5.3	1
14241	Pentachlorophenol	87-86-5	N.D.	5.3	1.1	1
14241	Phenanthrene	85-01-8	N.D.	0.53	0.11	1
14241	Phenol	108-95-2	N.D.	2.1	0.53	1
14241	Pyrene	129-00-0	N.D.	0.53	0.11	1
14241	Pyridine	110-86-1	N.D.	5.3	2.1	1
14241	1,2,4,5-Tetrachlorobenzene	95-94-3	N.D.	2.1	0.53	1
14241	2,3,4,6-Tetrachlorophenol	58-90-2	N.D.	11	4.2	1
14241	2,4,5-Trichlorophenol	95-95-4	N.D.	2.1	0.53	1
14241	2,4,6-Trichlorophenol	88-06-2	N.D.	2.1	0.53	1
14241	Triethylamine[1]	121-44-8	N.D.	11	11	1

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. Since the recovery is high and the target analyte(s) was not detected in the sample, the data is reported.

00886 SVOA TIC Interpretive(25)

*=This limit was used in the evaluation of the final result

Sample Description: **HVE-DVE-WC Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 09/21/2019 09:51
Collection Date/Time: 09/20/2019 14:00
SDG#: BMS79-01

ARCADIS U.S., Inc.
ELLE Sample #: GW 1156994
ELLE Group #: 2065288
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
	The results from the semivolatile library search are listed on the attached FORM 1 - SV-TIC. The qualifiers appearing in the "Q" column are defined at the end of the report.					
GC Miscellaneous		**SW-846 8015D Rev.4, June 2003**	**ug/l**	**ug/l**	**ug/l**	
10603	Ethanol	64-17-5	N.D. D2	1,000	150	1
12926	Ethylene glycol[1]	107-21-1	N.D.	10,000	5,000	1
10603	Isopropanol[1]	67-63-0	N.D. D2	1,000	110	1
10603	Methanol	67-56-1	510 JD2	1,000	220	1
12926	Propylene glycol[1]	57-55-6	N.D.	10,000	2,000	1
Metals		**SW-846 6010D Rev.4, July 2014**	**mg/l**	**mg/l**	**mg/l**	
07044	Antimony	7440-36-0	0.0163 J	0.0500	0.0160	1
07035	Arsenic	7440-38-2	N.D.	0.0300	0.0160	1
07046	Barium	7440-39-3	1.76	0.0050	0.0010	1
07047	Beryllium	7440-41-7	N.D.	0.0050	0.0010	1
07049	Cadmium	7440-43-9	N.D.	0.0050	0.0010	1
01750	Calcium	7440-70-2	473	1.00	0.480	5
07051	Chromium	7440-47-3	0.0041 J	0.0150	0.0016	1
07052	Cobalt	7440-48-4	0.0032 JK2	0.0050	0.0015	1
07053	Copper	7440-50-8	N.D.	0.100	0.0600	5
01754	Iron	7439-89-6	21.4	0.200	0.0400	1
07055	Lead	7439-92-1	N.D.	0.0150	0.0071	1
01757	Magnesium	7439-95-4	152	0.100	0.0400	1
07058	Manganese	7439-96-5	0.881	0.0100	0.0030	1
07061	Nickel	7440-02-0	0.0082 J	0.0100	0.0021	1
01762	Potassium	7440-09-7	13.1	0.500	0.204	1
07036	Selenium	7782-49-2	N.D.	0.0500	0.0160	1
07066	Silver	7440-22-4	N.D.	0.0100	0.0050	1
01767	Sodium	7440-23-5	346	1.00	0.239	1
07022	Thallium	7440-28-0	N.D. K1K2	0.0300	0.0081	1
		SW-846 6010D Rev.4, July 2014	**ug/l**	**ug/l**	**ug/l**	
01743	Aluminum	7429-90-5	175 J	300	107	1
07071	Vanadium	7440-62-2	N.D.	10.0	1.9	1
07072	Zinc	7440-66-6	44.5	20.0	3.7	1
		SW-846 7470A	**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	N.D.	0.00020	0.000050	1
Wet Chemistry		**SW-846 9012B**	**mg/kg**	**mg/kg**	**mg/kg**	

*=This limit was used in the evaluation of the final result

Sample Description: **HVE-DVE-WC Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 09/21/2019 09:51
Collection Date/Time: 09/20/2019 14:00
SDG#: BMS79-01

ARCADIS U.S., Inc.
ELLE Sample #: GW 1156994
ELLE Group #: 2065288
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
Wet Chemistry	**SW-846 9012B**		**mg/kg**	**mg/kg**	**mg/kg**	
01123	Cyanide (Reactivity)	n.a.	N.D.	57.6	19.2	1
Wet Chemistry	**SM 2550 B-2010**		**Degrees C**	**Degrees C**	**Degrees C**	
12151	Temperature of pH[1]	n.a.	19.9	0.010	0.010	1
	SM 4500-H+ B-2011		**Std. Units**	**Std. Units**	**Std. Units**	
12152	pH[1]	n.a.	7.2	0.010	0.010	1
	SW-846 9034		**mg/kg**	**mg/kg**	**mg/kg**	
01122	Sulfide (Reactivity)[1]	n.a.	N.D.	160	53.6	1
	SW-846 Chapter 7					
00496	Corrosivity[1]	n.a.	See Below	0	0	1
	The pH of the sample is 7.15 indicating that the sample is not corrosive. A sample is corrosive if it exhibits a pH equal to or less than 2 or equal to or greater than 12.5.					
	SW-846 Chapter 7.3		**see below**	**see below**	**see below**	
01121	Reactivity[1]	n.a.	See Below	0	0	1
	Reactivity: This sample was extracted and analyzed by the interim method described in SW-846 Revision 3, December 1996 - Chapter 7.3. The Interim Guidance for Reactive Cyanide and Reactive Sulfide (SW-846 Sections 7.3.3 and 7.3.4 of Chapter 7 - December 1996) identifies a reactive material as generating more than 250 mg/kg of hydrogen cyanide or 500 mg/kg of hydrogen sulfide. This waste is not considered hazardous due to reactivity based on that standard. These results do not reflect total cyanide or total sulfide. On July 14, 2005, EPA published a rule in the Federal Register that removed the Interim Guidance and the method referenced above. At this time there is no specific guidance or a method to be used to evaluate "Reactivity".					

Sample Comments

State of New York Certification No. 10670

[1] = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	L192741AA	10/01/2019 17:49	Corie Mellinger	100
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	L192741AA	10/01/2019 18:12	Corie Mellinger	1000
01163	GC/MS VOA Water Prep	SW-846 5030C	1	L192741AA	10/01/2019 17:48	Corie Mellinger	100
01163	GC/MS VOA Water Prep	SW-846 5030C	2	L192741AA	10/01/2019 18:11	Corie Mellinger	1000
14241	Semi-annual Groundwater BMS	SW-846 8270D	1	19269WAL026	09/30/2019 03:08	Brandon K Cordova	1

*=This limit was used in the evaluation of the final result

Sample Description: **HVE-DVE-WC Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 09/21/2019 09:51
Collection Date/Time: 09/20/2019 14:00
SDG#: BMS79-01

ARCADIS U.S., Inc.
ELLE Sample #: GW 1156994
ELLE Group #: 2065288
Matrix: Groundwater

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11010	8270D BNA Extraction	SW-846 3510C	1	19269WAL026	09/27/2019 09:00	Logan M Brosemer	1
10603	Alcohols in Water	SW-846 8015D Rev.4, June 2003	1	192670005A	09/24/2019 15:11	Johanna C Kennedy	1
12926	Glycols in Water by 8015C/D	SW-846 8015D Rev.4, June 2003	1	192660045A	09/23/2019 22:39	Donald Brown	1
01743	Aluminum	SW-846 6010D Rev.4, July 2014	1	192671404405	09/25/2019 17:14	Cindy M Gehman	1
07044	Antimony	SW-846 6010D Rev.4, July 2014	1	192671404405	09/25/2019 17:14	Cindy M Gehman	1
07035	Arsenic	SW-846 6010D Rev.4, July 2014	1	192671404405	09/25/2019 17:14	Cindy M Gehman	1
07046	Barium	SW-846 6010D Rev.4, July 2014	1	192671404405	09/25/2019 17:14	Cindy M Gehman	1
07047	Beryllium	SW-846 6010D Rev.4, July 2014	1	192671404405	09/25/2019 17:14	Cindy M Gehman	1
07049	Cadmium	SW-846 6010D Rev.4, July 2014	1	192671404405	09/25/2019 17:14	Cindy M Gehman	1
01750	Calcium	SW-846 6010D Rev.4, July 2014	1	192671404405	09/25/2019 17:53	Cindy M Gehman	5
07051	Chromium	SW-846 6010D Rev.4, July 2014	1	192671404405	09/25/2019 17:14	Cindy M Gehman	1
07052	Cobalt	SW-846 6010D Rev.4, July 2014	1	192671404405	09/25/2019 17:14	Cindy M Gehman	1
07053	Copper	SW-846 6010D Rev.4, July 2014	1	192671404405	09/25/2019 17:53	Cindy M Gehman	5
01754	Iron	SW-846 6010D Rev.4, July 2014	1	192671404405	09/25/2019 17:14	Cindy M Gehman	1
07055	Lead	SW-846 6010D Rev.4, July 2014	1	192671404405	09/25/2019 17:14	Cindy M Gehman	1
01757	Magnesium	SW-846 6010D Rev.4, July 2014	1	192671404405	09/25/2019 17:14	Cindy M Gehman	1
07058	Manganese	SW-846 6010D Rev.4, July 2014	1	192671404405	09/25/2019 17:14	Cindy M Gehman	1
07061	Nickel	SW-846 6010D Rev.4, July 2014	1	192671404405	09/25/2019 17:14	Cindy M Gehman	1
01762	Potassium	SW-846 6010D Rev.4, July 2014	1	192671404405	09/25/2019 17:14	Cindy M Gehman	1
07036	Selenium	SW-846 6010D Rev.4, July 2014	1	192671404405	09/25/2019 17:14	Cindy M Gehman	1
07066	Silver	SW-846 6010D Rev.4, July 2014	1	192671404405	09/29/2019 16:53	Elaine F Stoltzfus	1
01767	Sodium	SW-846 6010D Rev.4, July 2014	1	192671404405	09/25/2019 17:14	Cindy M Gehman	1
07022	Thallium	SW-846 6010D Rev.4, July 2014	1	192671404405	09/25/2019 17:14	Cindy M Gehman	1
07071	Vanadium	SW-846 6010D Rev.4, July 2014	1	192671404405	09/25/2019 17:14	Cindy M Gehman	1
07072	Zinc	SW-846 6010D Rev.4, July 2014	1	192671404405	09/25/2019 17:14	Cindy M Gehman	1

*=This limit was used in the evaluation of the final result

Sample Description: **HVE-DVE-WC Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 09/21/2019 09:51
Collection Date/Time: 09/20/2019 14:00
SDG#: BMS79-01

ARCADIS U.S., Inc.
ELLE Sample #: GW 1156994
ELLE Group #: 2065288
Matrix: Groundwater

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
00259	Mercury	SW-846 7470A	1	192670571303	09/25/2019 07:18	Christina Termini	1
14044	ICP-WW, 3005A (tot rec) - U345	SW-846 3005A	1	192671404405	09/24/2019 15:35	Barbara A Kane	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	192670571303	09/24/2019 17:00	Barbara A Kane	1
01123	Cyanide (Reactivity)	SW-846 9012B	1	19268104201A	09/25/2019 20:40	Gregory Baldree	1
12151	Temperature of pH	SM 2550 B-2010	1	19269121521A	09/26/2019 17:50	Jeremy L Bolf	1
12152	pH	SM 4500-H+ B-2011	1	19269121521A	09/26/2019 17:50	Jeremy L Bolf	1
01122	Sulfide (Reactivity)	SW-846 9034	1	19267112101A	09/24/2019 08:00	Kristen Wroblewski	1
00496	Corrosivity	SW-846 Chapter 7	1	19269121521A	09/26/2019 17:50	Jeremy L Bolf	1
01121	Reactivity	SW-846 Chapter 7.3	1	19267112101A	09/24/2019 08:00	Kristen Wroblewski	1

*=This limit was used in the evaluation of the final result

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
MS791

Lab Name: Lancaster Laboratories Contract:_____
Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____
Matrix: (soil/water) WATER Lab Sample ID: 1156994
Sample wt/vol: 5.0 (g/mL)mL Lab File ID:HP09915.i/19oct01a.b/lc01s21.d
Level: (low/med) LOW Date Received: 09/21/19
% Moisture: not dec. Date Analyzed: 10/01/19
Column: (pack/cap) CAP Dilution Factor: 100.0
CONCENTRATION UNITS:
Number TICs found: 0 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	VOCTIC	Total VOC TICs		0	U
2.					
3.					
4.					
5.					
6.					
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11.					
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30.					

page 1 of 1

FORM I VOA-TIC

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
MS791

Lab Name: Lancaster Laboratories Contract:
Lab Code: LANCAS Case No.: SAS No.: SDG No.:
Matrix: (soil/water) WATER Lab Sample ID: 1156994
Sample wt/vol: 238 (g/mL) mL Lab File ID: ji0916.d
Level: (low/med) LOW Date Received: 09/21/19
% Moisture: Decanted: (Y/N) Date Extracted: 09/27/19
Concentrated Extract Volume: 1000 (uL) Date Analyzed: 09/30/19
Injection Volume: 0.5 (uL) Dilution Factor: 1
GPC Cleanup: N pH: Extraction: Sepf
CONCENTRATION UNITS:
Number TICs found: 20 (ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.107-92-6	Butanoic acid	4.132	5	J
2.503-74-2	Butanoic acid, 3-methyl-	5.125	8	J
3.	Unknown	5.154	5	J
4.	Unknown	5.177	5	J
5.	Unknown	5.195	9	J
6.	Unknown	5.335	11	J
7.1618-26-4	2,4-Dithiapentane	5.907	18	J
8.	Unknown	6.322	16	J
9.	Unknown	7.174	9	J
10.100-61-8	Aniline, N-methyl-	8.038	5	J
11.112-42-5	1-Undecanol	11.349	30	J
12.143-07-7	Dodecanoic acid	11.863	6	J
13.4537-13-7	Benzene, (1-methylnonyl)-	12.143	7	J
14.4537-15-9	Benzene, (1-butylheptyl)-	12.289	4	J
15.4536-87-2	Benzene, (1-ethylnonyl)-	12.453	7	J
16.4536-88-3	Benzene, (1-methyldecyl)-	12.628	14	J
17.	Unknown	12.914	5	J
18.57-10-3	n-Hexadecanoic acid	13.749	4	J
19.	Unknown	14.490	4	J
20.	Unknown	22.426	6	J
21.				
22.SVOCTIC	Total SVOC TICs		180	J
23.				
24.				
25.				
26.				
27.				
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29.				
30.				

page 1 of 1

FORM I SV-1

Sample Description: **HVE-DW-WC Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 09/21/2019 09:51
Collection Date/Time: 09/20/2019 14:15
SDG#: BMS79-02

ARCADIS U.S., Inc.
ELLE Sample #: GW 1156995
ELLE Group #: 2065288
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	16 J	20	0.7	1
11997	Acetonitrile	75-05-8	N.D.	100	16	1
11997	Benzene	71-43-2	N.D.	1	0.2	1
11997	Bromochloromethane	74-97-5	N.D.	5	0.2	1
11997	Bromodichloromethane	75-27-4	N.D.	1	0.2	1
11997	Bromoform	75-25-2	N.D.	4	1	1
11997	Bromomethane	74-83-9	N.D.	1	0.3	1
11997	n-Butanol	71-36-3	N.D.	250	61	1
11997	2-Butanone	78-93-3	3 J	10	0.3	1
11997	t-Butyl alcohol	75-65-0	N.D.	50	12	1
11997	n-Butylbenzene	104-51-8	N.D.	5	0.2	1
11997	sec-Butylbenzene	135-98-8	N.D.	5	0.2	1
11997	tert-Butylbenzene	98-06-6	N.D.	5	0.3	1
11997	Carbon Disulfide	75-15-0	N.D.	5	0.2	1
11997	Carbon Tetrachloride	56-23-5	N.D.	1	0.2	1
11997	Chlorobenzene	108-90-7	N.D.	1	0.2	1
11997	Chlorodifluoromethane[1]	75-45-6	N.D.	5	2	1
11997	Chloroethane	75-00-3	N.D.	1	0.2	1
11997	Chloroform	67-66-3	N.D.	1	0.2	1
11997	Chloromethane	74-87-3	0.4 J	1	0.2	1
11997	Cyclohexane	110-82-7	N.D.	5	1	1
11997	Cyclohexanone[1]	108-94-1	N.D.	100	25	1
11997	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	5	0.3	1
11997	Dibromochloromethane	124-48-1	N.D.	1	0.2	1
11997	1,2-Dibromoethane	106-93-4	N.D.	1	0.2	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	5	0.2	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	5	0.2	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	5	0.2	1
11997	Dichlorodifluoromethane	75-71-8	N.D.	1	0.2	1
11997	1,1-Dichloroethane	75-34-3	N.D.	1	0.2	1
11997	1,2-Dichloroethane	107-06-2	N.D.	1	0.3	1
11997	1,1-Dichloroethene	75-35-4	N.D.	1	0.2	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	1	0.2	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	1	0.2	1
11997	1,2-Dichloropropane	78-87-5	N.D.	1	0.2	1
11997	cis-1,3-Dichloropropene	10061-01-5	N.D.	1	0.2	1
11997	trans-1,3-Dichloropropene	10061-02-6	N.D.	1	0.2	1
11997	1,4-Dioxane	123-91-1	N.D.	250	29	1
11997	Ethyl Acetate	141-78-6	N.D.	5	0.7	1
11997	Ethyl ether	60-29-7	N.D.	5	0.2	1
11997	Ethylbenzene	100-41-4	N.D.	1	0.4	1

*=This limit was used in the evaluation of the final result

Sample Description: **HVE-DW-WC Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 09/21/2019 09:51
Collection Date/Time: 09/20/2019 14:15
SDG#: BMS79-02

ARCADIS U.S., Inc.
ELLE Sample #: GW 1156995
ELLE Group #: 2065288
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Freon 113	76-13-1	N.D.	10	0.2	1
11997	n-Heptane[1]	142-82-5	N.D.	5	2	1
11997	n-Hexane[1]	110-54-3	N.D.	5	2	1
11997	2-Hexanone	591-78-6	N.D.	10	0.3	1
11997	Isobutyl Alcohol	78-83-1	N.D.	250	36	1
11997	Isopropylbenzene	98-82-8	N.D.	5	0.2	1
11997	p-Isopropyltoluene	99-87-6	N.D.	5	0.2	1
11997	Methyl Acetate	79-20-9	N.D.	5	0.2	1
11997	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	1	0.2	1
11997	4-Methyl-2-pentanone	108-10-1	0.9 J	10	0.5	1
11997	Methylcyclohexane	108-87-2	N.D.	5	0.5	1
11997	Methylene Chloride	75-09-2	3,400 E	1	0.3	1
11997	Naphthalene	91-20-3	N.D.	5	1	1
11997	2-Nitropropane	79-46-9	N.D.	10	0.8	1
11997	Styrene	100-42-5	N.D.	5	0.2	1
11997	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	1	0.2	1
11997	Tetrachloroethene	127-18-4	0.4 J	1	0.2	1
11997	Tetrahydrofuran	109-99-9	N.D.	10	0.7	1
11997	Toluene	108-88-3	0.3 J	1	0.2	1
11997	1,2,3-Trichlorobenzene	87-61-6	N.D.	5	0.4	1
11997	1,2,4-Trichlorobenzene	120-82-1	N.D.	5	0.3	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	1	0.3	1
11997	1,1,2-Trichloroethane	79-00-5	N.D.	1	0.2	1
11997	Trichloroethene	79-01-6	2	1	0.2	1
11997	Trichlorofluoromethane	75-69-4	0.2 J	1	0.2	1
11997	1,2,4-Trimethylbenzene	95-63-6	N.D.	5	1	1
11997	1,3,5-Trimethylbenzene	108-67-8	N.D.	5	0.3	1
11997	Vinyl Chloride	75-01-4	N.D.	1	0.2	1
11997	m+p-Xylene	179601-23-1	N.D.	5	1	1
11997	o-Xylene	95-47-6	N.D.	1	0.4	1
11997	Xylene (Total)	1330-20-7	N.D.	6	1	1

The concentration reported for Methylene Chloride is estimated since it exceeds the calibration range of the instrument. A further diluted analysis was performed from a previously opened container with headspace. The result for Methylene Chloride was 2800 ug/l.

Preservation requirements were not met.
A preserved vial was submitted for analysis. However, the pH at the time of analysis was 7.

12027 VOA Interp. Library Search-20

The results from the volatile library search are listed on the attached FORM 1 - VOA-TIC. The qualifiers appearing in the "Q" column are defined at the end of the report.

*=This limit was used in the evaluation of the final result

Sample Description: **HVE-DW-WC Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 09/21/2019 09:51
Collection Date/Time: 09/20/2019 14:15
SDG#: BMS79-02

ARCADIS U.S., Inc.
ELLE Sample #: GW 1156995
ELLE Group #: 2065288
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	Acenaphthene	83-32-9	0.68	0.54	0.11	1
14241	Acenaphthylene	208-96-8	N.D.	0.54	0.11	1
14241	Acetophenone	98-86-2	N.D.	11	4.3	1
14241	Aniline	62-53-3	N.D.	11	3.2	1
14241	Anthracene	120-12-7	0.95	0.54	0.11	1
14241	Atrazine	1912-24-9	N.D.	5.4	2.1	1
14241	Benzaldehyde	100-52-7	N.D.	11	3.2	1
14241	Benzo(a)anthracene	56-55-3	1.9	0.54	0.11	1
14241	Benzo(a)pyrene	50-32-8	1.7	0.54	0.11	1
14241	Benzo(b)fluoranthene	205-99-2	2.2	0.54	0.11	1
14241	Benzo(g,h,i)perylene	191-24-2	1.1	0.54	0.11	1
14241	Benzo(k)fluoranthene	207-08-9	1.0	0.54	0.11	1
14241	Benzyl alcohol	100-51-6	N.D.	32	11	1
14241	1,1'-Biphenyl	92-52-4	N.D.	11	3.2	1
14241	4-Bromophenyl-phenylether	101-55-3	N.D.	2.1	0.54	1
14241	Butylbenzylphthalate	85-68-7	N.D.	5.4	2.1	1
14241	Di-n-butylphthalate	84-74-2	N.D.	5.4	2.1	1
14241	Caprolactam	105-60-2	N.D.	12	5.4	1
14241	Carbazole	86-74-8	0.62 J	2.1	0.54	1
14241	4-Chloro-3-methylphenol	59-50-7	N.D.	2.1	0.54	1
14241	4-Chloroaniline	106-47-8	N.D.	11	4.3	1
14241	bis(2-Chloroethoxy)methane	111-91-1	N.D.	2.1	0.54	1
14241	bis(2-Chloroethyl)ether	111-44-4	N.D.	2.1	0.54	1
14241	bis(2-Chloroisopropyl)ether[1]	39638-32-9	N.D.	2.1	0.54	1
	Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.					
14241	2-Chloronaphthalene	91-58-7	N.D.	1.1	0.43	1
14241	2-Chlorophenol	95-57-8	N.D.	2.1	0.54	1
14241	4-Chlorophenyl-phenylether	7005-72-3	N.D.	2.1	0.54	1
14241	Chrysene	218-01-9	1.8	0.54	0.11	1
14241	Dibenz(a,h)anthracene	53-70-3	N.D.	0.54	0.11	1
14241	Dibenzofuran	132-64-9	0.70 J	2.1	0.54	1
14241	3,3'-Dichlorobenzidine	91-94-1	N.D.	11	3.2	1
14241	2,4-Dichlorophenol	120-83-2	N.D.	2.1	0.54	1
14241	Dicyclohexylamine[1]	101-83-7	N.D.	11	11	1
14241	Diethylphthalate	84-66-2	N.D.	5.4	2.1	1
14241	N,N-Dimethylaniline[1]	121-69-7	1.2	1.1	0.54	1
14241	2,4-Dimethylphenol	105-67-9	N.D.	11	3.2	1
14241	Dimethylphthalate	131-11-3	N.D.	5.4	2.1	1
14241	4,6-Dinitro-2-methylphenol	534-52-1	N.D.	23	8.6	1

*=This limit was used in the evaluation of the final result

Sample Description: **HVE-DW-WC Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 09/21/2019 09:51
Collection Date/Time: 09/20/2019 14:15
SDG#: BMS79-02

ARCADIS U.S., Inc.
ELLE Sample #: GW 1156995
ELLE Group #: 2065288
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	2,4-Dinitrophenol	51-28-5	N.D.	32	15	1
14241	2,4-Dinitrotoluene	121-14-2	N.D.	5.4	1.1	1
14241	2,6-Dinitrotoluene	606-20-2	N.D.	2.1	0.54	1
14241	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	12	5.4	1
14241	Fluoranthene	206-44-0	4.7	0.54	0.11	1
14241	Fluorene	86-73-7	0.72	0.54	0.11	1
14241	Hexachlorobenzene	118-74-1	N.D.	0.54	0.11	1
14241	Hexachlorobutadiene	87-68-3	N.D.	2.1	0.54	1
14241	Hexachlorocyclopentadiene	77-47-4	N.D.	12	5.4	1
14241	Hexachloroethane	67-72-1	N.D.	5.4	1.1	1
14241	Indeno(1,2,3-cd)pyrene	193-39-5	1.0	0.54	0.11	1
14241	Isophorone	78-59-1	N.D.	2.1	0.54	1
14241	2-Methylnaphthalene	91-57-6	0.94	0.54	0.11	1
14241	2-Methylphenol	95-48-7	N.D.	2.1	0.54	1
14241	4-Methylphenol	65794-96-9	N.D.	2.1	0.54	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
14241	Naphthalene	91-20-3	1.7	0.54	0.11	1
14241	2-Nitroaniline	88-74-4	N.D.	7.5	2.1	1
14241	3-Nitroaniline	99-09-2	N.D.	7.5	3.2	1
14241	4-Nitroaniline	100-01-6	N.D.	3.2	0.97	1
14241	Nitrobenzene	98-95-3	N.D.	2.1	0.54	1
14241	2-Nitrophenol	88-75-5	N.D.	11	3.2	1
14241	4-Nitrophenol	100-02-7	N.D.	32	11	1
14241	N-Nitroso-di-n-propylamine	621-64-7	N.D.	3.2	0.75	1
14241	N-Nitrosodiphenylamine	86-30-6	N.D.	3.2	0.75	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.					
14241	Di-n-octylphthalate	117-84-0	N.D.	12	5.4	1
14241	Pentachlorophenol	87-86-5	N.D.	5.4	1.1	1
14241	Phenanthrene	85-01-8	3.9	0.54	0.11	1
14241	Phenol	108-95-2	N.D.	2.1	0.54	1
14241	Pyrene	129-00-0	4.0	0.54	0.11	1
14241	Pyridine	110-86-1	N.D.	5.4	2.1	1
14241	1,2,4,5-Tetrachlorobenzene	95-94-3	N.D.	2.1	0.54	1
14241	2,3,4,6-Tetrachlorophenol	58-90-2	N.D.	11	4.3	1
14241	2,4,5-Trichlorophenol	95-95-4	N.D.	2.1	0.54	1
14241	2,4,6-Trichlorophenol	88-06-2	N.D.	2.1	0.54	1
14241	Triethylamine[1]	121-44-8	N.D.	11	11	1

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC

*=This limit was used in the evaluation of the final result

Sample Description: **HVE-DW-WC Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 09/21/2019 09:51
Collection Date/Time: 09/20/2019 14:15
SDG#: BMS79-02

ARCADIS U.S., Inc.
ELLE Sample #: GW 1156995
ELLE Group #: 2065288
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
	Summary. Since the recovery is high and the target analyte(s) was not detected in the sample, the data is reported.					
	The recovery for the sample surrogate(s) is outside the QC acceptance limits as noted on the QC Summary. The client was contacted and the data reported.					
00886	**SVOA TIC Interpretive(25)**					
	The results from the semivolatile library search are listed on the attached FORM 1 - SV-TIC. The qualifiers appearing in the "Q" column are defined at the end of the report.					
GC Miscellaneous	**SW-846 8015D Rev.4, June 2003**		**ug/l**	**ug/l**	**ug/l**	
10603	Ethanol	64-17-5	N.D. D2	1,000	150	1
12926	Ethylene glycol[1]	107-21-1	6,200 J	10,000	5,000	1
10603	Isopropanol[1]	67-63-0	N.D. D2	1,000	110	1
10603	Methanol	67-56-1	N.D. D2	1,000	220	1
12926	Propylene glycol[1]	57-55-6	N.D.	10,000	2,000	1
Metals	**SW-846 6010D Rev.4, July 2014**		**mg/l**	**mg/l**	**mg/l**	
07044	Antimony	7440-36-0	N.D.	0.250	0.0800	1
07035	Arsenic	7440-38-2	0.241	0.150	0.0800	1
07046	Barium	7440-39-3	2.73	0.0250	0.0050	1
07047	Beryllium	7440-41-7	0.0195 J	0.0250	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.0250	0.0050	1
01750	Calcium	7440-70-2	2,890	5.00	2.40	5
07051	Chromium	7440-47-3	1.20	0.0750	0.0080	1
07052	Cobalt	7440-48-4	0.291	0.0250	0.0075	1
07053	Copper	7440-50-8	1.24	0.500	0.300	5
01754	Iron	7439-89-6	826	1.00	0.200	1
07055	Lead	7439-92-1	0.469	0.0750	0.0355	1
01757	Magnesium	7439-95-4	742	0.500	0.200	1
07058	Manganese	7439-96-5	24.1	0.0500	0.0150	1
07061	Nickel	7440-02-0	0.759	0.0500	0.0105	1
01762	Potassium	7440-09-7	148	2.50	1.02	1
07036	Selenium	7782-49-2	N.D. K2	0.250	0.0800	1
07066	Silver	7440-22-4	N.D.	0.250	0.125	5
01767	Sodium	7440-23-5	114	5.00	1.20	1
07022	Thallium	7440-28-0	N.D.	0.150	0.0405	1
	SW-846 6010D Rev.4, July 2014		**ug/l**	**ug/l**	**ug/l**	
01743	Aluminum	7429-90-5	446,000	1,500	535	1

*=This limit was used in the evaluation of the final result

Sample Description: **HVE-DW-WC Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 09/21/2019 09:51
Collection Date/Time: 09/20/2019 14:15
SDG#: BMS79-02

ARCADIS U.S., Inc.
ELLE Sample #: GW 1156995
ELLE Group #: 2065288
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
Metals	**SW-846 6010D Rev.4, July 2014**		**ug/l**	**ug/l**	**ug/l**	
07071	Vanadium	7440-62-2	795	50.0	9.5	1
07072	Zinc	7440-66-6	1,970	100	18.5	1
	SW-846 7470A		**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	0.0025	0.0020	0.00050	1
Wet Chemistry	**SW-846 9012B**		**mg/kg**	**mg/kg**	**mg/kg**	
01123	Cyanide (Reactivity)	n.a.	N.D.	62.0	20.7	1
	SM 2550 B-2010		**Degrees C**	**Degrees C**	**Degrees C**	
12151	Temperature of pH[1]	n.a.	19.7	0.010	0.010	1
	SM 4500-H+ B-2011		**Std. Units**	**Std. Units**	**Std. Units**	
12152	pH[1]	n.a.	9.9	0.010	0.010	1
	SW-846 9034		**mg/kg**	**mg/kg**	**mg/kg**	
01122	Sulfide (Reactivity)[1]	n.a.	N.D.	160	53.6	1
	SW-846 Chapter 7					
00496	Corrosivity[1]	n.a.	See Below	0	0	1
	The pH of the sample is 9.90 indicating that the sample is not corrosive. A sample is corrosive if it exhibits a pH equal to or less than 2 or equal to or greater than 12.5.					
	SW-846 Chapter 7.3		**see below**	**see below**	**see below**	
01121	Reactivity[1]	n.a.	See Below	0	0	1
	Reactivity: This sample was extracted and analyzed by the interim method described in SW-846 Revision 3, December 1996 - Chapter 7.3. The Interim Guidance for Reactive Cyanide and Reactive Sulfide (SW-846 Sections 7.3.3 and 7.3.4 of Chapter 7 - December 1996) identifies a reactive material as generating more than 250 mg/kg of hydrogen cyanide or 500 mg/kg of hydrogen sulfide. This waste is not considered hazardous due to reactivity based on that standard. These results do not reflect total cyanide or total sulfide. On July 14, 2005, EPA published a rule in the Federal Register that removed the Interim Guidance and the method referenced above. At this time there is no specific guidance or a method to be used to evaluate "Reactivity".					

Sample Comments

State of New York Certification No. 10670

[1] = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

*=This limit was used in the evaluation of the final result

Sample Description: **HVE-DW-WC Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 09/21/2019 09:51
Collection Date/Time: 09/20/2019 14:15
SDG#: BMS79-02

ARCADIS U.S., Inc.
ELLE Sample #: GW 1156995
ELLE Group #: 2065288
Matrix: Groundwater

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	L192734AA	10/01/2019 04:13	Kevin A Sposito	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	L192734AA	10/01/2019 04:12	Kevin A Sposito	1
14241	Semi-annual Groundwater BMS	SW-846 8270D	1	19269WAL026	09/30/2019 03:38	Brandon K Cordova	1
11010	8270D BNA Extraction	SW-846 3510C	1	19269WAL026	09/27/2019 09:00	Logan M Brosemer	1
10603	Alcohols in Water	SW-846 8015D Rev.4, June 2003	1	192670005A	09/24/2019 16:01	Johanna C Kennedy	1
12926	Glycols in Water by 8015C/D	SW-846 8015D Rev.4, June 2003	1	192660045A	09/23/2019 23:18	Donald Brown	1
01743	Aluminum	SW-846 6010D Rev.4, July 2014	1	192691404402	09/29/2019 20:04	Elaine F Stoltzfus	1
07044	Antimony	SW-846 6010D Rev.4, July 2014	1	192691404402	09/30/2019 19:24	Elaine F Stoltzfus	1
07035	Arsenic	SW-846 6010D Rev.4, July 2014	1	192691404402	10/01/2019 05:22	Lisa J Cooke	1
07046	Barium	SW-846 6010D Rev.4, July 2014	1	192691404402	09/29/2019 20:04	Elaine F Stoltzfus	1
07047	Beryllium	SW-846 6010D Rev.4, July 2014	1	192691404402	09/29/2019 20:04	Elaine F Stoltzfus	1
07049	Cadmium	SW-846 6010D Rev.4, July 2014	1	192691404402	09/29/2019 20:04	Elaine F Stoltzfus	1
01750	Calcium	SW-846 6010D Rev.4, July 2014	1	192691404402	09/30/2019 19:44	Elaine F Stoltzfus	5
07051	Chromium	SW-846 6010D Rev.4, July 2014	1	192691404402	09/29/2019 20:04	Elaine F Stoltzfus	1
07052	Cobalt	SW-846 6010D Rev.4, July 2014	1	192691404402	09/29/2019 20:04	Elaine F Stoltzfus	1
07053	Copper	SW-846 6010D Rev.4, July 2014	1	192691404402	09/30/2019 19:44	Elaine F Stoltzfus	5
01754	Iron	SW-846 6010D Rev.4, July 2014	1	192691404402	09/29/2019 20:04	Elaine F Stoltzfus	1
07055	Lead	SW-846 6010D Rev.4, July 2014	1	192691404402	10/01/2019 16:09	Cindy M Gehman	1
01757	Magnesium	SW-846 6010D Rev.4, July 2014	1	192691404402	09/29/2019 20:04	Elaine F Stoltzfus	1
07058	Manganese	SW-846 6010D Rev.4, July 2014	1	192691404402	09/29/2019 20:04	Elaine F Stoltzfus	1
07061	Nickel	SW-846 6010D Rev.4, July 2014	1	192691404402	09/29/2019 20:04	Elaine F Stoltzfus	1
01762	Potassium	SW-846 6010D Rev.4, July 2014	1	192691404402	09/29/2019 20:04	Elaine F Stoltzfus	1
07036	Selenium	SW-846 6010D Rev.4, July 2014	1	192691404402	09/29/2019 20:04	Elaine F Stoltzfus	1
07066	Silver	SW-846 6010D Rev.4, July 2014	1	192691404402	09/30/2019 19:44	Elaine F Stoltzfus	5
01767	Sodium	SW-846 6010D Rev.4, July 2014	1	192691404402	09/29/2019 20:04	Elaine F Stoltzfus	1
07022	Thallium	SW-846 6010D Rev.4, July 2014	1	192691404402	09/29/2019 20:04	Elaine F Stoltzfus	1

*=This limit was used in the evaluation of the final result

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Sample Description: **HVE-DW-WC Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 09/21/2019 09:51
Collection Date/Time: 09/20/2019 14:15
SDG#: BMS79-02

ARCADIS U.S., Inc.
ELLE Sample #: GW 1156995
ELLE Group #: 2065288
Matrix: Groundwater

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07071	Vanadium	SW-846 6010D Rev.4, July 2014	1	192691404402	09/29/2019 20:04	Elaine F Stoltzfus	1
07072	Zinc	SW-846 6010D Rev.4, July 2014	1	192691404402	09/29/2019 20:04	Elaine F Stoltzfus	1
00259	Mercury	SW-846 7470A	1	192690571303	09/30/2019 06:42	Damary Valentin	1
14044	ICP-WW, 3005A (tot rec) - U345	SW-846 3005A	1	192691404402	09/26/2019 15:45	Barbara A Kane	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	192690571303	09/27/2019 19:10	Barbara A Kane	1
01123	Cyanide (Reactivity)	SW-846 9012B	1	19268104201A	09/25/2019 20:44	Gregory Baldree	1
12151	Temperature of pH	SM 2550 B-2010	1	19269121521A	09/26/2019 17:50	Jeremy L Bolf	1
12152	pH	SM 4500-H+ B-2011	1	19269121521A	09/26/2019 17:50	Jeremy L Bolf	1
01122	Sulfide (Reactivity)	SW-846 9034	1	19267112101A	09/24/2019 08:00	Kristen Wroblewski	1
00496	Corrosivity	SW-846 Chapter 7	1	19269121521A	09/26/2019 17:50	Jeremy L Bolf	1
01121	Reactivity	SW-846 Chapter 7.3	1	19267112101A	09/24/2019 08:00	Kristen Wroblewski	1

*=This limit was used in the evaluation of the final result

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
MS792

Lab Name: Lancaster Laboratories Contract:_____
Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____
Matrix: (soil/water) WATER Lab Sample ID: 1156995
Sample wt/vol: 5.0 (g/mL)mL Lab File ID:HP09915.i/19sep30b.b/ls30s83.d
Level: (low/med) LOW Date Received: 09/21/19
% Moisture: not dec. Date Analyzed: 10/01/19
Column: (pack/cap) CAP Dilution Factor: 1.0
CONCENTRATION UNITS:
Number TICs found: 0 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	VOCTIC	Total VOC TICs		0	U
2.					
3.					
4.					
5.					
6.					
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30.					

page 1 of 1

FORM I VOA-TIC

1F

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

MS792

Lab Name: Lancaster Laboratories Contract:
Lab Code: LANCAS Case No.: SAS No.: SDG No.:
Matrix: (soil/water) WATER Lab Sample ID: 1156995
Sample wt/vol: 233 (g/mL) mL Lab File ID: ji0915.d
Level: (low/med) LOW Date Received: 09/21/19
% Moisture: Decanted: (Y/N) Date Extracted: 09/27/19
Concentrated Extract Volume: 1000 (uL) Date Analyzed: 09/30/19
Injection Volume: 0.5 (uL) Dilution Factor: 1
GPC Cleanup: N pH: Extraction: Sepf

CONCENTRATION UNITS:
Number TICs found: 24 (ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.814-78-8	3-Buten-2-one, 3-methyl-	1.668	9	J
2.	Unknown	1.966	6	J
3.	Unknown	3.612	7	J
4.	Unknown	4.336	23	J
5.	Unknown	4.868	20	J
6.	Unknown	9.031	5	J
7.	Unknown	12.423	37	J
8.	Unknown	12.452	7	J
9.4536-88-3	Benzene, (1-methyldecyl)-	12.628	11	J
10.57-10-3	n-Hexadecanoic acid	13.749	7	J
11.10544-50-0	Cyclic octaatomic sulfur	14.496	10	J
12.	Unknown	14.619	14	J
13.	Unknown	15.845	18	J
14.	Unknown	16.254	13	J
15.	Unknown	16.937	6	J
16.13151-83-2	Dodecane, 3-cyclohexyl-	17.200	7	J
17.	Unknown	17.392	15	J
18.	Unknown	17.497	8	J
19.	Unknown	17.783	6	J
20.	Unknown	17.959	13	J
21.	Unknown	18.005	6	J
22.	Unknown	18.525	16	J
23.	Unknown	18.741	6	J
24.	Unknown	19.062	10	J
25.				
26.SVOCTIC	Total SVOC TICs		280	J
27.				
28.				
29.				
30.				

page 1 of 1

FORM I SV-1

Sample Description: **BDA-14-DW-WC Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 09/21/2019 09:51
Collection Date/Time: 09/20/2019 14:45
SDG#: BMS79-03

ARCADIS U.S., Inc.
ELLE Sample #: GW 1156996
ELLE Group #: 2065288
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	8 J	20	0.7	1
11997	Acetonitrile	75-05-8	N.D.	100	16	1
11997	Benzene	71-43-2	N.D.	1	0.2	1
11997	Bromochloromethane	74-97-5	N.D.	5	0.2	1
11997	Bromodichloromethane	75-27-4	N.D.	1	0.2	1
11997	Bromoform	75-25-2	N.D.	4	1	1
11997	Bromomethane	74-83-9	N.D.	1	0.3	1
11997	n-Butanol	71-36-3	N.D.	250	61	1
11997	2-Butanone	78-93-3	2 J	10	0.3	1
11997	t-Butyl alcohol	75-65-0	N.D.	50	12	1
11997	n-Butylbenzene	104-51-8	N.D.	5	0.2	1
11997	sec-Butylbenzene	135-98-8	N.D.	5	0.2	1
11997	tert-Butylbenzene	98-06-6	N.D.	5	0.3	1
11997	Carbon Disulfide	75-15-0	0.3 J	5	0.2	1
11997	Carbon Tetrachloride	56-23-5	N.D.	1	0.2	1
11997	Chlorobenzene	108-90-7	N.D.	1	0.2	1
11997	Chlorodifluoromethane[1]	75-45-6	N.D.	5	2	1
11997	Chloroethane	75-00-3	N.D.	1	0.2	1
11997	Chloroform	67-66-3	N.D.	1	0.2	1
11997	Chloromethane	74-87-3	N.D.	1	0.2	1
11997	Cyclohexane	110-82-7	N.D.	5	1	1
11997	Cyclohexanone[1]	108-94-1	N.D.	100	25	1
11997	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	5	0.3	1
11997	Dibromochloromethane	124-48-1	N.D.	1	0.2	1
11997	1,2-Dibromoethane	106-93-4	N.D.	1	0.2	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	5	0.2	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	5	0.2	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	5	0.2	1
11997	Dichlorodifluoromethane	75-71-8	N.D.	1	0.2	1
11997	1,1-Dichloroethane	75-34-3	N.D.	1	0.2	1
11997	1,2-Dichloroethane	107-06-2	N.D.	1	0.3	1
11997	1,1-Dichloroethene	75-35-4	N.D.	1	0.2	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	1	0.2	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	1	0.2	1
11997	1,2-Dichloropropane	78-87-5	N.D.	1	0.2	1
11997	cis-1,3-Dichloropropene	10061-01-5	N.D.	1	0.2	1
11997	trans-1,3-Dichloropropene	10061-02-6	N.D.	1	0.2	1
11997	1,4-Dioxane	123-91-1	N.D.	250	29	1
11997	Ethyl Acetate	141-78-6	N.D.	5	0.7	1
11997	Ethyl ether	60-29-7	N.D.	5	0.2	1
11997	Ethylbenzene	100-41-4	N.D.	1	0.4	1

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-14-DW-WC Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 09/21/2019 09:51
Collection Date/Time: 09/20/2019 14:45
SDG#: BMS79-03

ARCADIS U.S., Inc.
ELLE Sample #: GW 1156996
ELLE Group #: 2065288
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Freon 113	76-13-1	N.D.	10	0.2	1
11997	n-Heptane[1]	142-82-5	N.D.	5	2	1
11997	n-Hexane[1]	110-54-3	N.D.	5	2	1
11997	2-Hexanone	591-78-6	N.D.	10	0.3	1
11997	Isobutyl Alcohol	78-83-1	N.D.	250	36	1
11997	Isopropylbenzene	98-82-8	N.D.	5	0.2	1
11997	p-Isopropyltoluene	99-87-6	N.D.	5	0.2	1
11997	Methyl Acetate	79-20-9	N.D.	5	0.2	1
11997	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	1	0.2	1
11997	4-Methyl-2-pentanone	108-10-1	N.D.	10	0.5	1
11997	Methylcyclohexane	108-87-2	0.9 J	5	0.5	1
11997	Methylene Chloride	75-09-2	N.D.	1	0.3	1
11997	Naphthalene	91-20-3	N.D.	5	1	1
11997	2-Nitropropane	79-46-9	N.D.	10	0.8	1
11997	Styrene	100-42-5	N.D.	5	0.2	1
11997	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	1	0.2	1
11997	Tetrachloroethene	127-18-4	N.D.	1	0.2	1
11997	Tetrahydrofuran	109-99-9	N.D.	10	0.7	1
11997	Toluene	108-88-3	N.D.	1	0.2	1
11997	1,2,3-Trichlorobenzene	87-61-6	N.D.	5	0.4	1
11997	1,2,4-Trichlorobenzene	120-82-1	N.D.	5	0.3	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	1	0.3	1
11997	1,1,2-Trichloroethane	79-00-5	N.D.	1	0.2	1
11997	Trichloroethene	79-01-6	N.D.	1	0.2	1
11997	Trichlorofluoromethane	75-69-4	N.D.	1	0.2	1
11997	1,2,4-Trimethylbenzene	95-63-6	N.D.	5	1	1
11997	1,3,5-Trimethylbenzene	108-67-8	N.D.	5	0.3	1
11997	Vinyl Chloride	75-01-4	N.D.	1	0.2	1
11997	m+p-Xylene	179601-23-1	N.D.	5	1	1
11997	o-Xylene	95-47-6	N.D.	1	0.4	1
11997	Xylene (Total)	1330-20-7	N.D.	6	1	1

12027 VOA Interp. Library Search-20

The results from the volatile library search are listed on the attached FORM 1 - VOA-TIC. The qualifiers appearing in the "Q" column are defined at the end of the report.

GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	Acenaphthene	83-32-9	N.D.	0.58	0.12	1
14241	Acenaphthylene	208-96-8	N.D.	0.58	0.12	1
14241	Acetophenone	98-86-2	N.D.	12	4.6	1
14241	Aniline	62-53-3	N.D.	12	3.5	1

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-14-DW-WC Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 09/21/2019 09:51
Collection Date/Time: 09/20/2019 14:45
SDG#: BMS79-03

ARCADIS U.S., Inc.
ELLE Sample #: GW 1156996
ELLE Group #: 2065288
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	Anthracene	120-12-7	N.D.	0.58	0.12	1
14241	Atrazine	1912-24-9	N.D.	5.8	2.3	1
14241	Benzaldehyde	100-52-7	N.D.	12	3.5	1
14241	Benzo(a)anthracene	56-55-3	N.D.	0.58	0.12	1
14241	Benzo(a)pyrene	50-32-8	N.D.	0.58	0.12	1
14241	Benzo(b)fluoranthene	205-99-2	N.D.	0.58	0.12	1
14241	Benzo(g,h,i)perylene	191-24-2	N.D.	0.58	0.12	1
14241	Benzo(k)fluoranthene	207-08-9	N.D.	0.58	0.12	1
14241	Benzyl alcohol	100-51-6	N.D.	35	12	1
14241	1,1'-Biphenyl	92-52-4	N.D.	12	3.5	1
14241	4-Bromophenyl-phenylether	101-55-3	N.D.	2.3	0.58	1
14241	Butylbenzylphthalate	85-68-7	N.D.	5.8	2.3	1
14241	Di-n-butylphthalate	84-74-2	N.D.	5.8	2.3	1
14241	Caprolactam	105-60-2	N.D.	13	5.8	1
14241	Carbazole	86-74-8	N.D.	2.3	0.58	1
14241	4-Chloro-3-methylphenol	59-50-7	N.D.	2.3	0.58	1
14241	4-Chloroaniline	106-47-8	N.D.	12	4.6	1
14241	bis(2-Chloroethoxy)methane	111-91-1	N.D.	2.3	0.58	1
14241	bis(2-Chloroethyl)ether	111-44-4	N.D.	2.3	0.58	1
14241	bis(2-Chloroisopropyl)ether[1]	39638-32-9	N.D.	2.3	0.58	1
	Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.					
14241	2-Chloronaphthalene	91-58-7	N.D.	1.2	0.46	1
14241	2-Chlorophenol	95-57-8	N.D.	2.3	0.58	1
14241	4-Chlorophenyl-phenylether	7005-72-3	N.D.	2.3	0.58	1
14241	Chrysene	218-01-9	N.D.	0.58	0.12	1
14241	Dibenz(a,h)anthracene	53-70-3	N.D.	0.58	0.12	1
14241	Dibenzofuran	132-64-9	N.D.	2.3	0.58	1
14241	3,3'-Dichlorobenzidine	91-94-1	N.D.	12	3.5	1
14241	2,4-Dichlorophenol	120-83-2	N.D.	2.3	0.58	1
14241	Dicyclohexylamine[1]	101-83-7	N.D.	12	12	1
14241	Diethylphthalate	84-66-2	N.D.	5.8	2.3	1
14241	N,N-Dimethylaniline[1]	121-69-7	0.63 J	1.2	0.58	1
14241	2,4-Dimethylphenol	105-67-9	N.D.	12	3.5	1
14241	Dimethylphthalate	131-11-3	N.D.	5.8	2.3	1
14241	4,6-Dinitro-2-methylphenol	534-52-1	N.D.	24	9.2	1
14241	2,4-Dinitrophenol	51-28-5	N.D.	35	16	1
14241	2,4-Dinitrotoluene	121-14-2	N.D.	5.8	1.2	1
14241	2,6-Dinitrotoluene	606-20-2	N.D.	2.3	0.58	1
14241	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	13	5.8	1

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-14-DW-WC Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 09/21/2019 09:51
Collection Date/Time: 09/20/2019 14:45
SDG#: BMS79-03

ARCADIS U.S., Inc.
ELLE Sample #: GW 1156996
ELLE Group #: 2065288
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	Fluoranthene	206-44-0	N.D.	0.58	0.12	1
14241	Fluorene	86-73-7	N.D.	0.58	0.12	1
14241	Hexachlorobenzene	118-74-1	N.D.	0.58	0.12	1
14241	Hexachlorobutadiene	87-68-3	N.D.	2.3	0.58	1
14241	Hexachlorocyclopentadiene	77-47-4	N.D.	13	5.8	1
14241	Hexachloroethane	67-72-1	N.D.	5.8	1.2	1
14241	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.58	0.12	1
14241	Isophorone	78-59-1	N.D.	2.3	0.58	1
14241	2-Methylnaphthalene	91-57-6	1.5	0.58	0.12	1
14241	2-Methylphenol	95-48-7	N.D.	2.3	0.58	1
14241	4-Methylphenol	65794-96-9	N.D.	2.3	0.58	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
14241	Naphthalene	91-20-3	N.D.	0.58	0.12	1
14241	2-Nitroaniline	88-74-4	N.D.	8.1	2.3	1
14241	3-Nitroaniline	99-09-2	N.D.	8.1	3.5	1
14241	4-Nitroaniline	100-01-6	N.D.	3.5	1.0	1
14241	Nitrobenzene	98-95-3	N.D.	2.3	0.58	1
14241	2-Nitrophenol	88-75-5	N.D.	12	3.5	1
14241	4-Nitrophenol	100-02-7	N.D.	35	12	1
14241	N-Nitroso-di-n-propylamine	621-64-7	N.D.	3.5	0.81	1
14241	N-Nitrosodiphenylamine	86-30-6	N.D.	3.5	0.81	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.					
14241	Di-n-octylphthalate	117-84-0	N.D.	13	5.8	1
14241	Pentachlorophenol	87-86-5	N.D.	5.8	1.2	1
14241	Phenanthrene	85-01-8	N.D.	0.58	0.12	1
14241	Phenol	108-95-2	N.D.	2.3	0.58	1
14241	Pyrene	129-00-0	N.D.	0.58	0.12	1
14241	Pyridine	110-86-1	N.D.	5.8	2.3	1
14241	1,2,4,5-Tetrachlorobenzene	95-94-3	N.D.	2.3	0.58	1
14241	2,3,4,6-Tetrachlorophenol	58-90-2	N.D.	12	4.6	1
14241	2,4,5-Trichlorophenol	95-95-4	N.D.	2.3	0.58	1
14241	2,4,6-Trichlorophenol	88-06-2	N.D.	2.3	0.58	1
14241	Triethylamine[1]	121-44-8	N.D.	12	12	1

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. Since the recovery is high and the target analyte(s) was not detected in the sample, the data is reported.

00886 SVOA TIC Interpretive(25)

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-14-DW-WC Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 09/21/2019 09:51
Collection Date/Time: 09/20/2019 14:45
SDG#: BMS79-03

ARCADIS U.S., Inc.
ELLE Sample #: GW 1156996
ELLE Group #: 2065288
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
	The results from the semivolatile library search are listed on the attached FORM 1 - SV-TIC. The qualifiers appearing in the "Q" column are defined at the end of the report.					
GC Miscellaneous		**SW-846 8015D Rev.4, June 2003**	**ug/l**	**ug/l**	**ug/l**	
10603	Ethanol	64-17-5	N.D. D2	1,000	150	1
12926	Ethylene glycol[1]	107-21-1	N.D.	10,000	5,000	1
10603	Isopropanol[1]	67-63-0	N.D. D2	1,000	110	1
10603	Methanol	67-56-1	N.D. D2	1,000	220	1
12926	Propylene glycol[1]	57-55-6	N.D.	10,000	2,000	1
Metals		**SW-846 6010D Rev.4, July 2014**	**mg/l**	**mg/l**	**mg/l**	
07044	Antimony	7440-36-0	N.D.	0.0500	0.0160	1
07035	Arsenic	7440-38-2	0.0191 J	0.0300	0.0160	1
07046	Barium	7440-39-3	0.195	0.0050	0.0010	1
07047	Beryllium	7440-41-7	0.0017 J	0.0050	0.0010	1
07049	Cadmium	7440-43-9	N.D.	0.0050	0.0010	1
01750	Calcium	7440-70-2	761	1.00	0.480	5
07051	Chromium	7440-47-3	0.0843	0.0150	0.0016	1
07052	Cobalt	7440-48-4	0.0563	0.0050	0.0015	1
07053	Copper	7440-50-8	0.0653 J	0.100	0.0600	5
01754	Iron	7439-89-6	81.0	0.200	0.0400	1
07055	Lead	7439-92-1	0.0472	0.0150	0.0071	1
01757	Magnesium	7439-95-4	156	0.100	0.0400	1
07058	Manganese	7439-96-5	1.36	0.0100	0.0030	1
07061	Nickel	7440-02-0	0.0891	0.0100	0.0021	1
01762	Potassium	7440-09-7	53.0	0.500	0.204	1
07036	Selenium	7782-49-2	N.D.	0.0500	0.0160	1
07066	Silver	7440-22-4	N.D.	0.0100	0.0050	1
01767	Sodium	7440-23-5	166	1.00	0.239	1
07022	Thallium	7440-28-0	N.D. K1K2	0.0300	0.0081	1
		SW-846 6010D Rev.4, July 2014	**ug/l**	**ug/l**	**ug/l**	
01743	Aluminum	7429-90-5	60,600	300	107	1
07071	Vanadium	7440-62-2	79.7	10.0	1.9	1
07072	Zinc	7440-66-6	228	20.0	3.7	1
		SW-846 7470A	**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	0.000072 J	0.00020	0.000050	1
Wet Chemistry		**SW-846 9012B**	**mg/kg**	**mg/kg**	**mg/kg**	

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-14-DW-WC Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 09/21/2019 09:51
Collection Date/Time: 09/20/2019 14:45
SDG#: BMS79-03

ARCADIS U.S., Inc.
ELLE Sample #: GW 1156996
ELLE Group #: 2065288
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
Wet Chemistry	**SW-846 9012B**		**mg/kg**	**mg/kg**	**mg/kg**	
01123	Cyanide (Reactivity)	n.a.	N.D.	58.9	19.6	1
Wet Chemistry	**SM 2550 B-2010**		**Degrees C**	**Degrees C**	**Degrees C**	
12151	Temperature of pH[1]	n.a.	20.0	0.010	0.010	1
	SM 4500-H+ B-2011		**Std. Units**	**Std. Units**	**Std. Units**	
12152	pH[1]	n.a.	8.0	0.010	0.010	1
	SW-846 9034		**mg/kg**	**mg/kg**	**mg/kg**	
01122	Sulfide (Reactivity)[1]	n.a.	N.D.	160	53.6	1
	SW-846 Chapter 7					
00496	Corrosivity[1]	n.a.	See Below	0	0	1
	The pH of the sample is 8.00 indicating that the sample is not corrosive. A sample is corrosive if it exhibits a pH equal to or less than 2 or equal to or greater than 12.5.					
	SW-846 Chapter 7.3		**see below**	**see below**	**see below**	
01121	Reactivity[1]	n.a.	See Below	0	0	1
	Reactivity: This sample was extracted and analyzed by the interim method described in SW-846 Revision 3, December 1996 - Chapter 7.3. The Interim Guidance for Reactive Cyanide and Reactive Sulfide (SW-846 Sections 7.3.3 and 7.3.4 of Chapter 7 - December 1996) identifies a reactive material as generating more than 250 mg/kg of hydrogen cyanide or 500 mg/kg of hydrogen sulfide. This waste is not considered hazardous due to reactivity based on that standard. These results do not reflect total cyanide or total sulfide. On July 14, 2005, EPA published a rule in the Federal Register that removed the Interim Guidance and the method referenced above. At this time there is no specific guidance or a method to be used to evaluate "Reactivity".					

Sample Comments

State of New York Certification No. 10670

[1] = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	L192741AA	10/01/2019 15:59	Corie Mellinger	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	L192741AA	10/01/2019 15:58	Corie Mellinger	1
14241	Semi-annual Groundwater BMS	SW-846 8270D	1	19269WAL026	09/30/2019 04:08	Brandon K Cordova	1
11010	8270D BNA Extraction	SW-846 3510C	1	19269WAL026	09/27/2019 09:00	Logan M Brosemer	1

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-14-DW-WC Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 09/21/2019 09:51
Collection Date/Time: 09/20/2019 14:45
SDG#: BMS79-03

ARCADIS U.S., Inc.
ELLE Sample #: GW 1156996
ELLE Group #: 2065288
Matrix: Groundwater

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10603	Alcohols in Water	SW-846 8015D Rev.4, June 2003	1	192670005A	09/24/2019 16:18	Johanna C Kennedy	1
12926	Glycols in Water by 8015C/D	SW-846 8015D Rev.4, June 2003	1	192660045A	09/23/2019 23:30	Donald Brown	1
01743	Aluminum	SW-846 6010D Rev.4, July 2014	1	192671404405	09/25/2019 17:18	Cindy M Gehman	1
07044	Antimony	SW-846 6010D Rev.4, July 2014	1	192671404405	09/25/2019 17:18	Cindy M Gehman	1
07035	Arsenic	SW-846 6010D Rev.4, July 2014	1	192671404405	09/25/2019 17:18	Cindy M Gehman	1
07046	Barium	SW-846 6010D Rev.4, July 2014	1	192671404405	09/25/2019 17:18	Cindy M Gehman	1
07047	Beryllium	SW-846 6010D Rev.4, July 2014	1	192671404405	09/25/2019 17:18	Cindy M Gehman	1
07049	Cadmium	SW-846 6010D Rev.4, July 2014	1	192671404405	09/25/2019 17:18	Cindy M Gehman	1
01750	Calcium	SW-846 6010D Rev.4, July 2014	1	192671404405	09/25/2019 17:57	Cindy M Gehman	5
07051	Chromium	SW-846 6010D Rev.4, July 2014	1	192671404405	09/25/2019 17:18	Cindy M Gehman	1
07052	Cobalt	SW-846 6010D Rev.4, July 2014	1	192671404405	09/29/2019 16:56	Elaine F Stoltzfus	1
07053	Copper	SW-846 6010D Rev.4, July 2014	1	192671404405	09/25/2019 17:57	Cindy M Gehman	5
01754	Iron	SW-846 6010D Rev.4, July 2014	1	192671404405	09/25/2019 17:18	Cindy M Gehman	1
07055	Lead	SW-846 6010D Rev.4, July 2014	1	192671404405	09/30/2019 20:10	Elaine F Stoltzfus	1
01757	Magnesium	SW-846 6010D Rev.4, July 2014	1	192671404405	09/25/2019 17:18	Cindy M Gehman	1
07058	Manganese	SW-846 6010D Rev.4, July 2014	1	192671404405	09/25/2019 17:18	Cindy M Gehman	1
07061	Nickel	SW-846 6010D Rev.4, July 2014	1	192671404405	09/25/2019 17:18	Cindy M Gehman	1
01762	Potassium	SW-846 6010D Rev.4, July 2014	1	192671404405	09/25/2019 17:18	Cindy M Gehman	1
07036	Selenium	SW-846 6010D Rev.4, July 2014	1	192671404405	09/25/2019 17:18	Cindy M Gehman	1
07066	Silver	SW-846 6010D Rev.4, July 2014	1	192671404405	09/29/2019 16:56	Elaine F Stoltzfus	1
01767	Sodium	SW-846 6010D Rev.4, July 2014	1	192671404405	09/25/2019 17:18	Cindy M Gehman	1
07022	Thallium	SW-846 6010D Rev.4, July 2014	1	192671404405	09/25/2019 17:18	Cindy M Gehman	1
07071	Vanadium	SW-846 6010D Rev.4, July 2014	1	192671404405	09/25/2019 17:18	Cindy M Gehman	1
07072	Zinc	SW-846 6010D Rev.4, July 2014	1	192671404405	09/25/2019 17:18	Cindy M Gehman	1
00259	Mercury	SW-846 7470A	1	192670571303	09/25/2019 07:26	Christina Termini	1

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-14-DW-WC Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 09/21/2019 09:51
Collection Date/Time: 09/20/2019 14:45
SDG#: BMS79-03

ARCADIS U.S., Inc.
ELLE Sample #: GW 1156996
ELLE Group #: 2065288
Matrix: Groundwater

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14044	ICP-WW, 3005A (tot rec) - U345	SW-846 3005A	1	192671404405	09/24/2019 15:35	Barbara A Kane	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	192670571303	09/24/2019 17:00	Barbara A Kane	1
01123	Cyanide (Reactivity)	SW-846 9012B	1	19268104201A	09/25/2019 20:45	Gregory Baldree	1
12151	Temperature of pH	SM 2550 B-2010	1	19269121521A	09/26/2019 17:50	Jeremy L Bolf	1
12152	pH	SM 4500-H+ B-2011	1	19269121521A	09/26/2019 17:50	Jeremy L Bolf	1
01122	Sulfide (Reactivity)	SW-846 9034	1	19267112101A	09/24/2019 08:00	Kristen Wroblewski	1
00496	Corrosivity	SW-846 Chapter 7	1	19269121521A	09/26/2019 17:50	Jeremy L Bolf	1
01121	Reactivity	SW-846 Chapter 7.3	1	19267112101A	09/24/2019 08:00	Kristen Wroblewski	1

*=This limit was used in the evaluation of the final result

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
MS793

Lab Name: Lancaster Laboratories Contract:_____
Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____
Matrix: (soil/water) WATER Lab Sample ID: 1156996
Sample wt/vol: 5.0 (g/mL)mL Lab File ID:HP09915.i/19oct01a.b/lc01s14.d
Level: (low/med) LOW Date Received: 09/21/19
% Moisture: not dec. Date Analyzed: 10/01/19
Column: (pack/cap) CAP Dilution Factor: 1.0
CONCENTRATION UNITS:
Number TICs found: 1 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		Unknown	12.74	6	J
2.					
3.	VOCTIC	Total VOC TICs		6	J
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
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14.					
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26.					
27.					
28.					
29.					
30.					

page 1 of 1

FORM I VOA-TIC

1F

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

MS793

Lab Name: Lancaster Laboratories Contract:
Lab Code: LANCAS Case No.: SAS No.: SDG No.:
Matrix: (soil/water) WATER Lab Sample ID: 1156996
Sample wt/vol: 217 (g/mL) mL Lab File ID: ji0917.d
Level: (low/med) LOW Date Received: 09/21/19
% Moisture: Decanted: (Y/N) Date Extracted: 09/27/19
Concentrated Extract Volume: 1000 (uL) Date Analyzed: 09/30/19
Injection Volume: 0.5 (uL) Dilution Factor: 1
GPC Cleanup: N pH: Extraction: Sepf

CONCENTRATION UNITS:
Number TICs found: 15 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		Unknown	3.630	5	J
2.		Unknown	7.612	26	J
3.	10544-50-0	Cyclic octaatomic sulfur	14.496	8	J
4.		Unknown	15.687	5	J
5.		Unknown	16.248	9	J
6.		Unknown	16.604	9	J
7.		Unknown	16.668	5	J
8.		Unknown	16.820	10	J
9.		Unknown	16.884	5	J
10.		Unknown	17.188	6	J
11.		Unknown	17.386	16	J
12.		Unknown	17.497	7	J
13.		Unknown	17.953	16	J
14.		Unknown	18.513	10	J
15.		Unknown	19.249	9	J
16.					
17.	SVOCTIC	Total SVOC TICs		140	J
18.					
19.					
20.					
21.					
22.					
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24.					
25.					
26.					
27.					
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29.					
30.					

page 1 of 1

FORM I SV-1

Sample Description: **BDA-14-COR-WC Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 09/21/2019 09:51
Collection Date/Time: 09/20/2019 14:55
SDG#: BMS79-04

ARCADIS U.S., Inc.
ELLE Sample #: GW 1156997
ELLE Group #: 2065288
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	8 J	20	0.7	1
11997	Acetonitrile	75-05-8	N.D.	100	16	1
11997	Benzene	71-43-2	N.D.	1	0.2	1
11997	Bromochloromethane	74-97-5	N.D.	5	0.2	1
11997	Bromodichloromethane	75-27-4	N.D.	1	0.2	1
11997	Bromoform	75-25-2	N.D.	4	1	1
11997	Bromomethane	74-83-9	N.D.	1	0.3	1
11997	n-Butanol	71-36-3	62 J	250	61	1
11997	2-Butanone	78-93-3	3 J	10	0.3	1
11997	t-Butyl alcohol	75-65-0	N.D.	50	12	1
11997	n-Butylbenzene	104-51-8	N.D.	5	0.2	1
11997	sec-Butylbenzene	135-98-8	N.D.	5	0.2	1
11997	tert-Butylbenzene	98-06-6	N.D.	5	0.3	1
11997	Carbon Disulfide	75-15-0	N.D.	5	0.2	1
11997	Carbon Tetrachloride	56-23-5	N.D.	1	0.2	1
11997	Chlorobenzene	108-90-7	N.D.	1	0.2	1
11997	Chlorodifluoromethane[1]	75-45-6	N.D.	5	2	1
11997	Chloroethane	75-00-3	N.D.	1	0.2	1
11997	Chloroform	67-66-3	N.D.	1	0.2	1
11997	Chloromethane	74-87-3	N.D.	1	0.2	1
11997	Cyclohexane	110-82-7	N.D.	5	1	1
11997	Cyclohexanone[1]	108-94-1	N.D.	100	25	1
11997	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	5	0.3	1
11997	Dibromochloromethane	124-48-1	N.D.	1	0.2	1
11997	1,2-Dibromoethane	106-93-4	N.D.	1	0.2	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	5	0.2	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	5	0.2	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	5	0.2	1
11997	Dichlorodifluoromethane	75-71-8	N.D.	1	0.2	1
11997	1,1-Dichloroethane	75-34-3	N.D.	1	0.2	1
11997	1,2-Dichloroethane	107-06-2	N.D.	1	0.3	1
11997	1,1-Dichloroethene	75-35-4	N.D.	1	0.2	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	1	0.2	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	1	0.2	1
11997	1,2-Dichloropropane	78-87-5	N.D.	1	0.2	1
11997	cis-1,3-Dichloropropene	10061-01-5	N.D.	1	0.2	1
11997	trans-1,3-Dichloropropene	10061-02-6	N.D.	1	0.2	1
11997	1,4-Dioxane	123-91-1	N.D.	250	29	1
11997	Ethyl Acetate	141-78-6	N.D.	5	0.7	1
11997	Ethyl ether	60-29-7	N.D.	5	0.2	1
11997	Ethylbenzene	100-41-4	N.D.	1	0.4	1

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-14-COR-WC Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 09/21/2019 09:51
Collection Date/Time: 09/20/2019 14:55
SDG#: BMS79-04

ARCADIS U.S., Inc.
ELLE Sample #: GW 1156997
ELLE Group #: 2065288
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result		Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		ug/l		ug/l	ug/l	
11997	Freon 113	76-13-1	N.D.		10	0.2	1
11997	n-Heptane[1]	142-82-5	N.D.		5	2	1
11997	n-Hexane[1]	110-54-3	N.D.		5	2	1
11997	2-Hexanone	591-78-6	N.D.		10	0.3	1
11997	Isobutyl Alcohol	78-83-1	N.D.		250	36	1
11997	Isopropylbenzene	98-82-8	N.D.		5	0.2	1
11997	p-Isopropyltoluene	99-87-6	N.D.		5	0.2	1
11997	Methyl Acetate	79-20-9	N.D.		5	0.2	1
11997	Methyl Tertiary Butyl Ether	1634-04-4	N.D.		1	0.2	1
11997	4-Methyl-2-pentanone	108-10-1	N.D.		10	0.5	1
11997	Methylcyclohexane	108-87-2	N.D.		5	0.5	1
11997	Methylene Chloride	75-09-2	N.D.		1	0.3	1
11997	Naphthalene	91-20-3	N.D.		5	1	1
11997	2-Nitropropane	79-46-9	N.D.		10	0.8	1
11997	Styrene	100-42-5	N.D.		5	0.2	1
11997	1,1,2,2-Tetrachloroethane	79-34-5	N.D.		1	0.2	1
11997	Tetrachloroethene	127-18-4	N.D.		1	0.2	1
11997	Tetrahydrofuran	109-99-9	N.D.		10	0.7	1
11997	Toluene	108-88-3	0.2	J	1	0.2	1
11997	1,2,3-Trichlorobenzene	87-61-6	N.D.		5	0.4	1
11997	1,2,4-Trichlorobenzene	120-82-1	N.D.		5	0.3	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.		1	0.3	1
11997	1,1,2-Trichloroethane	79-00-5	N.D.		1	0.2	1
11997	Trichloroethene	79-01-6	N.D.		1	0.2	1
11997	Trichlorofluoromethane	75-69-4	N.D.		1	0.2	1
11997	1,2,4-Trimethylbenzene	95-63-6	N.D.		5	1	1
11997	1,3,5-Trimethylbenzene	108-67-8	N.D.		5	0.3	1
11997	Vinyl Chloride	75-01-4	N.D.		1	0.2	1
11997	m+p-Xylene	179601-23-1	N.D.		5	1	1
11997	o-Xylene	95-47-6	N.D.		1	0.4	1
11997	Xylene (Total)	1330-20-7	N.D.		6	1	1

12027 VOA Interp. Library Search-20
The results from the volatile library search are listed on the attached FORM 1 - VOA-TIC. The qualifiers appearing in the "Q" column are defined at the end of the report.

GC/MS Semivolatiles	**SW-846 8270D**		ug/l		ug/l	ug/l	
14241	Acenaphthene	83-32-9	N.D.		0.57	0.11	1
14241	Acenaphthylene	208-96-8	N.D.		0.57	0.11	1
14241	Acetophenone	98-86-2	N.D.		11	4.5	1
14241	Aniline	62-53-3	N.D.		11	3.4	1

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-14-COR-WC Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 09/21/2019 09:51
Collection Date/Time: 09/20/2019 14:55
SDG#: BMS79-04

ARCADIS U.S., Inc.
ELLE Sample #: GW 1156997
ELLE Group #: 2065288
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	Anthracene	120-12-7	N.D.	0.57	0.11	1
14241	Atrazine	1912-24-9	N.D.	5.7	2.3	1
14241	Benzaldehyde	100-52-7	N.D.	11	3.4	1
14241	Benzo(a)anthracene	56-55-3	N.D.	0.57	0.11	1
14241	Benzo(a)pyrene	50-32-8	N.D.	0.57	0.11	1
14241	Benzo(b)fluoranthene	205-99-2	N.D.	0.57	0.11	1
14241	Benzo(g,h,i)perylene	191-24-2	N.D.	0.57	0.11	1
14241	Benzo(k)fluoranthene	207-08-9	N.D.	0.57	0.11	1
14241	Benzyl alcohol	100-51-6	N.D.	34	11	1
14241	1,1'-Biphenyl	92-52-4	N.D.	11	3.4	1
14241	4-Bromophenyl-phenylether	101-55-3	N.D.	2.3	0.57	1
14241	Butylbenzylphthalate	85-68-7	N.D.	5.7	2.3	1
14241	Di-n-butylphthalate	84-74-2	N.D.	5.7	2.3	1
14241	Caprolactam	105-60-2	N.D.	13	5.7	1
14241	Carbazole	86-74-8	N.D.	2.3	0.57	1
14241	4-Chloro-3-methylphenol	59-50-7	N.D.	2.3	0.57	1
14241	4-Chloroaniline	106-47-8	N.D.	11	4.5	1
14241	bis(2-Chloroethoxy)methane	111-91-1	N.D.	2.3	0.57	1
14241	bis(2-Chloroethyl)ether	111-44-4	N.D.	2.3	0.57	1
14241	bis(2-Chloroisopropyl)ether[1]	39638-32-9	N.D.	2.3	0.57	1
	Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.					
14241	2-Chloronaphthalene	91-58-7	N.D.	1.1	0.45	1
14241	2-Chlorophenol	95-57-8	N.D.	2.3	0.57	1
14241	4-Chlorophenyl-phenylether	7005-72-3	N.D.	2.3	0.57	1
14241	Chrysene	218-01-9	N.D.	0.57	0.11	1
14241	Dibenz(a,h)anthracene	53-70-3	N.D.	0.57	0.11	1
14241	Dibenzofuran	132-64-9	N.D.	2.3	0.57	1
14241	3,3'-Dichlorobenzidine	91-94-1	N.D.	11	3.4	1
14241	2,4-Dichlorophenol	120-83-2	N.D.	2.3	0.57	1
14241	Dicyclohexylamine[1]	101-83-7	N.D.	11	11	1
14241	Diethylphthalate	84-66-2	N.D.	5.7	2.3	1
14241	N,N-Dimethylaniline[1]	121-69-7	N.D.	1.1	0.57	1
14241	2,4-Dimethylphenol	105-67-9	N.D.	11	3.4	1
14241	Dimethylphthalate	131-11-3	N.D.	5.7	2.3	1
14241	4,6-Dinitro-2-methylphenol	534-52-1	N.D.	24	9.1	1
14241	2,4-Dinitrophenol	51-28-5	N.D.	34	16	1
14241	2,4-Dinitrotoluene	121-14-2	N.D.	5.7	1.1	1
14241	2,6-Dinitrotoluene	606-20-2	N.D.	2.3	0.57	1
14241	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	13	5.7	1

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-14-COR-WC Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 09/21/2019 09:51
Collection Date/Time: 09/20/2019 14:55
SDG#: BMS79-04

ARCADIS U.S., Inc.
ELLE Sample #: GW 1156997
ELLE Group #: 2065288
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	Fluoranthene	206-44-0	N.D.	0.57	0.11	1
14241	Fluorene	86-73-7	N.D.	0.57	0.11	1
14241	Hexachlorobenzene	118-74-1	N.D.	0.57	0.11	1
14241	Hexachlorobutadiene	87-68-3	N.D.	2.3	0.57	1
14241	Hexachlorocyclopentadiene	77-47-4	N.D.	13	5.7	1
14241	Hexachloroethane	67-72-1	N.D.	5.7	1.1	1
14241	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.57	0.11	1
14241	Isophorone	78-59-1	N.D.	2.3	0.57	1
14241	2-Methylnaphthalene	91-57-6	0.37 J	0.57	0.11	1
14241	2-Methylphenol	95-48-7	N.D.	2.3	0.57	1
14241	4-Methylphenol	65794-96-9	N.D.	2.3	0.57	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
14241	Naphthalene	91-20-3	N.D.	0.57	0.11	1
14241	2-Nitroaniline	88-74-4	N.D.	8.0	2.3	1
14241	3-Nitroaniline	99-09-2	N.D.	8.0	3.4	1
14241	4-Nitroaniline	100-01-6	N.D.	3.4	1.0	1
14241	Nitrobenzene	98-95-3	N.D.	2.3	0.57	1
14241	2-Nitrophenol	88-75-5	N.D.	11	3.4	1
14241	4-Nitrophenol	100-02-7	N.D.	34	11	1
14241	N-Nitroso-di-n-propylamine	621-64-7	N.D.	3.4	0.80	1
14241	N-Nitrosodiphenylamine	86-30-6	N.D.	3.4	0.80	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.					
14241	Di-n-octylphthalate	117-84-0	N.D.	13	5.7	1
14241	Pentachlorophenol	87-86-5	N.D.	5.7	1.1	1
14241	Phenanthrene	85-01-8	N.D.	0.57	0.11	1
14241	Phenol	108-95-2	N.D.	2.3	0.57	1
14241	Pyrene	129-00-0	N.D.	0.57	0.11	1
14241	Pyridine	110-86-1	N.D.	5.7	2.3	1
14241	1,2,4,5-Tetrachlorobenzene	95-94-3	N.D.	2.3	0.57	1
14241	2,3,4,6-Tetrachlorophenol	58-90-2	N.D.	11	4.5	1
14241	2,4,5-Trichlorophenol	95-95-4	N.D.	2.3	0.57	1
14241	2,4,6-Trichlorophenol	88-06-2	N.D.	2.3	0.57	1
14241	Triethylamine[1]	121-44-8	N.D.	11	11	1

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. Since the recovery is high and the target analyte(s) was not detected in the sample, the data is reported.

00886 SVOA TIC Interpretive(25)

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-14-COR-WC Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 09/21/2019 09:51
Collection Date/Time: 09/20/2019 14:55
SDG#: BMS79-04

ARCADIS U.S., Inc.
ELLE Sample #: GW 1156997
ELLE Group #: 2065288
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
	The results from the semivolatile library search are listed on the attached FORM 1 - SV-TIC. The qualifiers appearing in the "Q" column are defined at the end of the report.					
GC Miscellaneous	**SW-846 8015D Rev.4, June 2003**		**ug/l**	**ug/l**	**ug/l**	
10603	Ethanol	64-17-5	N.D. D2	1,000	150	1
12926	Ethylene glycol[1]	107-21-1	N.D.	10,000	5,000	1
10603	Isopropanol[1]	67-63-0	N.D. D2	1,000	110	1
10603	Methanol	67-56-1	N.D. D2	1,000	220	1
12926	Propylene glycol[1]	57-55-6	N.D.	10,000	2,000	1
Metals	**SW-846 6010D Rev.4, July 2014**		**mg/l**	**mg/l**	**mg/l**	
07044	Antimony	7440-36-0	N.D.	0.0500	0.0160	1
07035	Arsenic	7440-38-2	N.D.	0.0300	0.0160	1
07046	Barium	7440-39-3	0.0636	0.0050	0.0010	1
07047	Beryllium	7440-41-7	N.D.	0.0050	0.0010	1
07049	Cadmium	7440-43-9	N.D.	0.0050	0.0010	1
01750	Calcium	7440-70-2	834	1.00	0.480	5
07051	Chromium	7440-47-3	0.0041 J	0.0150	0.0016	1
07052	Cobalt	7440-48-4	N.D.	0.0050	0.0015	1
07053	Copper	7440-50-8	N.D.	0.100	0.0600	5
01754	Iron	7439-89-6	3.37	0.200	0.0400	1
07055	Lead	7439-92-1	0.0095 J	0.0150	0.0071	1
01757	Magnesium	7439-95-4	23.4	0.100	0.0400	1
07058	Manganese	7439-96-5	0.104	0.0100	0.0030	1
07061	Nickel	7440-02-0	0.0030 J	0.0100	0.0021	1
01762	Potassium	7440-09-7	58.1	0.500	0.204	1
07036	Selenium	7782-49-2	N.D.	0.0500	0.0160	1
07066	Silver	7440-22-4	N.D.	0.0100	0.0050	1
01767	Sodium	7440-23-5	114	1.00	0.239	1
07022	Thallium	7440-28-0	0.0197 JK1K2	0.0300	0.0081	1
	SW-846 6010D Rev.4, July 2014		**ug/l**	**ug/l**	**ug/l**	
01743	Aluminum	7429-90-5	598	300	107	1
07071	Vanadium	7440-62-2	N.D.	10.0	1.9	1
07072	Zinc	7440-66-6	46.4	20.0	3.7	1
	SW-846 7470A		**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	N.D.	0.00020	0.000050	1
Wet Chemistry	**SW-846 9012B**		**mg/kg**	**mg/kg**	**mg/kg**	

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-14-COR-WC Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 09/21/2019 09:51
Collection Date/Time: 09/20/2019 14:55
SDG#: BMS79-04

ARCADIS U.S., Inc.
ELLE Sample #: GW 1156997
ELLE Group #: 2065288
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
Wet Chemistry	**SW-846 9012B**		**mg/kg**	**mg/kg**	**mg/kg**	
01123	Cyanide (Reactivity)	n.a.	N.D.	57.4	19.1	1
Wet Chemistry	**SM 2550 B-2010**		**Degrees C**	**Degrees C**	**Degrees C**	
12151	Temperature of pH[1]	n.a.	19.8	0.010	0.010	1
	SM 4500-H+ B-2011		**Std. Units**	**Std. Units**	**Std. Units**	
12152	pH[1]	n.a.	11.9 J	0.010	0.010	1
	SW-846 9034		**mg/kg**	**mg/kg**	**mg/kg**	
01122	Sulfide (Reactivity)[1]	n.a.	N.D.	160	53.6	1
	SW-846 Chapter 7					
00496	Corrosivity[1]	n.a.	See Below	0	0	1
	The pH of the sample is 11.92 indicating that the sample is not corrosive. A sample is corrosive if it exhibits a pH equal to or less than 2 or equal to or greater than 12.5.					
	SW-846 Chapter 7.3		**see below**	**see below**	**see below**	
01121	Reactivity[1]	n.a.	See Below	0	0	1
	Reactivity: This sample was extracted and analyzed by the interim method described in SW-846 Revision 3, December 1996 - Chapter 7.3. The Interim Guidance for Reactive Cyanide and Reactive Sulfide (SW-846 Sections 7.3.3 and 7.3.4 of Chapter 7 - December 1996) identifies a reactive material as generating more than 250 mg/kg of hydrogen cyanide or 500 mg/kg of hydrogen sulfide. This waste is not considered hazardous due to reactivity based on that standard. These results do not reflect total cyanide or total sulfide. On July 14, 2005, EPA published a rule in the Federal Register that removed the Interim Guidance and the method referenced above. At this time there is no specific guidance or a method to be used to evaluate "Reactivity".					

Sample Comments

State of New York Certification No. 10670

[1] = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	L192741AA	10/01/2019 16:21	Corie Mellinger	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	L192741AA	10/01/2019 16:20	Corie Mellinger	1
14241	Semi-annual Groundwater BMS	SW-846 8270D	1	19269WAL026	09/30/2019 04:38	Brandon K Cordova	1
11010	8270D BNA Extraction	SW-846 3510C	1	19269WAL026	09/27/2019 09:00	Logan M Brosemer	1

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-14-COR-WC Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 09/21/2019 09:51
Collection Date/Time: 09/20/2019 14:55
SDG#: BMS79-04

ARCADIS U.S., Inc.
ELLE Sample #: GW 1156997
ELLE Group #: 2065288
Matrix: Groundwater

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10603	Alcohols in Water	SW-846 8015D Rev.4, June 2003	1	192670005A	09/24/2019 16:35	Johanna C Kennedy	1
12926	Glycols in Water by 8015C/D	SW-846 8015D Rev.4, June 2003	1	192660045A	09/23/2019 23:43	Donald Brown	1
01743	Aluminum	SW-846 6010D Rev.4, July 2014	1	192671404405	09/25/2019 17:27	Cindy M Gehman	1
07044	Antimony	SW-846 6010D Rev.4, July 2014	1	192671404405	09/25/2019 17:27	Cindy M Gehman	1
07035	Arsenic	SW-846 6010D Rev.4, July 2014	1	192671404405	09/25/2019 17:27	Cindy M Gehman	1
07046	Barium	SW-846 6010D Rev.4, July 2014	1	192671404405	09/25/2019 17:27	Cindy M Gehman	1
07047	Beryllium	SW-846 6010D Rev.4, July 2014	1	192671404405	09/25/2019 17:27	Cindy M Gehman	1
07049	Cadmium	SW-846 6010D Rev.4, July 2014	1	192671404405	09/25/2019 17:27	Cindy M Gehman	1
01750	Calcium	SW-846 6010D Rev.4, July 2014	1	192671404405	09/25/2019 18:00	Cindy M Gehman	5
07051	Chromium	SW-846 6010D Rev.4, July 2014	1	192671404405	09/25/2019 17:27	Cindy M Gehman	1
07052	Cobalt	SW-846 6010D Rev.4, July 2014	1	192671404405	09/25/2019 17:27	Cindy M Gehman	1
07053	Copper	SW-846 6010D Rev.4, July 2014	1	192671404405	09/25/2019 18:00	Cindy M Gehman	5
01754	Iron	SW-846 6010D Rev.4, July 2014	1	192671404405	09/25/2019 17:27	Cindy M Gehman	1
07055	Lead	SW-846 6010D Rev.4, July 2014	1	192671404405	09/25/2019 17:27	Cindy M Gehman	1
01757	Magnesium	SW-846 6010D Rev.4, July 2014	1	192671404405	09/25/2019 17:27	Cindy M Gehman	1
07058	Manganese	SW-846 6010D Rev.4, July 2014	1	192671404405	09/25/2019 17:27	Cindy M Gehman	1
07061	Nickel	SW-846 6010D Rev.4, July 2014	1	192671404405	09/25/2019 17:27	Cindy M Gehman	1
01762	Potassium	SW-846 6010D Rev.4, July 2014	1	192671404405	09/25/2019 17:27	Cindy M Gehman	1
07036	Selenium	SW-846 6010D Rev.4, July 2014	1	192671404405	09/25/2019 17:27	Cindy M Gehman	1
07066	Silver	SW-846 6010D Rev.4, July 2014	1	192671404405	09/29/2019 17:00	Elaine F Stoltzfus	1
01767	Sodium	SW-846 6010D Rev.4, July 2014	1	192671404405	09/25/2019 17:27	Cindy M Gehman	1
07022	Thallium	SW-846 6010D Rev.4, July 2014	1	192671404405	09/25/2019 17:27	Cindy M Gehman	1
07071	Vanadium	SW-846 6010D Rev.4, July 2014	1	192671404405	09/25/2019 17:27	Cindy M Gehman	1
07072	Zinc	SW-846 6010D Rev.4, July 2014	1	192671404405	09/25/2019 17:27	Cindy M Gehman	1
00259	Mercury	SW-846 7470A	1	192670571303	09/25/2019 07:20	Christina Termini	1

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-14-COR-WC Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 09/21/2019 09:51
Collection Date/Time: 09/20/2019 14:55
SDG#: BMS79-04

ARCADIS U.S., Inc.
ELLE Sample #: GW 1156997
ELLE Group #: 2065288
Matrix: Groundwater

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14044	ICP-WW, 3005A (tot rec) - U345	SW-846 3005A	1	192671404405	09/24/2019 15:35	Barbara A Kane	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	192670571303	09/24/2019 17:00	Barbara A Kane	1
01123	Cyanide (Reactivity)	SW-846 9012B	1	19268104201A	09/25/2019 20:46	Gregory Baldree	1
12151	Temperature of pH	SM 2550 B-2010	1	19269121521A	09/26/2019 17:50	Jeremy L Bolf	1
12152	pH	SM 4500-H+ B-2011	1	19269121521A	09/26/2019 17:50	Jeremy L Bolf	1
01122	Sulfide (Reactivity)	SW-846 9034	1	19267112101A	09/24/2019 08:00	Kristen Wroblewski	1
00496	Corrosivity	SW-846 Chapter 7	1	19269121521A	09/26/2019 17:50	Jeremy L Bolf	1
01121	Reactivity	SW-846 Chapter 7.3	1	19267112101A	09/24/2019 08:00	Kristen Wroblewski	1

*=This limit was used in the evaluation of the final result

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
MS794

Lab Name: Lancaster Laboratories Contract:_____
Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____
Matrix: (soil/water) WATER Lab Sample ID: 1156997
Sample wt/vol: 5.0 (g/mL)mL Lab File ID:HP09915.i/19oct01a.b/lc01s15.d
Level: (low/med) LOW Date Received: 09/21/19
% Moisture: not dec. Date Analyzed: 10/01/19
Column: (pack/cap) CAP Dilution Factor: 1.0
CONCENTRATION UNITS:
Number TICs found: 0 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	VOCTIC	Total VOC TICs		0	U
2.					
3.					
4.					
5.					
6.					
7.					
8.					
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page 1 of 1

FORM I VOA-TIC

1F

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

MS794

Lab Name: Lancaster Laboratories Contract:
Lab Code: LANCAS Case No.: SAS No.: SDG No.:
Matrix: (soil/water) WATER Lab Sample ID: 1156997
Sample wt/vol: 220 (g/mL) mL Lab File ID: ji0918.d
Level: (low/med) LOW Date Received: 09/21/19
% Moisture: Decanted: (Y/N) Date Extracted: 09/27/19
Concentrated Extract Volume: 1000 (uL) Date Analyzed: 09/30/19
Injection Volume: 0.5 (uL) Dilution Factor: 1
GPC Cleanup: N pH: Extraction: Sepf

CONCENTRATION UNITS:
Number TICs found: 5 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		Unknown	3.629	6	J
2.	111-71-7	Heptanal	6.047	5	J
3.		Unknown	7.612	8	J
4.		Unknown	13.743	7	J
5.		Unknown	15.675	13	J
6.					
7.	SVOCTIC	Total SVOC TICs		38	J
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					
16.					
17.					
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page 1 of 1

FORM I SV-1

Sample Description: **BDA-17-COR-WC Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 09/21/2019 09:51
Collection Date/Time: 09/20/2019 15:55
SDG#: BMS79-05

ARCADIS U.S., Inc.
ELLE Sample #: GW 1156998
ELLE Group #: 2065288
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	12 J	20	0.7	1
11997	Acetonitrile	75-05-8	N.D.	100	16	1
11997	Benzene	71-43-2	N.D.	1	0.2	1
11997	Bromochloromethane	74-97-5	N.D.	5	0.2	1
11997	Bromodichloromethane	75-27-4	N.D.	1	0.2	1
11997	Bromoform	75-25-2	N.D.	4	1	1
11997	Bromomethane	74-83-9	N.D.	1	0.3	1
11997	n-Butanol	71-36-3	69 J	250	61	1
11997	2-Butanone	78-93-3	2 J	10	0.3	1
11997	t-Butyl alcohol	75-65-0	N.D.	50	12	1
11997	n-Butylbenzene	104-51-8	N.D.	5	0.2	1
11997	sec-Butylbenzene	135-98-8	N.D.	5	0.2	1
11997	tert-Butylbenzene	98-06-6	N.D.	5	0.3	1
11997	Carbon Disulfide	75-15-0	N.D.	5	0.2	1
11997	Carbon Tetrachloride	56-23-5	N.D.	1	0.2	1
11997	Chlorobenzene	108-90-7	N.D.	1	0.2	1
11997	Chlorodifluoromethane[1]	75-45-6	N.D.	5	2	1
11997	Chloroethane	75-00-3	N.D.	1	0.2	1
11997	Chloroform	67-66-3	N.D.	1	0.2	1
11997	Chloromethane	74-87-3	N.D.	1	0.2	1
11997	Cyclohexane	110-82-7	N.D.	5	1	1
11997	Cyclohexanone[1]	108-94-1	N.D.	100	25	1
11997	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	5	0.3	1
11997	Dibromochloromethane	124-48-1	N.D.	1	0.2	1
11997	1,2-Dibromoethane	106-93-4	N.D.	1	0.2	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	5	0.2	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	5	0.2	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	5	0.2	1
11997	Dichlorodifluoromethane	75-71-8	N.D.	1	0.2	1
11997	1,1-Dichloroethane	75-34-3	N.D.	1	0.2	1
11997	1,2-Dichloroethane	107-06-2	N.D.	1	0.3	1
11997	1,1-Dichloroethene	75-35-4	N.D.	1	0.2	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	1	0.2	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	1	0.2	1
11997	1,2-Dichloropropane	78-87-5	N.D.	1	0.2	1
11997	cis-1,3-Dichloropropene	10061-01-5	N.D.	1	0.2	1
11997	trans-1,3-Dichloropropene	10061-02-6	N.D.	1	0.2	1
11997	1,4-Dioxane	123-91-1	N.D.	250	29	1
11997	Ethyl Acetate	141-78-6	N.D.	5	0.7	1
11997	Ethyl ether	60-29-7	N.D.	5	0.2	1
11997	Ethylbenzene	100-41-4	N.D.	1	0.4	1

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-17-COR-WC Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 09/21/2019 09:51
Collection Date/Time: 09/20/2019 15:55
SDG#: BMS79-05

ARCADIS U.S., Inc.
ELLE Sample #: GW 1156998
ELLE Group #: 2065288
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Freon 113	76-13-1	N.D.	10	0.2	1
11997	n-Heptane[1]	142-82-5	N.D.	5	2	1
11997	n-Hexane[1]	110-54-3	N.D.	5	2	1
11997	2-Hexanone	591-78-6	N.D.	10	0.3	1
11997	Isobutyl Alcohol	78-83-1	N.D.	250	36	1
11997	Isopropylbenzene	98-82-8	N.D.	5	0.2	1
11997	p-Isopropyltoluene	99-87-6	N.D.	5	0.2	1
11997	Methyl Acetate	79-20-9	N.D.	5	0.2	1
11997	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	1	0.2	1
11997	4-Methyl-2-pentanone	108-10-1	N.D.	10	0.5	1
11997	Methylcyclohexane	108-87-2	N.D.	5	0.5	1
11997	Methylene Chloride	75-09-2	4	1	0.3	1
11997	Naphthalene	91-20-3	N.D.	5	1	1
11997	2-Nitropropane	79-46-9	N.D.	10	0.8	1
11997	Styrene	100-42-5	N.D.	5	0.2	1
11997	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	1	0.2	1
11997	Tetrachloroethene	127-18-4	N.D.	1	0.2	1
11997	Tetrahydrofuran	109-99-9	N.D.	10	0.7	1
11997	Toluene	108-88-3	3	1	0.2	1
11997	1,2,3-Trichlorobenzene	87-61-6	N.D.	5	0.4	1
11997	1,2,4-Trichlorobenzene	120-82-1	N.D.	5	0.3	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	1	0.3	1
11997	1,1,2-Trichloroethane	79-00-5	N.D.	1	0.2	1
11997	Trichloroethene	79-01-6	0.8 J	1	0.2	1
11997	Trichlorofluoromethane	75-69-4	N.D.	1	0.2	1
11997	1,2,4-Trimethylbenzene	95-63-6	N.D.	5	1	1
11997	1,3,5-Trimethylbenzene	108-67-8	N.D.	5	0.3	1
11997	Vinyl Chloride	75-01-4	N.D.	1	0.2	1
11997	m+p-Xylene	179601-23-1	N.D.	5	1	1
11997	o-Xylene	95-47-6	N.D.	1	0.4	1
11997	Xylene (Total)	1330-20-7	N.D.	6	1	1

12027 VOA Interp. Library Search-20

The results from the volatile library search are listed on the attached FORM 1 - VOA-TIC. The qualifiers appearing in the "Q" column are defined at the end of the report.

GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	Acenaphthene	83-32-9	N.D.	0.53	0.11	1
14241	Acenaphthylene	208-96-8	N.D.	0.53	0.11	1
14241	Acetophenone	98-86-2	N.D.	11	4.3	1
14241	Aniline	62-53-3	N.D.	11	3.2	1

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-17-COR-WC Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 09/21/2019 09:51
Collection Date/Time: 09/20/2019 15:55
SDG#: BMS79-05

ARCADIS U.S., Inc.
ELLE Sample #: GW 1156998
ELLE Group #: 2065288
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	Anthracene	120-12-7	N.D.	0.53	0.11	1
14241	Atrazine	1912-24-9	N.D.	5.3	2.1	1
14241	Benzaldehyde	100-52-7	N.D.	11	3.2	1
14241	Benzo(a)anthracene	56-55-3	N.D.	0.53	0.11	1
14241	Benzo(a)pyrene	50-32-8	N.D.	0.53	0.11	1
14241	Benzo(b)fluoranthene	205-99-2	N.D.	0.53	0.11	1
14241	Benzo(g,h,i)perylene	191-24-2	N.D.	0.53	0.11	1
14241	Benzo(k)fluoranthene	207-08-9	N.D.	0.53	0.11	1
14241	Benzyl alcohol	100-51-6	N.D.	32	11	1
14241	1,1'-Biphenyl	92-52-4	N.D.	11	3.2	1
14241	4-Bromophenyl-phenylether	101-55-3	N.D.	2.1	0.53	1
14241	Butylbenzylphthalate	85-68-7	N.D.	5.3	2.1	1
14241	Di-n-butylphthalate	84-74-2	N.D.	5.3	2.1	1
14241	Caprolactam	105-60-2	N.D.	12	5.3	1
14241	Carbazole	86-74-8	N.D.	2.1	0.53	1
14241	4-Chloro-3-methylphenol	59-50-7	N.D.	2.1	0.53	1
14241	4-Chloroaniline	106-47-8	N.D.	11	4.3	1
14241	bis(2-Chloroethoxy)methane	111-91-1	N.D.	2.1	0.53	1
14241	bis(2-Chloroethyl)ether	111-44-4	N.D.	2.1	0.53	1
14241	bis(2-Chloroisopropyl)ether[1]	39638-32-9	N.D.	2.1	0.53	1
	Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.					
14241	2-Chloronaphthalene	91-58-7	N.D.	1.1	0.43	1
14241	2-Chlorophenol	95-57-8	N.D.	2.1	0.53	1
14241	4-Chlorophenyl-phenylether	7005-72-3	N.D.	2.1	0.53	1
14241	Chrysene	218-01-9	N.D.	0.53	0.11	1
14241	Dibenz(a,h)anthracene	53-70-3	N.D.	0.53	0.11	1
14241	Dibenzofuran	132-64-9	N.D.	2.1	0.53	1
14241	3,3'-Dichlorobenzidine	91-94-1	N.D.	11	3.2	1
14241	2,4-Dichlorophenol	120-83-2	N.D.	2.1	0.53	1
14241	Dicyclohexylamine[1]	101-83-7	N.D.	11	11	1
14241	Diethylphthalate	84-66-2	N.D.	5.3	2.1	1
14241	N,N-Dimethylaniline[1]	121-69-7	N.D.	1.1	0.53	1
14241	2,4-Dimethylphenol	105-67-9	N.D.	11	3.2	1
14241	Dimethylphthalate	131-11-3	N.D.	5.3	2.1	1
14241	4,6-Dinitro-2-methylphenol	534-52-1	N.D.	22	8.5	1
14241	2,4-Dinitrophenol	51-28-5	N.D.	32	15	1
14241	2,4-Dinitrotoluene	121-14-2	N.D.	5.3	1.1	1
14241	2,6-Dinitrotoluene	606-20-2	N.D.	2.1	0.53	1
14241	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	12	5.3	1

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-17-COR-WC Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 09/21/2019 09:51
Collection Date/Time: 09/20/2019 15:55
SDG#: BMS79-05

ARCADIS U.S., Inc.
ELLE Sample #: GW 1156998
ELLE Group #: 2065288
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	Fluoranthene	206-44-0	N.D.	0.53	0.11	1
14241	Fluorene	86-73-7	N.D.	0.53	0.11	1
14241	Hexachlorobenzene	118-74-1	N.D.	0.53	0.11	1
14241	Hexachlorobutadiene	87-68-3	N.D.	2.1	0.53	1
14241	Hexachlorocyclopentadiene	77-47-4	N.D.	12	5.3	1
14241	Hexachloroethane	67-72-1	N.D.	5.3	1.1	1
14241	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.53	0.11	1
14241	Isophorone	78-59-1	N.D.	2.1	0.53	1
14241	2-Methylnaphthalene	91-57-6	2.1	0.53	0.11	1
14241	2-Methylphenol	95-48-7	N.D.	2.1	0.53	1
14241	4-Methylphenol	65794-96-9	N.D.	2.1	0.53	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
14241	Naphthalene	91-20-3	N.D.	0.53	0.11	1
14241	2-Nitroaniline	88-74-4	N.D.	7.4	2.1	1
14241	3-Nitroaniline	99-09-2	N.D.	7.4	3.2	1
14241	4-Nitroaniline	100-01-6	N.D.	3.2	0.96	1
14241	Nitrobenzene	98-95-3	N.D.	2.1	0.53	1
14241	2-Nitrophenol	88-75-5	N.D.	11	3.2	1
14241	4-Nitrophenol	100-02-7	N.D.	32	11	1
14241	N-Nitroso-di-n-propylamine	621-64-7	N.D.	3.2	0.74	1
14241	N-Nitrosodiphenylamine	86-30-6	N.D.	3.2	0.74	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.					
14241	Di-n-octylphthalate	117-84-0	N.D.	12	5.3	1
14241	Pentachlorophenol	87-86-5	N.D.	5.3	1.1	1
14241	Phenanthrene	85-01-8	N.D.	0.53	0.11	1
14241	Phenol	108-95-2	N.D.	2.1	0.53	1
14241	Pyrene	129-00-0	N.D.	0.53	0.11	1
14241	Pyridine	110-86-1	N.D.	5.3	2.1	1
14241	1,2,4,5-Tetrachlorobenzene	95-94-3	N.D.	2.1	0.53	1
14241	2,3,4,6-Tetrachlorophenol	58-90-2	N.D.	11	4.3	1
14241	2,4,5-Trichlorophenol	95-95-4	N.D.	2.1	0.53	1
14241	2,4,6-Trichlorophenol	88-06-2	N.D.	2.1	0.53	1
14241	Triethylamine[1]	121-44-8	N.D.	11	11	1

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. Since the recovery is high and the target analyte(s) was not detected in the sample, the data is reported.

00886 SVOA TIC Interpretive(25)

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-17-COR-WC Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 09/21/2019 09:51
Collection Date/Time: 09/20/2019 15:55
SDG#: BMS79-05

ARCADIS U.S., Inc.
ELLE Sample #: GW 1156998
ELLE Group #: 2065288
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
	The results from the semivolatile library search are listed on the attached FORM 1 - SV-TIC. The qualifiers appearing in the "Q" column are defined at the end of the report.					
GC Miscellaneous	**SW-846 8015D Rev.4, June 2003**		**ug/l**	**ug/l**	**ug/l**	
10603	Ethanol	64-17-5	N.D. D2	1,000	150	1
12926	Ethylene glycol[1]	107-21-1	N.D.	10,000	5,000	1
10603	Isopropanol[1]	67-63-0	N.D. D2	1,000	110	1
10603	Methanol	67-56-1	N.D. D2	1,000	220	1
12926	Propylene glycol[1]	57-55-6	N.D.	10,000	2,000	1
Metals	**SW-846 6010D Rev.4, July 2014**		**mg/l**	**mg/l**	**mg/l**	
07044	Antimony	7440-36-0	N.D.	0.0500	0.0160	1
07035	Arsenic	7440-38-2	N.D.	0.0300	0.0160	1
07046	Barium	7440-39-3	0.577	0.0050	0.0010	1
07047	Beryllium	7440-41-7	N.D.	0.0050	0.0010	1
07049	Cadmium	7440-43-9	N.D.	0.0050	0.0010	1
01750	Calcium	7440-70-2	950	1.00	0.480	5
07051	Chromium	7440-47-3	0.0240	0.0150	0.0016	1
07052	Cobalt	7440-48-4	0.0045 J	0.0050	0.0015	1
07053	Copper	7440-50-8	N.D.	0.100	0.0600	5
01754	Iron	7439-89-6	7.37	0.200	0.0400	1
07055	Lead	7439-92-1	0.0110 JK2	0.0150	0.0071	1
01757	Magnesium	7439-95-4	5.04	0.100	0.0400	1
07058	Manganese	7439-96-5	0.113	0.0100	0.0030	1
07061	Nickel	7440-02-0	0.0056 J	0.0100	0.0021	1
01762	Potassium	7440-09-7	151	0.500	0.204	1
07036	Selenium	7782-49-2	N.D.	0.0500	0.0160	1
07066	Silver	7440-22-4	N.D.	0.0100	0.0050	1
01767	Sodium	7440-23-5	226	1.00	0.239	1
07022	Thallium	7440-28-0	0.0133 JK1K2	0.0300	0.0081	1
	SW-846 6010D Rev.4, July 2014		**ug/l**	**ug/l**	**ug/l**	
01743	Aluminum	7429-90-5	5,560	300	107	1
07071	Vanadium	7440-62-2	8.2 J	10.0	1.9	1
07072	Zinc	7440-66-6	30.1	20.0	3.7	1
	SW-846 7470A		**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	N.D.	0.00020	0.000050	1
Wet Chemistry	**SW-846 9012B**		**mg/kg**	**mg/kg**	**mg/kg**	

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-17-COR-WC Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 09/21/2019 09:51
Collection Date/Time: 09/20/2019 15:55
SDG#: BMS79-05

ARCADIS U.S., Inc.
ELLE Sample #: GW 1156998
ELLE Group #: 2065288
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
Wet Chemistry	**SW-846 9012B**		**mg/kg**	**mg/kg**	**mg/kg**	
01123	Cyanide (Reactivity)	n.a.	N.D.	58.4	19.5	1
Wet Chemistry	**SM 2550 B-2010**		**Degrees C**	**Degrees C**	**Degrees C**	
12151	Temperature of pH[1]	n.a.	19.9	0.010	0.010	1
	SM 4500-H+ B-2011		**Std. Units**	**Std. Units**	**Std. Units**	
12152	pH[1]	n.a.	12.3 J	0.010	0.010	1
	SW-846 9034		**mg/kg**	**mg/kg**	**mg/kg**	
01122	Sulfide (Reactivity)[1]	n.a.	N.D.	160	53.6	1
	SW-846 Chapter 7					
00496	Corrosivity[1]	n.a.	See Below	0	0	1
	The pH of the sample is 12.25 indicating that the sample is not corrosive. A sample is corrosive if it exhibits a pH equal to or less than 2 or equal to or greater than 12.5.					
	SW-846 Chapter 7.3		**see below**	**see below**	**see below**	
01121	Reactivity[1]	n.a.	See Below	0	0	1
	Reactivity: This sample was extracted and analyzed by the interim method described in SW-846 Revision 3, December 1996 - Chapter 7.3. The Interim Guidance for Reactive Cyanide and Reactive Sulfide (SW-846 Sections 7.3.3 and 7.3.4 of Chapter 7 - December 1996) identifies a reactive material as generating more than 250 mg/kg of hydrogen cyanide or 500 mg/kg of hydrogen sulfide. This waste is not considered hazardous due to reactivity based on that standard. These results do not reflect total cyanide or total sulfide. On July 14, 2005, EPA published a rule in the Federal Register that removed the Interim Guidance and the method referenced above. At this time there is no specific guidance or a method to be used to evaluate "Reactivity".					

Sample Comments

State of New York Certification No. 10670

[1] = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	L192741AA	10/01/2019 16:43	Corie Mellinger	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	L192741AA	10/01/2019 16:42	Corie Mellinger	1
14241	Semi-annual Groundwater BMS	SW-846 8270D	1	19269WAL026	09/30/2019 05:08	Brandon K Cordova	1
11010	8270D BNA Extraction	SW-846 3510C	1	19269WAL026	09/27/2019 09:00	Logan M Brosemer	1

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-17-COR-WC Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 09/21/2019 09:51
Collection Date/Time: 09/20/2019 15:55
SDG#: BMS79-05

ARCADIS U.S., Inc.
ELLE Sample #: GW 1156998
ELLE Group #: 2065288
Matrix: Groundwater

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10603	Alcohols in Water	SW-846 8015D Rev.4, June 2003	1	192670005A	09/24/2019 16:51	Johanna C Kennedy	1
12926	Glycols in Water by 8015C/D	SW-846 8015D Rev.4, June 2003	1	192660045A	09/23/2019 23:56	Donald Brown	1
01743	Aluminum	SW-846 6010D Rev.4, July 2014	1	192671404405	09/25/2019 17:31	Cindy M Gehman	1
07044	Antimony	SW-846 6010D Rev.4, July 2014	1	192671404405	09/25/2019 17:31	Cindy M Gehman	1
07035	Arsenic	SW-846 6010D Rev.4, July 2014	1	192671404405	09/25/2019 17:31	Cindy M Gehman	1
07046	Barium	SW-846 6010D Rev.4, July 2014	1	192671404405	09/25/2019 17:31	Cindy M Gehman	1
07047	Beryllium	SW-846 6010D Rev.4, July 2014	1	192671404405	09/25/2019 17:31	Cindy M Gehman	1
07049	Cadmium	SW-846 6010D Rev.4, July 2014	1	192671404405	09/25/2019 17:31	Cindy M Gehman	1
01750	Calcium	SW-846 6010D Rev.4, July 2014	1	192671404405	09/25/2019 18:03	Cindy M Gehman	5
07051	Chromium	SW-846 6010D Rev.4, July 2014	1	192671404405	09/25/2019 17:31	Cindy M Gehman	1
07052	Cobalt	SW-846 6010D Rev.4, July 2014	1	192671404405	09/25/2019 17:31	Cindy M Gehman	1
07053	Copper	SW-846 6010D Rev.4, July 2014	1	192671404405	09/25/2019 18:03	Cindy M Gehman	5
01754	Iron	SW-846 6010D Rev.4, July 2014	1	192671404405	09/25/2019 17:31	Cindy M Gehman	1
07055	Lead	SW-846 6010D Rev.4, July 2014	1	192671404405	09/29/2019 17:03	Elaine F Stoltzfus	1
01757	Magnesium	SW-846 6010D Rev.4, July 2014	1	192671404405	09/25/2019 17:31	Cindy M Gehman	1
07058	Manganese	SW-846 6010D Rev.4, July 2014	1	192671404405	09/25/2019 17:31	Cindy M Gehman	1
07061	Nickel	SW-846 6010D Rev.4, July 2014	1	192671404405	09/25/2019 17:31	Cindy M Gehman	1
01762	Potassium	SW-846 6010D Rev.4, July 2014	1	192671404405	09/25/2019 17:31	Cindy M Gehman	1
07036	Selenium	SW-846 6010D Rev.4, July 2014	1	192671404405	09/25/2019 17:31	Cindy M Gehman	1
07066	Silver	SW-846 6010D Rev.4, July 2014	1	192671404405	09/29/2019 17:03	Elaine F Stoltzfus	1
01767	Sodium	SW-846 6010D Rev.4, July 2014	1	192671404405	09/25/2019 17:31	Cindy M Gehman	1
07022	Thallium	SW-846 6010D Rev.4, July 2014	1	192671404405	09/25/2019 17:31	Cindy M Gehman	1
07071	Vanadium	SW-846 6010D Rev.4, July 2014	1	192671404405	09/25/2019 17:31	Cindy M Gehman	1
07072	Zinc	SW-846 6010D Rev.4, July 2014	1	192671404405	09/25/2019 17:31	Cindy M Gehman	1
00259	Mercury	SW-846 7470A	1	192670571303	09/25/2019 07:16	Christina Termini	1

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-17-COR-WC Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 09/21/2019 09:51
Collection Date/Time: 09/20/2019 15:55
SDG#: BMS79-05

ARCADIS U.S., Inc.
ELLE Sample #: GW 1156998
ELLE Group #: 2065288
Matrix: Groundwater

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14044	ICP-WW, 3005A (tot rec) - U345	SW-846 3005A	1	192671404405	09/24/2019 15:35	Barbara A Kane	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	192670571303	09/24/2019 17:00	Barbara A Kane	1
01123	Cyanide (Reactivity)	SW-846 9012B	1	19268104201A	09/25/2019 20:48	Gregory Baldree	1
12151	Temperature of pH	SM 2550 B-2010	1	19269121521A	09/26/2019 17:50	Jeremy L Bolf	1
12152	pH	SM 4500-H+ B-2011	1	19269121521A	09/26/2019 17:50	Jeremy L Bolf	1
01122	Sulfide (Reactivity)	SW-846 9034	1	19267112101A	09/24/2019 08:00	Kristen Wroblewski	1
00496	Corrosivity	SW-846 Chapter 7	1	19269121521A	09/26/2019 17:50	Jeremy L Bolf	1
01121	Reactivity	SW-846 Chapter 7.3	1	19267112101A	09/24/2019 08:00	Kristen Wroblewski	1

*=This limit was used in the evaluation of the final result

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
MS795

Lab Name: Lancaster Laboratories Contract:_____
Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____
Matrix: (soil/water) WATER Lab Sample ID: 1156998
Sample wt/vol: 5.0 (g/mL)mL Lab File ID:HP09915.i/19oct01a.b/lc01s16.d
Level: (low/med) LOW Date Received: 09/21/19
% Moisture: not dec. Date Analyzed: 10/01/19
Column: (pack/cap) CAP Dilution Factor: 1.0
CONCENTRATION UNITS:
Number TICs found: 0 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	VOCTIC	Total VOC TICs		0	U
2.					
3.					
4.					
5.					
6.					
7.					
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9.					
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27.					
28.					
29.					
30.					

page 1 of 1

FORM I VOA-TIC

1F

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

MS795

Lab Name: Lancaster Laboratories Contract:
Lab Code: LANCAS Case No.: SAS No.: SDG No.:
Matrix: (soil/water) WATER Lab Sample ID: 1156998
Sample wt/vol: 235 (g/mL) mL Lab File ID: ji0919.d
Level: (low/med) LOW Date Received: 09/21/19
% Moisture: Decanted: (Y/N) Date Extracted: 09/27/19
Concentrated Extract Volume: 1000 (uL) Date Analyzed: 09/30/19
Injection Volume: 0.5 (uL) Dilution Factor: 1
GPC Cleanup: N pH: Extraction: Sepf

CONCENTRATION UNITS:
Number TICs found: 7 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	1.98-01-1	Furfural	4.996	7	J
2.		Unknown	5.720	6	J
3.		Unknown	7.612	11	J
4.	4.54-11-5	Pyridine, 3-(1-methyl-2-pyrr	10.467	5	J
5.	3622-84-2	Benzenesulfonamide, N-butyl-	13.013	33	J
6.	1678-25-7	Benzenesulfonanilide	14.198	6	J
7.		Unknown	15.675	8	J
8.					
9.	SVOCTIC	Total SVOC TICs		76	J
10.					
11.					
12.					
13.					
14.					
15.					
16.					
17.					
18.					
19.					
20.					
21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

Sample Description: **BDA-17-DW-WC Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 09/21/2019 09:51
Collection Date/Time: 09/20/2019 16:10
SDG#: BMS79-06

ARCADIS U.S., Inc.
ELLE Sample #: GW 1156999
ELLE Group #: 2065288
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	11 J	20	0.7	1
11997	Acetonitrile	75-05-8	N.D.	100	16	1
11997	Benzene	71-43-2	N.D.	1	0.2	1
11997	Bromochloromethane	74-97-5	N.D.	5	0.2	1
11997	Bromodichloromethane	75-27-4	N.D.	1	0.2	1
11997	Bromoform	75-25-2	N.D.	4	1	1
11997	Bromomethane	74-83-9	N.D.	1	0.3	1
11997	n-Butanol	71-36-3	N.D.	250	61	1
11997	2-Butanone	78-93-3	2 J	10	0.3	1
11997	t-Butyl alcohol	75-65-0	N.D.	50	12	1
11997	n-Butylbenzene	104-51-8	N.D.	5	0.2	1
11997	sec-Butylbenzene	135-98-8	N.D.	5	0.2	1
11997	tert-Butylbenzene	98-06-6	N.D.	5	0.3	1
11997	Carbon Disulfide	75-15-0	N.D.	5	0.2	1
11997	Carbon Tetrachloride	56-23-5	N.D.	1	0.2	1
11997	Chlorobenzene	108-90-7	N.D.	1	0.2	1
11997	Chlorodifluoromethane[1]	75-45-6	N.D.	5	2	1
11997	Chloroethane	75-00-3	N.D.	1	0.2	1
11997	Chloroform	67-66-3	N.D.	1	0.2	1
11997	Chloromethane	74-87-3	N.D.	1	0.2	1
11997	Cyclohexane	110-82-7	N.D.	5	1	1
11997	Cyclohexanone[1]	108-94-1	N.D.	100	25	1
11997	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	5	0.3	1
11997	Dibromochloromethane	124-48-1	N.D.	1	0.2	1
11997	1,2-Dibromoethane	106-93-4	N.D.	1	0.2	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	5	0.2	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	5	0.2	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	5	0.2	1
11997	Dichlorodifluoromethane	75-71-8	N.D.	1	0.2	1
11997	1,1-Dichloroethane	75-34-3	N.D.	1	0.2	1
11997	1,2-Dichloroethane	107-06-2	N.D.	1	0.3	1
11997	1,1-Dichloroethene	75-35-4	N.D.	1	0.2	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	1	0.2	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	1	0.2	1
11997	1,2-Dichloropropane	78-87-5	N.D.	1	0.2	1
11997	cis-1,3-Dichloropropene	10061-01-5	N.D.	1	0.2	1
11997	trans-1,3-Dichloropropene	10061-02-6	N.D.	1	0.2	1
11997	1,4-Dioxane	123-91-1	N.D.	250	29	1
11997	Ethyl Acetate	141-78-6	N.D.	5	0.7	1
11997	Ethyl ether	60-29-7	N.D.	5	0.2	1
11997	Ethylbenzene	100-41-4	N.D.	1	0.4	1

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-17-DW-WC Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 09/21/2019 09:51
Collection Date/Time: 09/20/2019 16:10
SDG#: BMS79-06

ARCADIS U.S., Inc.
ELLE Sample #: GW 1156999
ELLE Group #: 2065288
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Freon 113	76-13-1	N.D.	10	0.2	1
11997	n-Heptane[1]	142-82-5	N.D.	5	2	1
11997	n-Hexane[1]	110-54-3	N.D.	5	2	1
11997	2-Hexanone	591-78-6	N.D.	10	0.3	1
11997	Isobutyl Alcohol	78-83-1	N.D.	250	36	1
11997	Isopropylbenzene	98-82-8	N.D.	5	0.2	1
11997	p-Isopropyltoluene	99-87-6	N.D.	5	0.2	1
11997	Methyl Acetate	79-20-9	N.D.	5	0.2	1
11997	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	1	0.2	1
11997	4-Methyl-2-pentanone	108-10-1	N.D.	10	0.5	1
11997	Methylcyclohexane	108-87-2	N.D.	5	0.5	1
11997	Methylene Chloride	75-09-2	N.D.	1	0.3	1
11997	Naphthalene	91-20-3	N.D.	5	1	1
11997	2-Nitropropane	79-46-9	N.D.	10	0.8	1
11997	Styrene	100-42-5	N.D.	5	0.2	1
11997	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	1	0.2	1
11997	Tetrachloroethene	127-18-4	N.D.	1	0.2	1
11997	Tetrahydrofuran	109-99-9	N.D.	10	0.7	1
11997	Toluene	108-88-3	N.D.	1	0.2	1
11997	1,2,3-Trichlorobenzene	87-61-6	N.D.	5	0.4	1
11997	1,2,4-Trichlorobenzene	120-82-1	N.D.	5	0.3	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	1	0.3	1
11997	1,1,2-Trichloroethane	79-00-5	N.D.	1	0.2	1
11997	Trichloroethene	79-01-6	N.D.	1	0.2	1
11997	Trichlorofluoromethane	75-69-4	N.D.	1	0.2	1
11997	1,2,4-Trimethylbenzene	95-63-6	N.D.	5	1	1
11997	1,3,5-Trimethylbenzene	108-67-8	N.D.	5	0.3	1
11997	Vinyl Chloride	75-01-4	N.D.	1	0.2	1
11997	m+p-Xylene	179601-23-1	N.D.	5	1	1
11997	o-Xylene	95-47-6	N.D.	1	0.4	1
11997	Xylene (Total)	1330-20-7	N.D.	6	1	1

12027 VOA Interp. Library Search-20

The results from the volatile library search are listed on the attached FORM 1 - VOA-TIC. The qualifiers appearing in the "Q" column are defined at the end of the report.

GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	Acenaphthene	83-32-9	N.D.	0.56	0.11	1
14241	Acenaphthylene	208-96-8	N.D.	0.56	0.11	1
14241	Acetophenone	98-86-2	N.D.	11	4.5	1
14241	Aniline	62-53-3	N.D.	11	3.4	1

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-17-DW-WC Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 09/21/2019 09:51
Collection Date/Time: 09/20/2019 16:10
SDG#: BMS79-06

ARCADIS U.S., Inc.
ELLE Sample #: GW 1156999
ELLE Group #: 2065288
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	Anthracene	120-12-7	N.D.	0.56	0.11	1
14241	Atrazine	1912-24-9	N.D.	5.6	2.2	1
14241	Benzaldehyde	100-52-7	N.D.	11	3.4	1
14241	Benzo(a)anthracene	56-55-3	N.D.	0.56	0.11	1
14241	Benzo(a)pyrene	50-32-8	N.D.	0.56	0.11	1
14241	Benzo(b)fluoranthene	205-99-2	N.D.	0.56	0.11	1
14241	Benzo(g,h,i)perylene	191-24-2	N.D.	0.56	0.11	1
14241	Benzo(k)fluoranthene	207-08-9	N.D.	0.56	0.11	1
14241	Benzyl alcohol	100-51-6	N.D.	34	11	1
14241	1,1'-Biphenyl	92-52-4	N.D.	11	3.4	1
14241	4-Bromophenyl-phenylether	101-55-3	N.D.	2.2	0.56	1
14241	Butylbenzylphthalate	85-68-7	N.D.	5.6	2.2	1
14241	Di-n-butylphthalate	84-74-2	N.D.	5.6	2.2	1
14241	Caprolactam	105-60-2	N.D.	12	5.6	1
14241	Carbazole	86-74-8	N.D.	2.2	0.56	1
14241	4-Chloro-3-methylphenol	59-50-7	N.D.	2.2	0.56	1
14241	4-Chloroaniline	106-47-8	N.D.	11	4.5	1
14241	bis(2-Chloroethoxy)methane	111-91-1	N.D.	2.2	0.56	1
14241	bis(2-Chloroethyl)ether	111-44-4	N.D.	2.2	0.56	1
14241	bis(2-Chloroisopropyl)ether[1]	39638-32-9	N.D.	2.2	0.56	1
	Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.					
14241	2-Chloronaphthalene	91-58-7	N.D.	1.1	0.45	1
14241	2-Chlorophenol	95-57-8	N.D.	2.2	0.56	1
14241	4-Chlorophenyl-phenylether	7005-72-3	N.D.	2.2	0.56	1
14241	Chrysene	218-01-9	N.D.	0.56	0.11	1
14241	Dibenz(a,h)anthracene	53-70-3	N.D.	0.56	0.11	1
14241	Dibenzofuran	132-64-9	N.D.	2.2	0.56	1
14241	3,3'-Dichlorobenzidine	91-94-1	N.D.	11	3.4	1
14241	2,4-Dichlorophenol	120-83-2	N.D.	2.2	0.56	1
14241	Dicyclohexylamine[1]	101-83-7	N.D.	11	11	1
14241	Diethylphthalate	84-66-2	N.D.	5.6	2.2	1
14241	N,N-Dimethylaniline[1]	121-69-7	N.D.	1.1	0.56	1
14241	2,4-Dimethylphenol	105-67-9	N.D.	11	3.4	1
14241	Dimethylphthalate	131-11-3	N.D.	5.6	2.2	1
14241	4,6-Dinitro-2-methylphenol	534-52-1	N.D.	24	9.0	1
14241	2,4-Dinitrophenol	51-28-5	N.D.	34	16	1
14241	2,4-Dinitrotoluene	121-14-2	N.D.	5.6	1.1	1
14241	2,6-Dinitrotoluene	606-20-2	N.D.	2.2	0.56	1
14241	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	12	5.6	1

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-17-DW-WC Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 09/21/2019 09:51
Collection Date/Time: 09/20/2019 16:10
SDG#: BMS79-06

ARCADIS U.S., Inc.
ELLE Sample #: GW 1156999
ELLE Group #: 2065288
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	Fluoranthene	206-44-0	N.D.	0.56	0.11	1
14241	Fluorene	86-73-7	N.D.	0.56	0.11	1
14241	Hexachlorobenzene	118-74-1	N.D.	0.56	0.11	1
14241	Hexachlorobutadiene	87-68-3	N.D.	2.2	0.56	1
14241	Hexachlorocyclopentadiene	77-47-4	N.D.	12	5.6	1
14241	Hexachloroethane	67-72-1	N.D.	5.6	1.1	1
14241	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.56	0.11	1
14241	Isophorone	78-59-1	N.D.	2.2	0.56	1
14241	2-Methylnaphthalene	91-57-6	0.76	0.56	0.11	1
14241	2-Methylphenol	95-48-7	N.D.	2.2	0.56	1
14241	4-Methylphenol	65794-96-9	N.D.	2.2	0.56	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
14241	Naphthalene	91-20-3	N.D.	0.56	0.11	1
14241	2-Nitroaniline	88-74-4	N.D.	7.8	2.2	1
14241	3-Nitroaniline	99-09-2	N.D.	7.8	3.4	1
14241	4-Nitroaniline	100-01-6	N.D.	3.4	1.0	1
14241	Nitrobenzene	98-95-3	N.D.	2.2	0.56	1
14241	2-Nitrophenol	88-75-5	N.D.	11	3.4	1
14241	4-Nitrophenol	100-02-7	N.D.	34	11	1
14241	N-Nitroso-di-n-propylamine	621-64-7	N.D.	3.4	0.78	1
14241	N-Nitrosodiphenylamine	86-30-6	N.D.	3.4	0.78	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.					
14241	Di-n-octylphthalate	117-84-0	N.D.	12	5.6	1
14241	Pentachlorophenol	87-86-5	N.D.	5.6	1.1	1
14241	Phenanthrene	85-01-8	N.D.	0.56	0.11	1
14241	Phenol	108-95-2	N.D.	2.2	0.56	1
14241	Pyrene	129-00-0	N.D.	0.56	0.11	1
14241	Pyridine	110-86-1	N.D.	5.6	2.2	1
14241	1,2,4,5-Tetrachlorobenzene	95-94-3	N.D.	2.2	0.56	1
14241	2,3,4,6-Tetrachlorophenol	58-90-2	N.D.	11	4.5	1
14241	2,4,5-Trichlorophenol	95-95-4	N.D.	2.2	0.56	1
14241	2,4,6-Trichlorophenol	88-06-2	N.D.	2.2	0.56	1
14241	Triethylamine[1]	121-44-8	N.D.	11	11	1

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. Since the recovery is high and the target analyte(s) was not detected in the sample, the data is reported.

00886 SVOA TIC Interpretive(25)

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-17-DW-WC Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 09/21/2019 09:51
Collection Date/Time: 09/20/2019 16:10
SDG#: BMS79-06

ARCADIS U.S., Inc.
ELLE Sample #: GW 1156999
ELLE Group #: 2065288
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
	The results from the semivolatile library search are listed on the attached FORM 1 - SV-TIC. The qualifiers appearing in the "Q" column are defined at the end of the report.					
GC Miscellaneous	**SW-846 8015D Rev.4, June 2003**		**ug/l**	**ug/l**	**ug/l**	
10603	Ethanol	64-17-5	N.D. D2	1,000	150	1
12926	Ethylene glycol[1]	107-21-1	N.D.	10,000	5,000	1
10603	Isopropanol[1]	67-63-0	N.D. D2	1,000	110	1
10603	Methanol	67-56-1	N.D. D2	1,000	220	1
12926	Propylene glycol[1]	57-55-6	N.D.	10,000	2,000	1
Metals	**SW-846 6010D Rev.4, July 2014**		**mg/l**	**mg/l**	**mg/l**	
07044	Antimony	7440-36-0	N.D.	0.0500	0.0160	1
07035	Arsenic	7440-38-2	N.D.	0.0300	0.0160	1
07046	Barium	7440-39-3	0.115	0.0050	0.0010	1
07047	Beryllium	7440-41-7	N.D.	0.0050	0.0010	1
07049	Cadmium	7440-43-9	N.D.	0.0050	0.0010	1
01750	Calcium	7440-70-2	710	1.00	0.480	5
07051	Chromium	7440-47-3	0.0068 J	0.0150	0.0016	1
07052	Cobalt	7440-48-4	0.0022 J	0.0050	0.0015	1
07053	Copper	7440-50-8	N.D.	0.100	0.0600	5
01754	Iron	7439-89-6	1.68	0.200	0.0400	1
07055	Lead	7439-92-1	N.D.	0.0150	0.0071	1
01757	Magnesium	7439-95-4	6.65	0.100	0.0400	1
07058	Manganese	7439-96-5	0.0536	0.0100	0.0030	1
07061	Nickel	7440-02-0	N.D.	0.0100	0.0021	1
01762	Potassium	7440-09-7	221	0.500	0.204	1
07036	Selenium	7782-49-2	0.0177 J	0.0500	0.0160	1
07066	Silver	7440-22-4	N.D.	0.0100	0.0050	1
01767	Sodium	7440-23-5	141	1.00	0.239	1
07022	Thallium	7440-28-0	0.0089 JK1K2	0.0300	0.0081	1
	SW-846 6010D Rev.4, July 2014		**ug/l**	**ug/l**	**ug/l**	
01743	Aluminum	7429-90-5	N.D.	300	107	1
07071	Vanadium	7440-62-2	N.D.	10.0	1.9	1
07072	Zinc	7440-66-6	10.1 J	20.0	3.7	1
	SW-846 7470A		**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	N.D.	0.00020	0.000050	1
Wet Chemistry	**SW-846 9012B**		**mg/kg**	**mg/kg**	**mg/kg**	

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-17-DW-WC Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 09/21/2019 09:51
Collection Date/Time: 09/20/2019 16:10
SDG#: BMS79-06

ARCADIS U.S., Inc.
ELLE Sample #: GW 1156999
ELLE Group #: 2065288
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
Wet Chemistry	**SW-846 9012B**		**mg/kg**	**mg/kg**	**mg/kg**	
01123	Cyanide (Reactivity)	n.a.	N.D.	58.8	19.6	1
Wet Chemistry	**SM 2550 B-2010**		**Degrees C**	**Degrees C**	**Degrees C**	
12151	Temperature of pH[1]	n.a.	19.9	0.010	0.010	1
	SM 4500-H+ B-2011		**Std. Units**	**Std. Units**	**Std. Units**	
12152	pH[1]	n.a.	12.1 J	0.010	0.010	1
	SW-846 9034		**mg/kg**	**mg/kg**	**mg/kg**	
01122	Sulfide (Reactivity)[1]	n.a.	N.D.	160	53.6	1
	SW-846 Chapter 7					
00496	Corrosivity[1]	n.a.	See Below	0	0	1
	The pH of the sample is 12.09 indicating that the sample is not corrosive. A sample is corrosive if it exhibits a pH equal to or less than 2 or equal to or greater than 12.5.					
	SW-846 Chapter 7.3		**see below**	**see below**	**see below**	
01121	Reactivity[1]	n.a.	See Below	0	0	1
	Reactivity: This sample was extracted and analyzed by the interim method described in SW-846 Revision 3, December 1996 - Chapter 7.3. The Interim Guidance for Reactive Cyanide and Reactive Sulfide (SW-846 Sections 7.3.3 and 7.3.4 of Chapter 7 - December 1996) identifies a reactive material as generating more than 250 mg/kg of hydrogen cyanide or 500 mg/kg of hydrogen sulfide. This waste is not considered hazardous due to reactivity based on that standard. These results do not reflect total cyanide or total sulfide. On July 14, 2005, EPA published a rule in the Federal Register that removed the Interim Guidance and the method referenced above. At this time there is no specific guidance or a method to be used to evaluate "Reactivity".					

Sample Comments

State of New York Certification No. 10670

[1] = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	L192741AA	10/01/2019 17:05	Corie Mellinger	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	L192741AA	10/01/2019 17:04	Corie Mellinger	1
14241	Semi-annual Groundwater BMS	SW-846 8270D	1	19269WAL026	09/30/2019 05:39	Brandon K Cordova	1
11010	8270D BNA Extraction	SW-846 3510C	1	19269WAL026	09/27/2019 09:00	Logan M Brosemer	1

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-17-DW-WC Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 09/21/2019 09:51
Collection Date/Time: 09/20/2019 16:10
SDG#: BMS79-06

ARCADIS U.S., Inc.
ELLE Sample #: GW 1156999
ELLE Group #: 2065288
Matrix: Groundwater

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10603	Alcohols in Water	SW-846 8015D Rev.4, June 2003	1	192670005A	09/24/2019 17:08	Johanna C Kennedy	1
12926	Glycols in Water by 8015C/D	SW-846 8015D Rev.4, June 2003	1	192660045A	09/24/2019 00:08	Donald Brown	1
01743	Aluminum	SW-846 6010D Rev.4, July 2014	1	192671404405	09/25/2019 17:34	Cindy M Gehman	1
07044	Antimony	SW-846 6010D Rev.4, July 2014	1	192671404405	09/25/2019 17:34	Cindy M Gehman	1
07035	Arsenic	SW-846 6010D Rev.4, July 2014	1	192671404405	09/25/2019 17:34	Cindy M Gehman	1
07046	Barium	SW-846 6010D Rev.4, July 2014	1	192671404405	09/25/2019 17:34	Cindy M Gehman	1
07047	Beryllium	SW-846 6010D Rev.4, July 2014	1	192671404405	09/25/2019 17:34	Cindy M Gehman	1
07049	Cadmium	SW-846 6010D Rev.4, July 2014	1	192671404405	09/25/2019 17:34	Cindy M Gehman	1
01750	Calcium	SW-846 6010D Rev.4, July 2014	1	192671404405	09/25/2019 18:07	Cindy M Gehman	5
07051	Chromium	SW-846 6010D Rev.4, July 2014	1	192671404405	09/25/2019 17:34	Cindy M Gehman	1
07052	Cobalt	SW-846 6010D Rev.4, July 2014	1	192671404405	09/25/2019 17:34	Cindy M Gehman	1
07053	Copper	SW-846 6010D Rev.4, July 2014	1	192671404405	09/25/2019 18:07	Cindy M Gehman	5
01754	Iron	SW-846 6010D Rev.4, July 2014	1	192671404405	09/25/2019 17:34	Cindy M Gehman	1
07055	Lead	SW-846 6010D Rev.4, July 2014	1	192671404405	09/25/2019 17:34	Cindy M Gehman	1
01757	Magnesium	SW-846 6010D Rev.4, July 2014	1	192671404405	09/25/2019 17:34	Cindy M Gehman	1
07058	Manganese	SW-846 6010D Rev.4, July 2014	1	192671404405	09/25/2019 17:34	Cindy M Gehman	1
07061	Nickel	SW-846 6010D Rev.4, July 2014	1	192671404405	09/25/2019 17:34	Cindy M Gehman	1
01762	Potassium	SW-846 6010D Rev.4, July 2014	1	192671404405	09/25/2019 17:34	Cindy M Gehman	1
07036	Selenium	SW-846 6010D Rev.4, July 2014	1	192671404405	09/25/2019 17:34	Cindy M Gehman	1
07066	Silver	SW-846 6010D Rev.4, July 2014	1	192671404405	09/29/2019 17:07	Elaine F Stoltzfus	1
01767	Sodium	SW-846 6010D Rev.4, July 2014	1	192671404405	09/25/2019 17:34	Cindy M Gehman	1
07022	Thallium	SW-846 6010D Rev.4, July 2014	1	192671404405	09/25/2019 17:34	Cindy M Gehman	1
07071	Vanadium	SW-846 6010D Rev.4, July 2014	1	192671404405	09/25/2019 17:34	Cindy M Gehman	1
07072	Zinc	SW-846 6010D Rev.4, July 2014	1	192671404405	09/25/2019 17:34	Cindy M Gehman	1
00259	Mercury	SW-846 7470A	1	192670571303	09/25/2019 07:14	Christina Termini	1

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-17-DW-WC Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 09/21/2019 09:51
Collection Date/Time: 09/20/2019 16:10
SDG#: BMS79-06

ARCADIS U.S., Inc.
ELLE Sample #: GW 1156999
ELLE Group #: 2065288
Matrix: Groundwater

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14044	ICP-WW, 3005A (tot rec) - U345	SW-846 3005A	1	192671404405	09/24/2019 15:35	Barbara A Kane	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	192670571303	09/24/2019 17:00	Barbara A Kane	1
01123	Cyanide (Reactivity)	SW-846 9012B	1	19268104201A	09/25/2019 20:49	Gregory Baldree	1
12151	Temperature of pH	SM 2550 B-2010	1	19269121521A	09/26/2019 17:50	Jeremy L Bolf	1
12152	pH	SM 4500-H+ B-2011	1	19269121521A	09/26/2019 17:50	Jeremy L Bolf	1
01122	Sulfide (Reactivity)	SW-846 9034	1	19267112101A	09/24/2019 08:00	Kristen Wroblewski	1
00496	Corrosivity	SW-846 Chapter 7	1	19269121521A	09/26/2019 17:50	Jeremy L Bolf	1
01121	Reactivity	SW-846 Chapter 7.3	1	19267112101A	09/24/2019 08:00	Kristen Wroblewski	1

*=This limit was used in the evaluation of the final result

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
MS796

Lab Name: Lancaster Laboratories Contract:_____
Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____
Matrix: (soil/water) WATER Lab Sample ID: 1156999
Sample wt/vol: 5.0 (g/mL)mL Lab File ID:HP09915.i/19oct01a.b/lc01s17.d
Level: (low/med) LOW Date Received: 09/21/19
% Moisture: not dec. Date Analyzed: 10/01/19
Column: (pack/cap) CAP Dilution Factor: 1.0
CONCENTRATION UNITS:
Number TICs found: 1 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		Unknown	12.74	11	J
2.					
3.	VOCTIC	Total VOC TICs		11	J
4.					
5.					
6.					
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page 1 of 1

FORM I VOA-TIC

1F

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

MS796

Lab Name: Lancaster Laboratories Contract:
Lab Code: LANCAS Case No.: SAS No.: SDG No.:
Matrix: (soil/water) WATER Lab Sample ID: 1156999
Sample wt/vol: 223 (g/mL) mL Lab File ID: ji0920.d
Level: (low/med) LOW Date Received: 09/21/19
% Moisture: Decanted: (Y/N) Date Extracted: 09/27/19
Concentrated Extract Volume: 1000 (uL) Date Analyzed: 09/30/19
Injection Volume: 0.5 (uL) Dilution Factor: 1
GPC Cleanup: N pH: Extraction: Sepf

CONCENTRATION UNITS:
Number TICs found: 7 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		Unknown	3.618	6	J
2.		Unknown	7.612	39	J
3.	54446-78-5	Ethanol, 1-(2-butoxyethoxy)-	9.031	8	J
4.	95-16-9	Benzothiazole	9.474	5	J
5.	934-34-9	2(3H)-Benzothiazolone	12.511	5	J
6.	58-08-2	Caffeine	13.299	5	J
7.	1678-25-7	Benzenesulfonanilide	14.198	5	J
8.					
9.	SVOCTIC	Total SVOC TICs		74	J
10.					
11.					
12.					
13.					
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page 1 of 1

FORM I SV-1

Sample Description: **Trip Blank Water**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 09/21/2019 09:51
Collection Date/Time: 09/20/2019
SDG#: BMS79-07TB

ARCADIS U.S., Inc.
ELLE Sample #: GW 1157000
ELLE Group #: 2065288
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	20	0.7	1
11997	Acetonitrile	75-05-8	N.D.	100	16	1
11997	Benzene	71-43-2	N.D.	1	0.2	1
11997	Bromochloromethane	74-97-5	N.D.	5	0.2	1
11997	Bromodichloromethane	75-27-4	N.D.	1	0.2	1
11997	Bromoform	75-25-2	N.D.	4	1	1
11997	Bromomethane	74-83-9	N.D.	1	0.3	1
11997	n-Butanol	71-36-3	N.D.	250	61	1
11997	2-Butanone	78-93-3	N.D.	10	0.3	1
11997	t-Butyl alcohol	75-65-0	N.D.	50	12	1
11997	n-Butylbenzene	104-51-8	N.D.	5	0.2	1
11997	sec-Butylbenzene	135-98-8	N.D.	5	0.2	1
11997	tert-Butylbenzene	98-06-6	N.D.	5	0.3	1
11997	Carbon Disulfide	75-15-0	N.D.	5	0.2	1
11997	Carbon Tetrachloride	56-23-5	N.D.	1	0.2	1
11997	Chlorobenzene	108-90-7	N.D.	1	0.2	1
11997	Chlorodifluoromethane[1]	75-45-6	N.D.	5	2	1
11997	Chloroethane	75-00-3	N.D.	1	0.2	1
11997	Chloroform	67-66-3	N.D.	1	0.2	1
11997	Chloromethane	74-87-3	N.D.	1	0.2	1
11997	Cyclohexane	110-82-7	N.D.	5	1	1
11997	Cyclohexanone[1]	108-94-1	N.D.	100	25	1
11997	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	5	0.3	1
11997	Dibromochloromethane	124-48-1	N.D.	1	0.2	1
11997	1,2-Dibromoethane	106-93-4	N.D.	1	0.2	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	5	0.2	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	5	0.2	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	5	0.2	1
11997	Dichlorodifluoromethane	75-71-8	N.D.	1	0.2	1
11997	1,1-Dichloroethane	75-34-3	N.D.	1	0.2	1
11997	1,2-Dichloroethane	107-06-2	N.D.	1	0.3	1
11997	1,1-Dichloroethene	75-35-4	N.D.	1	0.2	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	1	0.2	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	1	0.2	1
11997	1,2-Dichloropropane	78-87-5	N.D.	1	0.2	1
11997	cis-1,3-Dichloropropene	10061-01-5	N.D.	1	0.2	1
11997	trans-1,3-Dichloropropene	10061-02-6	N.D.	1	0.2	1
11997	1,4-Dioxane	123-91-1	N.D.	250	29	1
11997	Ethyl Acetate	141-78-6	N.D.	5	0.7	1
11997	Ethyl ether	60-29-7	N.D.	5	0.2	1
11997	Ethylbenzene	100-41-4	N.D.	1	0.4	1

*=This limit was used in the evaluation of the final result

Sample Description: **Trip Blank Water**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 09/21/2019 09:51
Collection Date/Time: 09/20/2019
SDG#: BMS79-07TB

ARCADIS U.S., Inc.
ELLE Sample #: GW 1157000
ELLE Group #: 2065288
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Freon 113	76-13-1	N.D.	10	0.2	1
11997	n-Heptane[1]	142-82-5	N.D.	5	2	1
11997	n-Hexane[1]	110-54-3	N.D.	5	2	1
11997	2-Hexanone	591-78-6	N.D.	10	0.3	1
11997	Isobutyl Alcohol	78-83-1	N.D.	250	36	1
11997	Isopropylbenzene	98-82-8	N.D.	5	0.2	1
11997	p-Isopropyltoluene	99-87-6	N.D.	5	0.2	1
11997	Methyl Acetate	79-20-9	N.D.	5	0.2	1
11997	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	1	0.2	1
11997	4-Methyl-2-pentanone	108-10-1	N.D.	10	0.5	1
11997	Methylcyclohexane	108-87-2	N.D.	5	0.5	1
11997	Methylene Chloride	75-09-2	N.D.	1	0.3	1
11997	Naphthalene	91-20-3	N.D.	5	1	1
11997	2-Nitropropane	79-46-9	N.D.	10	0.8	1
11997	Styrene	100-42-5	N.D.	5	0.2	1
11997	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	1	0.2	1
11997	Tetrachloroethene	127-18-4	N.D.	1	0.2	1
11997	Tetrahydrofuran	109-99-9	N.D.	10	0.7	1
11997	Toluene	108-88-3	N.D.	1	0.2	1
11997	1,2,3-Trichlorobenzene	87-61-6	N.D.	5	0.4	1
11997	1,2,4-Trichlorobenzene	120-82-1	N.D.	5	0.3	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	1	0.3	1
11997	1,1,2-Trichloroethane	79-00-5	N.D.	1	0.2	1
11997	Trichloroethene	79-01-6	N.D.	1	0.2	1
11997	Trichlorofluoromethane	75-69-4	N.D.	1	0.2	1
11997	1,2,4-Trimethylbenzene	95-63-6	N.D.	5	1	1
11997	1,3,5-Trimethylbenzene	108-67-8	N.D.	5	0.3	1
11997	Vinyl Chloride	75-01-4	N.D.	1	0.2	1
11997	m+p-Xylene	179601-23-1	N.D.	5	1	1
11997	o-Xylene	95-47-6	N.D.	1	0.4	1
11997	Xylene (Total)	1330-20-7	N.D.	6	1	1

12027 VOA Interp. Library Search-20

The results from the volatile library search are listed on the attached FORM 1 - VOA-TIC. The qualifiers appearing in the "Q" column are defined at the end of the report.

GC Miscellaneous	**SW-846 8015D Rev.4, June 2003**		**ug/l**	**ug/l**	**ug/l**	
10603	Ethanol	64-17-5	N.D. D2	1,000	150	1
12926	Ethylene glycol[1]	107-21-1	N.D.	10,000	5,000	1
10603	Isopropanol[1]	67-63-0	N.D. D2	1,000	110	1

*=This limit was used in the evaluation of the final result

Sample Description: **Trip Blank Water**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 09/21/2019 09:51
Collection Date/Time: 09/20/2019
SDG#: BMS79-07TB

ARCADIS U.S., Inc.
ELLE Sample #: GW 1157000
ELLE Group #: 2065288
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC Miscellaneous	**SW-846 8015D Rev.4, June 2003**		**ug/l**	**ug/l**	**ug/l**	
10603	Methanol	67-56-1	N.D. D2	1,000	220	1
12926	Propylene glycol[1]	57-55-6	N.D.	10,000	2,000	1

Sample Comments

State of New York Certification No. 10670

[1] = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	L192734AA	10/01/2019 02:23	Kevin A Sposito	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	L192734AA	10/01/2019 02:22	Kevin A Sposito	1
10603	Alcohols in Water	SW-846 8015D Rev.4, June 2003	1	192670005A	09/24/2019 17:41	Johanna C Kennedy	1
12926	Glycols in Water by 8015C/D	SW-846 8015D Rev.4, June 2003	1	192660045A	09/24/2019 00:21	Donald Brown	1

*=This limit was used in the evaluation of the final result

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
MS797

Lab Name: Lancaster Laboratories Contract:_____
Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____
Matrix: (soil/water) WATER Lab Sample ID: 1157000
Sample wt/vol: 5.0 (g/mL)mL Lab File ID:HP09915.i/19sep30b.b/ls30s77.d
Level: (low/med) LOW Date Received: 09/21/19
% Moisture: not dec. Date Analyzed: 10/01/19
Column: (pack/cap) CAP Dilution Factor: 1.0
CONCENTRATION UNITS:
Number TICs found: 0 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	VOCTIC	Total VOC TICs		0	U
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page 1 of 1

FORM I VOA-TIC

Quality Control Summary

Client Name: ARCADIS U.S., Inc. Group Number: 2065288
Reported: 10/03/2019 17:33

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	LOQ**	MDL
	ug/l	ug/l	ug/l
Batch number: L192734AA	Sample number(s): 1156995,1157000		
Acetone	N.D.	20	0.7
Acetonitrile	N.D.	100	16
Benzene	N.D.	1	0.2
Bromochloromethane	N.D.	5	0.2
Bromodichloromethane	N.D.	1	0.2
Bromoform	N.D.	4	1
Bromomethane	N.D.	1	0.3
n-Butanol	N.D.	250	61
2-Butanone	N.D.	10	0.3
t-Butyl alcohol	N.D.	50	12
n-Butylbenzene	N.D.	5	0.2
sec-Butylbenzene	N.D.	5	0.2
tert-Butylbenzene	N.D.	5	0.3
Carbon Disulfide	N.D.	5	0.2
Carbon Tetrachloride	N.D.	1	0.2
Chlorobenzene	N.D.	1	0.2
Chlorodifluoromethane	N.D.	5	2
Chloroethane	N.D.	1	0.2
Chloroform	N.D.	1	0.2
Chloromethane	N.D.	1	0.2
Cyclohexane	N.D.	5	1
Cyclohexanone	N.D.	100	25
1,2-Dibromo-3-chloropropane	N.D.	5	0.3
Dibromochloromethane	N.D.	1	0.2
1,2-Dibromoethane	N.D.	1	0.2
1,2-Dichlorobenzene	N.D.	5	0.2
1,3-Dichlorobenzene	N.D.	5	0.2
1,4-Dichlorobenzene	N.D.	5	0.2
Dichlorodifluoromethane	N.D.	1	0.2
1,1-Dichloroethane	N.D.	1	0.2
1,2-Dichloroethane	N.D.	1	0.3
1,1-Dichloroethene	N.D.	1	0.2
cis-1,2-Dichloroethene	N.D.	1	0.2
trans-1,2-Dichloroethene	N.D.	1	0.2
1,2-Dichloropropane	N.D.	1	0.2
cis-1,3-Dichloropropene	N.D.	1	0.2
trans-1,3-Dichloropropene	N.D.	1	0.2
1,4-Dioxane	N.D.	250	29
Ethyl Acetate	N.D.	5	0.7

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: ARCADIS U.S., Inc. Group Number: 2065288
Reported: 10/03/2019 17:33

Method Blank (continued)

Analysis Name	Result	LOQ**	MDL
	ug/l	ug/l	ug/l
Ethyl ether	N.D.	5	0.2
Ethylbenzene	N.D.	1	0.4
Freon 113	N.D.	10	0.2
n-Heptane	N.D.	5	2
n-Hexane	N.D.	5	2
2-Hexanone	N.D.	10	0.3
Isobutyl Alcohol	N.D.	250	36
Isopropylbenzene	N.D.	5	0.2
p-Isopropyltoluene	N.D.	5	0.2
Methyl Acetate	N.D.	5	0.2
Methyl Tertiary Butyl Ether	N.D.	1	0.2
4-Methyl-2-pentanone	N.D.	10	0.5
Methylcyclohexane	N.D.	5	0.5
Methylene Chloride	N.D.	1	0.3
Naphthalene	N.D.	5	1
2-Nitropropane	N.D.	10	0.8
Styrene	N.D.	5	0.2
1,1,2,2-Tetrachloroethane	N.D.	1	0.2
Tetrachloroethene	N.D.	1	0.2
Tetrahydrofuran	N.D.	10	0.7
Toluene	N.D.	1	0.2
1,2,3-Trichlorobenzene	N.D.	5	0.4
1,2,4-Trichlorobenzene	N.D.	5	0.3
1,1,1-Trichloroethane	N.D.	1	0.3
1,1,2-Trichloroethane	N.D.	1	0.2
Trichloroethene	N.D.	1	0.2
Trichlorofluoromethane	N.D.	1	0.2
1,2,4-Trimethylbenzene	N.D.	5	1
1,3,5-Trimethylbenzene	N.D.	5	0.3
Vinyl Chloride	N.D.	1	0.2
m+p-Xylene	N.D.	5	1
o-Xylene	N.D.	1	0.4
Xylene (Total)	N.D.	6	1
Batch number: L192741AA	Sample number(s): 1156994,1156996-1156999		
Acetone	N.D.	20	0.7
Acetonitrile	N.D.	100	16
Benzene	N.D.	1	0.2
Bromochloromethane	N.D.	5	0.2
Bromodichloromethane	N.D.	1	0.2
Bromoform	N.D.	4	1
Bromomethane	N.D.	1	0.3
n-Butanol	N.D.	250	61
2-Butanone	N.D.	10	0.3
t-Butyl alcohol	N.D.	50	12

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: ARCADIS U.S., Inc.
Reported: 10/03/2019 17:33

Group Number: 2065288

Method Blank (continued)

Analysis Name	Result	LOQ**	MDL
	ug/l	ug/l	ug/l
n-Butylbenzene	N.D.	5	0.2
sec-Butylbenzene	N.D.	5	0.2
tert-Butylbenzene	N.D.	5	0.3
Carbon Disulfide	N.D.	5	0.2
Carbon Tetrachloride	N.D.	1	0.2
Chlorobenzene	N.D.	1	0.2
Chlorodifluoromethane	N.D.	5	2
Chloroethane	N.D.	1	0.2
Chloroform	N.D.	1	0.2
Chloromethane	N.D.	1	0.2
Cyclohexane	N.D.	5	1
Cyclohexanone	N.D.	100	25
1,2-Dibromo-3-chloropropane	N.D.	5	0.3
Dibromochloromethane	N.D.	1	0.2
1,2-Dibromoethane	N.D.	1	0.2
1,2-Dichlorobenzene	N.D.	5	0.2
1,3-Dichlorobenzene	N.D.	5	0.2
1,4-Dichlorobenzene	N.D.	5	0.2
Dichlorodifluoromethane	N.D.	1	0.2
1,1-Dichloroethane	N.D.	1	0.2
1,2-Dichloroethane	N.D.	1	0.3
1,1-Dichloroethene	N.D.	1	0.2
cis-1,2-Dichloroethene	N.D.	1	0.2
trans-1,2-Dichloroethene	N.D.	1	0.2
1,2-Dichloropropane	N.D.	1	0.2
cis-1,3-Dichloropropene	N.D.	1	0.2
trans-1,3-Dichloropropene	N.D.	1	0.2
1,4-Dioxane	N.D.	250	29
Ethyl Acetate	N.D.	5	0.7
Ethyl ether	N.D.	5	0.2
Ethylbenzene	N.D.	1	0.4
Freon 113	N.D.	10	0.2
n-Heptane	N.D.	5	2
n-Hexane	N.D.	5	2
2-Hexanone	N.D.	10	0.3
Isobutyl Alcohol	N.D.	250	36
Isopropylbenzene	N.D.	5	0.2
p-Isopropyltoluene	N.D.	5	0.2
Methyl Acetate	N.D.	5	0.2
Methyl Tertiary Butyl Ether	N.D.	1	0.2
4-Methyl-2-pentanone	N.D.	10	0.5
Methylcyclohexane	N.D.	5	0.5
Methylene Chloride	N.D.	1	0.3
Naphthalene	N.D.	5	1
2-Nitropropane	N.D.	10	0.8

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: ARCADIS U.S., Inc. Group Number: 2065288
Reported: 10/03/2019 17:33

Method Blank (continued)

Analysis Name	Result	LOQ**	MDL
	ug/l	ug/l	ug/l
Styrene	N.D.	5	0.2
1,1,2,2-Tetrachloroethane	N.D.	1	0.2
Tetrachloroethene	N.D.	1	0.2
Tetrahydrofuran	N.D.	10	0.7
Toluene	N.D.	1	0.2
1,2,3-Trichlorobenzene	N.D.	5	0.4
1,2,4-Trichlorobenzene	N.D.	5	0.3
1,1,1-Trichloroethane	N.D.	1	0.3
1,1,2-Trichloroethane	N.D.	1	0.2
Trichloroethene	N.D.	1	0.2
Trichlorofluoromethane	N.D.	1	0.2
1,2,4-Trimethylbenzene	N.D.	5	1
1,3,5-Trimethylbenzene	N.D.	5	0.3
Vinyl Chloride	N.D.	1	0.2
m+p-Xylene	N.D.	5	1
o-Xylene	N.D.	1	0.4
Xylene (Total)	N.D.	6	1
Batch number: 19269WAL026	Sample number(s): 1156994-1156999		
Acenaphthene	N.D.	0.50	0.10
Acenaphthylene	N.D.	0.50	0.10
Acetophenone	N.D.	10	4.0
Aniline	N.D.	10	3.0
Anthracene	N.D.	0.50	0.10
Atrazine	N.D.	5.0	2.0
Benzaldehyde	N.D.	10	3.0
Benzo(a)anthracene	N.D.	0.50	0.10
Benzo(a)pyrene	N.D.	0.50	0.10
Benzo(b)fluoranthene	N.D.	0.50	0.10
Benzo(g,h,i)perylene	N.D.	0.50	0.10
Benzo(k)fluoranthene	N.D.	0.50	0.10
Benzyl alcohol	N.D.	30	10
1,1'-Biphenyl	N.D.	10	3.0
4-Bromophenyl-phenylether	N.D.	2.0	0.50
Butylbenzylphthalate	N.D.	5.0	2.0
Di-n-butylphthalate	N.D.	5.0	2.0
Caprolactam	N.D.	11	5.0
Carbazole	N.D.	2.0	0.50
4-Chloro-3-methylphenol	N.D.	2.0	0.50
4-Chloroaniline	N.D.	10	4.0
bis(2-Chloroethoxy)methane	N.D.	2.0	0.50
bis(2-Chloroethyl)ether	N.D.	2.0	0.50
bis(2-Chloroisopropyl)ether	N.D.	2.0	0.50
2-Chloronaphthalene	N.D.	1.0	0.40
2-Chlorophenol	N.D.	2.0	0.50

*- Outside of specification
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(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: ARCADIS U.S., Inc. Group Number: 2065288
Reported: 10/03/2019 17:33

Method Blank (continued)

Analysis Name	Result	LOQ**	MDL
	ug/l	ug/l	ug/l
4-Chlorophenyl-phenylether	N.D.	2.0	0.50
Chrysene	N.D.	0.50	0.10
Dibenz(a,h)anthracene	N.D.	0.50	0.10
Dibenzofuran	N.D.	2.0	0.50
3,3'-Dichlorobenzidine	N.D.	10	3.0
2,4-Dichlorophenol	N.D.	2.0	0.50
Dicyclohexylamine	N.D.	10	10
Diethylphthalate	N.D.	5.0	2.0
N,N-Dimethylaniline	N.D.	1.0	0.50
2,4-Dimethylphenol	N.D.	10	3.0
Dimethylphthalate	N.D.	5.0	2.0
4,6-Dinitro-2-methylphenol	N.D.	21	8.0
2,4-Dinitrophenol	N.D.	30	14
2,4-Dinitrotoluene	N.D.	5.0	1.0
2,6-Dinitrotoluene	N.D.	2.0	0.50
bis(2-Ethylhexyl)phthalate	N.D.	11	5.0
Fluoranthene	N.D.	0.50	0.10
Fluorene	N.D.	0.50	0.10
Hexachlorobenzene	N.D.	0.50	0.10
Hexachlorobutadiene	N.D.	2.0	0.50
Hexachlorocyclopentadiene	N.D.	11	5.0
Hexachloroethane	N.D.	5.0	1.0
Indeno(1,2,3-cd)pyrene	N.D.	0.50	0.10
Isophorone	N.D.	2.0	0.50
2-Methylnaphthalene	N.D.	0.50	0.10
2-Methylphenol	N.D.	2.0	0.50
4-Methylphenol	N.D.	2.0	0.50
Naphthalene	N.D.	0.50	0.10
2-Nitroaniline	N.D.	7.0	2.0
3-Nitroaniline	N.D.	7.0	3.0
4-Nitroaniline	N.D.	3.0	0.90
Nitrobenzene	N.D.	2.0	0.50
2-Nitrophenol	N.D.	10	3.0
4-Nitrophenol	N.D.	30	10
N-Nitroso-di-n-propylamine	N.D.	3.0	0.70
N-Nitrosodiphenylamine	N.D.	3.0	0.70
Di-n-octylphthalate	N.D.	11	5.0
Pentachlorophenol	N.D.	5.0	1.0
Phenanthrene	N.D.	0.50	0.10
Phenol	N.D.	2.0	0.50
Pyrene	N.D.	0.50	0.10
Pyridine	N.D.	5.0	2.0
1,2,4,5-Tetrachlorobenzene	N.D.	2.0	0.50
2,3,4,6-Tetrachlorophenol	N.D.	10	4.0
2,4,5-Trichlorophenol	N.D.	2.0	0.50

*- Outside of specification
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(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: ARCADIS U.S., Inc. Group Number: 2065288
Reported: 10/03/2019 17:33

Method Blank (continued)

Analysis Name	Result	LOQ**	MDL
	ug/l	ug/l	ug/l
2,4,6-Trichlorophenol	N.D.	2.0	0.50
Triethylamine	N.D.	10	10
Batch number: 192660045A	Sample number(s): 1156994-1157000		
Ethylene glycol	N.D.	10,000	5,000
Propylene glycol	N.D.	10,000	2,000
Batch number: 192670005A	Sample number(s): 1156994-1157000		
Ethanol	N.D.	1,000	150
Isopropanol	N.D.	1,000	110
Methanol	N.D.	1,000	220
	mg/l	mg/l	mg/l
Batch number: 192670571303	Sample number(s): 1156994,1156996-1156999		
Mercury	N.D.	0.00020	0.000050
Batch number: 192671404405	Sample number(s): 1156994,1156996-1156999		
Antimony	N.D.	0.0500	0.0160
Arsenic	N.D.	0.0300	0.0160
Barium	N.D.	0.0050	0.0010
Beryllium	N.D.	0.0050	0.0010
Cadmium	N.D.	0.0050	0.0010
Calcium	N.D.	0.200	0.0960
Chromium	N.D.	0.0150	0.0016
Cobalt	0.0016 J	0.0050	0.0015
Copper	N.D.	0.0200	0.0120
Iron	N.D.	0.200	0.0400
Lead	N.D.	0.0150	0.0071
Magnesium	N.D.	0.100	0.0400
Manganese	N.D.	0.0100	0.0030
Nickel	N.D.	0.0100	0.0021
Potassium	N.D.	0.500	0.204
Selenium	N.D.	0.0500	0.0160
Silver	N.D.	0.0100	0.0050
Sodium	N.D.	1.00	0.239
Thallium	0.0116 J	0.0300	0.0081
Batch number: 192690571303	Sample number(s): 1156995		
Mercury	N.D.	0.00020	0.000050
Batch number: 192691404402	Sample number(s): 1156995		
Antimony	N.D.	0.0500	0.0160
Arsenic	N.D.	0.0300	0.0160
Barium	N.D.	0.0050	0.0010
Beryllium	N.D.	0.0050	0.0010
Cadmium	N.D.	0.0050	0.0010
Calcium	N.D.	0.200	0.0960
Chromium	N.D.	0.0150	0.0016

*- Outside of specification
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(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: ARCADIS U.S., Inc. Group Number: 2065288
Reported: 10/03/2019 17:33

Method Blank (continued)

Analysis Name	Result	LOQ**	MDL
	mg/l	mg/l	mg/l
Cobalt	N.D.	0.0050	0.0015
Copper	N.D.	0.0200	0.0120
Iron	N.D.	0.200	0.0400
Lead	N.D.	0.0150	0.0071
Magnesium	N.D.	0.100	0.0400
Manganese	N.D.	0.0100	0.0030
Nickel	N.D.	0.0100	0.0021
Potassium	N.D.	0.500	0.204
Selenium	N.D.	0.0500	0.0160
Silver	N.D.	0.0100	0.0050
Sodium	N.D.	1.00	0.239
Thallium	N.D.	0.0300	0.0081
	ug/l	ug/l	ug/l
Batch number: 192671404405	Sample number(s): 1156994,1156996-1156999		
Aluminum	N.D.	300	107
Vanadium	N.D.	10.0	1.9
Zinc	N.D.	20.0	3.7
Batch number: 192691404402	Sample number(s): 1156995		
Aluminum	N.D.	300	107
Vanadium	N.D.	10.0	1.9
Zinc	N.D.	20.0	3.7
	mg/kg	mg/kg	mg/kg
Batch number: 19268104201A	Sample number(s): 1156994-1156999		
Cyanide (Reactivity)	N.D.	60.0	20.0
Batch number: 19267112101A	Sample number(s): 1156994-1156999		
Sulfide (Reactivity)	N.D.	160	53.6

LCS/LCSD

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: L192734AA	Sample number(s): 1156995,1157000								
Acetone	150	143.45	150	130.06	96	87	54-157	10	30
Acetonitrile	150	161.11	150	166.12	107	111	66-149	3	30
Benzene	20	22.33	20	21.94	112	110	80-120	2	30
Bromochloromethane	20	19.14	20	18.85	96	94	80-120	2	30
Bromodichloromethane	20	18.34	20	18.14	92	91	71-120	1	30
Bromoform	20	15.23	20	15.16	76	76	51-120	0	30

*- Outside of specification
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Quality Control Summary

Client Name: ARCADIS U.S., Inc. Group Number: 2065288
Reported: 10/03/2019 17:33

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Bromomethane	20	11.72	20	11.1	59	55	53-128	5	30
n-Butanol	1000	1036.96	1000	980.65	104	98	57-130	6	30
2-Butanone	150	147.17	150	142.97	98	95	59-135	3	30
t-Butyl alcohol	200	203.35	200	187.54	102	94	60-130	8	30
n-Butylbenzene	20	23.9	20	23.49	120	117	76-120	2	30
sec-Butylbenzene	20	23.8	20	23.42	119	117	77-120	2	30
tert-Butylbenzene	20	22.41	20	21.73	112	109	78-120	3	30
Carbon Disulfide	20	20.28	20	20.24	101	101	65-128	0	30
Carbon Tetrachloride	20	18.21	20	18.08	91	90	64-134	1	30
Chlorobenzene	20	21.88	20	21.59	109	108	80-120	1	30
Chlorodifluoromethane	20	19.28	20	19.72	96	99	45-149	2	30
Chloroethane	20	14.34	20	13.7	72	69	55-123	5	30
Chloroform	20	20.49	20	20.11	102	101	80-120	2	30
Chloromethane	20	19.65	20	19.01	98	95	56-121	3	30
Cyclohexane	20	22.48	20	22.48	112	112	68-126	0	30
Cyclohexanone	500	564.36	500	531.48	113	106	27-141	6	30
1,2-Dibromo-3-chloropropane	20	18.47	20	18.74	92	94	47-131	1	30
Dibromochloromethane	20	18.64	20	18.49	93	92	71-120	1	30
1,2-Dibromoethane	20	21.04	20	20.8	105	104	77-120	1	30
1,2-Dichlorobenzene	20	21.82	20	21.74	109	109	80-120	0	30
1,3-Dichlorobenzene	20	21.63	20	21.43	108	107	80-120	1	30
1,4-Dichlorobenzene	20	21.7	20	21.41	109	107	80-120	1	30
Dichlorodifluoromethane	20	15.6	20	15.31	78	77	41-127	2	30
1,1-Dichloroethane	20	21.82	20	21.51	109	108	80-120	1	30
1,2-Dichloroethane	20	18.58	20	18.14	93	91	73-124	2	30
1,1-Dichloroethene	20	22.61	20	22.52	113	113	80-131	0	30
cis-1,2-Dichloroethene	20	22.57	20	22.31	113	112	80-125	1	30
trans-1,2-Dichloroethene	20	21.9	20	21.72	110	109	80-126	1	30
1,2-Dichloropropane	20	22.43	20	21.93	112	110	80-120	2	30
cis-1,3-Dichloropropene	20	19.16	20	19.08	96	95	75-120	0	30
trans-1,3-Dichloropropene	20	18.82	20	18.33	94	92	67-120	3	30
1,4-Dioxane	500	707.43	500	672.99	141	135	63-146	5	30
Ethyl Acetate	20	18.43	20	19.16	92	96	67-131	4	30
Ethyl ether	20	15.4	20	14.93	77	75	59-141	3	30
Ethylbenzene	20	21.85	20	21.62	109	108	80-120	1	30
Freon 113	20	22.43	20	22.42	112	112	73-139	0	30
n-Heptane	20	24	20	24.17	120	121	56-133	1	30
n-Hexane	20	25	20	25.1	125	125	61-138	0	30
2-Hexanone	100	100.14	100	98.83	100	99	56-135	1	30
Isobutyl Alcohol	500	498.87	500	460.24	100	92	61-136	8	30
Isopropylbenzene	20	22.08	20	21.79	110	109	80-120	1	30
p-Isopropyltoluene	20	22.94	20	22.72	115	114	76-120	1	30
Methyl Acetate	20	21.42	20	20.72	107	104	54-136	3	30
Methyl Tertiary Butyl Ether	20	19.28	20	19.1	96	95	69-122	1	30

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Quality Control Summary

Client Name: ARCADIS U.S., Inc.
Reported: 10/03/2019 17:33

Group Number: 2065288

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
4-Methyl-2-pentanone	100	92.61	100	90.95	93	91	62-133	2	30
Methylcyclohexane	20	21.86	20	21.96	109	110	67-121	0	30
Methylene Chloride	20	22.6	20	22.35	113	112	80-120	1	30
Naphthalene	20	21.24	20	21.24	106	106	53-124	0	30
2-Nitropropane	20	12.38	20	11.9	62	59	19-144	4	30
Styrene	20	20.52	20	20.39	103	102	80-120	1	30
1,1,2,2-Tetrachloroethane	20	22.76	20	22.51	114	113	72-120	1	30
Tetrachloroethene	20	21.22	20	21.19	106	106	80-120	0	30
Tetrahydrofuran	100	91.42	100	85.12	91	85	54-144	7	30
Toluene	20	22.72	20	22.4	114	112	80-120	1	30
1,2,3-Trichlorobenzene	20	21.33	20	21.54	107	108	66-120	1	30
1,2,4-Trichlorobenzene	20	21.03	20	20.99	105	105	63-120	0	30
1,1,1-Trichloroethane	20	18.96	20	18.4	95	92	67-126	3	30
1,1,2-Trichloroethane	20	23.12	20	22.27	116	111	80-120	4	30
Trichloroethene	20	20.87	20	20.6	104	103	80-120	1	30
Trichlorofluoromethane	20	15.88	20	15.26	79	76	55-135	4	30
1,2,4-Trimethylbenzene	20	21.86	20	21.52	109	108	75-120	2	30
1,3,5-Trimethylbenzene	20	22.14	20	21.95	111	110	75-120	1	30
Vinyl Chloride	20	18.25	20	17.65	91	88	56-120	3	30
m+p-Xylene	40	44.11	40	43.17	110	108	80-120	2	30
o-Xylene	20	21.23	20	21.09	106	105	80-120	1	30
Xylene (Total)	60	65.34	60	64.26	109	107	80-120	2	30
Batch number: L192741AA	Sample number(s): 1156994,1156996-1156999								
Acetone	150	164.23	150	143.62	109	96	54-157	13	30
Acetonitrile	150	165.31	150	157.81	110	105	66-149	5	30
Benzene	20	20.55	20	21.95	103	110	80-120	7	30
Bromochloromethane	20	18.21	20	18.98	91	95	80-120	4	30
Bromodichloromethane	20	17.13	20	18.27	86	91	71-120	6	30
Bromoform	20	14.83	20	15.41	74	77	51-120	4	30
Bromomethane	20	11.54	20	11.12	58	56	53-128	4	30
n-Butanol	1000	947.77	1000	953.28	95	95	57-130	1	30
2-Butanone	150	152.73	150	148.18	102	99	59-135	3	30
t-Butyl alcohol	200	188.33	200	194.69	94	97	60-130	3	30
n-Butylbenzene	20	21.4	20	22.81	107	114	76-120	6	30
sec-Butylbenzene	20	21.46	20	22.85	107	114	77-120	6	30
tert-Butylbenzene	20	19.39	20	20.77	97	104	78-120	7	30
Carbon Disulfide	20	18.69	20	19.71	93	99	65-128	5	30
Carbon Tetrachloride	20	16.43	20	17.71	82	89	64-134	8	30
Chlorobenzene	20	20.05	20	21.63	100	108	80-120	8	30
Chlorodifluoromethane	20	18.98	20	18.92	95	95	45-149	0	30
Chloroethane	20	13.69	20	13.34	68	67	55-123	3	30
Chloroform	20	18.76	20	20.09	94	100	80-120	7	30
Chloromethane	20	19.11	20	18.24	96	91	56-121	5	30

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Quality Control Summary

Client Name: ARCADIS U.S., Inc.
Reported: 10/03/2019 17:33

Group Number: 2065288

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Cyclohexane	20	19.72	20	21.37	99	107	68-126	8	30
Cyclohexanone	500	587.38	500	564.29	117	113	27-141	4	30
1,2-Dibromo-3-chloropropane	20	18.13	20	18.44	91	92	47-131	2	30
Dibromochloromethane	20	17.55	20	18.74	88	94	71-120	7	30
1,2-Dibromoethane	20	19.63	20	21.06	98	105	77-120	7	30
1,2-Dichlorobenzene	20	20.05	20	21.44	100	107	80-120	7	30
1,3-Dichlorobenzene	20	19.9	20	21.04	99	105	80-120	6	30
1,4-Dichlorobenzene	20	19.88	20	21.1	99	105	80-120	6	30
Dichlorodifluoromethane	20	14.41	20	13.62	72	68	41-127	6	30
1,1-Dichloroethane	20	20.19	20	21.51	101	108	80-120	6	30
1,2-Dichloroethane	20	17.46	20	18.41	87	92	73-124	5	30
1,1-Dichloroethene	20	20.6	20	21.95	103	110	80-131	6	30
cis-1,2-Dichloroethene	20	20.99	20	22.26	105	111	80-125	6	30
trans-1,2-Dichloroethene	20	20.4	20	21.42	102	107	80-126	5	30
1,2-Dichloropropane	20	20.59	20	22.25	103	111	80-120	8	30
cis-1,3-Dichloropropene	20	17.93	20	18.88	90	94	75-120	5	30
trans-1,3-Dichloropropene	20	17.35	20	18.31	87	92	67-120	5	30
1,4-Dioxane	500	637.98	500	660.46	128	132	63-146	3	30
Ethyl Acetate	20	19.91	20	18.27	100	91	67-131	9	30
Ethyl ether	20	15.63	20	16.37	78	82	59-141	5	30
Ethylbenzene	20	19.71	20	21.3	99	106	80-120	8	30
Freon 113	20	19.86	20	21.38	99	107	73-139	7	30
n-Heptane	20	20.3	20	22.31	102	112	56-133	9	30
n-Hexane	20	21.45	20	22.92	107	115	61-138	7	30
2-Hexanone	100	98.1	100	99.41	98	99	56-135	1	30
Isobutyl Alcohol	500	461.09	500	462.81	92	93	61-136	0	30
Isopropylbenzene	20	19.95	20	21.5	100	107	80-120	7	30
p-Isopropyltoluene	20	20.67	20	22.13	103	111	76-120	7	30
Methyl Acetate	20	21.01	20	21.75	105	109	54-136	3	30
Methyl Tertiary Butyl Ether	20	18.02	20	18.89	90	94	69-122	5	30
4-Methyl-2-pentanone	100	89.4	100	92.64	89	93	62-133	4	30
Methylcyclohexane	20	19.67	20	20.21	98	101	67-121	3	30
Methylene Chloride	20	21.35	20	22.43	107	112	80-120	5	30
Naphthalene	20	20.27	20	21.07	101	105	53-124	4	30
2-Nitropropane	20	12.15	20	12.23	61	61	19-144	1	30
Styrene	20	19.01	20	20.33	95	102	80-120	7	30
1,1,2,2-Tetrachloroethane	20	21.6	20	21.8	108	109	72-120	1	30
Tetrachloroethene	20	19.17	20	20.82	96	104	80-120	8	30
Tetrahydrofuran	100	85.14	100	91.29	85	91	54-144	7	30
Toluene	20	20.61	20	22.14	103	111	80-120	7	30
1,2,3-Trichlorobenzene	20	20	20	20.71	100	104	66-120	3	30
1,2,4-Trichlorobenzene	20	19.44	20	20.2	97	101	63-120	4	30
1,1,1-Trichloroethane	20	17.04	20	18.34	85	92	67-126	7	30
1,1,2-Trichloroethane	20	20.86	20	22.58	104	113	80-120	8	30

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Quality Control Summary

Client Name: ARCADIS U.S., Inc. Group Number: 2065288
Reported: 10/03/2019 17:33

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Trichloroethene	20	19.23	20	20.67	96	103	80-120	7	30
Trichlorofluoromethane	20	14.56	20	14.39	73	72	55-135	1	30
1,2,4-Trimethylbenzene	20	19.74	20	21.26	99	106	75-120	7	30
1,3,5-Trimethylbenzene	20	20.08	20	21.57	100	108	75-120	7	30
Vinyl Chloride	20	17.39	20	16.55	87	83	56-120	5	30
m+p-Xylene	40	39.62	40	42.87	99	107	80-120	8	30
o-Xylene	20	19.35	20	20.8	97	104	80-120	7	30
Xylene (Total)	60	58.98	60	63.67	98	106	80-120	8	30
	ug/l	ug/l	ug/l	ug/l					
Batch number: 19269WAL026	Sample number(s): 1156994-1156999								
Acenaphthene	50	37.39	50	40.97	75	82	52-114	9	30
Acenaphthylene	50	43.13	50	45.48	86	91	57-121	5	30
Acetophenone	50	42.79	50	45.19	86	90	61-114	5	30
Aniline	50	31.7	50	31.82	63	64	35-84	0	30
Anthracene	50	44.14	50	45.36	88	91	62-116	3	30
Atrazine	50	47.1	50	52.22	94	104	71-133	10	30
Benzaldehyde	50	34.16	50	35.57	68	71	48-118	4	30
Benzo(a)anthracene	50	45.38	50	50.59	91	101	70-118	11	30
Benzo(a)pyrene	50	48.09	50	48.82	96	98	71-117	2	30
Benzo(b)fluoranthene	50	49.77	50	50.3	100	101	71-115	1	30
Benzo(g,h,i)perylene	50	49.62	50	46.31	99	93	60-119	7	30
Benzo(k)fluoranthene	50	50.41	50	47.65	101	95	71-116	6	30
Benzyl alcohol	50	42.61	50	47.17	85	94	58-121	10	30
1,1'-Biphenyl	50	38.27	50	41.09	77	82	51-112	7	30
4-Bromophenyl-phenylether	50	40.65	50	42.8	81	86	53-117	5	30
Butylbenzylphthalate	50	30.61	50	30.58	61	61	44-124	0	30
Di-n-butylphthalate	50	38.54	50	41.02	77	82	62-118	6	30
Caprolactam	50	14.55	50	16.39	29	33	10-57	12	30
Carbazole	50	47.59	50	50.41	95	101	64-127	6	30
4-Chloro-3-methylphenol	50	48	50	45.83	96	92	60-118	5	30
4-Chloroaniline	50	39.2	50	36.66	78	73	35-108	7	30
bis(2-Chloroethoxy)methane	50	44.39	50	44.83	89	90	53-119	1	30
bis(2-Chloroethyl)ether	50	38.82	50	40.11	78	80	49-110	3	30
bis(2-Chloroisopropyl)ether	50	36.97	50	37.27	74	75	33-119	1	30
2-Chloronaphthalene	50	34.69	50	35.45	69	71	42-111	2	30
2-Chlorophenol	50	38.8	50	38.51	78	77	52-109	1	30
4-Chlorophenyl-phenylether	50	37.65	50	38.84	75	78	46-113	3	30
Chrysene	50	44.81	50	48.6	90	97	69-116	8	30
Dibenz(a,h)anthracene	50	51.11	50	51.14	102	102	68-121	0	30
Dibenzofuran	50	38.94	50	40.06	78	80	53-114	3	30
3,3'-Dichlorobenzidine	50	34.56	50	35.39	69	71	42-107	2	30
2,4-Dichlorophenol	50	42.37	50	41.76	85	84	58-114	1	30
Dicyclohexylamine	200	198.67	200	227.26	99*	114*	22-75	13	30

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Quality Control Summary

Client Name: ARCADIS U.S., Inc.
Reported: 10/03/2019 17:33

Group Number: 2065288

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Diethylphthalate	50	30.86	50	29.8	62	60	48-113	3	30
N,N-Dimethylaniline	100	79.33	100	85.97	79	86	59-114	8	30
2,4-Dimethylphenol	50	37.74	50	37.87	75	76	48-91	0	30
Dimethylphthalate	50	15.83	50	12.21	32	24	14-123	26	30
4,6-Dinitro-2-methylphenol	50	45.32	50	48.38	91	97	63-129	7	30
2,4-Dinitrophenol	100	104.34	100	108.31	104	108	44-134	4	30
2,4-Dinitrotoluene	50	41.31	50	42.27	83	85	69-117	2	30
2,6-Dinitrotoluene	50	43.55	50	44.98	87	90	63-122	3	30
bis(2-Ethylhexyl)phthalate	50	43.4	50	50.04	87	100	68-120	14	30
Fluoranthene	50	46.86	50	47.93	94	96	63-122	2	30
Fluorene	50	38.11	50	42.1	76	84	56-115	10	30
Hexachlorobenzene	50	42.14	50	42.68	84	85	60-117	1	30
Hexachlorobutadiene	50	32.88	50	33.21	66	66	20-108	1	30
Hexachlorocyclopentadiene	100	41.1	100	43.01	41	43	10-91	5	30
Hexachloroethane	50	28.07	50	30.4	56	61	23-95	8	30
Indeno(1,2,3-cd)pyrene	50	50.48	50	46.09	101	92	63-114	9	30
Isophorone	50	46.63	50	48.31	93	97	56-120	4	30
2-Methylnaphthalene	50	37.59	50	39	75	78	44-111	4	30
2-Methylphenol	50	37.78	50	39.05	76	78	53-107	3	30
4-Methylphenol	50	40.82	50	42.13	82	84	49-108	3	30
Naphthalene	50	35.88	50	36.31	72	73	45-105	1	30
2-Nitroaniline	50	43.81	50	46.4	88	93	66-126	6	30
3-Nitroaniline	50	38.12	50	41.39	76	83	47-119	8	30
4-Nitroaniline	50	33.79	50	39.18	68	78	45-107	15	30
Nitrobenzene	50	42.51	50	42.5	85	85	49-113	0	30
2-Nitrophenol	50	40.28	50	42.95	81	86	57-116	6	30
4-Nitrophenol	50	27.36	50	27.87	55	56	23-89	2	30
N-Nitroso-di-n-propylamine	50	42.44	50	44	85	88	51-122	4	30
N-Nitrosodiphenylamine	50	43.58	50	43.73	87	87	63-119	0	30
Di-n-octylphthalate	50	48.33	50	48.34	97	97	67-120	0	30
Pentachlorophenol	50	56.38	50	54.28	113	109	54-131	4	30
Phenanthrene	50	46.13	50	46.95	92	94	65-113	2	30
Phenol	50	23.97	50	24.57	48	49	19-79	2	30
Pyrene	50	46.83	50	48.47	94	97	65-115	3	30
Pyridine	50	16.11	50	21.18	32	42	13-83	27	30
1,2,4,5-Tetrachlorobenzene	50	29.97	50	33.51	60	67	33-105	11	30
2,3,4,6-Tetrachlorophenol	50	46.45	50	48.37	93	97	68-118	4	30
2,4,5-Trichlorophenol	50	43.24	50	44.99	86	90	66-118	4	30
2,4,6-Trichlorophenol	50	42.73	50	45.31	85	91	69-122	6	30
Triethylamine	200	54.97	200	60.64	27	30	10-88	10	30
	ug/l	**ug/l**	**ug/l**	**ug/l**					
Batch number: 192660045A	Sample number(s): 1156994-1157000								
Ethylene glycol	102783.4	109717.1			107		69-118		

*- Outside of specification
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(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: ARCADIS U.S., Inc. Group Number: 2065288
Reported: 10/03/2019 17:33

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Propylene glycol	98902.99	105541.9			107		60-121		
Batch number: 192670005A	Sample number(s): 1156994-1157000								
Ethanol	2501	2347.06			94		80-115		
Isopropanol	2505	2426.02			97		85-115		
Methanol	2503	2490.24			99		79-120		
	mg/l	mg/l	mg/l	mg/l					
Batch number: 192670571303	Sample number(s): 1156994,1156996-1156999								
Mercury	0.00100	0.000976			98		80-110		
Batch number: 192671404405	Sample number(s): 1156994,1156996-1156999								
Antimony	0.500	0.520			104		90-117		
Arsenic	0.150	0.165			110		86-120		
Barium	2.00	2.05			103		87-111		
Beryllium	0.0500	0.0495			99		86-110		
Cadmium	0.0500	0.0522			104		90-111		
Calcium	4.00	4.17			104		88-112		
Chromium	0.200	0.204			102		87-110		
Cobalt	0.500	0.527			105		90-111		
Copper	0.250	0.265			106		90-115		
Iron	1.00	1.05			105		90-115		
Lead	0.150	0.154			103		87-113		
Magnesium	2.00	2.11			105		88-114		
Manganese	0.500	0.520			104		90-112		
Nickel	0.500	0.533			107		90-114		
Potassium	10	10.4			104		88-112		
Selenium	0.150	0.138			92		80-120		
Silver	0.0500	0.0512			102		80-120		
Sodium	10	10.31			103		87-112		
Thallium	0.150	0.148			99		80-120		
Batch number: 192690571303	Sample number(s): 1156995								
Mercury	0.00100	0.000880			88		80-110		
Batch number: 192691404402	Sample number(s): 1156995								
Antimony	0.500	0.494			99		90-117		
Arsenic	0.150	0.159			106		86-120		
Barium	2.00	1.99			100		87-111		
Beryllium	0.0500	0.0498			100		86-110		
Cadmium	0.0500	0.0520			104		90-111		
Calcium	4.00	4.12			103		88-112		
Chromium	0.200	0.206			103		87-110		
Cobalt	0.500	0.523			105		90-111		
Copper	0.250	0.265			106		90-115		

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(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: ARCADIS U.S., Inc. Group Number: 2065288
Reported: 10/03/2019 17:33

LCS/LCSD (continued)

Analysis Name	LCS Spike Added mg/l	LCS Conc mg/l	LCSD Spike Added mg/l	LCSD Conc mg/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Iron	1.00	1.03			103		90-115		
Lead	0.150	0.150			100		87-113		
Magnesium	2.00	2.08			104		88-114		
Manganese	0.500	0.523			105		90-112		
Nickel	0.500	0.524			105		90-114		
Potassium	10	10.3			103		88-112		
Selenium	0.150	0.141			94		80-120		
Silver	0.0500	0.0493			99		80-120		
Sodium	10	10.24			102		87-112		
Thallium	0.150	0.144			96		80-120		
	ug/l	**ug/l**	**ug/l**	**ug/l**					
Batch number: 192671404405	Sample number(s): 1156994,1156996-1156999								
Aluminum	2000	2097.36			105		87-122		
Vanadium	500	512.69			103		89-114		
Zinc	500	513.47			103		89-111		
Batch number: 192691404402	Sample number(s): 1156995								
Aluminum	2000	2144.02			107		87-122		
Vanadium	500	515.38			103		89-114		
Zinc	500	504.76			101		89-111		
	mg/kg	**mg/kg**	**mg/kg**	**mg/kg**					
Batch number: 19268104201A	Sample number(s): 1156994-1156999								
Cyanide (Reactivity)	1000	1037.01			104		77-113		
Batch number: 19269121521A	Sample number(s): 1156994-1156999								
Corrosivity	7.00	6.93			99		89-110		
	mg/kg	**mg/kg**	**mg/kg**	**mg/kg**					
Batch number: 19267112101A	Sample number(s): 1156994-1156999								
Sulfide (Reactivity)	570	456.96			80		56-104		
	Std. Units	**Std. Units**	**Std. Units**	**Std. Units**					
Batch number: 19269121521A	Sample number(s): 1156994-1156999								
pH	7.00	6.93			99		95-105		

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

*- Outside of specification
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(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: ARCADIS U.S., Inc.
Reported: 10/03/2019 17:33

Group Number: 2065288

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: 192660045A	Sample number(s): 1156994-1157000 UNSPK: 1156994									
Ethylene glycol	N.D.	102783.4	85957.89	102783.4	101627.4	84	99	69-118	17	20
Propylene glycol	N.D.	98902.99	87735.59	98902.99	97609.27	89	99	60-121	11	20
Batch number: 192670005A	Sample number(s): 1156994-1157000 UNSPK: 1156994									
Ethanol	N.D.	2501	2389.06	2501	2387.25	96	95	80-115	0	30
Isopropanol	N.D.	2505	2419.07	2505	2419.44	97	97	85-115	0	30
Methanol	508.97	2503	2875.45	2503	2873	95	94	79-120	0	30
	mg/l	**mg/l**	**mg/l**	**mg/l**	**mg/l**					
Batch number: 192691404402	Sample number(s): 1156995 UNSPK: 1156995									
Antimony	N.D.	2.50	1.72	2.50	1.42	69*	57*	75-125	19	20
Arsenic	0.241	0.750	1.05	0.750	1.08	108	111	75-125	2	20
Barium	2.73	10	12.73	10	12.74	100	100	75-125	0	20
Beryllium	0.0195	0.250	0.264	0.250	0.259	98	96	80-115	2	20
Cadmium	N.D.	0.250	0.223	0.250	0.222	89	89	75-125	1	20
Calcium	2890.76	20	2945.7	20	3360.9	275 (2)	2351 (2)	75-125	13	20
Chromium	1.20	1.00	2.33	1.00	2.41	113	121	75-125	3	20
Cobalt	0.291	2.50	2.64	2.50	2.67	94	95	80-115	1	20
Copper	1.24	1.25	2.65	1.25	2.83	113	127*	75-125	7	20
Iron	825.52	5.00	870.38	5.00	967.53	897 (2)	2840 (2)	75-125	11	20
Lead	0.469	0.750	1.15	0.750	1.15	91	91	75-125	0	20
Magnesium	741.97	10	764.55	10	868.1	226 (2)	1261 (2)	75-125	13	20
Manganese	24.09	2.50	26.39	2.50	29.91	92 (2)	233 (2)	75-125	12	20
Nickel	0.759	2.50	3.09	2.50	3.18	93	97	75-125	3	20
Potassium	147.87	50	299.8	50	302.73	304*	310*	75-125	1	20
Selenium	N.D.	0.750	0.643	0.750	0.674	86	90	75-125	5	20
Silver	N.D.	0.250	0.166	0.250	0.147	67*	59*	75-125	12	20
Sodium	114.38	50	163.4	50	180.96	98	133*	75-125	10	20
Thallium	N.D.	0.750	0.623	0.750	0.560	83	75	75-125	11	20
	ug/l	**ug/l**	**ug/l**	**ug/l**	**ug/l**					
Batch number: 192691404402	Sample number(s): 1156995 UNSPK: 1156995									
Aluminum	446482.35	10000	660033.95	10000	692423	2136 (2)	2459 (2)	75-125	5	20
Vanadium	794.8	2500	3568.4	2500	3549.8	111	110	75-125	1	20
Zinc	1974.6	2500	4348.45	2500	4664.1	95	108	75-125	7	20

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Quality Control Summary

Client Name: ARCADIS U.S., Inc. Group Number: 2065288
Reported: 10/03/2019 17:33

Laboratory Duplicate

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc	DUP Conc	DUP RPD	DUP RPD Max
	mg/l	mg/l		
Batch number: 192691404402	Sample number(s): 1156995 BKG: 1156995			
Antimony	N.D.	N.D.	0 (1)	20
Arsenic	0.241	0.288	18 (1)	20
Barium	2.73	3.00	10	20
Beryllium	0.0195	0.0213	9 (1)	20
Cadmium	N.D.	N.D.	0 (1)	20
Calcium	2890.76	3145.79	8	20
Chromium	1.20	1.35	12	20
Cobalt	0.291	0.322	10	20
Copper	1.24	1.36	9 (1)	20
Iron	825.52	925.8	11	20
Lead	0.469	0.454	3	20
Magnesium	741.97	823.41	10	20
Manganese	24.09	26.57	10	20
Nickel	0.759	0.836	10	20
Potassium	147.87	164.53	11	20
Selenium	N.D.	N.D.	0 (1)	20
Silver	N.D.	N.D.	0 (1)	20
Sodium	114.38	126.63	10	20
Thallium	N.D.	N.D.	0 (1)	20
	ug/l	ug/l		
Batch number: 192691404402	Sample number(s): 1156995 BKG: 1156995			
Aluminum	446482.35	495974.15	11	20
Vanadium	794.8	884.3	11	20
Zinc	1974.6	2175.75	10	20
Batch number: 19269121521A	Sample number(s): 1156994-1156999 BKG: 1156996			
Corrosivity	8.00	7.98	0	2
	Degrees C	Degrees C		
Batch number: 19269121521A	Sample number(s): 1156994-1156999 BKG: 1156996			
Temperature of pH	20	20.1	0	5
	Std. Units	Std. Units		
Batch number: 19269121521A	Sample number(s): 1156994-1156999 BKG: 1156996			
pH	8.00	7.98	0	4

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Quality Control Summary

Client Name: ARCADIS U.S., Inc. Group Number: 2065288
Reported: 10/03/2019 17:33

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs- 5ml Water by 8260C/D
Batch number: L192734AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
1156995	94	101	104	96
1157000	94	101	103	94
Blank	92	100	103	96
LCS	93	100	106	100
LCSD	92	100	105	99
Limits:	80-120	80-120	80-120	80-120

Analysis Name: VOCs- 5ml Water by 8260C/D
Batch number: L192741AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
1156994	93	101	103	93
1156996	94	102	103	95
1156997	95	104	101	97
1156998	94	103	102	96
1156999	95	103	103	97
Blank	93	101	103	95
LCS	94	102	104	99
LCSD	93	102	105	99
Limits:	80-120	80-120	80-120	80-120

Analysis Name: Semi-annual Groundwater BMS
Batch number: 19269WAL026

	Phenol-d6	2-Fluorophenol	2,4,6-Tribromophenol	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14
1156994	25	28	79	70	73	84
1156995	31	37	82	78	70	38*
1156996	34	43	82	84	80	80
1156997	39	50	77	88	80	92
1156998	34	44	66	90	79	81
1156999	34	46	84	82	78	92
Blank	33	49	87	83	74	99
LCS	39	53	84	82	71	85
LCSD	42	56	93	86	82	102
Limits:	10-67	10-84	23-135	33-113	44-102	39-125

Analysis Name: Glycols in Water by 8015C/D
Batch number: 192660045A

	Tetramethylene glycol
1156994	24
1156995	55

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Quality Control Summary

Client Name: ARCADIS U.S., Inc. Group Number: 2065288
Reported: 10/03/2019 17:33

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: Glycols in Water by 8015C/D
Batch number: 192660045A

	Tetramethylene glycol
1156996	44
1156997	50
1156998	53
1156999	49
1157000	45
Blank	69
LCS	101
MS	49
MSD	64
Limits:	22-129

Analysis Name: Alcohols in Water
Batch number: 192670005A

	Acetone-D1	Acetone-D2
1156994	101	94
1156995	101	92
1156996	98	92
1156997	102	92
1156998	102	93
1156999	100	93
1157000	97	90
Blank	101	94
LCS	86	85
MS	96	95
MSD	95	94
Limits:	58-149	58-149

*- Outside of specification
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(2) The unspiked result was more than four times the spike added.

Environmental Analysis Request/Chain of Custody

eurofins | Lancaster Laboratories Environmental

For Eurofins Lancaster Laboratories Environmental use only

Acct. # 3074 Group # 2065288 Sample # 1156994-7000

COC #593173

Client Information

Client: Arcadis-US	Acct. #:
Project Name/#: BMS Syracuse	PWSID #:
Project Manager: William McCune	P.O. #: 30033396
Sampler: Evan Green	Quote #:
State where samples were collected: New York	For Compliance: Yes ☐ No ☒

Matrix: Soil ☐ Sediment ☐ Tissue ☐ | Water: Potable ☐ Ground ☒ Surface ☐ NPDES ☐ | Other: ____

Analysis Requested

Preservation and Filtration Codes: N | H | H

For Lab Use Only

FSC:

SCR#: 249221

Preservation Codes

H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 P=H_3PO_4
F=Field Filtered O=Other

Sample Identification	Collected Date	Collected Time	Grab	Composite	Total # of Containers	Metals	VOCs Subset by 8260C/D	Alcohols in Water	Glycols in water 8015C	1H Hexane pH	Reactivity	SVOAs 8270 D/E/M1/N1	Remarks
HVE-DEV-WC	9/20/19	1400		X	12	X	X	X	X	X	X	X	
HVE-DW-WC		1415		X	12	X	X	X	X	X	X	X	
BDA-14-DW-WC		1445		X	12	X	X	X	X	X	X	X	
BDA-14-COR-WC		1455		X	12	X	X	X	X	X	X	X	
BDA-17-COR-WC		1555		X	12	X	X	X	X	X	X	X	
BDA-17-DW-WC	✓	1610		X	12	X	X	X	X	X	X	X	
RE 9-30-19													

Turnaround Time (TAT) Requested (please circle)

Standard (Rush)

(Rush TAT is subject to laboratory approval and surcharge.)

Requested TAT in business days: 5

E-mail address: William.McCune@Arcadis.com

Data Package Options (circle if required)

Type I (EPA Level 3 Equivalent/non-CLP) | Type VI (Raw Data Only)

Type III (Reduced non-CLP) | NJ DKQP | TX TRRP-13

NYSDEC Category A or (B) | MA MCP | CT RCP

Relinquished by	Date	Time	Received by	Date	Time
	9/19/19	11:30		9/20/	1100
	9/20/19	1700	FAX	9/20/19	1700
RETIGHT	9-30-19	19:00			

EDD Required? (Yes) No

If yes, format: ____

Site-Specific QC (MS/MSD/Dup)? Yes (No)

(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier:

UPS ____ FedEx X Other ____

Temperature upon receipt 3.8 °C

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Sample Administration Receipt Documentation Log

Doc Log ID: 260790

Group Number(s): 2065288

Client: ARCADIS-US

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Date:	09/21/2019
Number of Packages:	1	Number of Projects:	1
State/Province of Origin:	NY		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	Total Trip Blank Qty:	0
Samples Chilled:	Yes	Air Quality Samples Present:	No
Paperwork Enclosed:	Yes		
Samples Intact:	Yes		
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	Yes		

Unpacked by Jessenia Colon Martinez (30 856) at 11:22 on 09/21/2019

Samples Chilled Details

Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	DT42-03	3.8	DT	Wet	Y	Loose/Bag	N

Container Quantity Discrepancy Details

Sample ID on COC	Container Qty. Received	Container Qty. on COC	Comments
HVE-DEV-WC	5	12	
HVR-OW-WC	5	12	
BDA-14-OW-WC	5	12	
BDA-14-COR-WC	5	12	
BDA-17-COR-WC	5	12	
BDA-17-OW-WC	5	12	

General Comments: (1) BOTTLE METALS BATCH QC

2425 New Holland Pike
Lancaster, PA 17605-2425
T 717-656-2300
F 717-656-2681
www.LancasterLabs.com

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Sample Administration Receipt Documentation Log

Doc Log ID: 260876

Group Number(s): 2065288

Client: Arcadis

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Date:	09/21/2019
Number of Packages:	1	Number of Projects:	1
State/Province of Origin:	NY		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	Total Trip Blank Qty:	8
Samples Chilled:	Yes	Trip Blank Type:	See Below
Paperwork Enclosed:	Yes	Air Quality Samples Present:	No
Samples Intact:	Yes		
Missing Samples:	No		
Extra Samples:	Yes		
Discrepancy in Container Qty on COC:	No		

Trip Blank Type(s): 6-HCl, 2 unpreserved

Unpacked by Kristin Zeigler (2123) at 13:43 on 09/23/2019

Samples Chilled Details

Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	DT42-03	0.4	DT	Wet	Y	Loose/Bag	N

Extra Sample Details

Sample ID on Label	Number of Extra Containers	Date on Label	Comments
HVE-DVE-WC	7	9/20/2019 14:00	
HVE-DW-WC	7	9/20/2019 14:15	
BDA-14-DW-WC	7	9/20/2019 14:45	
BDA-14-COR-WC	7	9/20/2019 14:55	
BDA-17-COR-WC	7	9/20/2019 15:55	
BDA-17-DW-WC	7	9/20/2019 16:10	

2425 New Holland Pike
717.656.2300
www.LancasterLabs.com

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mL**	milliliter(s)
C	degrees Celsius	**MPN**	Most Probable Number
cfu	colony forming units	**N.D.**	non-detect
CP Units	cobalt-chloroplatinate units	**ng**	nanogram(s)
F	degrees Fahrenheit	**NTU**	nephelometric turbidity units
g	gram(s)	**pg/L**	picogram/liter
IU	International Units	**RL**	Reporting Limit
kg	kilogram(s)	**TNTC**	Too Numerous To Count
L	liter(s)	**µg**	microgram(s)
lb.	pound(s)	**µL**	microliter(s)
m3	cubic meter(s)	**umhos/cm**	micromhos/cm
meq	milliequivalents	**MCL**	Maximum Contamination Limit
mg	milligram(s)		

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
P^	Concentration difference between the primary and confirmation column > 40%. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

INVOICE

Invoice No 1003167451

42 Longwater Drive
P.O. Box 9149
Norwell, MA 02061-9149

REMIT TO:
Clean Harbors Env. Services
PO Box 3442
Boston, MA 02241-3442

OFFICE:
Clean Harbors Environmental Services, Inc.
6741 VIP Parkway
Syracuse, NY 13211
(315) 463-9901

If you have any questions regarding this invoice, please cont
service representative at the telephone nu

Accounts Payable
Bristol-Myers Squibb Company
PO Box 4755
Syracuse, NY 13221 - 0000

JOB SITE/GENERATOR:
Bristol-Myers Squibb Company
6000 Thompson Road
East Syracuse, NY 13057 - 0000

EIN: 04-2698999

Job Description: Drum Shipments

**** Payable in U**

Last Service Date	Invoice No	Customer	Branch	Sales Order	Purchase Order	Terms
19 Nov 2019	1003167451	BR000002	72	1905782635	0082010533	2% 10, Net

SUMMARY BY LINE TYPE

Disposal	
Fees	
Service	
Transportation	
SUBTOTAL	
TAX	
INVOICE TOTAL	
DUE DATE	**03 May 2020**

EASE PAY THIS AMOUNT
REMIT PAYMENT BY

E-BILLED INVOICE COPY

Manifest Info	Item ID	Description	Shipment Qty	Shipment UOM	Billing Qty	Billing UOM	Unit Price	Amount
		28 Oct 2019						
BOL1241559 1	DISPSL / CCRK	Soil borings from Monitor Wells install sample BDA-17RX Grab CH1923270	3	DM	3.000	55DM	120.0000 T	
BOL1241866 1	DISPSL / CCRK	Soil borings from Monitor Wells install sample BDA-17RX Grab CH1923270	7	DM	7.000	55DM	120.0000 T	
BOL1241558 1	DISPSL / B36B	Groundwater Drums CH1923203	14	DM	14.000	55DM	157.0000 T	
BOL1241865 1	DISPSL / B36B	Groundwater Drums CH1923203	40	DM	40.000	55DM	157.0000 T	
BOL1241865 2	DISPSL / B36B	Groundwater Drums CH1923203	1	DM	1.000	85DM	227.6500 T	
BOL1241865	TRAN	TRANSPORTATION			1.000	EA	1,250.0000 T	
		13 Nov 2019						
	REMANIFEST	Remanifesting Fee			1.000	EA	50.0000 T	
	RTAFDRUM	Return Drum to Alternate Facility			1.000	EA	25.0000 T	

Interest will be charged at a rate of 1.5% per month for all past due amounts.

42 Longwater Drive
P.O. Box 9149
Norwell, MA 02061-9149

INVOICE

Invoice No 1003167451

Manifest Info	Item ID	Description	Shipment Qty	Shipment UOM	Billing Qty	Billing UOM	Unit Price	Amount
	RTAFDRUM	Return Drum to Alternate Facility			1.000	EA	25.0000 T	[redacted]
	RTAFDRUM	Return Drum to Alternate Facility			1.000	EA	25.0000 T	
	RTAFDRUM	Return Drum to Alternate Facility			1.000	EA	25.0000 T	
	REMANIFEST	Remanifesting Fee			1.000	EA	50.0000 T	
	RTAFDRUM	Return Drum to Alternate Facility			1.000	EA	25.0000 T	
	RTAFDRUM	Return Drum to Alternate Facility			1.000	EA	25.0000 T	
	RTAFDRUM	Return Drum to Alternate Facility			1.000	EA	25.0000 T	
		19 Nov 2019						
011912107FLE 1	DISPSL / CCRKS	Groundwater Drums with solids Offspec to CCRK CH1923203-1	32	DM	2.000	55DM	120.0000 T	
011912107FLE 1	DISPSL / CCRKS	Groundwater Drums with solids Offspec to A22K CH1923203-1	32	DM	14.000	55DM	154.0000 T	
011912107FLE 1	DISPSL / CCRKS	Groundwater Drums with solids CH1923203-1	32	DM	16.000	55DM	115.0000 T	
	MTRLDISC10	Invoice Discount	[redacted]			EA	-0.0250 T	
	FEE	Fuel Surcharge				EA	0.1400 T	
							SUBTOTAL	
							TAX	
							TOTAL	[redacted]

E-BILLED INVOICE COPY

T indicates SALES TAXABLE ITEM

Interest will be charged at a rate of 1.5% per month for all past due amounts.

Site Address: 6000 Thompson Road
East Syracuse, NY 13057

SC PPW 12/9/2008

1241866

WORK ORDER NO. 781905782635

DOCUMENT NO.

STRAIGHT BILL OF LADING

TRANSPORTER 1 Clean Harbors Environmental Services, Inc. VEHICLE ID #

EPA ID # MAD039322250 TRANS. 1 PHONE (781) 792-5000

TRANSPORTER 2 Frank's Vacuum Trk Service VEHICLE ID #

EPA ID # NYD982772814 TRANS. 2 PHONE

DESIGNATED FACILITY			SHIPPER		
Clean Harbors El Dorado LLC			Bristol-Myers Squibb Company		
FACILITY EPA ID # ARD069748192			SHIPPER EPA ID # NYD002230902		
ADDRESS 309 American Circle			ADDRESS PO Box 4755		
CITY El Dorado	STATE AR	ZIP 71730	CITY Syracuse	STATE NY	ZIP 13221

CONTAINERS NO. & SIZE	TYPE	HM	DESCRIPTION OF MATERIALS	TOTAL QUANTITY	UNIT WT/VOL
7-55	DM		A. NON-REGULATED SOLID, (SOIL SAMPLES)	4900	P
			B. ~~NON-REGULATED SOLID~~ SR		
			C.		
			D.		
			E.		
			F.		
			G.		
			H.		

SPECIAL HANDLING INSTRUCTIONS EMERGENCY PHONE #: (800) 483-3718 GENERATOR: Bristol-Myers Squibb Company
A.CH1923270 ~~B.CH448566~~ SR

SHIPPERS CERTIFICATION: This is to certify that the above named materials are properly classified, described, packaged, marked and labeled and are in proper condition for transportation according to the applicable regulations of the Department of Transportation.

	PRINT	SIGN	DATE
SHIPPER	Anne H Locke		10/28/19
TRANSPORTER 1	Walt St. Pierre		10/28/19
TRANSPORTER 2	Chris Hurdiss		11/1/19
RECEIVED BY	Haylie Tittle	Haylie Tittle	11/14/19

1

CHI 107

STRAIGHT BILL OF LADING CONTINUATION FORM

DOCUMENT #: BUL 1241846

Shipper: Bristol Myers

EPA ID#: NJD002230902

Transporter # 3 : Clean Harbors Env Ser

EPA ID: MAD039320282

Stephanie Mathews
Name

Stephanie Mathews
Signature

Date: 11/4/19

Transporter #: _____

EPA ID#: _____

Name

Signature

Date:

Site Address: 6000 Thompson Road
East Syracuse, NY 13057

SC PPW 12/9/2008

1241865

WORK ORDER NO. 419057825 35

DOCUMENT NO.

STRAIGHT BILL OF LADING

TRANSPORTER 1 Clean Harbors Environmental Services, Inc. VEHICLE ID #

EPA ID # MAD039322250 TRANS. 1 PHONE (781) 792-5000

TRANSPORTER 2 FRANK'S VACUUM TRUCK SERVICE INC. VEHICLE ID # 800/259-B

EPA ID # NYD982792814 TRANS. 2 PHONE 716-284-2134

DESIGNATED FACILITY				SHIPPER			
Clean Harbors Environmental Services, Inc.				Bristol-Myers Squibb Company			
FACILITY EPA ID #				SHIPPER EPA ID #			
OHD000724153				NYD002230902			
ADDRESS				ADDRESS			
2900 Rockefeller Avenue				PO Box 4755			
CITY	STATE	ZIP		CITY	STATE	ZIP	
Cleveland	OH	44115		Syracuse	NY	13221	

CONTAINERS NO. & SIZE	TYPE	HM	DESCRIPTION OF MATERIALS	TOTAL QUANTITY	UNIT WT/VOL
2 ~~1~~ X 55	DM		A. NON HAZARDOUS, NON D.O.T. REGULATED LIQUID	20,000	P
2 X 55	DM		B. Non Hazardous non D.O.T. Regulated Liquid:	500	P
			C.		
			D. Reject due to non conformance - excessive solids Line 1 2 x 55 DM Line 2 1 x 55 DM		
			E. Ship to: Clean Harbors El Dorado, LLC		
			F. 309 American Circle El Dorado, AR 71730 ARD069748172		
			G. (870) 863-7173		
			H.		

SPECIAL HANDLING INSTRUCTIONS EMERGENCY PHONE #: (800) 483-3718 GENERATOR: Bristol-Myers Squibb Company
A.CH1923203 B. CH1923203

SHIPPERS CERTIFICATION: This is to certify that the above named materials are properly classified, described, packaged, marked and labeled and are in proper condition for transportation according to the applicable regulations of the Department of Transportation.

	PRINT	SIGN	DATE
SHIPPER	Anne Hlocke	Anne Hlocke	10-22-19
TRANSPORTER 1	Walt St. Pierre		10-22-19
TRANSPORTER 2	MARTIN T. MONKE	~~SIGN~~	11-4-19
RECEIVED BY	Frank G. Hegarty	Frank G Hegarty	11-11-19

CHI 107

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) 721905782635 SC PPW 12/9/2008 Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Manifest Tracking Number
NYD002230902	1	(800) 483-3718	011912107 FLE

GENERATOR

5. Generator's Name and Mailing Address
Bristol-Myers Squibb Company
PO Box 4755
Syracuse, NY 13221
Generator's Phone:

Generator's Site Address (if different than mailing address)
6000 Thompson Road
East Syracuse, NY 13057

6. Transporter 1 Company Name: Clean Harbors Environmental Services, Inc. (781) 792-5000 — U.S. EPA ID Number: MAD039322250

7. Transporter 2 Company Name — U.S. EPA ID Number:

8. Designated Facility Name and Site Address
Clean Harbors El Dorado LLC
309 American Circle
El Dorado, AR 71730
Facility's Phone: (870) 863-7173
U.S. EPA ID Number: ARD069748192

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
	1. NONE, NON HAZARDOUS, NON D.O.T. REGULATED LIQUID, N/A, NONE (SOLIDS, LIQUID)	32	DM	14000	P	
	2.					
	3.					
	4.					

14. Special Handling Instructions and Additional Information
1. CH1923203-1 30 x 55 2 x 85

Contract retained by generator confers agency authority on initial transporter to add or substitute additional transporters on generator's behalf for purposes of transportation efficiency, convenience or safety

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: Frank G. Hegarty — Signature: [signature] — Month: 11 Day: 19 Year: 19

INT'L

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name	Signature	Month	Day	Year

Transporter 2 Printed/Typed Name	Signature	Month	Day	Year

DESIGNATED FACILITY

18. Discrepancy

18a. Discrepancy Indication Space: Rejected due to CH1923203 — ☐ Quantity — ☐ Type: NON COMPLIANT MATERIAL - EXCESSIVE SOLIDS — ☐ Residue — ☑ Partial Rejection BOL 1241832 — ☐ Full Rejection
Manifest Reference Number: BOL 1241965 BOL 1241838

18b. Alternate Facility (or Generator) — U.S. EPA ID Number:
Facility's Phone:

18c. Signature of Alternate Facility (or Generator) — Month: Day: Year:

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1.	2.	3.	4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name	Signature	Month	Day	Year

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

Clean Harbors has the appropriate permits for and will accept the waste the generator is shipping.

Site Address: 6000 Thompson Road
East Syracuse, NY 13057

1241559

SC PPW 12/9/2008
WORK ORDER NO. 72 1905782635

DOCUMENT NO.

STRAIGHT BILL OF LADING

TRANSPORTER 1 Clean Harbors Environmental Services, Inc. VEHICLE ID #

EPA ID # MAD039322250 TRANS. 1 PHONE (781) 792-5000

TRANSPORTER 2 Frank's Vacuum Trk Service VEHICLE ID #

EPA ID # NYD982772814 TRANS. 2 PHONE

DESIGNATED FACILITY			SHIPPER		
Clean Harbors El Dorado LLC			Bristol-Myers Squibb Company		
FACILITY EPA ID #			SHIPPER EPA ID #		
ARD069748192			NYD002230902		
ADDRESS			ADDRESS		
309 American Circle			PO Box 4755		
CITY	STATE	ZIP	CITY	STATE	ZIP
El Dorado	AR	71730	Syracuse	NY	13221

CONTAINERS NO. & SIZE	TYPE	HM	DESCRIPTION OF MATERIALS	TOTAL QUANTITY	UNIT WT/VOL
3X55	DM		A. NON-REGULATED SOLID, (SOIL SAMPLES)	2,000	A
			B.		
			C.		
			D.		
			E.		
			F.		
			G.		
			H.		

SPECIAL HANDLING INSTRUCTIONS A.CH1923270 EMERGENCY PHONE #: (800) 483-3718 GENERATOR: Bristol-Myers Squibb Company

SHIPPERS CERTIFICATION: This is to certify that the above named materials are properly classified, described, packaged, marked and labeled and are in proper condition for transportation according to the applicable regulations of the Department of Transportation.

	PRINT	SIGN	DATE
SHIPPER	Anne H Locke	Anne H Locke	10-28-19
TRANSPORTER 1	Walt St. Pierre		10-28-19
TRANSPORTER 2	Chris Hurdiss		11-1-19
RECEIVED BY	Haylie Tittle	haylie tittle	11/14/19

1

CHI 107

STRAIGHT BILL OF LADING CONTINUATION FORM

PAGE 2 OF 2

DOCUMENT #: BUL 124559

Shipper Bristol Myers

EPA ID#: NYD002230902

Transporter # 3 Clean Harbors ENV Ser

EPA ID MAD039320282

Stephanie Matheny
Name

Stephanie Matheny
Signature

Date: 11/12/19

Transporter #

EPA ID#:

Name

Signature

Site Address: 6000 Thompson Road
East Syracuse, NY 13057

SC PPW 12/9/2008

1241558

WORK ORDER NO 21905782635

DOCUMENT NO.

STRAIGHT BILL OF LADING

TRANSPORTER 1 Clean Harbors Environmental Services, Inc. VEHICLE ID #

EPA ID # MAD039322250 TRANS. 1 PHONE (781) 792-5000

TRANSPORTER 2 FRANK'S VACUUM TRUCK SERVICE INC. VEHICLE ID # 800/259-B

EPA ID # NYD982792814 TRANS. 2 PHONE 716-284-2134

DESIGNATED FACILITY	SHIPPER
Clean Harbors Environmental Services, Inc.	Bristol-Myers Squibb Company
FACILITY EPA ID # OHD000724153	SHIPPER EPA ID # NYD002230902
ADDRESS 2900 Rockefeller Avenue	ADDRESS PO Box 4755
CITY Cleveland STATE OH ZIP 44115	CITY Syracuse STATE NY ZIP 13221

CONTAINERS NO. & SIZE	TYPE	HM	DESCRIPTION OF MATERIALS	TOTAL QUANTITY	UNIT WT/VOL
7 ~~8~~ X 55	Dm		A. NON HAZARDOUS, NON D.O.T. REGULATED LIQUID	8000	P
1 X 85	Dm		B. Non Hazardous, non D.O.T. Regulated Liquid	400	P
			C.		
			D. Reject due to nonconformance - excessive solids Line 1 3x55 Dm Line 2 1x85 Dm		
			E. Ship to Clean Harbors El Dorado LLC ARD069748192		
			F. 309 American Circle El Dorado, AR 71730 (870) -863-7173		
			G.		
			H.		

SPECIAL HANDLING INSTRUCTIONS A.CH1923203 B. CH1923203 EMERGENCY PHONE #: (800) 483-3718 GENERATOR: Bristol-Myers Squibb Company

SHIPPERS CERTIFICATION: This is to certify that the above named materials are properly classified, described, packaged, marked and labeled and are in proper condition for transportation according to the applicable regulations of the Department of Transportation.

	PRINT	SIGN	DATE
SHIPPER	Anne H Locke	Anne H Locke	10-28-19
TRANSPORTER 1	Walt St. Pierre		10-28-19
TRANSPORTER 2	MARTIN T. NOONE	~~SIGN~~	11-4-19
RECEIVED BY	Frank G. Hegarty		11-11-19

CHI 107

ATTACHMENT 9

Laboratory Analytical Reports

eurofins | Lancaster Laboratories Environmental

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv



ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

ARCADIS U.S., Inc.
630 Plaza Drive
Suite 600
Highlands Ranch CO 80129

Report Date: August 30, 2019 15:37

Project: Bristol-Myers Squibb

Account #: 03074
Group Number: 2058610
SDG: BMS76
PO Number: B0033396
State of Sample Origin: NY

Electronic Copy To	Arcadis	Attn: William McCune
Electronic Copy To	Arcadis	Attn: Lawrence Carey Healy

Respectfully Submitted,

Megan A. Moeller
Senior Specialist

(717) 556-7261

To view our laboratory's current scopes of accreditation please go to https://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/certifications-and-accreditations-eurofins-lancaster-laboratories-environmental/ . Historical copies may be requested through your project manager.



2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
BDA-17RX(9-11) Grab Soil	08/13/2019 08:30	1123981
DUP-1-081319 Grab Soil	08/13/2019	1123982
Trip Blank 1 Water	08/13/2019	1123983
SupplyWater-081319 Grab Surface Water	08/13/2019 14:00	1123984

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

Project Name: Bristol-Myers Squibb
ELLE Group #: 2058610

General Comments:

Through our technical processes and second person review of data, we have established that our data/deliverables are in compliance with the methods and project requirements unless otherwise noted or previously resolved with the client. The compliance signature is located on the cover page of the Analysis Reports.

See the Laboratory Sample Analysis Record section of the Analysis Report for the method references.

All QC met criteria unless otherwise noted in an Analysis Specific Comment below.

Refer to the QC Summary for specific values and acceptance criteria.

Project specific QC samples are not included in this data set.

Matrix QC may not be reported if site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

Surrogate recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in an Analysis Specific Comment below.

The samples were received at the appropriate temperature and in accordance with the chain of custody unless otherwise noted.

Analysis Specific Comments:

SW-846 8260C, GC/MS Volatiles

Sample #s: 1123981

A Method Detection Limit (MDL) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The MDL standard shows adequate sensitivity at or below the reporting limit.

The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the TNI/DoD Standards. The following analytes are accepted based on this allowance: Acetone

Sample #s: 1123983

Project defined calibration criteria are not met. The calibration is compliant with the method defined criteria.

A Method Detection Limit (MDL) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The MDL standard shows adequate sensitivity at or below the reporting limit.

Sample #s: 1123984

Project defined calibration criteria are not met. The calibration is compliant with the method defined criteria.

A Method Detection Limit (MDL) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The MDL standard shows adequate sensitivity at or below the reporting limit.

The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the TNI/DoD Standards. The following analytes are accepted based on this allowance: acetone.

Sample #s: 1123982

Project defined calibration criteria are not met. The calibration is compliant with the method defined criteria.

A Method Detection Limit (MDL) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The MDL standard shows adequate sensitivity at or below the reporting limit.

The recovery for the sample internal standard is outside the QC acceptance limits. The following action was taken: The sample was re-analyzed and the QC is again outside of the acceptance limits, indicating a matrix effect. The data is reported from the initial trial.

Batch #: 4192381AA (Sample number(s): 1123983-1123984 UNSPK: 1123984)

The recovery(ies) for the following analyte(s) in the LCS and/or LCSD exceeded the acceptance window indicating a positive bias: Acetone

Batch #: B192342AA (Sample number(s): 1123982)

The recovery(ies) for the following analyte(s) in the LCS and/or LCSD exceeded the acceptance window indicating a positive bias: cis-1,2-Dichloroethene, Tetrachloroethene, sec-Butylbenzene

Batch #: B192351AA (Sample number(s): 1123981)

The recovery(ies) for the following analyte(s) in the LCS and/or LCSD exceeded the acceptance window indicating a positive bias: Tetrachloroethene, Acetone

SW-846 8270D, GC/MS Semivolatiles

Sample #s: 1123984

Z=The stated QC limits are advisory only until sufficient data points can be obtained to calculate statistical limits.

Sample #s: 1123981

Z=The stated QC limits are advisory only until sufficient data points can be obtained to calculate statistical limits.

The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the TNI/DoD Standards. The following analytes are accepted based on this allowance: 4-Nitrophenol, Butylbenzylphthalate, Di-n-octylphthalate and bis(2-Ethylhexyl)phthalate

Sample #s: 1123982

Z=The stated QC limits are advisory only until sufficient data points

can be obtained to calculate statistical limits.

The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the TNI/DoD Standards. The following analytes are accepted based on this allowance: 4-Nitrophenol, Butylbenzylphthalate, Di-n-octylphthalate and bis(2-Ethylhexyl)phthalate

Reporting limits were raised due to interference from the sample matrix.

Batch #: 19231WAG026 (Sample number(s): 1123984)

The recovery(ies) for the following analyte(s) in the LCS and/or LCSD exceeded the acceptance window indicating a positive bias: Dicyclohexylamine

Batch #: 19234SLE026 (Sample number(s): 1123981-1123982)

The recovery(ies) for the following analyte(s) in the LCS and/or LCSD exceeded the acceptance window indicating a positive bias: 4-Nitrophenol, Butylbenzylphthalate, bis(2-Ethylhexyl)phthalate, Di-n-octylphthalate

The recovery(ies) for the following analyte(s) in the LCS and/or LCSD were below the acceptance window: N,N-Dimethylaniline, Triethylamine

SW-846 8015C Feb 2007 Rev 3, GC Miscellaneous

Sample #s: 1123983

The requirement for no headspace at the time of analysis was not met. The container used for the testing had headspace at the time of analysis.

Sample #s: 1123981, 1123982

The response for tetramethylene glycol in the continuing calibration verification standard is outside the QC acceptance limits high. The following action was taken:
The analysis was repeated and the continuing calibration verification standard bracketing the sample on the second trial is also outside the acceptance limits high for tetramethylene glycol.
This effect is attributed to the sample matrix and the data is reported.

Batch #: 192270013A (Sample number(s): 1123983-1123984 UNSPK: 1123984)

The recovery(ies) for the following analyte(s) in the MS and/or MSD exceeded the acceptance window indicating a positive bias: Methanol

SM 2540 G-2011 %Moisture Calc, Wet Chemistry

Batch #: 19232820006A (Sample number(s): 1123981-1123982 BKG: 1123981)

The duplicate RPD for the following analyte(s) exceeded the acceptance window: Moisture

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

Sample Description: **BDA-17RX(9-11) Grab Soil**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 08/14/2019 10:10
Collection Date/Time: 08/13/2019 08:30
SDG#: BMS76-01

ARCADIS U.S., Inc.
ELLE Sample #: SW 1123981
ELLE Group #: 2058610
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Limit of Quantitation*	Dry Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**mg/kg**	**mg/kg**	**mg/kg**	
11995	Acetone	67-64-1	0.015 J	0.019	0.006	0.88
11995	Acetonitrile	75-05-8	N.D.	0.095	0.024	0.88
11995	Benzene	71-43-2	N.D.	0.005	0.0005	0.88
11995	Bromochloromethane	74-97-5	N.D.	0.005	0.0006	0.88
11995	Bromodichloromethane	75-27-4	N.D.	0.005	0.0004	0.88
11995	Bromoform	75-25-2	N.D.	0.009	0.005	0.88
11995	Bromomethane	74-83-9	N.D.	0.005	0.0007	0.88
11995	n-Butanol	71-36-3	N.D.	0.24	0.053	0.88
11995	2-Butanone	78-93-3	N.D.	0.009	0.0009	0.88
11995	t-Butyl alcohol	75-65-0	N.D.	0.095	0.014	0.88
11995	n-Butylbenzene	104-51-8	N.D.	0.008	0.003	0.88
11995	sec-Butylbenzene	135-98-8	N.D.	0.005	0.002	0.88
11995	tert-Butylbenzene	98-06-6	N.D.	0.005	0.0008	0.88
11995	Carbon Disulfide	75-15-0	0.001 J	0.005	0.0006	0.88
11995	Carbon Tetrachloride	56-23-5	N.D.	0.005	0.0005	0.88
11995	Chlorobenzene	108-90-7	N.D.	0.005	0.0005	0.88
11995	Chlorodifluoromethane[1]	75-45-6	N.D.	0.009	0.002	0.88
11995	Chloroethane	75-00-3	N.D.	0.005	0.0009	0.88
11995	Chloroform	67-66-3	N.D.	0.005	0.0006	0.88
11995	Chloromethane	74-87-3	N.D.	0.005	0.0006	0.88
11995	Cyclohexane	110-82-7	N.D.	0.005	0.0005	0.88
11995	Cyclohexanone[1]	108-94-1	N.D.	0.24	0.024	0.88
11995	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	0.005	0.0005	0.88
11995	Dibromochloromethane	124-48-1	N.D.	0.005	0.0005	0.88
11995	1,2-Dibromoethane	106-93-4	N.D.	0.005	0.0004	0.88
11995	1,2-Dichlorobenzene	95-50-1	N.D.	0.005	0.0005	0.88
11995	1,3-Dichlorobenzene	541-73-1	N.D.	0.005	0.0005	0.88
11995	1,4-Dichlorobenzene	106-46-7	N.D.	0.005	0.0004	0.88
11995	Dichlorodifluoromethane	75-71-8	N.D.	0.005	0.0006	0.88
11995	1,1-Dichloroethane	75-34-3	N.D.	0.005	0.0005	0.88
11995	1,2-Dichloroethane	107-06-2	N.D.	0.005	0.0006	0.88
11995	1,1-Dichloroethene	75-35-4	N.D.	0.005	0.0005	0.88
11995	cis-1,2-Dichloroethene	156-59-2	N.D.	0.005	0.0005	0.88
11995	trans-1,2-Dichloroethene	156-60-5	N.D.	0.005	0.0005	0.88
11995	1,2-Dichloropropane	78-87-5	N.D.	0.005	0.0005	0.88
11995	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.005	0.0004	0.88
11995	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.005	0.0005	0.88
11995	1,4-Dioxane	123-91-1	N.D.	0.24	0.035	0.88
11995	Ethyl Acetate	141-78-6	N.D.	0.005	0.0009	0.88
11995	Ethyl Ether[1]	60-29-7	N.D.	0.005	0.0009	0.88
11995	Ethylbenzene	100-41-4	N.D.	0.005	0.0004	0.88

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-17RX(9-11) Grab Soil**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 08/14/2019 10:10
Collection Date/Time: 08/13/2019 08:30
SDG#: BMS76-01

ARCADIS U.S., Inc.
ELLE Sample #: SW 1123981
ELLE Group #: 2058610
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Limit of Quantitation*	Dry Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**mg/kg**	**mg/kg**	**mg/kg**	
11995	Freon 113	76-13-1	N.D.	0.009	0.0006	0.88
11995	n-Heptane[1]	142-82-5	N.D.	0.008	0.003	0.88
11995	n-Hexane[1]	110-54-3	N.D.	0.005	0.0005	0.88
11995	2-Hexanone	591-78-6	N.D.	0.009	0.0009	0.88
11995	Isobutyl Alcohol	78-83-1	N.D.	0.24	0.036	0.88
11995	Isopropylbenzene	98-82-8	N.D.	0.005	0.0004	0.88
11995	p-Isopropyltoluene	99-87-6	N.D.	0.005	0.002	0.88
11995	Methyl Acetate	79-20-9	N.D.	0.005	0.0009	0.88
11995	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.005	0.0005	0.88
11995	4-Methyl-2-pentanone	108-10-1	N.D.	0.009	0.0009	0.88
11995	Methylcyclohexane	108-87-2	N.D.	0.005	0.0006	0.88
11995	Methylene Chloride	75-09-2	N.D.	0.005	0.002	0.88
11995	Naphthalene	91-20-3	N.D.	0.005	0.002	0.88
11995	2-Nitropropane	79-46-9	N.D.	0.009	0.002	0.88
11995	Styrene	100-42-5	N.D.	0.005	0.0004	0.88
11995	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.005	0.0004	0.88
11995	Tetrachloroethene	127-18-4	N.D.	0.005	0.0005	0.88
11995	Tetrahydrofuran[1]	109-99-9	N.D.	0.008	0.0009	0.88
11995	Toluene	108-88-3	N.D.	0.005	0.0006	0.88
11995	1,2,3-Trichlorobenzene	87-61-6	N.D.	0.009	0.005	0.88
11995	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.009	0.005	0.88
11995	1,1,1-Trichloroethane	71-55-6	N.D.	0.005	0.0006	0.88
11995	1,1,2-Trichloroethane	79-00-5	N.D.	0.005	0.0005	0.88
11995	Trichloroethene	79-01-6	N.D.	0.005	0.0005	0.88
11995	Trichlorofluoromethane	75-69-4	N.D.	0.005	0.0007	0.88
11995	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.005	0.0005	0.88
11995	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.005	0.0005	0.88
11995	Vinyl Chloride	75-01-4	N.D.	0.005	0.0006	0.88
11995	m+p-Xylene	179601-23-1	N.D.	0.005	0.0009	0.88
11995	o-Xylene	95-47-6	N.D.	0.005	0.0004	0.88
11995	Xylene (Total)	1330-20-7	N.D.	0.009	0.001	0.88

A Method Detection Limit (MDL) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The MDL standard shows adequate sensitivity at or below the reporting limit.

The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the TNI/DoD Standards. The following analytes are accepted based on this allowance: Acetone

12027 VOA Interp. Library Search-20

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-17RX(9-11) Grab Soil**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 08/14/2019 10:10
Collection Date/Time: 08/13/2019 08:30
SDG#: BMS76-01

ARCADIS U.S., Inc.
ELLE Sample #: SW 1123981
ELLE Group #: 2058610
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Limit of Quantitation*	Dry Method Detection Limit	Dilution Factor
	The results from the volatile library search are listed on the attached FORM 1 - VOA-TIC. The qualifiers appearing in the "Q" column are defined at the end of the report.						
GC/MS Semivolatiles	**SW-846 8270D**		**ug/kg**		**ug/kg**	**ug/kg**	
10726	Acenaphthene	83-32-9	9	J	18	4	1
10726	Acenaphthylene	208-96-8	10	J	18	4	1
10726	Acetophenone	98-86-2	N.D.		53	18	1
10726	Aniline	62-53-3	N.D.		530	180	1
10726	Anthracene	120-12-7	8	J	18	4	1
10726	Atrazine	1912-24-9	N.D.		460	210	1
10726	Benzaldehyde	100-52-7	N.D.		180	71	1
10726	Benzo(a)anthracene	56-55-3	11	J	18	7	1
10726	Benzo(a)pyrene	50-32-8	10	J	18	4	1
10726	Benzo(b)fluoranthene	205-99-2	12	J	18	4	1
10726	Benzo(g,h,i)perylene	191-24-2	12	J	18	4	1
10726	Benzo(k)fluoranthene	207-08-9	12	J	18	4	1
10726	Benzyl alcohol	100-51-6	N.D.		530	180	1
10726	1,1'-Biphenyl	92-52-4	N.D.		39	18	1
10726	4-Bromophenyl-phenylether	101-55-3	N.D.		53	25	1
10726	Butylbenzylphthalate	85-68-7	N.D.		180	71	1
10726	Di-n-butylphthalate	84-74-2	N.D.		180	71	1
10726	Caprolactam	105-60-2	N.D.		180	35	1
10726	Carbazole	86-74-8	N.D.		39	18	1
10726	4-Chloro-3-methylphenol	59-50-7	N.D.		53	25	1
10726	4-Chloroaniline	106-47-8	N.D.		180	35	1
10726	bis(2-Chloroethoxy)methane	111-91-1	N.D.		39	18	1
10726	bis(2-Chloroethyl)ether	111-44-4	N.D.		53	25	1
10726	bis(2-Chloroisopropyl)ether[1]	39638-32-9	N.D.		46	21	1
	Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.						
10726	2-Chloronaphthalene	91-58-7	N.D.		35	7	1
10726	2-Chlorophenol	95-57-8	N.D.		39	18	1
10726	4-Chlorophenyl-phenylether	7005-72-3	N.D.		46	21	1
10726	Chrysene	218-01-9	12	J	18	4	1
10726	Dibenz(a,h)anthracene	53-70-3	8	J	18	7	1
10726	Dibenzofuran	132-64-9	N.D.		39	18	1
10726	3,3'-Dichlorobenzidine	91-94-1	N.D.		350	110	1
10726	2,4-Dichlorophenol	120-83-2	N.D.		46	21	1
10726	Dicyclohexylamine[1]	101-83-7	N.D.		2,100	710	1
10726	Diethylphthalate	84-66-2	N.D.		180	71	1
10726	N,N-Dimethylaniline[1]	121-69-7	N.D.	Z	180	35	1
10726	2,4-Dimethylphenol	105-67-9	N.D.		71	32	1

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-17RX(9-11) Grab Soil**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 08/14/2019 10:10
Collection Date/Time: 08/13/2019 08:30
SDG#: BMS76-01

ARCADIS U.S., Inc.
ELLE Sample #: SW 1123981
ELLE Group #: 2058610
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Limit of Quantitation*	Dry Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/kg**	**ug/kg**	**ug/kg**	
10726	Dimethylphthalate	131-11-3	N.D.	180	71	1
10726	4,6-Dinitro-2-methylphenol	534-52-1	N.D.	530	250	1
10726	2,4-Dinitrophenol	51-28-5	N.D.	1,100	350	1
10726	2,4-Dinitrotoluene	121-14-2	N.D.	180	71	1
10726	2,6-Dinitrotoluene	606-20-2	N.D.	53	25	1
10726	bis(2-Ethylhexyl)phthalate	117-81-7	110 J	180	71	1
10726	Fluoranthene	206-44-0	11 J	18	4	1
10726	Fluorene	86-73-7	10 J	18	4	1
10726	Hexachlorobenzene	118-74-1	12 J	18	7	1
10726	Hexachlorobutadiene	87-68-3	N.D.	81	39	1
10726	Hexachlorocyclopentadiene	77-47-4	N.D. K3	530	210	1
10726	Hexachloroethane	67-72-1	N.D.	180	35	1
10726	Indeno(1,2,3-cd)pyrene	193-39-5	10 J	18	4	1
10726	Isophorone	78-59-1	N.D.	39	18	1
10726	2-Methylnaphthalene	91-57-6	8 J	35	4	1
10726	2-Methylphenol	95-48-7	N.D.	71	18	1
10726	4-Methylphenol	65794-96-9	N.D.	53	18	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
10726	Naphthalene	91-20-3	9 J	18	7	1
10726	2-Nitroaniline	88-74-4	N.D.	53	18	1
10726	3-Nitroaniline	99-09-2	N.D.	180	71	1
10726	4-Nitroaniline	100-01-6	N.D.	180	71	1
10726	Nitrobenzene	98-95-3	N.D.	71	28	1
10726	2-Nitrophenol	88-75-5	N.D.	60	28	1
10726	4-Nitrophenol	100-02-7	N.D.	530	180	1
10726	N-Nitroso-di-n-propylamine	621-64-7	N.D.	53	25	1
10726	N-Nitrosodiphenylamine	86-30-6	N.D.	39	18	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.					
10726	Di-n-octylphthalate	117-84-0	N.D.	180	71	1
10726	Pentachlorophenol	87-86-5	N.D.	180	71	1
10726	Phenanthrene	85-01-8	12 J	18	4	1
10726	Phenol[1]	108-95-2	N.D.	39	18	1
10726	Pyrene	129-00-0	14 J	18	4	1
10726	Pyridine	110-86-1	N.D.	180	71	1
10726	1,2,4,5-Tetrachlorobenzene	95-94-3	N.D.	39	18	1
10726	2,3,4,6-Tetrachlorophenol	58-90-2	N.D.	180	71	1
10726	2,4,5-Trichlorophenol	95-95-4	N.D.	71	32	1
10726	2,4,6-Trichlorophenol	88-06-2	N.D.	60	28	1

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-17RX(9-11) Grab Soil**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 08/14/2019 10:10
Collection Date/Time: 08/13/2019 08:30
SDG#: BMS76-01

ARCADIS U.S., Inc.
ELLE Sample #: SW 1123981
ELLE Group #: 2058610
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Limit of Quantitation*	Dry Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/kg**	**ug/kg**	**ug/kg**	
10726	Triethylamine[1]	121-44-8	N.D. Z	5,300	1,800	1

Z=The stated QC limits are advisory only until sufficient data points can be obtained to calculate statistical limits.

The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the TNI/DoD Standards. The following analytes are accepted based on this allowance: 4-Nitrophenol, Butylbenzylphthalate, Di-n-octylphthalate and bis(2-Ethylhexyl)phthalate

00886 SVOA TIC Interpretive(25)

The results from the semivolatile library search are listed on the attached FORM 1 - SV-TIC. The qualifiers appearing in the "Q" column are defined at the end of the report.

GC Miscellaneous	**SW-846 8015C Feb 2007 Rev 3**		**mg/kg**	**mg/kg**	**mg/kg**	
12925	Ethylene glycol	107-21-1	N.D.	11	5.3	1
12925	Propylene glycol[1]	57-55-6	N.D.	11	5.3	1

The response for tetramethylene glycol in the continuing calibration verification standard is outside the QC acceptance limits high. The following action was taken:
The analysis was repeated and the continuing calibration verification standard bracketing the sample on the second trial is also outside the acceptance limits high for tetramethylene glycol.
This effect is attributed to the sample matrix and the data is reported.

GC Miscellaneous	**SW-846 8015D Rev.4, June 2003**		**mg/kg**	**mg/kg**	**mg/kg**	
10604	Ethanol (by Direct Injection)[1]	64-17-5	N.D. D2	1.1	0.13	1
10604	Isopropanol[1]	67-63-0	N.D. D2	1.1	0.049	1
10604	Methanol (by Direct Injection)[1]	67-56-1	1.4 D2	1.1	0.21	1
Wet Chemistry	**SM 2540 G-2011 %Moisture Calc**		**%**	**%**	**%**	
00111	Moisture[1]	n.a.	6.4	0.50	0.50	1

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-17RX(9-11) Grab Soil**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 08/14/2019 10:10
Collection Date/Time: 08/13/2019 08:30
SDG#: BMS76-01

ARCADIS U.S., Inc.
ELLE Sample #: SW 1123981
ELLE Group #: 2058610
Matrix: Soil

Sample Comments

State of New York Certification No. 10670

[1] = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Eurofins Lancaster Laboratories Environmental, LLC is responsible only for the certified testing of samples. We are not directly responsible for the integrity of the sample prior to laboratory receipt. Any reported concentrations less than 200 ug/kg may be biased low if they were not collected according to EPA 5035/5035A specifications.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11995	VOCs- Solid by 8260C/D	SW-846 8260C	1	B192351AA	08/23/2019 15:06	Linda C Pape	0.88
06176	GC/MS - LL DIH2O Prep	SW-846 5035A	1	201922654537	08/14/2019 15:28	Rebecca Williams	1
06176	GC/MS - LL DIH2O Prep	SW-846 5035A	2	201922654537	08/14/2019 15:28	Rebecca Williams	1
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	201922654537	08/13/2019 08:30	Client Supplied	1
10726	SVOA 8270D/E (microwave)	SW-846 8270D	1	19234SLE026	08/24/2019 19:27	Linda M Hartenstine	1
10813	BNA Soil Microwave APP IX	SW-846 3546	2	19234SLE026	08/23/2019 09:00	Logan M Brosemer	1
12925	Glycols in Soil by 8015C/D	SW-846 8015C Feb 2007 Rev 3	1	192280045A	08/16/2019 22:19	Donald Brown	1
10604	Alcohols in Soil	SW-846 8015D Rev.4, June 2003	1	192270015A	08/15/2019 17:04	Johanna C Kennedy	1
13121	Glycol Solids Ext. 8015C/D	SW-846 8015C Feb 2007 Rev 3	3	192280045A	08/16/2019 18:25	Donald Brown	1
00380	Solids Extraction for Alcohols	SW-846 8015D Rev 4 06/2003 Mod	1	192270015A	08/15/2019 11:45	Johanna C Kennedy	1
00111	Moisture	SM 2540 G-2011 %Moisture Calc	1	19232820006A	08/21/2019 11:08	William C Schwebel	1

*=This limit was used in the evaluation of the final result

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
MS761

Lab Name: Lancaster Laboratories Contract:_____
Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____
Matrix: (soil/water) SOIL Lab Sample ID: 1123981
Sample wt/vol: 5.32 (g/mL) g Lab File ID: HP09953.i/19aug22a.b/bg22s41.d
Level: (low/med) LOW Date Received: 08/14/19
% Moisture: not dec. 6.4 Date Analyzed: 08/22/19
Column: (pack/cap) CAP Dilution Factor: 1.0
CONCENTRATION UNITS:
Number TICs found: 0 (mg/L or mg/Kg) mg/Kg

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	VOCTIC	Total VOC TICs		0	U
2.					
3.					
4.					
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page 1 of 1

FORM I VOA-TIC

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
MS761

Lab Name: Lancaster Laboratories Contract:
Lab Code: LANCAS Case No.: SAS No.: SDG No.:
Matrix: (soil/water) SOIL Lab Sample ID: 1123981
Sample wt/vol: 30.2 (g/mL) g Lab File ID: gh1515.d
Level: (low/med) LOW Date Received: 08/14/19
% Moisture: 6.4 Decanted: (Y/N) Date Extracted: 08/23/19
Concentrated Extract Volume: 1000 (uL) Date Analyzed: 08/24/19
Injection Volume: 1 (uL) Dilution Factor: 1
GPC Cleanup: N pH: Extraction: Mic
CONCENTRATION UNITS:
Number TICs found: 3 (ug/L or ug/Kg) ug/Kg

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		Unknown	3.616	200	J
2.	301-02-0	9-Octadecenamide, (Z)-	13.151	680	J
3.		Unknown	15.451	160	J
4.					
5.	SVOCTIC	Total SVOC TICs		1000	J
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page 1 of 1

FORM I SV-1

Sample Description: **DUP-1-081319 Grab Soil**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 08/14/2019 10:10
Collection Date/Time: 08/13/2019
SDG#: BMS76-02FD

ARCADIS U.S., Inc.
ELLE Sample #: SW 1123982
ELLE Group #: 2058610
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Limit of Quantitation*	Dry Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**mg/kg**	**mg/kg**	**mg/kg**	
11995	Acetone	67-64-1	0.019 J	0.020	0.006	0.93
11995	Acetonitrile	75-05-8	N.D.	0.10	0.025	0.93
11995	Benzene	71-43-2	N.D.	0.005	0.0005	0.93
11995	Bromochloromethane	74-97-5	N.D.	0.005	0.0006	0.93
11995	Bromodichloromethane	75-27-4	N.D.	0.005	0.0004	0.93
11995	Bromoform	75-25-2	N.D.	0.010	0.005	0.93
11995	Bromomethane	74-83-9	N.D.	0.005	0.0007	0.93
11995	n-Butanol	71-36-3	N.D.	0.25	0.057	0.93
11995	2-Butanone	78-93-3	0.003 J	0.010	0.001	0.93
11995	t-Butyl alcohol	75-65-0	N.D.	0.10	0.015	0.93
11995	n-Butylbenzene	104-51-8	N.D.	0.008	0.003	0.93
11995	sec-Butylbenzene	135-98-8	N.D.	0.005	0.002	0.93
11995	tert-Butylbenzene	98-06-6	N.D.	0.005	0.0008	0.93
11995	Carbon Disulfide	75-15-0	0.001 J	0.005	0.0006	0.93
11995	Carbon Tetrachloride	56-23-5	N.D.	0.005	0.0005	0.93
11995	Chlorobenzene	108-90-7	N.D.	0.005	0.0005	0.93
11995	Chlorodifluoromethane[1]	75-45-6	N.D.	0.010	0.002	0.93
11995	Chloroethane	75-00-3	N.D.	0.005	0.001	0.93
11995	Chloroform	67-66-3	N.D.	0.005	0.0006	0.93
11995	Chloromethane	74-87-3	N.D.	0.005	0.0006	0.93
11995	Cyclohexane	110-82-7	N.D.	0.005	0.0005	0.93
11995	Cyclohexanone[1]	108-94-1	N.D.	0.25	0.025	0.93
11995	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	0.005	0.0005	0.93
11995	Dibromochloromethane	124-48-1	N.D.	0.005	0.0005	0.93
11995	1,2-Dibromoethane	106-93-4	N.D.	0.005	0.0004	0.93
11995	1,2-Dichlorobenzene	95-50-1	N.D.	0.005	0.0005	0.93
11995	1,3-Dichlorobenzene	541-73-1	N.D.	0.005	0.0005	0.93
11995	1,4-Dichlorobenzene	106-46-7	N.D.	0.005	0.0004	0.93
11995	Dichlorodifluoromethane	75-71-8	N.D.	0.005	0.0006	0.93
11995	1,1-Dichloroethane	75-34-3	N.D.	0.005	0.0005	0.93
11995	1,2-Dichloroethane	107-06-2	N.D.	0.005	0.0006	0.93
11995	1,1-Dichloroethene	75-35-4	N.D.	0.005	0.0005	0.93
11995	cis-1,2-Dichloroethene	156-59-2	N.D.	0.005	0.0005	0.93
11995	trans-1,2-Dichloroethene	156-60-5	N.D.	0.005	0.0005	0.93
11995	1,2-Dichloropropane	78-87-5	N.D.	0.005	0.0005	0.93
11995	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.005	0.0004	0.93
11995	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.005	0.0005	0.93
11995	1,4-Dioxane	123-91-1	N.D.	0.25	0.037	0.93
11995	Ethyl Acetate	141-78-6	N.D.	0.005	0.001	0.93
11995	Ethyl Ether[1]	60-29-7	N.D.	0.005	0.001	0.93
11995	Ethylbenzene	100-41-4	N.D.	0.005	0.0004	0.93

*=This limit was used in the evaluation of the final result

Sample Description: **DUP-1-081319 Grab Soil**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 08/14/2019 10:10
Collection Date/Time: 08/13/2019
SDG#: BMS76-02FD

ARCADIS U.S., Inc.
ELLE Sample #: SW 1123982
ELLE Group #: 2058610
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Limit of Quantitation*	Dry Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**mg/kg**	**mg/kg**	**mg/kg**	
11995	Freon 113	76-13-1	N.D.	0.010	0.0006	0.93
11995	n-Heptane[1]	142-82-5	N.D.	0.008	0.003	0.93
11995	n-Hexane[1]	110-54-3	N.D.	0.005	0.0005	0.93
11995	2-Hexanone	591-78-6	N.D.	0.010	0.001	0.93
11995	Isobutyl Alcohol	78-83-1	N.D.	0.25	0.038	0.93
11995	Isopropylbenzene	98-82-8	N.D.	0.005	0.0004	0.93
11995	p-Isopropyltoluene	99-87-6	N.D.	0.005	0.002	0.93
11995	Methyl Acetate	79-20-9	N.D.	0.005	0.001	0.93
11995	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.005	0.0005	0.93
11995	4-Methyl-2-pentanone	108-10-1	N.D.	0.010	0.001	0.93
11995	Methylcyclohexane	108-87-2	N.D.	0.005	0.0006	0.93
11995	Methylene Chloride	75-09-2	N.D.	0.005	0.002	0.93
11995	Naphthalene	91-20-3	N.D.	0.005	0.002	0.93
11995	2-Nitropropane	79-46-9	N.D.	0.010	0.002	0.93
11995	Styrene	100-42-5	N.D.	0.005	0.0004	0.93
11995	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.005	0.0004	0.93
11995	Tetrachloroethene	127-18-4	N.D.	0.005	0.0005	0.93
11995	Tetrahydrofuran[1]	109-99-9	N.D.	0.008	0.001	0.93
11995	Toluene	108-88-3	N.D.	0.005	0.0006	0.93
11995	1,2,3-Trichlorobenzene	87-61-6	N.D.	0.010	0.005	0.93
11995	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.010	0.005	0.93
11995	1,1,1-Trichloroethane	71-55-6	N.D.	0.005	0.0006	0.93
11995	1,1,2-Trichloroethane	79-00-5	N.D.	0.005	0.0005	0.93
11995	Trichloroethene	79-01-6	N.D.	0.005	0.0005	0.93
11995	Trichlorofluoromethane	75-69-4	N.D.	0.005	0.0007	0.93
11995	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.005	0.0005	0.93
11995	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.005	0.0005	0.93
11995	Vinyl Chloride	75-01-4	N.D.	0.005	0.0006	0.93
11995	m+p-Xylene	179601-23-1	N.D.	0.005	0.001	0.93
11995	o-Xylene	95-47-6	N.D.	0.005	0.0004	0.93
11995	Xylene (Total)	1330-20-7	N.D.	0.010	0.001	0.93

Project defined calibration criteria are not met. The calibration is compliant with the method defined criteria.

A Method Detection Limit (MDL) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The MDL standard shows adequate sensitivity at or below the reporting limit.

The recovery for the sample internal standard is outside the QC acceptance limits. The following action was taken: The sample was re-analyzed and the QC is again outside of the acceptance limits, indicating a matrix effect.

*=This limit was used in the evaluation of the final result

Sample Description: **DUP-1-081319 Grab Soil**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 08/14/2019 10:10
Collection Date/Time: 08/13/2019
SDG#: BMS76-02FD

ARCADIS U.S., Inc.
ELLE Sample #: SW 1123982
ELLE Group #: 2058610
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Limit of Quantitation*	Dry Method Detection Limit	Dilution Factor
	The data is reported from the initial trial.						
12027	**VOA Interp. Library Search-20**						
	The results from the volatile library search are listed on the attached FORM 1 - VOA-TIC. The qualifiers appearing in the "Q" column are defined at the end of the report.						
GC/MS Semivolatiles	**SW-846 8270D**		**ug/kg**		**ug/kg**	**ug/kg**	
10726	Acenaphthene	83-32-9	N.D.		89	18	5
10726	Acenaphthylene	208-96-8	19	J	89	18	5
10726	Acetophenone	98-86-2	N.D.		270	89	5
10726	Aniline	62-53-3	N.D.		2,700	890	5
10726	Anthracene	120-12-7	N.D.		89	18	5
10726	Atrazine	1912-24-9	N.D.		2,300	1,100	5
10726	Benzaldehyde	100-52-7	N.D.		890	360	5
10726	Benzo(a)anthracene	56-55-3	42	J	89	36	5
10726	Benzo(a)pyrene	50-32-8	N.D.		89	18	5
10726	Benzo(b)fluoranthene	205-99-2	N.D.		89	18	5
10726	Benzo(g,h,i)perylene	191-24-2	N.D.		89	18	5
10726	Benzo(k)fluoranthene	207-08-9	N.D.		89	18	5
10726	Benzyl alcohol	100-51-6	N.D.		2,700	890	5
10726	1,1'-Biphenyl	92-52-4	N.D.		200	89	5
10726	4-Bromophenyl-phenylether	101-55-3	N.D.		270	130	5
10726	Butylbenzylphthalate	85-68-7	N.D.		890	360	5
10726	Di-n-butylphthalate	84-74-2	N.D.		890	360	5
10726	Caprolactam	105-60-2	N.D.		890	180	5
10726	Carbazole	86-74-8	N.D.		200	89	5
10726	4-Chloro-3-methylphenol	59-50-7	N.D.		270	130	5
10726	4-Chloroaniline	106-47-8	N.D.		890	180	5
10726	bis(2-Chloroethoxy)methane	111-91-1	N.D.		200	89	5
10726	bis(2-Chloroethyl)ether	111-44-4	N.D.		270	130	5
10726	bis(2-Chloroisopropyl)ether[1]	39638-32-9	N.D.		230	110	5
	Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.						
10726	2-Chloronaphthalene	91-58-7	N.D.		180	36	5
10726	2-Chlorophenol	95-57-8	N.D.		200	89	5
10726	4-Chlorophenyl-phenylether	7005-72-3	N.D.		230	110	5
10726	Chrysene	218-01-9	74	J	89	18	5
10726	Dibenz(a,h)anthracene	53-70-3	N.D.		89	36	5
10726	Dibenzofuran	132-64-9	N.D.		200	89	5
10726	3,3'-Dichlorobenzidine	91-94-1	N.D.		1,800	540	5
10726	2,4-Dichlorophenol	120-83-2	N.D.		230	110	5
10726	Dicyclohexylamine[1]	101-83-7	N.D.		11,000	3,600	5

*=This limit was used in the evaluation of the final result

Sample Description: **DUP-1-081319 Grab Soil**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 08/14/2019 10:10
Collection Date/Time: 08/13/2019
SDG#: BMS76-02FD

ARCADIS U.S., Inc.
ELLE Sample #: SW 1123982
ELLE Group #: 2058610
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Limit of Quantitation*	Dry Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/kg**	**ug/kg**	**ug/kg**	
10726	Diethylphthalate	84-66-2	N.D.	890	360	5
10726	N,N-Dimethylaniline[1]	121-69-7	N.D. Z	890	180	5
10726	2,4-Dimethylphenol	105-67-9	N.D.	360	160	5
10726	Dimethylphthalate	131-11-3	N.D.	890	360	5
10726	4,6-Dinitro-2-methylphenol	534-52-1	N.D.	2,700	1,300	5
10726	2,4-Dinitrophenol	51-28-5	N.D.	5,400	1,800	5
10726	2,4-Dinitrotoluene	121-14-2	N.D.	890	360	5
10726	2,6-Dinitrotoluene	606-20-2	N.D.	270	130	5
10726	bis(2-Ethylhexyl)phthalate	117-81-7	1,100	890	360	5
10726	Fluoranthene	206-44-0	55 J	89	18	5
10726	Fluorene	86-73-7	N.D.	89	18	5
10726	Hexachlorobenzene	118-74-1	N.D.	89	36	5
10726	Hexachlorobutadiene	87-68-3	N.D.	410	200	5
10726	Hexachlorocyclopentadiene	77-47-4	N.D. K3	2,700	1,100	5
10726	Hexachloroethane	67-72-1	N.D.	890	180	5
10726	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	89	18	5
10726	Isophorone	78-59-1	N.D.	200	89	5
10726	2-Methylnaphthalene	91-57-6	N.D.	180	18	5
10726	2-Methylphenol	95-48-7	N.D.	360	89	5
10726	4-Methylphenol	65794-96-9	N.D.	270	89	5
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
10726	Naphthalene	91-20-3	N.D.	89	36	5
10726	2-Nitroaniline	88-74-4	N.D.	270	89	5
10726	3-Nitroaniline	99-09-2	N.D.	890	360	5
10726	4-Nitroaniline	100-01-6	N.D.	890	360	5
10726	Nitrobenzene	98-95-3	N.D.	360	140	5
10726	2-Nitrophenol	88-75-5	N.D.	300	140	5
10726	4-Nitrophenol	100-02-7	N.D.	2,700	890	5
10726	N-Nitroso-di-n-propylamine	621-64-7	N.D.	270	130	5
10726	N-Nitrosodiphenylamine	86-30-6	N.D.	200	89	5
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.					
10726	Di-n-octylphthalate	117-84-0	N.D.	890	360	5
10726	Pentachlorophenol	87-86-5	N.D.	890	360	5
10726	Phenanthrene	85-01-8	20 J	89	18	5
10726	Phenol[1]	108-95-2	N.D.	200	89	5
10726	Pyrene	129-00-0	58 J	89	18	5
10726	Pyridine	110-86-1	N.D.	890	360	5
10726	1,2,4,5-Tetrachlorobenzene	95-94-3	N.D.	200	89	5

*=This limit was used in the evaluation of the final result

Sample Description: **DUP-1-081319 Grab Soil**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 08/14/2019 10:10
Collection Date/Time: 08/13/2019
SDG#: BMS76-02FD

ARCADIS U.S., Inc.
ELLE Sample #: SW 1123982
ELLE Group #: 2058610
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Limit of Quantitation*	Dry Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/kg**	**ug/kg**	**ug/kg**	
10726	2,3,4,6-Tetrachlorophenol	58-90-2	N.D.	890	360	5
10726	2,4,5-Trichlorophenol	95-95-4	N.D.	360	160	5
10726	2,4,6-Trichlorophenol	88-06-2	N.D.	300	140	5
10726	Triethylamine[1]	121-44-8	N.D. Z	27,000	8,900	5

Z=The stated QC limits are advisory only until sufficient data points can be obtained to calculate statistical limits.

The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the TNI/DoD Standards. The following analytes are accepted based on this allowance: 4-Nitrophenol, Butylbenzylphthalate, Di-n-octylphthalate and bis(2-Ethylhexyl)phthalate

Reporting limits were raised due to interference from the sample matrix.

00886 SVOA TIC Interpretive(25)

The results from the semivolatile library search are listed on the attached FORM 1 - SV-TIC. The qualifiers appearing in the "Q" column are defined at the end of the report.

GC Miscellaneous	**SW-846 8015C Feb 2007 Rev 3**		**mg/kg**	**mg/kg**	**mg/kg**	
12925	Ethylene glycol	107-21-1	N.D.	11	5.4	1
12925	Propylene glycol[1]	57-55-6	N.D.	11	5.4	1

The response for tetramethylene glycol in the continuing calibration verification standard is outside the QC acceptance limits high. The following action was taken:
The analysis was repeated and the continuing calibration verification standard bracketing the sample on the second trial is also outside the acceptance limits high for tetramethylene glycol.
This effect is attributed to the sample matrix and the data is reported.

GC Miscellaneous	**SW-846 8015D Rev.4, June 2003**		**mg/kg**	**mg/kg**	**mg/kg**	
10604	Ethanol (by Direct Injection)[1]	64-17-5	N.D. D2	1.1	0.13	1
10604	Isopropanol[1]	67-63-0	N.D. D2	1.1	0.050	1
10604	Methanol (by Direct Injection)[1]	67-56-1	1.1 D2	1.1	0.22	1
Wet Chemistry	**SM 2540 G-2011 %Moisture Calc**		**%**	**%**	**%**	
00111	Moisture[1]	n.a.	8.0	0.50	0.50	1

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

*=This limit was used in the evaluation of the final result

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

Sample Description: **DUP-1-081319 Grab Soil**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 08/14/2019 10:10
Collection Date/Time: 08/13/2019
SDG#: BMS76-02FD

ARCADIS U.S., Inc.
ELLE Sample #: SW 1123982
ELLE Group #: 2058610
Matrix: Soil

Sample Comments

State of New York Certification No. 10670

[1] = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Eurofins Lancaster Laboratories Environmental, LLC is responsible only for the certified testing of samples. We are not directly responsible for the integrity of the sample prior to laboratory receipt. Any reported concentrations less than 200 ug/kg may be biased low if they were not collected according to EPA 5035/5035A specifications.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11995	VOCs- Solid by 8260C/D	SW-846 8260C	1	B192342AA	08/22/2019 16:40	Linda C Pape	0.93
06176	GC/MS - LL DIH2O Prep	SW-846 5035A	1	201922654537	08/14/2019 15:28	Rebecca Williams	1
06176	GC/MS - LL DIH2O Prep	SW-846 5035A	2	201922654537	08/14/2019 15:28	Rebecca Williams	1
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	201922654537	08/13/2019 00:00	Client Supplied	1
10726	SVOA 8270D/E (microwave)	SW-846 8270D	1	19234SLE026	08/24/2019 19:51	Linda M Hartenstine	5
10813	BNA Soil Microwave APP IX	SW-846 3546	2	19234SLE026	08/23/2019 09:00	Logan M Brosemer	1
12925	Glycols in Soil by 8015C/D	SW-846 8015C Feb 2007 Rev 3	1	192280045A	08/16/2019 22:32	Donald Brown	1
10604	Alcohols in Soil	SW-846 8015D Rev.4, June 2003	1	192270015A	08/15/2019 17:21	Johanna C Kennedy	1
13121	Glycol Solids Ext. 8015C/D	SW-846 8015C Feb 2007 Rev 3	3	192280045A	08/16/2019 18:25	Donald Brown	1
00380	Solids Extraction for Alcohols	SW-846 8015D Rev 4 06/2003 Mod	1	192270015A	08/15/2019 11:45	Johanna C Kennedy	1
00111	Moisture	SM 2540 G-2011 %Moisture Calc	1	19232820006A	08/21/2019 11:08	William C Schwebel	1

*=This limit was used in the evaluation of the final result

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
MS762

Lab Name: Lancaster Laboratories Contract:_____
Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____
Matrix: (soil/water) SOIL Lab Sample ID: 1123982
Sample wt/vol: 5.38 (g/mL) g Lab File ID: HP09953.i/19aug22a.b/bg22s42.d
Level: (low/med) LOW Date Received: 08/14/19
% Moisture: not dec. 8 Date Analyzed: 08/22/19
Column: (pack/cap) CAP Dilution Factor: 1.0
CONCENTRATION UNITS:
Number TICs found: 0 (mg/L or mg/Kg) mg/Kg

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	VOCTIC	Total VOC TICs		0	U
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page 1 of 1

FORM I VOA-TIC

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
MS762

Lab Name: Lancaster Laboratories Contract:
Lab Code: LANCAS Case No.: SAS No.: SDG No.:
Matrix: (soil/water) SOIL Lab Sample ID: 1123982
Sample wt/vol: 30.4 (g/mL) g Lab File ID: gh1516.d
Level: (low/med) LOW Date Received: 08/14/19
% Moisture: 8 Decanted: (Y/N) Date Extracted: 08/23/19
Concentrated Extract Volume: 1000 (uL) Date Analyzed: 08/24/19
Injection Volume: 1 (uL) Dilution Factor: 5
GPC Cleanup: N pH: Extraction: Mic
CONCENTRATION UNITS:
Number TICs found: 3 (ug/L or ug/Kg) ug/Kg

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	1.103-23-1	Hexanedioic acid, bis(2-ethy	11.851	3000	J
2.		Unknown	14.198	970	J
3.		Unknown	14.492	1100	J
4.					
5.	SVOCTIC	Total SVOC TICs		5100	J
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page 1 of 1

FORM I SV-1

Sample Description: **Trip Blank 1 Water**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 08/14/2019 10:10
Collection Date/Time: 08/13/2019
SDG#: BMS76-03TB

ARCADIS U.S., Inc.
ELLE Sample #: WW 1123983
ELLE Group #: 2058610
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	20	0.7	1
11997	Acetonitrile	75-05-8	N.D.	100	16	1
11997	Benzene	71-43-2	N.D.	1	0.2	1
11997	Bromochloromethane	74-97-5	N.D.	5	0.2	1
11997	Bromodichloromethane	75-27-4	N.D.	1	0.2	1
11997	Bromoform	75-25-2	N.D.	4	1	1
11997	Bromomethane	74-83-9	N.D.	1	0.3	1
11997	n-Butanol	71-36-3	N.D.	250	61	1
11997	2-Butanone	78-93-3	N.D.	10	0.3	1
11997	t-Butyl alcohol	75-65-0	N.D.	50	12	1
11997	n-Butylbenzene	104-51-8	N.D.	5	0.2	1
11997	sec-Butylbenzene	135-98-8	N.D.	5	0.2	1
11997	tert-Butylbenzene	98-06-6	N.D.	5	0.3	1
11997	Carbon Disulfide	75-15-0	N.D.	5	0.2	1
11997	Carbon Tetrachloride	56-23-5	N.D.	1	0.2	1
11997	Chlorobenzene	108-90-7	N.D.	1	0.2	1
11997	Chlorodifluoromethane[1]	75-45-6	N.D.	5	2	1
11997	Chloroethane	75-00-3	N.D.	1	0.2	1
11997	Chloroform	67-66-3	N.D.	1	0.2	1
11997	Chloromethane	74-87-3	N.D.	1	0.2	1
11997	Cyclohexane	110-82-7	N.D.	5	1	1
11997	Cyclohexanone[1]	108-94-1	N.D.	100	25	1
11997	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	5	0.3	1
11997	Dibromochloromethane	124-48-1	N.D.	1	0.2	1
11997	1,2-Dibromoethane	106-93-4	N.D.	1	0.2	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	5	0.2	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	5	0.2	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	5	0.2	1
11997	Dichlorodifluoromethane	75-71-8	N.D.	1	0.2	1
11997	1,1-Dichloroethane	75-34-3	N.D.	1	0.2	1
11997	1,2-Dichloroethane	107-06-2	N.D.	1	0.3	1
11997	1,1-Dichloroethene	75-35-4	N.D.	1	0.2	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	1	0.2	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	1	0.2	1
11997	1,2-Dichloropropane	78-87-5	N.D.	1	0.2	1
11997	cis-1,3-Dichloropropene	10061-01-5	N.D.	1	0.2	1
11997	trans-1,3-Dichloropropene	10061-02-6	N.D.	1	0.2	1
11997	1,4-Dioxane	123-91-1	N.D.	250	29	1
11997	Ethyl Acetate	141-78-6	N.D.	5	0.7	1
11997	Ethyl ether	60-29-7	N.D.	5	0.2	1
11997	Ethylbenzene	100-41-4	N.D.	1	0.4	1

*=This limit was used in the evaluation of the final result

Sample Description: **Trip Blank 1 Water**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 08/14/2019 10:10
Collection Date/Time: 08/13/2019
SDG#: BMS76-03TB

ARCADIS U.S., Inc.
ELLE Sample #: WW 1123983
ELLE Group #: 2058610
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Freon 113	76-13-1	N.D.	10	0.2	1
11997	n-Heptane[1]	142-82-5	N.D.	5	2	1
11997	n-Hexane[1]	110-54-3	N.D.	5	2	1
11997	2-Hexanone	591-78-6	N.D.	10	0.3	1
11997	Isobutyl Alcohol	78-83-1	N.D.	250	36	1
11997	Isopropylbenzene	98-82-8	N.D.	5	0.2	1
11997	p-Isopropyltoluene	99-87-6	N.D.	5	0.2	1
11997	Methyl Acetate	79-20-9	N.D.	5	0.2	1
11997	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	1	0.2	1
11997	4-Methyl-2-pentanone	108-10-1	N.D.	10	0.5	1
11997	Methylcyclohexane	108-87-2	N.D.	5	0.5	1
11997	Methylene Chloride	75-09-2	0.5 J	1	0.3	1
11997	Naphthalene	91-20-3	N.D.	5	1	1
11997	2-Nitropropane	79-46-9	N.D.	10	0.8	1
11997	Styrene	100-42-5	N.D.	5	0.2	1
11997	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	1	0.2	1
11997	Tetrachloroethene	127-18-4	N.D.	1	0.2	1
11997	Tetrahydrofuran	109-99-9	N.D.	10	0.7	1
11997	Toluene	108-88-3	N.D.	1	0.2	1
11997	1,2,3-Trichlorobenzene	87-61-6	N.D.	5	0.4	1
11997	1,2,4-Trichlorobenzene	120-82-1	N.D.	5	0.3	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	1	0.3	1
11997	1,1,2-Trichloroethane	79-00-5	N.D.	1	0.2	1
11997	Trichloroethene	79-01-6	N.D.	1	0.2	1
11997	Trichlorofluoromethane	75-69-4	N.D.	1	0.2	1
11997	1,2,4-Trimethylbenzene	95-63-6	N.D.	5	1	1
11997	1,3,5-Trimethylbenzene	108-67-8	N.D.	5	0.3	1
11997	Vinyl Chloride	75-01-4	N.D.	1	0.2	1
11997	m+p-Xylene	179601-23-1	N.D.	5	1	1
11997	o-Xylene	95-47-6	N.D.	1	0.4	1
11997	Xylene (Total)	1330-20-7	N.D.	6	1	1

Project defined calibration criteria are not met. The calibration is compliant with the method defined criteria.

A Method Detection Limit (MDL) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The MDL standard shows adequate sensitivity at or below the reporting limit.

12027 VOA Interp. Library Search-20

The results from the volatile library search are listed on the attached FORM 1 - VOA-TIC. The qualifiers appearing in the "Q" column are defined at the end of the report.

*=This limit was used in the evaluation of the final result

Sample Description: **Trip Blank 1 Water**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 08/14/2019 10:10
Collection Date/Time: 08/13/2019
SDG#: BMS76-03TB

ARCADIS U.S., Inc.
ELLE Sample #: WW 1123983
ELLE Group #: 2058610
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result		Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC Miscellaneous	**SW-846 8015C Feb 2007 Rev 3**		**mg/l**		**mg/l**	**mg/l**	
12926	Ethylene glycol	107-21-1	N.D.		10	5.0	1
12926	Propylene glycol[1]	57-55-6	N.D.		10	2.0	1
GC Miscellaneous	**SW-846 8015C Feb 2007 Rev 3**		**ug/l**		**ug/l**	**ug/l**	
10603	Ethanol	64-17-5	N.D.	D2	1,000	150	1
10603	Isopropanol[1]	67-63-0	N.D.	D2	1,000	110	1
10603	Methanol	67-56-1	950	JD2	1,000	220	1

The requirement for no headspace at the time of analysis was not met. The container used for the testing had headspace at the time of analysis.

Sample Comments

State of New York Certification No. 10670

[1] = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	4192381AA	08/26/2019 12:23	Corie Mellinger	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	4192381AA	08/26/2019 12:22	Corie Mellinger	1
10603	Alcohols in Water	SW-846 8015C Feb 2007 Rev 3	1	192270013A	08/15/2019 13:26	Johanna C Kennedy	1
12926	Glycols in Water by 8015C/D	SW-846 8015C Feb 2007 Rev 3	1	192340031A	08/23/2019 00:21	Donald Brown	1

*=This limit was used in the evaluation of the final result

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
MS763

Lab Name: Lancaster Laboratories Contract:_____
Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____
Matrix: (soil/water) WATER Lab Sample ID: 1123983
Sample wt/vol: 5.0 (g/mL)mL Lab File ID:HP23297.i/19aug26a.b/4g26s05.d
Level: (low/med) LOW Date Received: 08/14/19
% Moisture: not dec. Date Analyzed: 08/26/19
Column: (pack/cap) CAP Dilution Factor: 1.0
CONCENTRATION UNITS:
Number TICs found: 0 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	VOCTIC	Total VOC TICs		0	U
2.					
3.					
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page 1 of 1

FORM I VOA-TIC

Sample Description: **SupplyWater-081319 Grab Surface Water**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 08/14/2019 10:10
Collection Date/Time: 08/13/2019 14:00
SDG#: BMS76-04

ARCADIS U.S., Inc.
ELLE Sample #: WW 1123984
ELLE Group #: 2058610
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	1 J	20	0.7	1
11997	Acetonitrile	75-05-8	N.D.	100	16	1
11997	Benzene	71-43-2	N.D.	1	0.2	1
11997	Bromochloromethane	74-97-5	N.D.	5	0.2	1
11997	Bromodichloromethane	75-27-4	N.D.	1	0.2	1
11997	Bromoform	75-25-2	N.D.	4	1	1
11997	Bromomethane	74-83-9	N.D.	1	0.3	1
11997	n-Butanol	71-36-3	N.D.	250	61	1
11997	2-Butanone	78-93-3	N.D.	10	0.3	1
11997	t-Butyl alcohol	75-65-0	N.D.	50	12	1
11997	n-Butylbenzene	104-51-8	N.D.	5	0.2	1
11997	sec-Butylbenzene	135-98-8	N.D.	5	0.2	1
11997	tert-Butylbenzene	98-06-6	N.D.	5	0.3	1
11997	Carbon Disulfide	75-15-0	N.D.	5	0.2	1
11997	Carbon Tetrachloride	56-23-5	N.D.	1	0.2	1
11997	Chlorobenzene	108-90-7	N.D.	1	0.2	1
11997	Chlorodifluoromethane[1]	75-45-6	N.D.	5	2	1
11997	Chloroethane	75-00-3	N.D.	1	0.2	1
11997	Chloroform	67-66-3	N.D.	1	0.2	1
11997	Chloromethane	74-87-3	N.D.	1	0.2	1
11997	Cyclohexane	110-82-7	N.D.	5	1	1
11997	Cyclohexanone[1]	108-94-1	N.D.	100	25	1
11997	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	5	0.3	1
11997	Dibromochloromethane	124-48-1	N.D.	1	0.2	1
11997	1,2-Dibromoethane	106-93-4	N.D.	1	0.2	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	5	0.2	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	5	0.2	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	5	0.2	1
11997	Dichlorodifluoromethane	75-71-8	N.D.	1	0.2	1
11997	1,1-Dichloroethane	75-34-3	N.D.	1	0.2	1
11997	1,2-Dichloroethane	107-06-2	N.D.	1	0.3	1
11997	1,1-Dichloroethene	75-35-4	N.D.	1	0.2	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	1	0.2	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	1	0.2	1
11997	1,2-Dichloropropane	78-87-5	N.D.	1	0.2	1
11997	cis-1,3-Dichloropropene	10061-01-5	N.D.	1	0.2	1
11997	trans-1,3-Dichloropropene	10061-02-6	N.D.	1	0.2	1
11997	1,4-Dioxane	123-91-1	N.D.	250	29	1
11997	Ethyl Acetate	141-78-6	N.D.	5	0.7	1
11997	Ethyl ether	60-29-7	N.D.	5	0.2	1
11997	Ethylbenzene	100-41-4	N.D.	1	0.4	1

*=This limit was used in the evaluation of the final result

Sample Description: **SupplyWater-081319 Grab Surface Water**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 08/14/2019 10:10
Collection Date/Time: 08/13/2019 14:00
SDG#: BMS76-04

ARCADIS U.S., Inc.
ELLE Sample #: WW 1123984
ELLE Group #: 2058610
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Freon 113	76-13-1	N.D.	10	0.2	1
11997	n-Heptane[1]	142-82-5	N.D.	5	2	1
11997	n-Hexane[1]	110-54-3	N.D.	5	2	1
11997	2-Hexanone	591-78-6	N.D.	10	0.3	1
11997	Isobutyl Alcohol	78-83-1	N.D.	250	36	1
11997	Isopropylbenzene	98-82-8	N.D.	5	0.2	1
11997	p-Isopropyltoluene	99-87-6	N.D.	5	0.2	1
11997	Methyl Acetate	79-20-9	N.D.	5	0.2	1
11997	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	1	0.2	1
11997	4-Methyl-2-pentanone	108-10-1	N.D.	10	0.5	1
11997	Methylcyclohexane	108-87-2	N.D.	5	0.5	1
11997	Methylene Chloride	75-09-2	0.6 J	1	0.3	1
11997	Naphthalene	91-20-3	N.D.	5	1	1
11997	2-Nitropropane	79-46-9	N.D.	10	0.8	1
11997	Styrene	100-42-5	N.D.	5	0.2	1
11997	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	1	0.2	1
11997	Tetrachloroethene	127-18-4	N.D.	1	0.2	1
11997	Tetrahydrofuran	109-99-9	N.D.	10	0.7	1
11997	Toluene	108-88-3	N.D.	1	0.2	1
11997	1,2,3-Trichlorobenzene	87-61-6	N.D.	5	0.4	1
11997	1,2,4-Trichlorobenzene	120-82-1	N.D.	5	0.3	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	1	0.3	1
11997	1,1,2-Trichloroethane	79-00-5	N.D.	1	0.2	1
11997	Trichloroethene	79-01-6	N.D.	1	0.2	1
11997	Trichlorofluoromethane	75-69-4	N.D.	1	0.2	1
11997	1,2,4-Trimethylbenzene	95-63-6	N.D.	5	1	1
11997	1,3,5-Trimethylbenzene	108-67-8	N.D.	5	0.3	1
11997	Vinyl Chloride	75-01-4	N.D.	1	0.2	1
11997	m+p-Xylene	179601-23-1	N.D.	5	1	1
11997	o-Xylene	95-47-6	N.D.	1	0.4	1
11997	Xylene (Total)	1330-20-7	N.D.	6	1	1

Project defined calibration criteria are not met. The calibration is compliant with the method defined criteria.

A Method Detection Limit (MDL) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The MDL standard shows adequate sensitivity at or below the reporting limit.

The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the TNI/DoD Standards. The following analytes are accepted based on this

*=This limit was used in the evaluation of the final result

Sample Description: **SupplyWater-081319 Grab Surface Water**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 08/14/2019 10:10
Collection Date/Time: 08/13/2019 14:00
SDG#: BMS76-04

ARCADIS U.S., Inc.
ELLE Sample #: WW 1123984
ELLE Group #: 2058610
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
	allowance: acetone.					
12027	**VOA Interp. Library Search-20**					
	The results from the volatile library search are listed on the attached FORM 1 - VOA-TIC. The qualifiers appearing in the "Q" column are defined at the end of the report.					
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	Acenaphthene	83-32-9	N.D.	0.51	0.10	1
14241	Acenaphthylene	208-96-8	N.D.	0.51	0.10	1
14241	Acetophenone	98-86-2	N.D.	10	4.0	1
14241	Aniline	62-53-3	N.D.	10	3.0	1
14241	Anthracene	120-12-7	N.D.	0.51	0.10	1
14241	Atrazine	1912-24-9	N.D.	5.1	2.0	1
14241	Benzaldehyde	100-52-7	N.D.	10	3.0	1
14241	Benzo(a)anthracene	56-55-3	N.D.	0.51	0.10	1
14241	Benzo(a)pyrene	50-32-8	N.D.	0.51	0.10	1
14241	Benzo(b)fluoranthene	205-99-2	N.D.	0.51	0.10	1
14241	Benzo(g,h,i)perylene	191-24-2	N.D.	0.51	0.10	1
14241	Benzo(k)fluoranthene	207-08-9	N.D.	0.51	0.10	1
14241	Benzyl alcohol	100-51-6	N.D.	30	10	1
14241	1,1'-Biphenyl	92-52-4	N.D.	10	3.0	1
14241	4-Bromophenyl-phenylether	101-55-3	N.D.	2.0	0.51	1
14241	Butylbenzylphthalate	85-68-7	N.D.	5.1	2.0	1
14241	Di-n-butylphthalate	84-74-2	N.D.	5.1	2.0	1
14241	Caprolactam	105-60-2	N.D.	11	5.1	1
14241	Carbazole	86-74-8	N.D.	2.0	0.51	1
14241	4-Chloro-3-methylphenol	59-50-7	N.D.	2.0	0.51	1
14241	4-Chloroaniline	106-47-8	N.D.	10	4.0	1
14241	bis(2-Chloroethoxy)methane	111-91-1	N.D.	2.0	0.51	1
14241	bis(2-Chloroethyl)ether	111-44-4	N.D.	2.0	0.51	1
14241	bis(2-Chloroisopropyl)ether[1]	39638-32-9	N.D.	2.0	0.51	1
	Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.					
14241	2-Chloronaphthalene	91-58-7	N.D.	1.0	0.40	1
14241	2-Chlorophenol	95-57-8	N.D.	2.0	0.51	1
14241	4-Chlorophenyl-phenylether	7005-72-3	N.D.	2.0	0.51	1
14241	Chrysene	218-01-9	N.D.	0.51	0.10	1
14241	Dibenz(a,h)anthracene	53-70-3	N.D.	0.51	0.10	1
14241	Dibenzofuran	132-64-9	N.D.	2.0	0.51	1
14241	3,3'-Dichlorobenzidine	91-94-1	N.D.	10	3.0	1
14241	2,4-Dichlorophenol	120-83-2	N.D.	2.0	0.51	1
14241	Dicyclohexylamine[1]	101-83-7	N.D. Z	10	10	1

*=This limit was used in the evaluation of the final result

Sample Description: **SupplyWater-081319 Grab Surface Water**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 08/14/2019 10:10
Collection Date/Time: 08/13/2019 14:00
SDG#: BMS76-04

ARCADIS U.S., Inc.
ELLE Sample #: WW 1123984
ELLE Group #: 2058610
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	Diethylphthalate	84-66-2	N.D.	5.1	2.0	1
14241	N,N-Dimethylaniline[1]	121-69-7	N.D. Z	1.0	0.51	1
14241	2,4-Dimethylphenol	105-67-9	N.D.	10	3.0	1
14241	Dimethylphthalate	131-11-3	N.D.	5.1	2.0	1
14241	4,6-Dinitro-2-methylphenol	534-52-1	N.D.	21	8.1	1
14241	2,4-Dinitrophenol	51-28-5	N.D.	30	14	1
14241	2,4-Dinitrotoluene	121-14-2	N.D.	5.1	1.0	1
14241	2,6-Dinitrotoluene	606-20-2	N.D.	2.0	0.51	1
14241	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	11	5.1	1
14241	Fluoranthene	206-44-0	N.D.	0.51	0.10	1
14241	Fluorene	86-73-7	N.D.	0.51	0.10	1
14241	Hexachlorobenzene	118-74-1	N.D.	0.51	0.10	1
14241	Hexachlorobutadiene	87-68-3	N.D.	2.0	0.51	1
14241	Hexachlorocyclopentadiene	77-47-4	N.D.	11	5.1	1
14241	Hexachloroethane	67-72-1	N.D.	5.1	1.0	1
14241	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.51	0.10	1
14241	Isophorone	78-59-1	N.D.	2.0	0.51	1
14241	2-Methylnaphthalene	91-57-6	N.D.	0.51	0.10	1
14241	2-Methylphenol	95-48-7	N.D.	2.0	0.51	1
14241	4-Methylphenol	65794-96-9	N.D.	2.0	0.51	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
14241	Naphthalene	91-20-3	N.D.	0.51	0.10	1
14241	2-Nitroaniline	88-74-4	N.D.	7.1	2.0	1
14241	3-Nitroaniline	99-09-2	N.D.	7.1	3.0	1
14241	4-Nitroaniline	100-01-6	N.D.	3.0	0.91	1
14241	Nitrobenzene	98-95-3	N.D.	2.0	0.51	1
14241	2-Nitrophenol	88-75-5	N.D.	10	3.0	1
14241	4-Nitrophenol	100-02-7	N.D.	30	10	1
14241	N-Nitroso-di-n-propylamine	621-64-7	N.D.	3.0	0.71	1
14241	N-Nitrosodiphenylamine	86-30-6	N.D.	3.0	0.71	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.					
14241	Di-n-octylphthalate	117-84-0	N.D.	11	5.1	1
14241	Pentachlorophenol	87-86-5	N.D.	5.1	1.0	1
14241	Phenanthrene	85-01-8	N.D.	0.51	0.10	1
14241	Phenol	108-95-2	N.D.	2.0	0.51	1
14241	Pyrene	129-00-0	N.D.	0.51	0.10	1
14241	Pyridine	110-86-1	N.D.	5.1	2.0	1
14241	1,2,4,5-Tetrachlorobenzene	95-94-3	N.D.	2.0	0.51	1

*=This limit was used in the evaluation of the final result

Sample Description: **SupplyWater-081319 Grab Surface Water**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 08/14/2019 10:10
Collection Date/Time: 08/13/2019 14:00
SDG#: BMS76-04

ARCADIS U.S., Inc.
ELLE Sample #: WW 1123984
ELLE Group #: 2058610
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result		Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**		**ug/l**	**ug/l**	
14241	2,3,4,6-Tetrachlorophenol	58-90-2	N.D.		10	4.0	1
14241	2,4,5-Trichlorophenol	95-95-4	N.D.		2.0	0.51	1
14241	2,4,6-Trichlorophenol	88-06-2	N.D.		2.0	0.51	1
14241	Triethylamine[1]	121-44-8	N.D.	Z	10	10	1

Z=The stated QC limits are advisory only until sufficient data points can be obtained to calculate statistical limits.

00886 SVOA TIC Interpretive(25)

The results from the semivolatile library search are listed on the attached FORM 1 - SV-TIC. The qualifiers appearing in the "Q" column are defined at the end of the report.

GC Miscellaneous	**SW-846 8015C Feb 2007 Rev 3**		**mg/l**		**mg/l**	**mg/l**	
12926	Ethylene glycol	107-21-1	N.D.		10	5.0	1
12926	Propylene glycol[1]	57-55-6	N.D.		10	2.0	1
GC Miscellaneous	**SW-846 8015C Feb 2007 Rev 3**		**ug/l**		**ug/l**	**ug/l**	
10603	Ethanol	64-17-5	N.D.	D2	1,000	150	1
10603	Isopropanol[1]	67-63-0	N.D.	D2	1,000	110	1
10603	Methanol	67-56-1	240	JD2	1,000	220	1

Sample Comments

State of New York Certification No. 10670

[1] = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	4192381AA	08/26/2019 12:46	Corie Mellinger	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	4192381AA	08/26/2019 12:45	Corie Mellinger	1
14241	Semi-annual Groundwater BMS	SW-846 8270D	1	19231WAG026	08/24/2019 01:06	Ashley R Transue	1
11010	8270D BNA Extraction	SW-846 3510C	1	19231WAG026	08/20/2019 02:00	Mathias Okpo	1
10603	Alcohols in Water	SW-846 8015C Feb 2007 Rev 3	1	192270013A	08/15/2019 13:43	Johanna C Kennedy	1
12926	Glycols in Water by 8015C/D	SW-846 8015C Feb 2007 Rev 3	1	192340031A	08/23/2019 00:34	Donald Brown	1

*=This limit was used in the evaluation of the final result

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
MS764

Lab Name: Lancaster Laboratories Contract:_____
Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____
Matrix: (soil/water) WATER Lab Sample ID: 1123984
Sample wt/vol: 5.0 (g/mL)mL Lab File ID:HP23297.i/19aug26a.b/4g26s06.d
Level: (low/med) LOW Date Received: 08/14/19
% Moisture: not dec. Date Analyzed: 08/26/19
Column: (pack/cap) CAP Dilution Factor: 1.0
CONCENTRATION UNITS:
Number TICs found: 0 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	VOCTIC	Total VOC TICs		0	U
2.					
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page 1 of 1

FORM I VOA-TIC

1F

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

MS764

Lab Name: Lancaster Laboratories Contract:
Lab Code: LANCAS Case No.: SAS No.: SDG No.:
Matrix: (soil/water) WATER Lab Sample ID: 1123984
Sample wt/vol: 247 (g/mL) mL Lab File ID: lh1211.d
Level: (low/med) LOW Date Received: 08/14/19
% Moisture: Decanted: (Y/N) Date Extracted: 08/20/19
Concentrated Extract Volume: 1000 (uL) Date Analyzed: 08/24/19
Injection Volume: 1 (uL) Dilution Factor: 1
GPC Cleanup: N pH: Extraction: Sepf

CONCENTRATION UNITS:
Number TICs found: 5 (ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 124-07-2	Octanoic acid	8.417	13	J
2.	Unknown	9.385	5	J
3. 143-07-7	Dodecanoic acid	11.979	10	J
4. 57-10-3	n-Hexadecanoic acid	14.279	14	J
5. 593-39-5	6-Octadecenoic acid, (Z)-	15.322	29	J
6.				
7. SVOCTIC	Total SVOC TICs		71	J
8.				
9.				
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page 1 of 1

FORM I SV-1

Quality Control Summary

Client Name: ARCADIS U.S., Inc. Group Number: 2058610
Reported: 08/30/2019 15:37

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	LOQ**	MDL
	mg/kg	mg/kg	mg/kg
Batch number: B192342AA	Sample number(s): 1123982		
Acetone	N.D.	0.020	0.006
Acetonitrile	N.D.	0.10	0.025
Benzene	N.D.	0.005	0.0005
Bromochloromethane	N.D.	0.005	0.0006
Bromodichloromethane	N.D.	0.005	0.0004
Bromoform	N.D.	0.010	0.005
Bromomethane	N.D.	0.005	0.0007
n-Butanol	N.D.	0.25	0.056
2-Butanone	N.D.	0.010	0.001
t-Butyl alcohol	N.D.	0.10	0.015
n-Butylbenzene	N.D.	0.008	0.003
sec-Butylbenzene	N.D.	0.005	0.002
tert-Butylbenzene	N.D.	0.005	0.0008
Carbon Disulfide	N.D.	0.005	0.0006
Carbon Tetrachloride	N.D.	0.005	0.0005
Chlorobenzene	N.D.	0.005	0.0005
Chlorodifluoromethane	N.D.	0.010	0.002
Chloroethane	N.D.	0.005	0.001
Chloroform	N.D.	0.005	0.0006
Chloromethane	N.D.	0.005	0.0006
Cyclohexane	N.D.	0.005	0.0005
Cyclohexanone	N.D.	0.25	0.025
1,2-Dibromo-3-chloropropane	N.D.	0.005	0.0005
Dibromochloromethane	N.D.	0.005	0.0005
1,2-Dibromoethane	N.D.	0.005	0.0004
1,2-Dichlorobenzene	N.D.	0.005	0.0005
1,3-Dichlorobenzene	N.D.	0.005	0.0005
1,4-Dichlorobenzene	N.D.	0.005	0.0004
Dichlorodifluoromethane	N.D.	0.005	0.0006
1,1-Dichloroethane	N.D.	0.005	0.0005
1,2-Dichloroethane	N.D.	0.005	0.0006
1,1-Dichloroethene	N.D.	0.005	0.0005
cis-1,2-Dichloroethene	N.D.	0.005	0.0005
trans-1,2-Dichloroethene	N.D.	0.005	0.0005
1,2-Dichloropropane	N.D.	0.005	0.0005
cis-1,3-Dichloropropene	N.D.	0.005	0.0004
trans-1,3-Dichloropropene	N.D.	0.005	0.0005
1,4-Dioxane	N.D.	0.25	0.037
Ethyl Acetate	N.D.	0.005	0.001

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: ARCADIS U.S., Inc.
Reported: 08/30/2019 15:37

Group Number: 2058610

Method Blank (continued)

Analysis Name	Result	LOQ**	MDL
	mg/kg	mg/kg	mg/kg
Ethyl Ether	N.D.	0.005	0.001
Ethylbenzene	N.D.	0.005	0.0004
Freon 113	N.D.	0.010	0.0006
n-Heptane	N.D.	0.008	0.003
n-Hexane	N.D.	0.005	0.0005
2-Hexanone	N.D.	0.010	0.001
Isobutyl Alcohol	N.D.	0.25	0.038
Isopropylbenzene	N.D.	0.005	0.0004
p-Isopropyltoluene	N.D.	0.005	0.002
Methyl Acetate	N.D.	0.005	0.001
Methyl Tertiary Butyl Ether	N.D.	0.005	0.0005
4-Methyl-2-pentanone	N.D.	0.010	0.001
Methylcyclohexane	N.D.	0.005	0.0006
Methylene Chloride	N.D.	0.005	0.002
Naphthalene	N.D.	0.005	0.002
2-Nitropropane	N.D.	0.010	0.002
Styrene	N.D.	0.005	0.0004
1,1,2,2-Tetrachloroethane	N.D.	0.005	0.0004
Tetrachloroethene	N.D.	0.005	0.0005
Tetrahydrofuran	N.D.	0.008	0.001
Toluene	N.D.	0.005	0.0006
1,2,3-Trichlorobenzene	N.D.	0.010	0.005
1,2,4-Trichlorobenzene	N.D.	0.010	0.005
1,1,1-Trichloroethane	N.D.	0.005	0.0006
1,1,2-Trichloroethane	N.D.	0.005	0.0005
Trichloroethene	N.D.	0.005	0.0005
Trichlorofluoromethane	N.D.	0.005	0.0007
1,2,4-Trimethylbenzene	N.D.	0.005	0.0005
1,3,5-Trimethylbenzene	N.D.	0.005	0.0005
Vinyl Chloride	N.D.	0.005	0.0006
m+p-Xylene	N.D.	0.005	0.001
o-Xylene	N.D.	0.005	0.0004
Xylene (Total)	N.D.	0.010	0.001
Batch number: B192351AA	Sample number(s): 1123981		
Acetone	N.D.	0.020	0.006
Acetonitrile	N.D.	0.10	0.025
Benzene	N.D.	0.005	0.0005
Bromochloromethane	N.D.	0.005	0.0006
Bromodichloromethane	N.D.	0.005	0.0004
Bromoform	N.D.	0.010	0.005
Bromomethane	N.D.	0.005	0.0007
n-Butanol	N.D.	0.25	0.056
2-Butanone	N.D.	0.010	0.001
t-Butyl alcohol	N.D.	0.10	0.015

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: ARCADIS U.S., Inc.
Reported: 08/30/2019 15:37

Group Number: 2058610

Method Blank (continued)

Analysis Name	Result	LOQ**	MDL
	mg/kg	mg/kg	mg/kg
n-Butylbenzene	N.D.	0.008	0.003
sec-Butylbenzene	N.D.	0.005	0.002
tert-Butylbenzene	N.D.	0.005	0.0008
Carbon Disulfide	N.D.	0.005	0.0006
Carbon Tetrachloride	N.D.	0.005	0.0005
Chlorobenzene	N.D.	0.005	0.0005
Chlorodifluoromethane	N.D.	0.010	0.002
Chloroethane	N.D.	0.005	0.001
Chloroform	N.D.	0.005	0.0006
Chloromethane	N.D.	0.005	0.0006
Cyclohexane	N.D.	0.005	0.0005
Cyclohexanone	N.D.	0.25	0.025
1,2-Dibromo-3-chloropropane	N.D.	0.005	0.0005
Dibromochloromethane	N.D.	0.005	0.0005
1,2-Dibromoethane	N.D.	0.005	0.0004
1,2-Dichlorobenzene	N.D.	0.005	0.0005
1,3-Dichlorobenzene	N.D.	0.005	0.0005
1,4-Dichlorobenzene	N.D.	0.005	0.0004
Dichlorodifluoromethane	N.D.	0.005	0.0006
1,1-Dichloroethane	N.D.	0.005	0.0005
1,2-Dichloroethane	N.D.	0.005	0.0006
1,1-Dichloroethene	N.D.	0.005	0.0005
cis-1,2-Dichloroethene	N.D.	0.005	0.0005
trans-1,2-Dichloroethene	N.D.	0.005	0.0005
1,2-Dichloropropane	N.D.	0.005	0.0005
cis-1,3-Dichloropropene	N.D.	0.005	0.0004
trans-1,3-Dichloropropene	N.D.	0.005	0.0005
1,4-Dioxane	N.D.	0.25	0.037
Ethyl Acetate	N.D.	0.005	0.001
Ethyl Ether	N.D.	0.005	0.001
Ethylbenzene	N.D.	0.005	0.0004
Freon 113	N.D.	0.010	0.0006
n-Heptane	N.D.	0.008	0.003
n-Hexane	N.D.	0.005	0.0005
2-Hexanone	N.D.	0.010	0.001
Isobutyl Alcohol	N.D.	0.25	0.038
Isopropylbenzene	N.D.	0.005	0.0004
p-Isopropyltoluene	N.D.	0.005	0.002
Methyl Acetate	N.D.	0.005	0.001
Methyl Tertiary Butyl Ether	N.D.	0.005	0.0005
4-Methyl-2-pentanone	N.D.	0.010	0.001
Methylcyclohexane	N.D.	0.005	0.0006
Methylene Chloride	N.D.	0.005	0.002
Naphthalene	N.D.	0.005	0.002
2-Nitropropane	N.D.	0.010	0.002

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: ARCADIS U.S., Inc. Group Number: 2058610
Reported: 08/30/2019 15:37

Method Blank (continued)

Analysis Name	Result	LOQ**	MDL
	mg/kg	mg/kg	mg/kg
Styrene	N.D.	0.005	0.0004
1,1,2,2-Tetrachloroethane	N.D.	0.005	0.0004
Tetrachloroethene	N.D.	0.005	0.0005
Tetrahydrofuran	N.D.	0.008	0.001
Toluene	N.D.	0.005	0.0006
1,2,3-Trichlorobenzene	N.D.	0.010	0.005
1,2,4-Trichlorobenzene	N.D.	0.010	0.005
1,1,1-Trichloroethane	N.D.	0.005	0.0006
1,1,2-Trichloroethane	N.D.	0.005	0.0005
Trichloroethene	N.D.	0.005	0.0005
Trichlorofluoromethane	N.D.	0.005	0.0007
1,2,4-Trimethylbenzene	N.D.	0.005	0.0005
1,3,5-Trimethylbenzene	N.D.	0.005	0.0005
Vinyl Chloride	N.D.	0.005	0.0006
m+p-Xylene	N.D.	0.005	0.001
o-Xylene	N.D.	0.005	0.0004
Xylene (Total)	N.D.	0.010	0.001
	ug/l	ug/l	ug/l
Batch number: 4192381AA	Sample number(s): 1123983-1123984		
Acetone	N.D.	20	0.7
Acetonitrile	N.D.	100	16
Benzene	N.D.	1	0.2
Bromochloromethane	N.D.	5	0.2
Bromodichloromethane	N.D.	1	0.2
Bromoform	N.D.	4	1
Bromomethane	N.D.	1	0.3
n-Butanol	N.D.	250	61
2-Butanone	N.D.	10	0.3
t-Butyl alcohol	N.D.	50	12
n-Butylbenzene	N.D.	5	0.2
sec-Butylbenzene	N.D.	5	0.2
tert-Butylbenzene	N.D.	5	0.3
Carbon Disulfide	N.D.	5	0.2
Carbon Tetrachloride	N.D.	1	0.2
Chlorobenzene	N.D.	1	0.2
Chlorodifluoromethane	N.D.	5	2
Chloroethane	N.D.	1	0.2
Chloroform	N.D.	1	0.2
Chloromethane	N.D.	1	0.2
Cyclohexane	N.D.	5	1
Cyclohexanone	N.D.	100	25
1,2-Dibromo-3-chloropropane	N.D.	5	0.3
Dibromochloromethane	N.D.	1	0.2
1,2-Dibromoethane	N.D.	1	0.2

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Quality Control Summary

Client Name: ARCADIS U.S., Inc.
Reported: 08/30/2019 15:37

Group Number: 2058610

Method Blank (continued)

Analysis Name	Result	LOQ**	MDL
	ug/l	ug/l	ug/l
1,2-Dichlorobenzene	N.D.	5	0.2
1,3-Dichlorobenzene	N.D.	5	0.2
1,4-Dichlorobenzene	N.D.	5	0.2
Dichlorodifluoromethane	N.D.	1	0.2
1,1-Dichloroethane	N.D.	1	0.2
1,2-Dichloroethane	N.D.	1	0.3
1,1-Dichloroethene	N.D.	1	0.2
cis-1,2-Dichloroethene	N.D.	1	0.2
trans-1,2-Dichloroethene	N.D.	1	0.2
1,2-Dichloropropane	N.D.	1	0.2
cis-1,3-Dichloropropene	N.D.	1	0.2
trans-1,3-Dichloropropene	N.D.	1	0.2
1,4-Dioxane	N.D.	250	29
Ethyl Acetate	N.D.	5	0.7
Ethyl ether	N.D.	5	0.2
Ethylbenzene	N.D.	1	0.4
Freon 113	N.D.	10	0.2
n-Heptane	N.D.	5	2
n-Hexane	N.D.	5	2
2-Hexanone	N.D.	10	0.3
Isobutyl Alcohol	N.D.	250	36
Isopropylbenzene	N.D.	5	0.2
p-Isopropyltoluene	N.D.	5	0.2
Methyl Acetate	N.D.	5	0.2
Methyl Tertiary Butyl Ether	N.D.	1	0.2
4-Methyl-2-pentanone	N.D.	10	0.5
Methylcyclohexane	N.D.	5	0.5
Methylene Chloride	0.6 J	1	0.3
Naphthalene	N.D.	5	1
2-Nitropropane	N.D.	10	0.8
Styrene	N.D.	5	0.2
1,1,2,2-Tetrachloroethane	N.D.	1	0.2
Tetrachloroethene	N.D.	1	0.2
Tetrahydrofuran	N.D.	10	0.7
Toluene	N.D.	1	0.2
1,2,3-Trichlorobenzene	N.D.	5	0.4
1,2,4-Trichlorobenzene	N.D.	5	0.3
1,1,1-Trichloroethane	N.D.	1	0.3
1,1,2-Trichloroethane	N.D.	1	0.2
Trichloroethene	N.D.	1	0.2
Trichlorofluoromethane	N.D.	1	0.2
1,2,4-Trimethylbenzene	N.D.	5	1
1,3,5-Trimethylbenzene	N.D.	5	0.3
Vinyl Chloride	N.D.	1	0.2
m+p-Xylene	N.D.	5	1

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Quality Control Summary

Client Name: ARCADIS U.S., Inc. Group Number: 2058610
Reported: 08/30/2019 15:37

Method Blank (continued)

Analysis Name	Result	LOQ**	MDL
	ug/l	ug/l	ug/l
o-Xylene	N.D.	1	0.4
Xylene (Total)	N.D.	6	1
	ug/kg	ug/kg	ug/kg
Batch number: 19234SLE026	Sample number(s): 1123981-1123982		
Acenaphthene	N.D.	17	3
Acenaphthylene	N.D.	17	3
Acetophenone	N.D.	50	17
Aniline	N.D.	500	170
Anthracene	N.D.	17	3
Atrazine	N.D.	430	200
Benzaldehyde	N.D.	170	67
Benzo(a)anthracene	N.D.	17	7
Benzo(a)pyrene	N.D.	17	3
Benzo(b)fluoranthene	N.D.	17	3
Benzo(g,h,i)perylene	N.D.	17	3
Benzo(k)fluoranthene	N.D.	17	3
Benzyl alcohol	N.D.	500	170
1,1'-Biphenyl	N.D.	37	17
4-Bromophenyl-phenylether	N.D.	50	23
Butylbenzylphthalate	N.D.	170	67
Di-n-butylphthalate	N.D.	170	67
Caprolactam	N.D.	170	33
Carbazole	N.D.	37	17
4-Chloro-3-methylphenol	N.D.	50	23
4-Chloroaniline	N.D.	170	33
bis(2-Chloroethoxy)methane	N.D.	37	17
bis(2-Chloroethyl)ether	N.D.	50	23
bis(2-Chloroisopropyl)ether	N.D.	43	20
2-Chloronaphthalene	N.D.	33	7
2-Chlorophenol	N.D.	37	17
4-Chlorophenyl-phenylether	N.D.	43	20
Chrysene	N.D.	17	3
Dibenz(a,h)anthracene	N.D.	17	7
Dibenzofuran	N.D.	37	17
3,3'-Dichlorobenzidine	N.D.	330	100
2,4-Dichlorophenol	N.D.	43	20
Dicyclohexylamine	N.D.	2,000	670
Diethylphthalate	N.D.	170	67
N,N-Dimethylaniline	N.D.	170	33
2,4-Dimethylphenol	N.D.	67	30
Dimethylphthalate	N.D.	170	67
4,6-Dinitro-2-methylphenol	N.D.	500	230
2,4-Dinitrophenol	N.D.	1,000	330
2,4-Dinitrotoluene	N.D.	170	67

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Quality Control Summary

Client Name: ARCADIS U.S., Inc. Group Number: 2058610
Reported: 08/30/2019 15:37

Method Blank (continued)

Analysis Name	Result	LOQ**	MDL
	ug/kg	ug/kg	ug/kg
2,6-Dinitrotoluene	N.D.	50	23
bis(2-Ethylhexyl)phthalate	N.D.	170	67
Fluoranthene	N.D.	17	3
Fluorene	N.D.	17	3
Hexachlorobenzene	N.D.	17	7
Hexachlorobutadiene	N.D.	77	37
Hexachlorocyclopentadiene	N.D.	500	200
Hexachloroethane	N.D.	170	33
Indeno(1,2,3-cd)pyrene	N.D.	17	3
Isophorone	N.D.	37	17
2-Methylnaphthalene	N.D.	33	3
2-Methylphenol	N.D.	67	17
4-Methylphenol	N.D.	50	17
Naphthalene	N.D.	17	7
2-Nitroaniline	N.D.	50	17
3-Nitroaniline	N.D.	170	67
4-Nitroaniline	N.D.	170	67
Nitrobenzene	N.D.	67	27
2-Nitrophenol	N.D.	57	27
4-Nitrophenol	N.D.	500	170
N-Nitroso-di-n-propylamine	N.D.	50	23
N-Nitrosodiphenylamine	N.D.	37	17
Di-n-octylphthalate	N.D.	170	67
Pentachlorophenol	N.D.	170	67
Phenanthrene	N.D.	17	3
Phenol	N.D.	37	17
Pyrene	N.D.	17	3
Pyridine	N.D.	170	67
1,2,4,5-Tetrachlorobenzene	N.D.	37	17
2,3,4,6-Tetrachlorophenol	N.D.	170	67
2,4,5-Trichlorophenol	N.D.	67	30
2,4,6-Trichlorophenol	N.D.	57	27
Triethylamine	N.D.	5,000	1,700
	ug/l	ug/l	ug/l
Batch number: 19231WAG026	Sample number(s): 1123984		
Acenaphthene	N.D.	0.50	0.10
Acenaphthylene	N.D.	0.50	0.10
Acetophenone	N.D.	10	4.0
Aniline	N.D.	10	3.0
Anthracene	N.D.	0.50	0.10
Atrazine	N.D.	5.0	2.0
Benzaldehyde	N.D.	10	3.0
Benzo(a)anthracene	N.D.	0.50	0.10
Benzo(a)pyrene	N.D.	0.50	0.10

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Quality Control Summary

Client Name: ARCADIS U.S., Inc.
Reported: 08/30/2019 15:37

Group Number: 2058610

Method Blank (continued)

Analysis Name	Result	LOQ**	MDL
	ug/l	ug/l	ug/l
Benzo(b)fluoranthene	N.D.	0.50	0.10
Benzo(g,h,i)perylene	N.D.	0.50	0.10
Benzo(k)fluoranthene	N.D.	0.50	0.10
Benzyl alcohol	N.D.	30	10
1,1'-Biphenyl	N.D.	10	3.0
4-Bromophenyl-phenylether	N.D.	2.0	0.50
Butylbenzylphthalate	N.D.	5.0	2.0
Di-n-butylphthalate	N.D.	5.0	2.0
Caprolactam	N.D.	11	5.0
Carbazole	N.D.	2.0	0.50
4-Chloro-3-methylphenol	N.D.	2.0	0.50
4-Chloroaniline	N.D.	10	4.0
bis(2-Chloroethoxy)methane	N.D.	2.0	0.50
bis(2-Chloroethyl)ether	N.D.	2.0	0.50
bis(2-Chloroisopropyl)ether	N.D.	2.0	0.50
2-Chloronaphthalene	N.D.	1.0	0.40
2-Chlorophenol	N.D.	2.0	0.50
4-Chlorophenyl-phenylether	N.D.	2.0	0.50
Chrysene	N.D.	0.50	0.10
Dibenz(a,h)anthracene	N.D.	0.50	0.10
Dibenzofuran	N.D.	2.0	0.50
3,3'-Dichlorobenzidine	N.D.	10	3.0
2,4-Dichlorophenol	N.D.	2.0	0.50
Dicyclohexylamine	N.D.	10	10
Diethylphthalate	N.D.	5.0	2.0
N,N-Dimethylaniline	N.D.	1.0	0.50
2,4-Dimethylphenol	N.D.	10	3.0
Dimethylphthalate	N.D.	5.0	2.0
4,6-Dinitro-2-methylphenol	N.D.	21	8.0
2,4-Dinitrophenol	N.D.	30	14
2,4-Dinitrotoluene	N.D.	5.0	1.0
2,6-Dinitrotoluene	N.D.	2.0	0.50
bis(2-Ethylhexyl)phthalate	N.D.	11	5.0
Fluoranthene	N.D.	0.50	0.10
Fluorene	N.D.	0.50	0.10
Hexachlorobenzene	N.D.	0.50	0.10
Hexachlorobutadiene	N.D.	2.0	0.50
Hexachlorocyclopentadiene	N.D.	11	5.0
Hexachloroethane	N.D.	5.0	1.0
Indeno(1,2,3-cd)pyrene	N.D.	0.50	0.10
Isophorone	N.D.	2.0	0.50
2-Methylnaphthalene	N.D.	0.50	0.10
2-Methylphenol	N.D.	2.0	0.50
4-Methylphenol	N.D.	2.0	0.50
Naphthalene	N.D.	0.50	0.10

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Quality Control Summary

Client Name: ARCADIS U.S., Inc. Group Number: 2058610
Reported: 08/30/2019 15:37

Method Blank (continued)

Analysis Name	Result	LOQ**	MDL
	ug/l	ug/l	ug/l
2-Nitroaniline	N.D.	7.0	2.0
3-Nitroaniline	N.D.	7.0	3.0
4-Nitroaniline	N.D.	3.0	0.90
Nitrobenzene	N.D.	2.0	0.50
2-Nitrophenol	N.D.	10	3.0
4-Nitrophenol	N.D.	30	10
N-Nitroso-di-n-propylamine	N.D.	3.0	0.70
N-Nitrosodiphenylamine	N.D.	3.0	0.70
Di-n-octylphthalate	N.D.	11	5.0
Pentachlorophenol	N.D.	5.0	1.0
Phenanthrene	N.D.	0.50	0.10
Phenol	N.D.	2.0	0.50
Pyrene	N.D.	0.50	0.10
Pyridine	N.D.	5.0	2.0
1,2,4,5-Tetrachlorobenzene	N.D.	2.0	0.50
2,3,4,6-Tetrachlorophenol	N.D.	10	4.0
2,4,5-Trichlorophenol	N.D.	2.0	0.50
2,4,6-Trichlorophenol	N.D.	2.0	0.50
Triethylamine	N.D.	10	10
	mg/kg	mg/kg	mg/kg
Batch number: 192270015A	Sample number(s): 1123981-1123982		
Ethanol (by Direct Injection)	N.D.	1.0	0.12
Isopropanol	N.D.	1.0	0.046
Methanol (by Direct Injection)	N.D.	1.0	0.20
Batch number: 192280045A	Sample number(s): 1123981-1123982		
Ethylene glycol	N.D.	10	5.0
Propylene glycol	N.D.	10	5.0
	mg/l	mg/l	mg/l
Batch number: 192340031A	Sample number(s): 1123983-1123984		
Ethylene glycol	N.D.	10	5.0
Propylene glycol	N.D.	10	5.0
	ug/l	ug/l	ug/l
Batch number: 192270013A	Sample number(s): 1123983-1123984		
Ethanol	N.D.	1,000	150
Isopropanol	N.D.	1,000	110
Methanol	N.D.	1,000	220

LCS/LCSD

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Quality Control Summary

Client Name: ARCADIS U.S., Inc.
Reported: 08/30/2019 15:37

Group Number: 2058610

LCS/LCSD

Analysis Name	LCS Spike Added mg/kg	LCS Conc mg/kg	LCSD Spike Added mg/kg	LCSD Conc mg/kg	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: B192342AA	Sample number(s): 1123982								
Acetone	0.150	0.139	0.150	0.133	93	89	41-150	4	30
Acetonitrile	0.150	0.132	0.150	0.146	88	97	61-120	10	30
Benzene	0.0200	0.0237	0.0200	0.0233	119	116	80-120	2	30
Bromochloromethane	0.0200	0.0233	0.0200	0.0227	117	114	72-124	3	30
Bromodichloromethane	0.0200	0.0215	0.0200	0.0215	108	107	70-120	0	30
Bromoform	0.0200	0.0174	0.0200	0.0172	87	86	51-127	1	30
Bromomethane	0.0200	0.0161	0.0200	0.0162	81	81	45-140	0	30
n-Butanol	1.00	0.806	1.00	0.830	81	83	63-123	3	30
2-Butanone	0.150	0.133	0.150	0.130	89	87	57-128	2	30
t-Butyl alcohol	0.200	0.181	0.200	0.196	90	98	74-121	8	30
n-Butylbenzene	0.0200	0.0225	0.0200	0.0221	112	111	71-121	2	30
sec-Butylbenzene	0.0200	0.0243	0.0200	0.0240	121*	120	72-120	1	30
tert-Butylbenzene	0.0200	0.0238	0.0200	0.0239	119	120	68-120	0	30
Carbon Disulfide	0.0200	0.0187	0.0200	0.0177	94	88	64-133	6	30
Carbon Tetrachloride	0.0200	0.0231	0.0200	0.0229	115	114	64-134	1	30
Chlorobenzene	0.0200	0.0226	0.0200	0.0226	113	113	80-120	0	30
Chlorodifluoromethane	0.0200	0.0170	0.0200	0.0170	85	85	60-133	0	30
Chloroethane	0.0200	0.0177	0.0200	0.0172	89	86	43-135	3	30
Chloroform	0.0200	0.0233	0.0200	0.0232	116	116	80-120	0	30
Chloromethane	0.0200	0.0181	0.0200	0.0183	91	92	56-120	1	30
Cyclohexane	0.0200	0.0201	0.0200	0.0199	100	99	58-126	1	30
Cyclohexanone	0.500	0.375	0.500	0.391	75	78	47-136	4	30
1,2-Dibromo-3-chloropropane	0.0200	0.0153	0.0200	0.0159	77	79	48-134	4	30
Dibromochloromethane	0.0200	0.0205	0.0200	0.0205	103	103	69-125	0	30
1,2-Dibromoethane	0.0200	0.0214	0.0200	0.0216	107	108	76-120	1	30
1,2-Dichlorobenzene	0.0200	0.0214	0.0200	0.0215	107	107	76-120	0	30
1,3-Dichlorobenzene	0.0200	0.0211	0.0200	0.0210	105	105	75-120	0	30
1,4-Dichlorobenzene	0.0200	0.0202	0.0200	0.0204	101	102	80-120	1	30
Dichlorodifluoromethane	0.0200	0.0153	0.0200	0.0150	77	75	21-127	2	30
1,1-Dichloroethane	0.0200	0.0233	0.0200	0.0231	117	116	79-120	1	30
1,2-Dichloroethane	0.0200	0.0236	0.0200	0.0234	118	117	71-128	1	30
1,1-Dichloroethene	0.0200	0.0225	0.0200	0.0220	113	110	73-129	2	30
cis-1,2-Dichloroethene	0.0200	0.0265	0.0200	0.0263	132*	132*	80-125	1	30
trans-1,2-Dichloroethene	0.0200	0.0225	0.0200	0.0222	112	111	80-126	1	30
1,2-Dichloropropane	0.0200	0.0232	0.0200	0.0232	116	116	80-120	0	30
cis-1,3-Dichloropropene	0.0200	0.0216	0.0200	0.0215	108	107	66-120	1	30
trans-1,3-Dichloropropene	0.0200	0.0191	0.0200	0.0191	96	95	68-122	0	30
1,4-Dioxane	0.500	0.522	0.500	0.524	104	105	62-131	0	30
Ethyl Acetate	0.0200	0.0232	0.0200	0.0210	116	105	65-133	10	30
Ethyl Ether	0.0200	0.0163	0.0200	0.0163	82	81	59-135	1	30
Ethylbenzene	0.0200	0.0229	0.0200	0.0227	114	114	78-120	1	30
Freon 113	0.0200	0.0222	0.0200	0.0217	111	108	64-135	2	30
n-Heptane	0.0200	0.0213	0.0200	0.0201	106	100	50-141	6	30

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Quality Control Summary

Client Name: ARCADIS U.S., Inc. Group Number: 2058610
Reported: 08/30/2019 15:37

LCS/LCSD (continued)

Analysis Name	LCS Spike Added mg/kg	LCS Conc mg/kg	LCSD Spike Added mg/kg	LCSD Conc mg/kg	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
n-Hexane	0.0200	0.0209	0.0200	0.0198	104	99	50-132	5	30
2-Hexanone	0.100	0.0807	0.100	0.0835	81	84	54-140	3	30
Isobutyl Alcohol	0.500	0.479	0.500	0.471	96	94	69-129	2	30
Isopropylbenzene	0.0200	0.0240	0.0200	0.0238	120	119	77-120	1	30
p-Isopropyltoluene	0.0200	0.0240	0.0200	0.0237	120	119	72-120	1	30
Methyl Acetate	0.0200	0.0201	0.0200	0.0195	100	97	67-128	3	30
Methyl Tertiary Butyl Ether	0.0200	0.0211	0.0200	0.0209	106	104	72-120	1	30
4-Methyl-2-pentanone	0.100	0.0969	0.100	0.0975	97	97	67-128	1	30
Methylcyclohexane	0.0200	0.0229	0.0200	0.0223	115	112	61-124	3	30
Methylene Chloride	0.0200	0.0225	0.0200	0.0221	112	110	76-122	2	30
Naphthalene	0.0200	0.0139	0.0200	0.0158	69	79	48-130	13	30
2-Nitropropane	0.0200	0.0145	0.0200	0.0149	72	75	27-183	3	30
Styrene	0.0200	0.0212	0.0200	0.0212	106	106	76-120	0	30
1,1,2,2-Tetrachloroethane	0.0200	0.0202	0.0200	0.0203	101	101	69-125	0	30
Tetrachloroethene	0.0200	0.0253	0.0200	0.0250	127*	125*	73-120	1	30
Tetrahydrofuran	0.100	0.0886	0.100	0.0849	89	85	71-127	4	30
Toluene	0.0200	0.0230	0.0200	0.0227	115	113	80-120	1	30
1,2,3-Trichlorobenzene	0.0200	0.0198	0.0200	0.0205	99	102	57-131	3	30
1,2,4-Trichlorobenzene	0.0200	0.0184	0.0200	0.0187	92	93	56-130	1	30
1,1,1-Trichloroethane	0.0200	0.0236	0.0200	0.0232	118	116	69-123	2	30
1,1,2-Trichloroethane	0.0200	0.0229	0.0200	0.0229	114	115	80-120	0	30
Trichloroethene	0.0200	0.0236	0.0200	0.0235	118	118	80-120	0	30
Trichlorofluoromethane	0.0200	0.0188	0.0200	0.0186	94	93	55-134	1	30
1,2,4-Trimethylbenzene	0.0200	0.0223	0.0200	0.0220	112	110	73-120	2	30
1,3,5-Trimethylbenzene	0.0200	0.0231	0.0200	0.0228	115	114	73-120	1	30
Vinyl Chloride	0.0200	0.0191	0.0200	0.0188	96	94	52-120	2	30
m+p-Xylene	0.0400	0.0467	0.0400	0.0461	117	115	80-120	1	30
o-Xylene	0.0200	0.0229	0.0200	0.0227	115	113	75-120	1	30
Xylene (Total)	0.0600	0.0697	0.0600	0.0688	116	115	75-120	1	30
Batch number: B192351AA	Sample number(s): 1123981								
Acetone	0.150	0.240	0.150	0.231	160*	154*	41-150	4	30
Acetonitrile	0.150	0.147	0.150	0.143	98	95	61-120	3	30
Benzene	0.0200	0.0222	0.0200	0.0229	111	114	80-120	3	30
Bromochloromethane	0.0200	0.0226	0.0200	0.0231	113	115	72-124	2	30
Bromodichloromethane	0.0200	0.0207	0.0200	0.0211	103	106	70-120	2	30
Bromoform	0.0200	0.0158	0.0200	0.0167	79	83	51-127	5	30
Bromomethane	0.0200	0.0151	0.0200	0.0157	75	79	45-140	4	30
n-Butanol	1.00	0.767	1.00	0.795	77	80	63-123	4	30
2-Butanone	0.150	0.160	0.150	0.158	107	105	57-128	1	30
t-Butyl alcohol	0.200	0.182	0.200	0.195	91	98	74-121	7	30
n-Butylbenzene	0.0200	0.0214	0.0200	0.0220	107	110	71-121	3	30
sec-Butylbenzene	0.0200	0.0229	0.0200	0.0236	114	118	72-120	3	30
tert-Butylbenzene	0.0200	0.0228	0.0200	0.0234	114	117	68-120	3	30

*- Outside of specification
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(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: ARCADIS U.S., Inc. Group Number: 2058610
Reported: 08/30/2019 15:37

LCS/LCSD (continued)

Analysis Name	LCS Spike Added mg/kg	LCS Conc mg/kg	LCSD Spike Added mg/kg	LCSD Conc mg/kg	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Carbon Disulfide	0.0200	0.0169	0.0200	0.0172	85	86	64-133	2	30
Carbon Tetrachloride	0.0200	0.0220	0.0200	0.0226	110	113	64-134	3	30
Chlorobenzene	0.0200	0.0217	0.0200	0.0225	108	113	80-120	4	30
Chlorodifluoromethane	0.0200	0.0181	0.0200	0.0170	91	85	60-133	6	30
Chloroethane	0.0200	0.0162	0.0200	0.0168	81	84	43-135	4	30
Chloroform	0.0200	0.0223	0.0200	0.0232	112	116	80-120	4	30
Chloromethane	0.0200	0.0165	0.0200	0.0170	82	85	56-120	3	30
Cyclohexane	0.0200	0.0208	0.0200	0.0214	104	107	58-126	3	30
Cyclohexanone	0.500	0.395	0.500	0.402	79	80	47-136	2	30
1,2-Dibromo-3-chloropropane	0.0200	0.0144	0.0200	0.0153	72	76	48-134	6	30
Dibromochloromethane	0.0200	0.0192	0.0200	0.0197	96	99	69-125	3	30
1,2-Dibromoethane	0.0200	0.0204	0.0200	0.0209	102	104	76-120	2	30
1,2-Dichlorobenzene	0.0200	0.0207	0.0200	0.0216	104	108	76-120	4	30
1,3-Dichlorobenzene	0.0200	0.0205	0.0200	0.0211	102	106	75-120	3	30
1,4-Dichlorobenzene	0.0200	0.0198	0.0200	0.0207	99	103	80-120	4	30
Dichlorodifluoromethane	0.0200	0.0152	0.0200	0.0158	76	79	21-127	4	30
1,1-Dichloroethane	0.0200	0.0216	0.0200	0.0224	108	112	79-120	4	30
1,2-Dichloroethane	0.0200	0.0230	0.0200	0.0236	115	118	71-128	3	30
1,1-Dichloroethene	0.0200	0.0201	0.0200	0.0204	100	102	73-129	2	30
cis-1,2-Dichloroethene	0.0200	0.0235	0.0200	0.0244	118	122	80-125	4	30
trans-1,2-Dichloroethene	0.0200	0.0219	0.0200	0.0229	110	115	80-126	4	30
1,2-Dichloropropane	0.0200	0.0220	0.0200	0.0227	110	113	80-120	3	30
cis-1,3-Dichloropropene	0.0200	0.0204	0.0200	0.0211	102	105	66-120	3	30
trans-1,3-Dichloropropene	0.0200	0.0180	0.0200	0.0186	90	93	68-122	3	30
1,4-Dioxane	0.500	0.476	0.500	0.502	95	100	62-131	5	30
Ethyl Acetate	0.0200	0.0214	0.0200	0.0211	107	106	65-133	1	30
Ethyl Ether	0.0200	0.0166	0.0200	0.0164	83	82	59-135	2	30
Ethylbenzene	0.0200	0.0219	0.0200	0.0223	110	112	78-120	2	30
Freon 113	0.0200	0.0232	0.0200	0.0237	116	118	64-135	2	30
n-Heptane	0.0200	0.0216	0.0200	0.0220	108	110	50-141	2	30
n-Hexane	0.0200	0.0212	0.0200	0.0217	106	108	50-132	2	30
2-Hexanone	0.100	0.0921	0.100	0.0948	92	95	54-140	3	30
Isobutyl Alcohol	0.500	0.464	0.500	0.458	93	92	69-129	1	30
Isopropylbenzene	0.0200	0.0229	0.0200	0.0233	114	117	77-120	2	30
p-Isopropyltoluene	0.0200	0.0227	0.0200	0.0233	113	117	72-120	3	30
Methyl Acetate	0.0200	0.0199	0.0200	0.0197	99	99	67-128	1	30
Methyl Tertiary Butyl Ether	0.0200	0.0207	0.0200	0.0212	103	106	72-120	3	30
4-Methyl-2-pentanone	0.100	0.0958	0.100	0.0975	96	98	67-128	2	30
Methylcyclohexane	0.0200	0.0226	0.0200	0.0232	113	116	61-124	3	30
Methylene Chloride	0.0200	0.0222	0.0200	0.0219	111	110	76-122	1	30
Naphthalene	0.0200	0.0147	0.0200	0.0160	74	80	48-130	8	30
2-Nitropropane	0.0200	0.0132	0.0200	0.0136	66	68	27-183	3	30
Styrene	0.0200	0.0203	0.0200	0.0208	102	104	76-120	3	30
1,1,2,2-Tetrachloroethane	0.0200	0.0191	0.0200	0.0195	95	97	69-125	2	30

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Quality Control Summary

Client Name: ARCADIS U.S., Inc. Group Number: 2058610
Reported: 08/30/2019 15:37

LCS/LCSD (continued)

Analysis Name	LCS Spike Added mg/kg	LCS Conc mg/kg	LCSD Spike Added mg/kg	LCSD Conc mg/kg	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Tetrachloroethene	0.0200	0.0244	0.0200	0.0249	122*	125*	73-120	2	30
Tetrahydrofuran	0.100	0.0831	0.100	0.0830	83	83	71-127	0	30
Toluene	0.0200	0.0216	0.0200	0.0222	108	111	80-120	3	30
1,2,3-Trichlorobenzene	0.0200	0.0196	0.0200	0.0208	98	104	57-131	6	30
1,2,4-Trichlorobenzene	0.0200	0.0185	0.0200	0.0193	92	96	56-130	4	30
1,1,1-Trichloroethane	0.0200	0.0226	0.0200	0.0231	113	116	69-123	2	30
1,1,2-Trichloroethane	0.0200	0.0219	0.0200	0.0226	110	113	80-120	3	30
Trichloroethene	0.0200	0.0230	0.0200	0.0233	115	116	80-120	1	30
Trichlorofluoromethane	0.0200	0.0189	0.0200	0.0193	94	97	55-134	3	30
1,2,4-Trimethylbenzene	0.0200	0.0212	0.0200	0.0220	106	110	73-120	3	30
1,3,5-Trimethylbenzene	0.0200	0.0217	0.0200	0.0225	109	112	73-120	3	30
Vinyl Chloride	0.0200	0.0182	0.0200	0.0188	91	94	52-120	4	30
m+p-Xylene	0.0400	0.0448	0.0400	0.0457	112	114	80-120	2	30
o-Xylene	0.0200	0.0218	0.0200	0.0224	109	112	75-120	3	30
Xylene (Total)	0.0600	0.0666	0.0600	0.0681	111	113	75-120	2	30
	ug/l	**ug/l**	**ug/l**	**ug/l**					
Batch number: 4192381AA	Sample number(s): 1123983-1123984								
Acetone	150	242.49	150	239.3	162*	160*	54-157	1	30
Acetonitrile	150	138.43	150	138.59	92	92	66-149	0	30
Benzene	20	19.6	20	19.82	98	99	80-120	1	30
Bromochloromethane	20	18.07	20	17.74	90	89	80-120	2	30
Bromodichloromethane	20	16.21	20	16.31	81	82	71-120	1	30
Bromoform	20	13.87	20	13.9	69	69	51-120	0	30
Bromomethane	20	13.17	20	13.32	66	67	53-128	1	30
n-Butanol	1000	1027.57	1000	1031.97	103	103	57-130	0	30
2-Butanone	150	145.35	150	140.89	97	94	59-135	3	30
t-Butyl alcohol	200	180.15	200	177.13	90	89	60-130	2	30
n-Butylbenzene	20	18.6	20	18.85	93	94	76-120	1	30
sec-Butylbenzene	20	19.5	20	19.68	98	98	77-120	1	30
tert-Butylbenzene	20	18.42	20	18.91	92	95	78-120	3	30
Carbon Disulfide	20	15.97	20	15.87	80	79	65-128	1	30
Carbon Tetrachloride	20	16.1	20	15.93	81	80	64-134	1	30
Chlorobenzene	20	19.93	20	20.23	100	101	80-120	2	30
Chlorodifluoromethane	20	12.86	20	13.03	64	65	45-149	1	30
Chloroethane	20	14.15	20	13.95	71	70	55-123	1	30
Chloroform	20	18.54	20	18.25	93	91	80-120	2	30
Chloromethane	20	14.31	20	14.73	72	74	56-121	3	30
Cyclohexane	20	17.27	20	17.48	86	87	68-126	1	30
Cyclohexanone	500	603.92	500	609.14	121	122	27-141	1	30
1,2-Dibromo-3-chloropropane	20	15.72	20	16.24	79	81	47-131	3	30
Dibromochloromethane	20	16.13	20	16.17	81	81	71-120	0	30
1,2-Dibromoethane	20	19.32	20	19.49	97	97	77-120	1	30
1,2-Dichlorobenzene	20	19.66	20	20.01	98	100	80-120	2	30

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(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: ARCADIS U.S., Inc. Group Number: 2058610
Reported: 08/30/2019 15:37

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
1,3-Dichlorobenzene	20	19.59	20	19.89	98	99	80-120	2	30
1,4-Dichlorobenzene	20	19.91	20	20	100	100	80-120	0	30
Dichlorodifluoromethane	20	12.54	20	12.38	63	62	41-127	1	30
1,1-Dichloroethane	20	19.11	20	19.11	96	96	80-120	0	30
1,2-Dichloroethane	20	18.31	20	18.24	92	91	73-124	0	30
1,1-Dichloroethene	20	20.54	20	20.5	103	102	80-131	0	30
cis-1,2-Dichloroethene	20	20.91	20	20.79	105	104	80-125	1	30
trans-1,2-Dichloroethene	20	19.93	20	19.77	100	99	80-126	1	30
1,2-Dichloropropane	20	19.85	20	20.1	99	101	80-120	1	30
cis-1,3-Dichloropropene	20	17.43	20	17.22	87	86	75-120	1	30
trans-1,3-Dichloropropene	20	16.49	20	16.74	82	84	67-120	1	30
1,4-Dioxane	500	595.91	500	591.02	119	118	63-146	1	30
Ethyl Acetate	20	19.1	20	19.19	96	96	67-131	0	30
Ethyl ether	20	13.59	20	13.82	68	69	59-141	2	30
Ethylbenzene	20	19.13	20	19.38	96	97	80-120	1	30
Freon 113	20	19.18	20	19.08	96	95	73-139	1	30
n-Heptane	20	15.99	20	15.6	80	78	56-133	2	30
n-Hexane	20	18.67	20	18.31	93	92	61-138	2	30
2-Hexanone	100	90.83	100	90.1	91	90	56-135	1	30
Isobutyl Alcohol	500	532.35	500	529.03	106	106	61-136	1	30
Isopropylbenzene	20	18.82	20	18.97	94	95	80-120	1	30
p-Isopropyltoluene	20	18.78	20	18.93	94	95	76-120	1	30
Methyl Acetate	20	17.72	20	17.46	89	87	54-136	1	30
Methyl Tertiary Butyl Ether	20	17.52	20	17.67	88	88	69-122	1	30
4-Methyl-2-pentanone	100	84.45	100	83.66	84	84	62-133	1	30
Methylcyclohexane	20	16.44	20	16.45	82	82	67-121	0	30
Methylene Chloride	20	21	20	20.87	105	104	80-120	1	30
Naphthalene	20	18.27	20	18.65	91	93	53-124	2	30
2-Nitropropane	20	10.42	20	11.85	52	59	19-144	13	30
Styrene	20	19.09	20	19.27	95	96	80-120	1	30
1,1,2,2-Tetrachloroethane	20	20.72	20	21.1	104	106	72-120	2	30
Tetrachloroethene	20	19.53	20	19.53	98	98	80-120	0	30
Tetrahydrofuran	100	106.5	100	106.65	106	107	54-144	0	30
Toluene	20	19.81	20	20.02	99	100	80-120	1	30
1,2,3-Trichlorobenzene	20	18.24	20	19.11	91	96	66-120	5	30
1,2,4-Trichlorobenzene	20	17.7	20	18.2	89	91	63-120	3	30
1,1,1-Trichloroethane	20	16.79	20	16.71	84	84	67-126	0	30
1,1,2-Trichloroethane	20	20.61	20	20.83	103	104	80-120	1	30
Trichloroethene	20	19.18	20	18.92	96	95	80-120	1	30
Trichlorofluoromethane	20	12.8	20	12.52	64	63	55-135	2	30
1,2,4-Trimethylbenzene	20	19.28	20	19.63	96	98	75-120	2	30
1,3,5-Trimethylbenzene	20	19.38	20	19.74	97	99	75-120	2	30
Vinyl Chloride	20	14.58	20	14.44	73	72	56-120	1	30
m+p-Xylene	40	39.16	40	39	98	98	80-120	0	30

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Quality Control Summary

Client Name: ARCADIS U.S., Inc. Group Number: 2058610
Reported: 08/30/2019 15:37

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
o-Xylene	20	18.78	20	18.85	94	94	80-120	0	30
Xylene (Total)	60	57.94	60	57.85	97	96	80-120	0	30
	ug/kg	ug/kg	ug/kg	ug/kg					
Batch number: 19234SLE026	Sample number(s): 1123981-1123982								
Acenaphthene	1666.67	1621.36			97		58-107		
Acenaphthylene	1666.67	1814.86			109		62-115		
Acetophenone	1666.67	1342.05			81		47-102		
Aniline	1666.67	1134.81			68		22-91		
Anthracene	1666.67	1719.06			103		67-111		
Atrazine	1666.67	1678.97			101		68-122		
Benzaldehyde	1666.67	853.53			51		20-101		
Benzo(a)anthracene	1666.67	1652.88			99		67-112		
Benzo(a)pyrene	1666.67	1794.25			108		68-119		
Benzo(b)fluoranthene	1666.67	1725.62			104		65-117		
Benzo(g,h,i)perylene	1666.67	1728.82			104		65-119		
Benzo(k)fluoranthene	1666.67	1684.86			101		66-122		
Benzyl alcohol	1666.67	1503.13			90		45-115		
1,1'-Biphenyl	1666.67	1575.66			95		59-106		
4-Bromophenyl-phenylether	1666.67	1654.87			99		63-115		
Butylbenzylphthalate	1666.67	1956.53			117*		67-115		
Di-n-butylphthalate	1666.67	1902.26			114		67-118		
Caprolactam	1666.67	1750.14			105		61-113		
Carbazole	1666.67	1822.03			109		72-114		
4-Chloro-3-methylphenol	1666.67	1705.81			102		62-109		
4-Chloroaniline	1666.67	1275.57			77		14-97		
bis(2-Chloroethoxy)methane	1666.67	1424.11			85		50-103		
bis(2-Chloroethyl)ether	1666.67	1149.95			69		40-99		
bis(2-Chloroisopropyl)ether	1666.67	1068.2			64		35-93		
2-Chloronaphthalene	1666.67	1339.65			80		43-124		
2-Chlorophenol	1666.67	1322.25			79		47-103		
4-Chlorophenyl-phenylether	1666.67	1636.22			98		58-110		
Chrysene	1666.67	1542.53			93		66-111		
Dibenz(a,h)anthracene	1666.67	1897.71			114		72-127		
Dibenzofuran	1666.67	1621.43			97		60-108		
3,3'-Dichlorobenzidine	1666.67	1236.76			74		16-107		
2,4-Dichlorophenol	1666.67	1591.39			95		58-107		
Dicyclohexylamine	1666.67	1654.52	1666.67	1641.44	99	98	49-141	1	30
Diethylphthalate	1666.67	1771.55			106		58-115		
N,N-Dimethylaniline	1666.67	534.57	1666.67	510.94	32	31*	32-133	5	30
2,4-Dimethylphenol	1666.67	1330.82			80		46-89		
Dimethylphthalate	1666.67	1709.74			103		56-116		
4,6-Dinitro-2-methylphenol	1666.67	1824.73			109		45-134		
2,4-Dinitrophenol	3333.33	3750.02			113		10-138		

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Quality Control Summary

Client Name: ARCADIS U.S., Inc. Group Number: 2058610
Reported: 08/30/2019 15:37

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/kg	LCS Conc ug/kg	LCSD Spike Added ug/kg	LCSD Conc ug/kg	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
2,4-Dinitrotoluene	1666.67	1799.24			108		61-121		
2,6-Dinitrotoluene	1666.67	1831.98			110		64-115		
bis(2-Ethylhexyl)phthalate	1666.67	2069.41			124*		66-121		
Fluoranthene	1666.67	1677			101		65-114		
Fluorene	1666.67	1607.86			96		62-110		
Hexachlorobenzene	1666.67	1516.46			91		57-123		
Hexachlorobutadiene	1666.67	1200.89			72		32-123		
Hexachlorocyclopentadiene	3333.33	2537			76		14-109		
Hexachloroethane	1666.67	1124.15			67		25-107		
Indeno(1,2,3-cd)pyrene	1666.67	1805.4			108		67-119		
Isophorone	1666.67	1464.95			88		49-103		
2-Methylnaphthalene	1666.67	1411.85			85		52-104		
2-Methylphenol	1666.67	1485.52			89		41-113		
4-Methylphenol	1666.67	1663.03			100		46-112		
Naphthalene	1666.67	1244.78			75		46-99		
2-Nitroaniline	1666.67	1964.93			118		65-119		
3-Nitroaniline	1666.67	1740.38			104		58-115		
4-Nitroaniline	1666.67	1241.05			74		41-91		
Nitrobenzene	1666.67	1316.78			79		33-115		
2-Nitrophenol	1666.67	1431.82			86		50-107		
4-Nitrophenol	1666.67	1914.86			115*		54-107		
N-Nitroso-di-n-propylamine	1666.67	1330.67			80		43-100		
N-Nitrosodiphenylamine	1666.67	1820.5			109		68-115		
Di-n-octylphthalate	1666.67	2156.54			129*		64-125		
Pentachlorophenol	1666.67	1721.61			103		48-127		
Phenanthrene	1666.67	1715.23			103		66-110		
Phenol	1666.67	1392.5			84		43-105		
Pyrene	1666.67	1608.1			96		67-109		
Pyridine	1666.67	794.04			48		10-117		
1,2,4,5-Tetrachlorobenzene	1666.67	1433.3			86		54-101		
2,3,4,6-Tetrachlorophenol	1666.67	1802.07			108		62-116		
2,4,5-Trichlorophenol	1666.67	1723.81			103		60-116		
2,4,6-Trichlorophenol	1666.67	1728.21			104		60-120		
Triethylamine	3333.33	1007.19	3333.33	912.47	30*	27*	70-130	10	30
	ug/l	**ug/l**	**ug/l**	**ug/l**					
Batch number: 19231WAG026	Sample number(s): 1123984								
Acenaphthene	50	43.72			87		52-114		
Acenaphthylene	50	49.18			98		57-121		
Acetophenone	50	41.29			83		61-114		
Aniline	50	27.04			54		35-84		
Anthracene	50	46.72			93		62-116		
Atrazine	50	50.91			102		71-133		
Benzaldehyde	50	40.05			80		48-118		

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Quality Control Summary

Client Name: ARCADIS U.S., Inc. Group Number: 2058610
Reported: 08/30/2019 15:37

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Benzo(a)anthracene	50	51.39			103		70-118		
Benzo(a)pyrene	50	50.46			101		71-117		
Benzo(b)fluoranthene	50	50.57			101		71-115		
Benzo(g,h,i)perylene	50	46.21			92		60-119		
Benzo(k)fluoranthene	50	49.4			99		71-116		
Benzyl alcohol	50	37.05			74		58-121		
1,1'-Biphenyl	50	41.13			82		51-112		
4-Bromophenyl-phenylether	50	44.77			90		53-117		
Butylbenzylphthalate	50	40.25			80		44-124		
Di-n-butylphthalate	50	45.11			90		62-118		
Caprolactam	50	13.48			27		10-57		
Carbazole	50	49.92			100		64-127		
4-Chloro-3-methylphenol	50	43.51			87		60-118		
4-Chloroaniline	50	40.41			81		35-108		
bis(2-Chloroethoxy)methane	50	45.52			91		53-119		
bis(2-Chloroethyl)ether	50	40.73			81		49-110		
bis(2-Chloroisopropyl)ether	50	33.76			68		33-119		
2-Chloronaphthalene	50	38.69			77		42-111		
2-Chlorophenol	50	37.1			74		52-109		
4-Chlorophenyl-phenylether	50	45.79			92		46-113		
Chrysene	50	50.57			101		69-116		
Dibenz(a,h)anthracene	50	50.33			101		68-121		
Dibenzofuran	50	45.53			91		53-114		
3,3'-Dichlorobenzidine	50	41.72			83		42-107		
2,4-Dichlorophenol	50	44.47			89		58-114		
Dicyclohexylamine	200	186.44	200	184.77	93*	92*	22-75	1	30
Diethylphthalate	50	44.39			89		48-113		
N,N-Dimethylaniline	100	83.72	100	78.56	84	79	59-114	6	30
2,4-Dimethylphenol	50	35.59			71		48-91		
Dimethylphthalate	50	32.26			65		14-123		
4,6-Dinitro-2-methylphenol	50	44.1			88		63-129		
2,4-Dinitrophenol	100	91.59			92		44-134		
2,4-Dinitrotoluene	50	52.65			105		69-117		
2,6-Dinitrotoluene	50	50.77			102		63-122		
bis(2-Ethylhexyl)phthalate	50	49.12			98		68-120		
Fluoranthene	50	51.12			102		63-122		
Fluorene	50	47.18			94		56-115		
Hexachlorobenzene	50	46.93			94		60-117		
Hexachlorobutadiene	50	31.5			63		20-108		
Hexachlorocyclopentadiene	100	17.24			17		10-91		
Hexachloroethane	50	25.42			51		24-100		
Indeno(1,2,3-cd)pyrene	50	48.2			96		63-114		
Isophorone	50	45.07			90		56-120		
2-Methylnaphthalene	50	42			84		44-111		

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Quality Control Summary

Client Name: ARCADIS U.S., Inc. Group Number: 2058610
Reported: 08/30/2019 15:37

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
2-Methylphenol	50	34.59			69		53-107		
4-Methylphenol	50	33			66		49-108		
Naphthalene	50	39.78			80		45-105		
2-Nitroaniline	50	47.51			95		66-126		
3-Nitroaniline	50	44.89			90		47-119		
4-Nitroaniline	50	43.68			87		45-107		
Nitrobenzene	50	42.52			85		49-113		
2-Nitrophenol	50	44.22			88		57-116		
4-Nitrophenol	50	25.54			51		23-89		
N-Nitroso-di-n-propylamine	50	40.68			81		51-122		
N-Nitrosodiphenylamine	50	46.66			93		63-119		
Di-n-octylphthalate	50	49.34			99		67-120		
Pentachlorophenol	50	45.38			91		54-131		
Phenanthrene	50	44.9			90		65-113		
Phenol	50	21.3			43		19-79		
Pyrene	50	47.94			96		65-115		
Pyridine	50	16.48			33		13-83		
1,2,4,5-Tetrachlorobenzene	50	38.13			76		33-105		
2,3,4,6-Tetrachlorophenol	50	51.08			102		68-118		
2,4,5-Trichlorophenol	50	48.35			97		66-118		
2,4,6-Trichlorophenol	50	48.24			96		69-122		
Triethylamine	200	36.87	200	37.14	18	19	10-88	1	30
	mg/kg	**mg/kg**	**mg/kg**	**mg/kg**					
Batch number: 192270015A	Sample number(s): 1123981-1123982								
Ethanol (by Direct Injection)	2.50	2.59			104		77-120		
Isopropanol	2.51	2.56			102		75-125		
Methanol (by Direct Injection)	2.50	2.73			109		76-119		
Batch number: 192280045A	Sample number(s): 1123981-1123982								
Ethylene glycol	99.8	95.4			96		76-122		
Propylene glycol	98.51	88.22			90		67-131		
	mg/l	**mg/l**	**mg/l**	**mg/l**					
Batch number: 192340031A	Sample number(s): 1123983-1123984								
Ethylene glycol	99.8	86.61			87		77-121		
Propylene glycol	98.51	80.73			82		78-131		
	ug/l	**ug/l**	**ug/l**	**ug/l**					
Batch number: 192270013A	Sample number(s): 1123983-1123984								
Ethanol	2501	2738.31			109		80-115		
Isopropanol	2505	2674.66			107		85-115		
Methanol	2503	2921.42			117		79-120		

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Quality Control Summary

Client Name: ARCADIS U.S., Inc. Group Number: 2058610
Reported: 08/30/2019 15:37

LCS/LCSD (continued)

Analysis Name	LCS Spike Added %	LCS Conc %	LCSD Spike Added %	LCSD Conc %	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 19232820006A	Sample number(s): 1123981-1123982								
Moisture	89.5	89.46			100		99-101		

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: 4192381AA	Sample number(s): 1123983-1123984 UNSPK: 1123984									
Acetone	1.45	150	158.83	150	158.74	105	105	54-157	0	30
Benzene	N.D.	20	20.77	20	21.52	104	108	80-120	4	30
Bromochloromethane	N.D.	20	17.67	20	18.59	88	93	80-120	5	30
Bromodichloromethane	N.D.	20	16.29	20	16.88	81	84	71-120	4	30
Bromoform	N.D.	20	12.65	20	13.38	63	67	51-120	6	30
Bromomethane	N.D.	20	14.21	20	14.73	71	74	53-128	4	30
n-Butanol	N.D.	1000	1029.6	1000	1027.77	103	103	57-130	0	30
2-Butanone	N.D.	150	121.82	150	126.51	81	84	59-135	4	30
t-Butyl alcohol	N.D.	200	177.52	200	165.81	89	83	60-130	7	30
n-Butylbenzene	N.D.	20	20.15	20	21.2	101	106	76-120	5	30
sec-Butylbenzene	N.D.	20	20.81	20	21.68	104	108	77-120	4	30
tert-Butylbenzene	N.D.	20	20.58	20	21.41	103	107	78-120	4	30
Carbon Disulfide	N.D.	20	15.78	20	16.52	79	83	65-128	5	30
Carbon Tetrachloride	N.D.	20	17.6	20	18.16	88	91	64-134	3	30
Chlorobenzene	N.D.	20	20.81	20	21.64	104	108	80-120	4	30
Chloroethane	N.D.	20	15.49	20	15.95	77	80	55-123	3	30
Chloroform	N.D.	20	19.16	20	20.24	96	101	80-120	5	30
Chloromethane	N.D.	20	15.67	20	16.87	78	84	56-121	7	30
Cyclohexane	N.D.	20	19.66	20	19.7	98	98	68-126	0	30
Cyclohexanone	N.D.	500	463.37	500	508.02	93	102	27-141	9	30
1,2-Dibromo-3-chloropropane	N.D.	20	15.11	20	15.96	76	80	47-131	6	30
Dibromochloromethane	N.D.	20	15.84	20	16.19	79	81	71-120	2	30
1,2-Dibromoethane	N.D.	20	18.96	20	19.83	95	99	77-120	5	30
1,2-Dichlorobenzene	N.D.	20	20.09	20	21.24	100	106	80-120	6	30
1,3-Dichlorobenzene	N.D.	20	20.15	20	21.05	101	105	80-120	4	30
1,4-Dichlorobenzene	N.D.	20	20.55	20	21.62	103	108	80-120	5	30
Dichlorodifluoromethane	N.D.	20	14.39	20	14.25	72	71	41-127	1	30
1,1-Dichloroethane	N.D.	20	19.81	20	20.77	99	104	80-120	5	30
1,2-Dichloroethane	N.D.	20	18.76	20	19.09	94	95	73-124	2	30
1,1-Dichloroethene	N.D.	20	22.24	20	23.12	111	116	80-131	4	30
cis-1,2-Dichloroethene	N.D.	20	21.91	20	22.79	110	114	80-120	4	30

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Quality Control Summary

Client Name: ARCADIS U.S., Inc. Group Number: 2058610
Reported: 08/30/2019 15:37

MS/MSD (continued)

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
trans-1,2-Dichloroethene	N.D.	20	21.27	20	22.31	106	112	80-120	5	30
1,2-Dichloropropane	N.D.	20	20.5	20	21.27	103	106	80-120	4	30
cis-1,3-Dichloropropene	N.D.	20	16.74	20	17.62	84	88	75-120	5	30
trans-1,3-Dichloropropene	N.D.	20	16.03	20	16.6	80	83	67-120	3	30
1,4-Dioxane	N.D.	500	596.31	500	593.44	119	119	63-146	0	30
Ethylbenzene	N.D.	20	20.26	20	21.03	101	105	80-120	4	30
Freon 113	N.D.	20	21.92	20	21.25	110	106	73-139	3	30
n-Heptane	N.D.	20	18.93	20	17.27	95	86	56-133	9	30
n-Hexane	N.D.	20	21.39	20	19.9	107	99	61-138	7	30
2-Hexanone	N.D.	100	86.04	100	89.99	86	90	56-135	4	30
Isobutyl Alcohol	N.D.	500	533.48	500	535.69	107	107	61-136	0	30
Isopropylbenzene	N.D.	20	19.84	20	20.71	99	104	80-120	4	30
p-Isopropyltoluene	N.D.	20	19.96	20	20.9	100	104	76-120	5	30
Methyl Acetate	N.D.	20	16.83	20	17.96	84	90	54-136	6	30
Methyl Tertiary Butyl Ether	N.D.	20	16.96	20	17.93	85	90	69-122	6	30
4-Methyl-2-pentanone	N.D.	100	81.73	100	85.01	82	85	62-133	4	30
Methylcyclohexane	N.D.	20	18.47	20	18.23	92	91	67-121	1	30
Methylene Chloride	0.562	20	21.56	20	22.49	105	110	80-120	4	30
Naphthalene	N.D.	20	17.72	20	19	89	95	53-124	7	30
2-Nitropropane	N.D.	20	10.54	20	10.67	53	53	19-144	1	30
Styrene	N.D.	20	19.62	20	20.51	98	103	80-120	4	30
1,1,2,2-Tetrachloroethane	N.D.	20	20.36	20	21.07	102	105	72-120	3	30
Tetrachloroethene	N.D.	20	20.81	20	21.75	104	109	80-120	4	30
Tetrahydrofuran	N.D.	100	99.78	100	100.46	100	100	54-144	1	30
Toluene	N.D.	20	20.85	20	21.9	104	110	80-120	5	30
1,2,3-Trichlorobenzene	N.D.	20	18.37	20	19.84	92	99	66-120	8	30
1,2,4-Trichlorobenzene	N.D.	20	17.79	20	19.2	89	96	63-120	8	30
1,1,1-Trichloroethane	N.D.	20	18.3	20	18.84	92	94	67-126	3	30
1,1,2-Trichloroethane	N.D.	20	20.74	20	21.52	104	108	80-120	4	30
Trichloroethene	N.D.	20	20.47	20	21.43	102	107	80-120	5	30
Trichlorofluoromethane	N.D.	20	14.08	20	14.63	70	73	55-135	4	30
1,2,4-Trimethylbenzene	N.D.	20	20.11	20	21.03	101	105	75-120	4	30
1,3,5-Trimethylbenzene	N.D.	20	20.3	20	21.2	101	106	75-120	4	30
Vinyl Chloride	N.D.	20	16.15	20	17.26	81	86	56-120	7	30
m+p-Xylene	N.D.	40	41.04	40	42.49	103	106	80-120	3	30
o-Xylene	N.D.	20	19.27	20	20.2	96	101	80-120	5	30
Xylene (Total)	N.D.	60	60.31	60	62.69	101	104	80-120	4	30
	ug/l	**ug/l**	**ug/l**	**ug/l**	**ug/l**					
Batch number: 192270013A	Sample number(s): 1123983-1123984 UNSPK: 1123984									
Ethanol	N.D.	2501	2705.74	2501	2717.57	108	109	80-115	0	30
Isopropanol	N.D.	2505	2685.23	2505	2684.68	107	107	85-115	0	30
Methanol	238.56	2503	3161.15	2503	3274.89	117	121*	79-120	4	30

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Quality Control Summary

Client Name: ARCADIS U.S., Inc. Group Number: 2058610
Reported: 08/30/2019 15:37

MS/MSD (continued)

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max

Laboratory Duplicate

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc %	DUP Conc %	DUP RPD	DUP RPD Max
Batch number: 19232820006A	Sample number(s): 1123981-1123982 BKG: 1123981			
Moisture	6.42	7.01	9*	5

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs- 5ml Water by 8260C/D
Batch number: 4192381AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
1123983	97	104	101	94
1123984	98	100	101	95
Blank	95	103	101	94
LCS	95	103	103	97
LCSD	94	102	103	97
MS	96	103	102	97
MSD	96	103	102	97
Limits:	80-120	80-120	80-120	80-120

Analysis Name: VOCs- Solid by 8260C/D
Batch number: B192342AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
1123982	101	101	113	75
Blank	99	107	97	96
LCS	101	107	98	97
LCSD	101	104	99	97
Limits:	50-141	54-135	52-141	50-131

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Quality Control Summary

Client Name: ARCADIS U.S., Inc. Group Number: 2058610
Reported: 08/30/2019 15:37

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs- Solid by 8260C/D
Batch number: B192351AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
1123981	97	100	106	81
Blank	100	105	96	95
LCS	103	106	98	97
LCSD	101	106	98	98
Limits:	50-141	54-135	52-141	50-131

Analysis Name: Semi-annual Groundwater BMS
Batch number: 19231WAG026

	Phenol-d6	2-Fluorophenol	2,4,6-Tribromophenol	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14
1123984	22	28	73	56	58	69
Blank	24	33	78	61	61	90
LCS	34	45	92	76	75	89
LCSD	34	44	90	74	72	87
Limits:	10-67	10-84	23-135	33-113	44-102	39-125

Analysis Name: SVOA 8270D/E (microwave)
Batch number: 19234SLE026

	Phenol-d6	2-Fluorophenol	2,4,6-Tribromophenol	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14
1123981	81	82	98	83	91	104
1123982	77	72	80	75	85	95
Blank	76	79	95	80	84	104
LCS	82	78	104	79	92	107
LCSD	92	86	108	77	92	109
Limits:	21-112	18-115	10-136	14-115	22-122	23-141

Analysis Name: Alcohols in Water
Batch number: 192270013A

	Acetone-D1	Acetone-D2
1123983	102	96
1123984	99	94
Blank	97	97
LCS	95	95
MS	93	94
MSD	93	95
Limits:	58-149	58-149

Analysis Name: Alcohols in Soil
Batch number: 192270015A

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Quality Control Summary

Client Name: ARCADIS U.S., Inc. Group Number: 2058610
Reported: 08/30/2019 15:37

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: Alcohols in Soil
Batch number: 192270015A

	Acetone-D1	Acetone-D2
1123981	88	88
1123982	95	91
Blank	101	96
LCS	93	93
Limits:	10-179	10-179

Analysis Name: Glycols in Soil by 8015C/D
Batch number: 192280045A

	Tetramethylene glycol
1123981	78
1123982	78
Blank	69
LCS	113
Limits:	36-143

Analysis Name: Glycols in Water by 8015C/D
Batch number: 192340031A

	Tetramethylene glycol
1123983	72
1123984	23
Blank	69
LCS	109
Limits:	17-134

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Environmental Analysis Request/Chain of Custody

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Acct. # 3074 Group # 2058610 Sample # 1123981-84

COC #589463

For Lab Use Only
FSC:
SCR#: 247282

Client Information

Client: Arcadis - US
Acct. #:
Project Name/#: BMS Syracuse
PWSID #:
Project Manager: William McCune
PO #: 30033596 247282
Sampler: Evan Green
Quote #:
State where samples were collected: New York
For Compliance: Yes ☐ No ☒ (EG)

Matrix

Soil ☒ Sediment ☐ Tissue ☐ | Water: Potable ☐ Ground ☐ NPDES ☐ Surface ☒ | Other:

Analysis Requested

Preservation and Filtration Codes

Sample Identification	Collected Date	Collected Time	Grab	Composite	Total # of Containers	Moisture	SVOA 8270D (micro)	Alcohols in Soil	Glycols in soil by 8015C	VOCs-Soil by 8260C	VOCs-Sat Liq by 8260C	Alcohols in water	Glycols in water by 8015C
BDA-17RX (9-11)	8/13/19	0830	X		6	X	X	X	X	X			
Dup-1-081319	8/13/19	-:-	X		6	X	X	X	X	X			
Trip Blank 1	8/13/19	-:-			6						X	X	X
Supplywater-081319	8/13/19	1400	X		9		X (EG)				X	X	X

Preservation Codes

H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 P=H_3PO_4
F=Field Filtered O=Other

Remarks

Amended by BM
8/22/19 TH01326

Turnaround Time (TAT) Requested (please circle)
Standard Rush
(Rush TAT is subject to laboratory approval and surcharge.)

Requested TAT in business days: 10

E-mail address: William.McCune@Arcadis.com

Data Package Options (circle if required)
Type I (EPA Level 3 Equivalent/non-CLP)
Type VI (Raw Data Only)
Type III (Reduced non-CLP)
NJ DKQP
TX TRRP-13
NYSDEC Category A or B
MA MCP
CT RCP

Relinquished by	Date	Time	Received by	Date	Time
Edwin Hernandez	8/8/19	11:50		8/8/19	11:50
	8/17/19 (EF)	17:30		8/17/19	1730

EDD Required? (Yes) No
If yes, format:

Site-Specific QC (MS/MSD/Dup)? (Yes) No
(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier:
UPS FedEx Other

Temperature upon receipt °C

Environmental Analysis Request/Chain of Custody

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Acct. # 30074 Group # 2058610 Sample # 1123981-84

COC #589463

Client Information

Client: Arcadis - US
Acct. #:
Project Name/#: BMS Syracuse
PWSID #:
Project Manager: William McCune
P.O. #: 247282
Sampler: Even Green
Quote #:
State where samples were collected: New York
For Compliance: Yes ☐ No ☐

Matrix

Soil ☒ Sediment ☐ Tissue ☐ | Water: Potable ☐ Ground ☐ NPDES ☐ Surface ☒ | Other: | Total # of Containers

Analysis Requested

Preservation and Filtration Codes: O | H | H

Sample Identification	Collected Date	Collected Time	Grab	Composite	Soil/Sed	Water	Other	Total # of Containers	Moisture	SVOA 8270D (miranda)	Alcohols in Soil	Glycols in soil by GC/MS	VOCs-Soil by 8260C	VOCs-SmL water by 8260C	Alcohols in water	Glycols in water by 8015		
BDA-17RX (9-11)	8/13/19	08:30	X		X			6	X	X	X	X	X					
DUP-1-081319	8/13/19	-:-	X		X			6	X	X	X	X	X					
Trip Blank 1	8/13/19	-:-				X		3						X	X	X		
SUPPLYwater-081319	8/13/19	1400	X			X		9						X	X	X		
TA Syracuse #225	8/13-19																	

For Lab Use Only

FSC:
SCR#: 247282

Preservation Codes

H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 P=H_3PO_4
F=Field Filtered O=Other

Remarks

Turnaround Time (TAT) Requested (please circle)

Standard Rush

(Rush TAT is subject to laboratory approval and surcharge.)

Requested TAT in business days: 10

E-mail address: William.McCune@Arcadis.com

Data Package Options (circle if required)

Type I (EPA Level 3 Equivalent/non-CLP)
Type VI (Raw Data Only)
Type III (Reduced non-CLP)
NJ DKQP
TX TRRP-13
NYSDEC Category A or B
MA MCP
CT RCP

Relinquished by	Date	Time	Received by	Date	Time
Edwin Hernandez	8/8/19	11:50		8/8/19	11:50
	8/17/19	17:30	TA SYR	8/17/19	1730
TA SYR	8-13-19	19:00			
				8/14/19	1010

EDD Required? Yes No
If yes, format:

Site-Specific QC (MS/MSD/Dup)? Yes No
(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier: UPS ____ FedEx X Other ____

Temperature upon receipt 1.8 °C

Client: Arcadis-U.S.

3 MS Syracuse

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Timestamp:	08/14/2019 10:10
Number of Packages:	1	Number of Projects:	1
State/Province of Origin:	NY		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	Total Trip Blank Qty:	6
Samples Chilled:	Yes	Trip Blank Type:	See Below
Paperwork Enclosed:	Yes	Air Quality Samples Present:	No
Samples Intact:	Yes		
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Trip Blank Type(s): 4 HCl, 2 Unpreserved

Unpacked by Nicole Reiff (25684) at 11:37 on 08/14/2019

Samples Chilled Details: 3 MS Syracuse

Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	192050133	1.8	IR	Wet	Y	Loose	N

2425 New Holland Pike
Lancaster, PA 17605-2425

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F | 717-656-2681
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Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mL**	milliliter(s)
C	degrees Celsius	**MPN**	Most Probable Number
cfu	colony forming units	**N.D.**	non-detect
CP Units	cobalt-chloroplatinate units	**ng**	nanogram(s)
F	degrees Fahrenheit	**NTU**	nephelometric turbidity units
g	gram(s)	**pg/L**	picogram/liter
IU	International Units	**RL**	Reporting Limit
kg	kilogram(s)	**TNTC**	Too Numerous To Count
L	liter(s)	**µg**	microgram(s)
lb.	pound(s)	**µL**	microliter(s)
m3	cubic meter(s)	**umhos/cm**	micromhos/cm
meq	milliequivalents	**MCL**	Maximum Contamination Limit
mg	milligram(s)		

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

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Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
P^	Concentration difference between the primary and confirmation column > 40%. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

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ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

ARCADIS U.S., Inc.
630 Plaza Drive
Suite 600
Highlands Ranch CO 80129

Report Date: October 04, 2019 12:51

Project: Bristol-Myers Squibb

Account #: 03074
Group Number: 2060623
SDG: BMS77
PO Number: B0033396
State of Sample Origin: NY

Electronic Copy To	Arcadis	Attn: William McCune
Electronic Copy To	Arcadis	Attn: Lawrence Carey Healy

Respectfully Submitted,

Megan A. Moeller
Senior Specialist

(717) 556-7261

To view our laboratory's current scopes of accreditation please go to https://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/certifications-and-accreditations-eurofins-lancaster-laboratories-environmental/ . Historical copies may be requested through your project manager.



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SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
BDA-14RX (20.5-22.5) Grab Soil	08/23/2019 10:20	1134881
BDA-14RX (20.5-22.5) MS Grab Soil	08/23/2019 10:20	1134882
BDA-14RX (20.5-22.5) MSD Grab Soil	08/23/2019 10:20	1134883
Trip Blank Water	08/23/2019	1134884

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

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Project Name: Bristol-Myers Squibb
ELLE Group #: 2060623

General Comments:

Through our technical processes and second person review of data, we have established that our data/deliverables are in compliance with the methods and project requirements unless otherwise noted or previously resolved with the client. The compliance signature is located on the cover page of the Analysis Reports.

See the Laboratory Sample Analysis Record section of the Analysis Report for the method references.

All QC met criteria unless otherwise noted in an Analysis Specific Comment below.

Refer to the QC Summary for specific values and acceptance criteria.

Project specific QC samples are included in this data set.

Matrix QC may not be reported if site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

Surrogate recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in an Analysis Specific Comment below.

The samples were received at the appropriate temperature and in accordance with the chain of custody unless otherwise noted.

Analysis Specific Comments:

SW-846 8260C, GC/MS Volatiles

Sample #s: 1134884

A Method Detection Limit (MDL) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The MDL standard shows adequate sensitivity at or below the reporting limit.

Project defined calibration criteria are not met. The calibration is compliant with the method defined criteria.

Sample #s: 1134882, 1134883

The recovery for the sample internal standard is outside the QC acceptance limits. The internal standard recovery was outside of acceptance limits in the background, matrix spike, and matrix spike duplicate indicating a matrix effect.

Sample #s: 1134881

The recovery for the sample internal standard is outside the QC acceptance limits. The internal standard recovery was outside of acceptance limits in the background, matrix spike, and matrix spike duplicate indicating a matrix effect.

The referenced method allows a maximum of 20% of the analytes in the calibration to exceed the 20% Drift continuing calibration verification criteria. The reported concentration in the

associated sample(s) is considered to be estimated. Therefore the result for the following analyte(s) is estimated:
Carbon Disulfide, n-Hexane, Cyclohexane

Batch #: B192481AA (Sample number(s): 1134881-1134883 UNSPK: 1134881)

The recovery(ies) for the following analyte(s) in the MS and/or MSD exceeded the acceptance window indicating a positive bias: 1,1-Dichloroethene, Methylene Chloride, 1,1-Dichloroethane, cis-1,2-Dichloroethene, Chloroform, 1,1,1-Trichloroethane, Benzene, Toluene, 1,1,2-Trichloroethane, Tetrachloroethene, Dibromochloromethane, Ethylbenzene, o-Xylene, Isopropylbenzene, 1,1,2,2-Tetrachloroethane, 1,3,5-Trimethylbenzene, tert-Butylbenzene, 1,2,4-Trimethylbenzene, sec-Butylbenzene, p-Isopropyltoluene, 1,3-Dichlorobenzene, 1,4-Dichlorobenzene, n-Butylbenzene, 1,2-Dichlorobenzene, 1,2-Dibromo-3-chloropropane, Acetone, 2-Hexanone, Xylene (Total), Freon 113, Cyclohexane, m+p-Xylene

The recovery(ies) for the following analyte(s) in the MS and/or MSD were below the acceptance window:
1,2,4-Trichlorobenzene

SW-846 8270D, GC/MS Semivolatiles

Sample #s: 1134882, 1134883

The stated QC limits for Triethylamine are advisory only until sufficient data points can be obtained to calculate statistical limits.

Sample #s: 1134881

The stated QC limits for Triethylamine are advisory only until sufficient data points can be obtained to calculate statistical limits.

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. Since the recovery is high and the target analyte(s) was not detected in the sample, the data is reported.

Batch #: 19240SLC026 (Sample number(s): 1134881-1134883 UNSPK: 1134881)

The recovery(ies) for the following analyte(s) in the LCS and/or LCSD exceeded the acceptance window indicating a positive bias: 1,2,4,5-Tetrachlorobenzene, 2,3,4,6-Tetrachlorophenol, 2-Nitroaniline

The recovery(ies) for the following analyte(s) in the LCS and/or LCSD were below the acceptance window:
Triethylamine

The recovery(ies) for the following analyte(s) in the MS and/or MSD were below the acceptance window:
4,6-Dinitro-2-methylphenol, Hexachlorocyclopentadiene

SM 2540 G-2011 %Moisture Calc, Wet Chemistry

Batch #: 19241820005A (Sample number(s): 1134881-1134883 BKG: 1134881)

The duplicate RPD for the following analyte(s) exceeded the acceptance window: Moisture, Moisture, Moisture Duplicate

Sample Description: **BDA-14RX (20.5-22.5) Grab Soil**
BMS Phase II RI - Syracuse, NY

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 08/24/2019 09:20
Collection Date/Time: 08/23/2019 10:20
SDG#: BMS77-01BKG

ARCADIS U.S., Inc.
ELLE Sample #: SW 1134881
ELLE Group #: 2060623
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Limit of Quantitation*	Dry Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/kg**	**ug/kg**	**ug/kg**	
11995	Acetone	67-64-1	39	17	5	0.79
11995	Acetonitrile	75-05-8	N.D.	86	21	0.79
11995	Benzene	71-43-2	N.D.	4	0.4	0.79
11995	Bromochloromethane	74-97-5	N.D.	4	0.5	0.79
11995	Bromodichloromethane	75-27-4	N.D.	4	0.3	0.79
11995	Bromoform	75-25-2	N.D.	9	4	0.79
11995	Bromomethane	74-83-9	N.D.	4	0.6	0.79
11995	n-Butanol	71-36-3	N.D.	210	48	0.79
11995	2-Butanone	78-93-3	N.D.	9	0.9	0.79
11995	t-Butyl alcohol	75-65-0	N.D.	86	13	0.79
11995	n-Butylbenzene	104-51-8	N.D.	7	3	0.79
11995	sec-Butylbenzene	135-98-8	N.D.	4	2	0.79
11995	tert-Butylbenzene	98-06-6	N.D.	4	0.7	0.79
11995	Carbon Disulfide	75-15-0	1 J	4	0.5	0.79
11995	Carbon Tetrachloride	56-23-5	N.D.	4	0.4	0.79
11995	Chlorobenzene	108-90-7	N.D.	4	0.4	0.79
11995	Chlorodifluoromethane[1]	75-45-6	N.D.	9	2	0.79
11995	Chloroethane	75-00-3	N.D.	4	0.9	0.79
11995	Chloroform	67-66-3	N.D.	4	0.5	0.79
11995	Chloromethane	74-87-3	N.D.	4	0.5	0.79
11995	Cyclohexane	110-82-7	0.7 J	4	0.4	0.79
11995	Cyclohexanone[1]	108-94-1	N.D.	210	21	0.79
11995	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	4	0.4	0.79
11995	Dibromochloromethane	124-48-1	N.D.	4	0.4	0.79
11995	1,2-Dibromoethane	106-93-4	N.D.	4	0.3	0.79
11995	1,2-Dichlorobenzene	95-50-1	N.D.	4	0.4	0.79
11995	1,3-Dichlorobenzene	541-73-1	N.D.	4	0.4	0.79
11995	1,4-Dichlorobenzene	106-46-7	N.D.	4	0.3	0.79
11995	Dichlorodifluoromethane	75-71-8	N.D.	4	0.5	0.79
11995	1,1-Dichloroethane	75-34-3	N.D.	4	0.4	0.79
11995	1,2-Dichloroethane	107-06-2	N.D.	4	0.5	0.79
11995	1,1-Dichloroethene	75-35-4	N.D.	4	0.4	0.79
11995	cis-1,2-Dichloroethene	156-59-2	N.D.	4	0.4	0.79
11995	trans-1,2-Dichloroethene	156-60-5	N.D.	4	0.4	0.79
11995	1,2-Dichloropropane	78-87-5	N.D.	4	0.4	0.79
11995	cis-1,3-Dichloropropene	10061-01-5	N.D.	4	0.3	0.79
11995	trans-1,3-Dichloropropene	10061-02-6	N.D.	4	0.4	0.79
11995	1,4-Dioxane	123-91-1	N.D.	210	32	0.79
11995	Ethyl Acetate	141-78-6	N.D.	4	0.9	0.79
11995	Ethyl Ether[1]	60-29-7	N.D.	4	0.9	0.79
11995	Ethylbenzene	100-41-4	N.D.	4	0.3	0.79

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-14RX (20.5-22.5) Grab Soil**
BMS Phase II RI - Syracuse, NY

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 08/24/2019 09:20
Collection Date/Time: 08/23/2019 10:20
SDG#: BMS77-01BKG

ARCADIS U.S., Inc.
ELLE Sample #: SW 1134881
ELLE Group #: 2060623
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Limit of Quantitation*	Dry Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/kg**	**ug/kg**	**ug/kg**	
11995	Freon 113	76-13-1	N.D.	9	0.5	0.79
11995	n-Heptane[1]	142-82-5	4 J	7	3	0.79
11995	n-Hexane[1]	110-54-3	1 J	4	0.4	0.79
11995	2-Hexanone	591-78-6	N.D.	9	0.9	0.79
11995	Isobutyl Alcohol	78-83-1	N.D.	210	33	0.79
11995	Isopropylbenzene	98-82-8	N.D.	4	0.3	0.79
11995	p-Isopropyltoluene	99-87-6	N.D.	4	2	0.79
11995	Methyl Acetate	79-20-9	2 J	4	0.9	0.79
11995	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	4	0.4	0.79
11995	4-Methyl-2-pentanone	108-10-1	N.D.	9	0.9	0.79
11995	Methylcyclohexane	108-87-2	3 J	4	0.5	0.79
11995	Methylene Chloride	75-09-2	N.D.	4	2	0.79
11995	Naphthalene	91-20-3	N.D.	4	2	0.79
11995	2-Nitropropane	79-46-9	N.D.	9	2	0.79
11995	Styrene	100-42-5	N.D.	4	0.3	0.79
11995	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	4	0.3	0.79
11995	Tetrachloroethene	127-18-4	N.D.	4	0.4	0.79
11995	Tetrahydrofuran[1]	109-99-9	N.D.	7	0.9	0.79
11995	Toluene	108-88-3	N.D.	4	0.5	0.79
11995	1,2,3-Trichlorobenzene	87-61-6	N.D.	9	4	0.79
11995	1,2,4-Trichlorobenzene	120-82-1	N.D.	9	4	0.79
11995	1,1,1-Trichloroethane	71-55-6	N.D.	4	0.5	0.79
11995	1,1,2-Trichloroethane	79-00-5	N.D.	4	0.4	0.79
11995	Trichloroethene	79-01-6	N.D.	4	0.4	0.79
11995	Trichlorofluoromethane	75-69-4	N.D.	4	0.6	0.79
11995	1,2,4-Trimethylbenzene	95-63-6	N.D.	4	0.4	0.79
11995	1,3,5-Trimethylbenzene	108-67-8	N.D.	4	0.4	0.79
11995	Vinyl Chloride	75-01-4	N.D.	4	0.5	0.79
11995	m+p-Xylene	179601-23-1	N.D.	4	0.9	0.79
11995	o-Xylene	95-47-6	N.D.	4	0.3	0.79
11995	Xylene (Total)	1330-20-7	N.D.	9	1	0.79

The recovery for the sample internal standard is outside the QC acceptance limits. The internal standard recovery was outside of acceptance limits in the background, matrix spike, and matrix spike duplicate indicating a matrix effect.

The referenced method allows a maximum of 20% of the analytes in the calibration to exceed the 20% Drift continuing calibration verification criteria. The reported concentration in the associated sample(s) is considered to be estimated. Therefore the result for the following analyte(s) is estimated:
Carbon Disulfide, n-Hexane, Cyclohexane

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-14RX (20.5-22.5) Grab Soil**
BMS Phase II RI - Syracuse, NY

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 08/24/2019 09:20
Collection Date/Time: 08/23/2019 10:20
SDG#: BMS77-01BKG

ARCADIS U.S., Inc.
ELLE Sample #: SW 1134881
ELLE Group #: 2060623
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Limit of Quantitation*	Dry Method Detection Limit	Dilution Factor
12027	**VOA Interp. Library Search-20**					
	The results from the volatile library search are listed on the attached FORM 1 - VOA-TIC. The qualifiers appearing in the "Q" column are defined at the end of the report.					
GC/MS Semivolatiles	**SW-846 8270D**		**ug/kg**	**ug/kg**	**ug/kg**	
10726	Acenaphthene	83-32-9	N.D.	18	4	1
10726	Acenaphthylene	208-96-8	N.D.	18	4	1
10726	Acetophenone	98-86-2	N.D.	53	18	1
10726	Aniline	62-53-3	N.D.	530	180	1
10726	Anthracene	120-12-7	6 J	18	4	1
10726	Atrazine	1912-24-9	N.D.	460	210	1
10726	Benzaldehyde	100-52-7	N.D.	180	71	1
10726	Benzo(a)anthracene	56-55-3	N.D.	18	7	1
10726	Benzo(a)pyrene	50-32-8	N.D.	18	4	1
10726	Benzo(b)fluoranthene	205-99-2	7 J	18	4	1
10726	Benzo(g,h,i)perylene	191-24-2	N.D.	18	4	1
10726	Benzo(k)fluoranthene	207-08-9	N.D.	18	4	1
10726	Benzyl alcohol	100-51-6	N.D.	530	180	1
10726	1,1'-Biphenyl	92-52-4	N.D.	39	18	1
10726	4-Bromophenyl-phenylether	101-55-3	N.D.	53	25	1
10726	Butylbenzylphthalate	85-68-7	N.D.	180	71	1
10726	Di-n-butylphthalate	84-74-2	N.D.	180	71	1
10726	Caprolactam	105-60-2	N.D.	180	36	1
10726	Carbazole	86-74-8	N.D.	39	18	1
10726	4-Chloro-3-methylphenol	59-50-7	N.D.	53	25	1
10726	4-Chloroaniline	106-47-8	N.D.	180	36	1
10726	bis(2-Chloroethoxy)methane	111-91-1	N.D.	39	18	1
10726	bis(2-Chloroethyl)ether	111-44-4	N.D.	53	25	1
10726	bis(2-Chloroisopropyl)ether[1]	39638-32-9	N.D.	46	21	1
	Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.					
10726	2-Chloronaphthalene	91-58-7	N.D.	36	7	1
10726	2-Chlorophenol	95-57-8	N.D.	39	18	1
10726	4-Chlorophenyl-phenylether	7005-72-3	N.D.	46	21	1
10726	Chrysene	218-01-9	7 J	18	4	1
10726	Dibenz(a,h)anthracene	53-70-3	N.D.	18	7	1
10726	Dibenzofuran	132-64-9	N.D.	39	18	1
10726	3,3'-Dichlorobenzidine	91-94-1	N.D.	360	110	1
10726	2,4-Dichlorophenol	120-83-2	N.D.	46	21	1
10726	Dicyclohexylamine[1]	101-83-7	N.D.	2,100	710	1
10726	Diethylphthalate	84-66-2	N.D.	180	71	1

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-14RX (20.5-22.5) Grab Soil**
BMS Phase II RI - Syracuse, NY

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 08/24/2019 09:20
Collection Date/Time: 08/23/2019 10:20
SDG#: BMS77-01BKG

ARCADIS U.S., Inc.
ELLE Sample #: SW 1134881
ELLE Group #: 2060623
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Limit of Quantitation*	Dry Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/kg**	**ug/kg**	**ug/kg**	
10726	N,N-Dimethylaniline[1]	121-69-7	N.D.	180	36	1
10726	2,4-Dimethylphenol	105-67-9	N.D.	71	32	1
10726	Dimethylphthalate	131-11-3	N.D.	180	71	1
10726	4,6-Dinitro-2-methylphenol	534-52-1	N.D.	530	250	1
10726	2,4-Dinitrophenol	51-28-5	N.D.	1,100	360	1
10726	2,4-Dinitrotoluene	121-14-2	N.D.	180	71	1
10726	2,6-Dinitrotoluene	606-20-2	N.D.	53	25	1
10726	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	180	71	1
10726	Fluoranthene	206-44-0	6 J	18	4	1
10726	Fluorene	86-73-7	5 J	18	4	1
10726	Hexachlorobenzene	118-74-1	N.D.	18	7	1
10726	Hexachlorobutadiene	87-68-3	N.D.	82	39	1
10726	Hexachlorocyclopentadiene	77-47-4	N.D. K3	530	210	1
10726	Hexachloroethane	67-72-1	N.D.	180	36	1
10726	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	18	4	1
10726	Isophorone	78-59-1	N.D.	39	18	1
10726	2-Methylnaphthalene	91-57-6	4 J	36	4	1
10726	2-Methylphenol	95-48-7	N.D.	71	18	1
10726	4-Methylphenol	65794-96-9	N.D.	53	18	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
10726	Naphthalene	91-20-3	N.D.	18	7	1
10726	2-Nitroaniline	88-74-4	N.D.	53	18	1
10726	3-Nitroaniline	99-09-2	N.D.	180	71	1
10726	4-Nitroaniline	100-01-6	N.D.	180	71	1
10726	Nitrobenzene	98-95-3	N.D.	71	28	1
10726	2-Nitrophenol	88-75-5	N.D.	60	28	1
10726	4-Nitrophenol	100-02-7	N.D.	530	180	1
10726	N-Nitroso-di-n-propylamine	621-64-7	N.D.	53	25	1
10726	N-Nitrosodiphenylamine	86-30-6	N.D.	39	18	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.					
10726	Di-n-octylphthalate	117-84-0	N.D.	180	71	1
10726	Pentachlorophenol	87-86-5	N.D.	180	71	1
10726	Phenanthrene	85-01-8	8 J	18	4	1
10726	Phenol[1]	108-95-2	N.D.	39	18	1
10726	Pyrene	129-00-0	9 J	18	4	1
10726	Pyridine	110-86-1	N.D.	180	71	1
10726	1,2,4,5-Tetrachlorobenzene	95-94-3	N.D.	39	18	1
10726	2,3,4,6-Tetrachlorophenol	58-90-2	N.D.	180	71	1

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-14RX (20.5-22.5) Grab Soil**
BMS Phase II RI - Syracuse, NY

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 08/24/2019 09:20
Collection Date/Time: 08/23/2019 10:20
SDG#: BMS77-01BKG

ARCADIS U.S., Inc.
ELLE Sample #: SW 1134881
ELLE Group #: 2060623
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Limit of Quantitation*	Dry Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/kg**	**ug/kg**	**ug/kg**	
10726	2,4,5-Trichlorophenol	95-95-4	N.D.	71	32	1
10726	2,4,6-Trichlorophenol	88-06-2	N.D.	60	28	1
10726	Triethylamine[1]	121-44-8	N.D.	5,300	1,800	1

The stated QC limits for Triethylamine are advisory only until sufficient data points can be obtained to calculate statistical limits.

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. Since the recovery is high and the target analyte(s) was not detected in the sample, the data is reported.

00886 SVOA TIC Interpretive(25)

The results from the semivolatile library search are listed on the attached FORM 1 - SV-TIC. The qualifiers appearing in the "Q" column are defined at the end of the report.

GC Miscellaneous	**SW-846 8015C Feb 2007 Rev 3**		**mg/kg**	**mg/kg**	**mg/kg**	
12925	Ethylene glycol	107-21-1	N.D.	11	5.4	1
12925	Propylene glycol[1]	57-55-6	N.D.	11	5.4	1
GC Miscellaneous	**SW-846 8015D Rev.4, June 2003**		**ug/kg**	**ug/kg**	**ug/kg**	
10604	Ethanol (by Direct Injection)[1]	64-17-5	N.D. D2	1,100	130	1
10604	Isopropanol[1]	67-63-0	N.D. D2	1,100	50	1
10604	Methanol (by Direct Injection)[1]	67-56-1	N.D. D2	1,100	220	1
Wet Chemistry	**SM 2540 G-2011 %Moisture Calc**		**%**	**%**	**%**	
00111	Moisture[1]	n.a.	7.2	0.50	0.50	1

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

Sample Comments

State of New York Certification No. 10670

[1] = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Eurofins Lancaster Laboratories Environmental, LLC is responsible only for the certified testing of samples. We are not directly responsible for the integrity of the sample prior to laboratory receipt. Any reported concentrations less than 200 ug/kg may be biased low if they were not collected according to EPA 5035/5035A specifications.

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-14RX (20.5-22.5) Grab Soil**
BMS Phase II RI - Syracuse, NY

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 08/24/2019 09:20
Collection Date/Time: 08/23/2019 10:20
SDG#: BMS77-01BKG

ARCADIS U.S., Inc.
ELLE Sample #: SW 1134881
ELLE Group #: 2060623
Matrix: Soil

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11995	VOCs- Solid by 8260C/D	SW-846 8260C	1	B192481AA	09/05/2019 15:02	Linda C Pape	0.79
06176	GC/MS - LL DIH2O Prep	SW-846 5035A	1	201923654667	08/24/2019 19:15	Rebecca Williams	1
06176	GC/MS - LL DIH2O Prep	SW-846 5035A	2	201923654667	08/24/2019 19:15	Rebecca Williams	1
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	201923654667	08/23/2019 10:20	Client Supplied	1
10726	SVOA 8270D/E (microwave)	SW-846 8270D	1	19240SLC026	08/31/2019 06:12	Brandon K Cordova	1
10813	BNA Soil Microwave APP IX	SW-846 3546	1	19240SLC026	08/29/2019 07:00	Joshua S Ruth	1
12925	Glycols in Soil by 8015C/D	SW-846 8015C Feb 2007 Rev 3	1	192410029A	08/30/2019 00:03	Donald Brown	1
10604	Alcohols in Soil	SW-846 8015D Rev.4, June 2003	1	192410001A	08/29/2019 18:02	Johanna C Kennedy	1
13121	Glycol Solids Ext. 8015C/D	SW-846 8015C Feb 2007 Rev 3	1	192410029A	08/29/2019 19:19	Donald Brown	1
00380	Solids Extraction for Alcohols	SW-846 8015D Rev 4 06/2003 Mod	1	192410001A	08/29/2019 14:30	Johanna C Kennedy	1
00111	Moisture	SM 2540 G-2011 %Moisture Calc	1	19241820005A	08/30/2019 11:43	William C Schwebel	1

*=This limit was used in the evaluation of the final result

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
00271

Lab Name: Lancaster Laboratories Contract:_____
Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____
Matrix: (soil/water) SOIL Lab Sample ID: 1134881
Sample wt/vol: 6.29 (g/mL) g Lab File ID: HP09953.i/19sep05a.b/bs05s05.d
Level: (low/med) LOW Date Received: 08/24/19
% Moisture: not dec. 7.2 Date Analyzed: 09/05/19
Column: (pack/cap) CAP Dilution Factor: 1.0
CONCENTRATION UNITS:
Number TICs found: 1 (ug/L or ug/Kg) ug/Kg

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		Unknown	1.95	10	J
2.					
3.	VOCTIC	Total VOC TICs		10	J
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page 1 of 1

FORM I VOA-TIC

1F

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

00271

Lab Name: Lancaster Laboratories Contract:
Lab Code: LANCAS Case No.: SAS No.: SDG No.:
Matrix: (soil/water) SOIL Lab Sample ID: 1134881
Sample wt/vol: 30.34(g/mL) g Lab File ID: gh2169.d
Level: (low/med) LOW Date Received: 08/24/19
% Moisture: 7.2 Decanted: (Y/N) Date Extracted: 08/29/19
Concentrated Extract Volume: 1000 (uL) Date Analyzed: 08/31/19
Injection Volume: 1 (uL) Dilution Factor: 1
GPC Cleanup: N pH: Extraction: Mic
CONCENTRATION UNITS:
Number TICs found: 6 (ug/L or ug/Kg) ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 141-79-7	3-Penten-2-one, 4-methyl-	2.699	140	JB
2.	Unknown	3.287	8300	JB
3.	Unknown	4.904	260	J
4. 1193-18-6	2-Cyclohexen-1-one, 3-methyl	5.287	170	J
5.	Unknown	9.504	150	J
6. 112-84-5	13-Docosenamide, (Z)-	12.798	260	J
7.				
8. SVOCTIC	Total SVOC TICs		9300	JB
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page 1 of 1

FORM I SV-1

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Sample Description: **BDA-14RX (20.5-22.5) MS Grab Soil**
BMS Phase II RI - Syracuse, NY

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 08/24/2019 09:20
Collection Date/Time: 08/23/2019 10:20
SDG#: BMS77-01MS

ARCADIS U.S., Inc.
ELLE Sample #: SW 1134882
ELLE Group #: 2060623
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Limit of Quantitation*	Dry Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/kg**	**ug/kg**	**ug/kg**	
11995	Acetone	67-64-1	270	21	6	0.97
11995	Benzene	71-43-2	25	5	0.5	0.97
11995	Bromochloromethane	74-97-5	24	5	0.6	0.97
11995	Bromodichloromethane	75-27-4	25	5	0.4	0.97
11995	Bromoform	75-25-2	20	11	5	0.97
11995	Bromomethane	74-83-9	19	5	0.7	0.97
11995	n-Butanol	71-36-3	890	260	59	0.97
11995	2-Butanone	78-93-3	190	11	1	0.97
11995	t-Butyl alcohol	75-65-0	210	110	16	0.97
11995	n-Butylbenzene	104-51-8	34	8	3	0.97
11995	sec-Butylbenzene	135-98-8	48	5	2	0.97
11995	tert-Butylbenzene	98-06-6	53	5	0.8	0.97
11995	Carbon Disulfide	75-15-0	25	5	0.6	0.97
11995	Carbon Tetrachloride	56-23-5	28	5	0.5	0.97
11995	Chlorobenzene	108-90-7	24	5	0.5	0.97
11995	Chloroethane	75-00-3	20	5	1	0.97
11995	Chloroform	67-66-3	27	5	0.6	0.97
11995	Chloromethane	74-87-3	22	5	0.6	0.97
11995	Cyclohexane	110-82-7	31	5	0.5	0.97
11995	Cyclohexanone[1]	108-94-1	360	260	26	0.97
11995	1,2-Dibromo-3-chloropropane	96-12-8	35	5	0.5	0.97
11995	Dibromochloromethane	124-48-1	26	5	0.5	0.97
11995	1,2-Dibromoethane	106-93-4	23	5	0.4	0.97
11995	1,2-Dichlorobenzene	95-50-1	30	5	0.5	0.97
11995	1,3-Dichlorobenzene	541-73-1	28	5	0.5	0.97
11995	1,4-Dichlorobenzene	106-46-7	26	5	0.4	0.97
11995	Dichlorodifluoromethane	75-71-8	21	5	0.6	0.97
11995	1,1-Dichloroethane	75-34-3	26	5	0.5	0.97
11995	1,2-Dichloroethane	107-06-2	26	5	0.6	0.97
11995	1,1-Dichloroethene	75-35-4	29	5	0.5	0.97
11995	cis-1,2-Dichloroethene	156-59-2	27	5	0.5	0.97
11995	trans-1,2-Dichloroethene	156-60-5	26	5	0.5	0.97
11995	1,2-Dichloropropane	78-87-5	25	5	0.5	0.97
11995	cis-1,3-Dichloropropene	10061-01-5	21	5	0.4	0.97
11995	trans-1,3-Dichloropropene	10061-02-6	21	5	0.5	0.97
11995	1,4-Dioxane	123-91-1	500	260	39	0.97
11995	Ethylbenzene	100-41-4	26	5	0.4	0.97
11995	Freon 113	76-13-1	30	11	0.6	0.97
11995	n-Heptane[1]	142-82-5	21	8	3	0.97
11995	n-Hexane[1]	110-54-3	24	5	0.5	0.97
11995	2-Hexanone	591-78-6	140	11	1	0.97

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-14RX (20.5-22.5) MS Grab Soil**
BMS Phase II RI - Syracuse, NY

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 08/24/2019 09:20
Collection Date/Time: 08/23/2019 10:20
SDG#: BMS77-01MS

ARCADIS U.S., Inc.
ELLE Sample #: SW 1134882
ELLE Group #: 2060623
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Limit of Quantitation*	Dry Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/kg**	**ug/kg**	**ug/kg**	
11995	Isobutyl Alcohol	78-83-1	510	260	40	0.97
11995	Isopropylbenzene	98-82-8	28	5	0.4	0.97
11995	p-Isopropyltoluene	99-87-6	43	5	2	0.97
11995	Methyl Acetate	79-20-9	22	5	1	0.97
11995	Methyl Tertiary Butyl Ether	1634-04-4	24	5	0.5	0.97
11995	4-Methyl-2-pentanone	108-10-1	110	11	1	0.97
11995	Methylcyclohexane	108-87-2	26	5	0.6	0.97
11995	Methylene Chloride	75-09-2	26	5	2	0.97
11995	Naphthalene	91-20-3	14	5	2	0.97
11995	2-Nitropropane	79-46-9	16	11	2	0.97
11995	Styrene	100-42-5	21	5	0.4	0.97
11995	1,1,2,2-Tetrachloroethane	79-34-5	48	5	0.4	0.97
11995	Tetrachloroethene	127-18-4	31	5	0.5	0.97
11995	Tetrahydrofuran[1]	109-99-9	110	8	1	0.97
11995	Toluene	108-88-3	28	5	0.6	0.97
11995	1,2,3-Trichlorobenzene	87-61-6	13	11	5	0.97
11995	1,2,4-Trichlorobenzene	120-82-1	12	11	5	0.97
11995	1,1,1-Trichloroethane	71-55-6	28	5	0.6	0.97
11995	1,1,2-Trichloroethane	79-00-5	29	5	0.5	0.97
11995	Trichloroethene	79-01-6	25	5	0.5	0.97
11995	Trichlorofluoromethane	75-69-4	23	5	0.7	0.97
11995	1,2,4-Trimethylbenzene	95-63-6	41	5	0.5	0.97
11995	1,3,5-Trimethylbenzene	108-67-8	47	5	0.5	0.97
11995	Vinyl Chloride	75-01-4	22	5	0.6	0.97
11995	m+p-Xylene	179601-23-1	52	5	1	0.97
11995	o-Xylene	95-47-6	27	5	0.4	0.97
11995	Xylene (Total)	1330-20-7	79	11	1	0.97

The recovery for the sample internal standard is outside the QC acceptance limits. The internal standard recovery was outside of acceptance limits in the background, matrix spike, and matrix spike duplicate indicating a matrix effect.

GC/MS Semivolatiles	**SW-846 8270D**		**ug/kg**	**ug/kg**	**ug/kg**	
10726	Acenaphthene	83-32-9	1,600	18	4	1
10726	Acenaphthylene	208-96-8	1,800	18	4	1
10726	Acetophenone	98-86-2	1,400	53	18	1
10726	Aniline	62-53-3	1,100	530	180	1
10726	Anthracene	120-12-7	1,700	18	4	1
10726	Atrazine	1912-24-9	1,600	460	210	1
10726	Benzaldehyde	100-52-7	1,100	180	71	1
10726	Benzo(a)anthracene	56-55-3	1,700	18	7	1
10726	Benzo(a)pyrene	50-32-8	1,700	18	4	1

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-14RX (20.5-22.5) MS Grab Soil**
BMS Phase II RI - Syracuse, NY

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 08/24/2019 09:20
Collection Date/Time: 08/23/2019 10:20
SDG#: BMS77-01MS

ARCADIS U.S., Inc.
ELLE Sample #: SW 1134882
ELLE Group #: 2060623
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Limit of Quantitation*	Dry Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/kg**		**ug/kg**	**ug/kg**	
10726	Benzo(b)fluoranthene	205-99-2	1,700		18	4	1
10726	Benzo(g,h,i)perylene	191-24-2	1,700		18	4	1
10726	Benzo(k)fluoranthene	207-08-9	1,600		18	4	1
10726	Benzyl alcohol	100-51-6	1,500		530	180	1
10726	1,1'-Biphenyl	92-52-4	1,600		39	18	1
10726	4-Bromophenyl-phenylether	101-55-3	1,700		53	25	1
10726	Butylbenzylphthalate	85-68-7	1,700		180	71	1
10726	Di-n-butylphthalate	84-74-2	1,700		180	71	1
10726	Caprolactam	105-60-2	1,700		180	35	1
10726	Carbazole	86-74-8	1,700		39	18	1
10726	4-Chloro-3-methylphenol	59-50-7	1,500		53	25	1
10726	4-Chloroaniline	106-47-8	1,300		180	35	1
10726	bis(2-Chloroethoxy)methane	111-91-1	1,400		39	18	1
10726	bis(2-Chloroethyl)ether	111-44-4	1,300		53	25	1
10726	bis(2-Chloroisopropyl)ether[1]	39638-32-9	1,200		46	21	1
	Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.						
10726	2-Chloronaphthalene	91-58-7	1,600		35	7	1
10726	2-Chlorophenol	95-57-8	1,500		39	18	1
10726	4-Chlorophenyl-phenylether	7005-72-3	1,600		46	21	1
10726	Chrysene	218-01-9	1,700		18	4	1
10726	Dibenz(a,h)anthracene	53-70-3	1,900		18	7	1
10726	Dibenzofuran	132-64-9	1,600		39	18	1
10726	3,3'-Dichlorobenzidine	91-94-1	1,600		350	110	1
10726	2,4-Dichlorophenol	120-83-2	1,500		46	21	1
10726	Dicyclohexylamine[1]	101-83-7	N.D.		2,100	710	1
10726	Diethylphthalate	84-66-2	1,600		180	71	1
10726	N,N-Dimethylaniline[1]	121-69-7	N.D.		180	35	1
10726	2,4-Dimethylphenol	105-67-9	1,200		71	32	1
10726	Dimethylphthalate	131-11-3	1,500		180	71	1
10726	4,6-Dinitro-2-methylphenol	534-52-1	610		530	250	1
10726	2,4-Dinitrophenol	51-28-5	710	J	1,100	350	1
10726	2,4-Dinitrotoluene	121-14-2	1,700		180	71	1
10726	2,6-Dinitrotoluene	606-20-2	1,700		53	25	1
10726	bis(2-Ethylhexyl)phthalate	117-81-7	1,900		180	71	1
10726	Fluoranthene	206-44-0	1,700		18	4	1
10726	Fluorene	86-73-7	1,600		18	4	1
10726	Hexachlorobenzene	118-74-1	1,700		18	7	1
10726	Hexachlorobutadiene	87-68-3	1,400		82	39	1
10726	Hexachlorocyclopentadiene	77-47-4	N.D.		530	210	1

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-14RX (20.5-22.5) MS Grab Soil**
BMS Phase II RI - Syracuse, NY

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 08/24/2019 09:20
Collection Date/Time: 08/23/2019 10:20
SDG#: BMS77-01MS

ARCADIS U.S., Inc.
ELLE Sample #: SW 1134882
ELLE Group #: 2060623
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Limit of Quantitation*	Dry Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/kg**	**ug/kg**	**ug/kg**	
10726	Hexachloroethane	67-72-1	790	180	35	1
10726	Indeno(1,2,3-cd)pyrene	193-39-5	1,800	18	4	1
10726	Isophorone	78-59-1	1,400	39	18	1
10726	2-Methylnaphthalene	91-57-6	1,500	35	4	1
10726	2-Methylphenol	95-48-7	1,500	71	18	1
10726	4-Methylphenol	65794-96-9	1,600	53	18	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
10726	Naphthalene	91-20-3	1,300	18	7	1
10726	2-Nitroaniline	88-74-4	1,900	53	18	1
10726	3-Nitroaniline	99-09-2	1,800	180	71	1
10726	4-Nitroaniline	100-01-6	1,400	180	71	1
10726	Nitrobenzene	98-95-3	1,300	71	28	1
10726	2-Nitrophenol	88-75-5	1,600	60	28	1
10726	4-Nitrophenol	100-02-7	1,600	530	180	1
10726	N-Nitroso-di-n-propylamine	621-64-7	1,300	53	25	1
10726	N-Nitrosodiphenylamine	86-30-6	1,700	39	18	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.					
10726	Di-n-octylphthalate	117-84-0	1,700	180	71	1
10726	Pentachlorophenol	87-86-5	1,500	180	71	1
10726	Phenanthrene	85-01-8	1,700	18	4	1
10726	Phenol[1]	108-95-2	1,400	39	18	1
10726	Pyrene	129-00-0	1,600	18	4	1
10726	Pyridine	110-86-1	830	180	71	1
10726	1,2,4,5-Tetrachlorobenzene	95-94-3	1,500	39	18	1
10726	2,3,4,6-Tetrachlorophenol	58-90-2	1,800	180	71	1
10726	2,4,5-Trichlorophenol	95-95-4	1,700	71	32	1
10726	2,4,6-Trichlorophenol	88-06-2	1,600	60	28	1
10726	Triethylamine[1]	121-44-8	N.D.	5,300	1,800	1
	The stated QC limits for Triethylamine are advisory only until sufficient data points can be obtained to calculate statistical limits.					
GC Miscellaneous	**SW-846 8015C Feb 2007 Rev 3**		**mg/kg**	**mg/kg**	**mg/kg**	
12925	Ethylene glycol	107-21-1	100	11	5.4	1
12925	Propylene glycol[1]	57-55-6	93	11	5.4	1
GC Miscellaneous	**SW-846 8015D Rev.4, June 2003**		**ug/kg**	**ug/kg**	**ug/kg**	
10604	Ethanol (by Direct Injection)[1]	64-17-5	2,300 D2	1,100	130	1

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-14RX (20.5-22.5) MS Grab Soil**
BMS Phase II RI - Syracuse, NY

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 08/24/2019 09:20
Collection Date/Time: 08/23/2019 10:20
SDG#: BMS77-01MS

ARCADIS U.S., Inc.
ELLE Sample #: SW 1134882
ELLE Group #: 2060623
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Limit of Quantitation*	Dry Method Detection Limit	Dilution Factor
GC Miscellaneous	**SW-846 8015D Rev.4, June 2003**		**ug/kg**	**ug/kg**	**ug/kg**	
10604	Isopropanol[1]	67-63-0	2,300 D2	1,100	50	1
10604	Methanol (by Direct Injection)[1]	67-56-1	2,600 D2	1,100	220	1
Wet Chemistry	**SM 2540 G-2011 %Moisture Calc**		**%**	**%**	**%**	
00118	Moisture[1]	n.a.	7.2	0.50	0.50	1

Sample Comments

State of New York Certification No. 10670

[1] = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Eurofins Lancaster Laboratories Environmental, LLC is responsible only for the certified testing of samples. We are not directly responsible for the integrity of the sample prior to laboratory receipt. Any reported concentrations less than 200 ug/kg may be biased low if they were not collected according to EPA 5035/5035A specifications.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11995	VOCs- Solid by 8260C/D	SW-846 8260C	1	B192481AA	09/05/2019 15:25	Linda C Pape	0.97
06176	GC/MS - LL DIH2O Prep	SW-846 5035A	1	201923654667	08/24/2019 19:16	Rebecca Williams	1
06176	GC/MS - LL DIH2O Prep	SW-846 5035A	2	201923654667	08/24/2019 19:16	Rebecca Williams	1
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	201923654667	08/23/2019 10:20	Client Supplied	1
10726	SVOA 8270D/E (microwave)	SW-846 8270D	1	19240SLC026	08/31/2019 06:36	Brandon K Cordova	1
10813	BNA Soil Microwave APP IX	SW-846 3546	1	19240SLC026	08/29/2019 07:00	Joshua S Ruth	1
12925	Glycols in Soil by 8015C/D	SW-846 8015C Feb 2007 Rev 3	1	192410029A	08/30/2019 00:16	Donald Brown	1
10604	Alcohols in Soil	SW-846 8015D Rev.4, June 2003	1	192410001A	08/29/2019 18:18	Johanna C Kennedy	1
13121	Glycol Solids Ext. 8015C/D	SW-846 8015C Feb 2007 Rev 3	1	192410029A	08/29/2019 19:19	Donald Brown	1
00380	Solids Extraction for Alcohols	SW-846 8015D Rev 4 06/2003 Mod	1	192410001A	08/29/2019 14:30	Johanna C Kennedy	1
00118	Moisture	SM 2540 G-2011 %Moisture Calc	1	19241820005A	08/30/2019 11:43	William C Schwebel	1

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-14RX (20.5-22.5) MSD Grab Soil**
BMS Phase II RI - Syracuse, NY

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 08/24/2019 09:20
Collection Date/Time: 08/23/2019 10:20
SDG#: BMS77-01MSD

ARCADIS U.S., Inc.
ELLE Sample #: SW 1134883
ELLE Group #: 2060623
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Limit of Quantitation*	Dry Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/kg**	**ug/kg**	**ug/kg**	
11995	Acetone	67-64-1	280	20	6	0.93
11995	Benzene	71-43-2	24	5	0.5	0.93
11995	Bromochloromethane	74-97-5	23	5	0.6	0.93
11995	Bromodichloromethane	75-27-4	24	5	0.4	0.93
11995	Bromoform	75-25-2	19	10	5	0.93
11995	Bromomethane	74-83-9	17	5	0.7	0.93
11995	n-Butanol	71-36-3	920	250	56	0.93
11995	2-Butanone	78-93-3	190	10	1	0.93
11995	t-Butyl alcohol	75-65-0	200	100	15	0.93
11995	n-Butylbenzene	104-51-8	35	8	3	0.93
11995	sec-Butylbenzene	135-98-8	51	5	2	0.93
11995	tert-Butylbenzene	98-06-6	57	5	0.8	0.93
11995	Carbon Disulfide	75-15-0	25	5	0.6	0.93
11995	Carbon Tetrachloride	56-23-5	27	5	0.5	0.93
11995	Chlorobenzene	108-90-7	23	5	0.5	0.93
11995	Chloroethane	75-00-3	18	5	1	0.93
11995	Chloroform	67-66-3	26	5	0.6	0.93
11995	Chloromethane	74-87-3	21	5	0.6	0.93
11995	Cyclohexane	110-82-7	26	5	0.5	0.93
11995	Cyclohexanone[1]	108-94-1	310	250	25	0.93
11995	1,2-Dibromo-3-chloropropane	96-12-8	37	5	0.5	0.93
11995	Dibromochloromethane	124-48-1	26	5	0.5	0.93
11995	1,2-Dibromoethane	106-93-4	23	5	0.4	0.93
11995	1,2-Dichlorobenzene	95-50-1	32	5	0.5	0.93
11995	1,3-Dichlorobenzene	541-73-1	29	5	0.5	0.93
11995	1,4-Dichlorobenzene	106-46-7	27	5	0.4	0.93
11995	Dichlorodifluoromethane	75-71-8	19	5	0.6	0.93
11995	1,1-Dichloroethane	75-34-3	25	5	0.5	0.93
11995	1,2-Dichloroethane	107-06-2	25	5	0.6	0.93
11995	1,1-Dichloroethene	75-35-4	28	5	0.5	0.93
11995	cis-1,2-Dichloroethene	156-59-2	26	5	0.5	0.93
11995	trans-1,2-Dichloroethene	156-60-5	25	5	0.5	0.93
11995	1,2-Dichloropropane	78-87-5	24	5	0.5	0.93
11995	cis-1,3-Dichloropropene	10061-01-5	20	5	0.4	0.93
11995	trans-1,3-Dichloropropene	10061-02-6	21	5	0.5	0.93
11995	1,4-Dioxane	123-91-1	490	250	37	0.93
11995	Ethylbenzene	100-41-4	25	5	0.4	0.93
11995	Freon 113	76-13-1	29	10	0.6	0.93
11995	n-Heptane[1]	142-82-5	21	8	3	0.93
11995	n-Hexane[1]	110-54-3	23	5	0.5	0.93
11995	2-Hexanone	591-78-6	160	10	1	0.93

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-14RX (20.5-22.5) MSD Grab Soil**
BMS Phase II RI - Syracuse, NY

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 08/24/2019 09:20
Collection Date/Time: 08/23/2019 10:20
SDG#: BMS77-01MSD

ARCADIS U.S., Inc.
ELLE Sample #: SW 1134883
ELLE Group #: 2060623
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Limit of Quantitation*	Dry Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/kg**	**ug/kg**	**ug/kg**	
11995	Isobutyl Alcohol	78-83-1	510	250	38	0.93
11995	Isopropylbenzene	98-82-8	26	5	0.4	0.93
11995	p-Isopropyltoluene	99-87-6	46	5	2	0.93
11995	Methyl Acetate	79-20-9	22	5	1	0.93
11995	Methyl Tertiary Butyl Ether	1634-04-4	24	5	0.5	0.93
11995	4-Methyl-2-pentanone	108-10-1	120	10	1	0.93
11995	Methylcyclohexane	108-87-2	24	5	0.6	0.93
11995	Methylene Chloride	75-09-2	25	5	2	0.93
11995	Naphthalene	91-20-3	13	5	2	0.93
11995	2-Nitropropane	79-46-9	16	10	2	0.93
11995	Styrene	100-42-5	19	5	0.4	0.93
11995	1,1,2,2-Tetrachloroethane	79-34-5	56	5	0.4	0.93
11995	Tetrachloroethene	127-18-4	29	5	0.5	0.93
11995	Tetrahydrofuran[1]	109-99-9	110	8	1	0.93
11995	Toluene	108-88-3	27	5	0.6	0.93
11995	1,2,3-Trichlorobenzene	87-61-6	12	10	5	0.93
11995	1,2,4-Trichlorobenzene	120-82-1	11	10	5	0.93
11995	1,1,1-Trichloroethane	71-55-6	27	5	0.6	0.93
11995	1,1,2-Trichloroethane	79-00-5	29	5	0.5	0.93
11995	Trichloroethene	79-01-6	23	5	0.5	0.93
11995	Trichlorofluoromethane	75-69-4	21	5	0.7	0.93
11995	1,2,4-Trimethylbenzene	95-63-6	43	5	0.5	0.93
11995	1,3,5-Trimethylbenzene	108-67-8	50	5	0.5	0.93
11995	Vinyl Chloride	75-01-4	20	5	0.6	0.93
11995	m+p-Xylene	179601-23-1	48	5	1	0.93
11995	o-Xylene	95-47-6	25	5	0.4	0.93
11995	Xylene (Total)	1330-20-7	73	10	1	0.93

The recovery for the sample internal standard is outside the QC acceptance limits. The internal standard recovery was outside of acceptance limits in the background, matrix spike, and matrix spike duplicate indicating a matrix effect.

GC/MS Semivolatiles	**SW-846 8270D**		**ug/kg**	**ug/kg**	**ug/kg**	
10726	Acenaphthene	83-32-9	1,500	18	4	1
10726	Acenaphthylene	208-96-8	1,700	18	4	1
10726	Acetophenone	98-86-2	1,300	54	18	1
10726	Aniline	62-53-3	910	540	180	1
10726	Anthracene	120-12-7	1,700	18	4	1
10726	Atrazine	1912-24-9	1,600	460	210	1
10726	Benzaldehyde	100-52-7	920	180	72	1
10726	Benzo(a)anthracene	56-55-3	1,800	18	7	1
10726	Benzo(a)pyrene	50-32-8	1,700	18	4	1

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-14RX (20.5-22.5) MSD Grab Soil**
BMS Phase II RI - Syracuse, NY

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 08/24/2019 09:20
Collection Date/Time: 08/23/2019 10:20
SDG#: BMS77-01MSD

ARCADIS U.S., Inc.
ELLE Sample #: SW 1134883
ELLE Group #: 2060623
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Limit of Quantitation*	Dry Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/kg**		**ug/kg**	**ug/kg**	
10726	Benzo(b)fluoranthene	205-99-2	1,700		18	4	1
10726	Benzo(g,h,i)perylene	191-24-2	1,700		18	4	1
10726	Benzo(k)fluoranthene	207-08-9	1,500		18	4	1
10726	Benzyl alcohol	100-51-6	1,300		540	180	1
10726	1,1'-Biphenyl	92-52-4	1,500		39	18	1
10726	4-Bromophenyl-phenylether	101-55-3	1,600		54	25	1
10726	Butylbenzylphthalate	85-68-7	1,800		180	72	1
10726	Di-n-butylphthalate	84-74-2	1,700		180	72	1
10726	Caprolactam	105-60-2	1,700		180	36	1
10726	Carbazole	86-74-8	1,800		39	18	1
10726	4-Chloro-3-methylphenol	59-50-7	1,500		54	25	1
10726	4-Chloroaniline	106-47-8	1,200		180	36	1
10726	bis(2-Chloroethoxy)methane	111-91-1	1,300		39	18	1
10726	bis(2-Chloroethyl)ether	111-44-4	1,100		54	25	1
10726	bis(2-Chloroisopropyl)ether[1]	39638-32-9	1,000		46	21	1
	Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.						
10726	2-Chloronaphthalene	91-58-7	1,500		36	7	1
10726	2-Chlorophenol	95-57-8	1,300		39	18	1
10726	4-Chlorophenyl-phenylether	7005-72-3	1,500		46	21	1
10726	Chrysene	218-01-9	1,700		18	4	1
10726	Dibenz(a,h)anthracene	53-70-3	1,900		18	7	1
10726	Dibenzofuran	132-64-9	1,500		39	18	1
10726	3,3'-Dichlorobenzidine	91-94-1	1,700		360	110	1
10726	2,4-Dichlorophenol	120-83-2	1,400		46	21	1
10726	Dicyclohexylamine[1]	101-83-7	N.D.		2,100	720	1
10726	Diethylphthalate	84-66-2	1,600		180	72	1
10726	N,N-Dimethylaniline[1]	121-69-7	N.D.		180	36	1
10726	2,4-Dimethylphenol	105-67-9	1,100		72	32	1
10726	Dimethylphthalate	131-11-3	1,500		180	72	1
10726	4,6-Dinitro-2-methylphenol	534-52-1	630		540	250	1
10726	2,4-Dinitrophenol	51-28-5	660	J	1,100	360	1
10726	2,4-Dinitrotoluene	121-14-2	1,700		180	72	1
10726	2,6-Dinitrotoluene	606-20-2	1,700		54	25	1
10726	bis(2-Ethylhexyl)phthalate	117-81-7	1,900		180	72	1
10726	Fluoranthene	206-44-0	1,700		18	4	1
10726	Fluorene	86-73-7	1,500		18	4	1
10726	Hexachlorobenzene	118-74-1	1,600		18	7	1
10726	Hexachlorobutadiene	87-68-3	1,200		82	39	1
10726	Hexachlorocyclopentadiene	77-47-4	N.D.		540	210	1

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-14RX (20.5-22.5) MSD Grab Soil**
BMS Phase II RI - Syracuse, NY

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 08/24/2019 09:20
Collection Date/Time: 08/23/2019 10:20
SDG#: BMS77-01MSD

ARCADIS U.S., Inc.
ELLE Sample #: SW 1134883
ELLE Group #: 2060623
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Limit of Quantitation*	Dry Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/kg**	**ug/kg**	**ug/kg**	
10726	Hexachloroethane	67-72-1	680	180	36	1
10726	Indeno(1,2,3-cd)pyrene	193-39-5	1,800	18	4	1
10726	Isophorone	78-59-1	1,200	39	18	1
10726	2-Methylnaphthalene	91-57-6	1,400	36	4	1
10726	2-Methylphenol	95-48-7	1,300	72	18	1
10726	4-Methylphenol	65794-96-9	1,400	54	18	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
10726	Naphthalene	91-20-3	1,300	18	7	1
10726	2-Nitroaniline	88-74-4	1,800	54	18	1
10726	3-Nitroaniline	99-09-2	1,700	180	72	1
10726	4-Nitroaniline	100-01-6	1,400	180	72	1
10726	Nitrobenzene	98-95-3	1,200	72	29	1
10726	2-Nitrophenol	88-75-5	1,400	61	29	1
10726	4-Nitrophenol	100-02-7	1,500	540	180	1
10726	N-Nitroso-di-n-propylamine	621-64-7	1,200	54	25	1
10726	N-Nitrosodiphenylamine	86-30-6	1,600	39	18	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.					
10726	Di-n-octylphthalate	117-84-0	1,700	180	72	1
10726	Pentachlorophenol	87-86-5	1,600	180	72	1
10726	Phenanthrene	85-01-8	1,700	18	4	1
10726	Phenol[1]	108-95-2	1,200	39	18	1
10726	Pyrene	129-00-0	1,700	18	4	1
10726	Pyridine	110-86-1	640	180	72	1
10726	1,2,4,5-Tetrachlorobenzene	95-94-3	1,400	39	18	1
10726	2,3,4,6-Tetrachlorophenol	58-90-2	1,900	180	72	1
10726	2,4,5-Trichlorophenol	95-95-4	1,600	72	32	1
10726	2,4,6-Trichlorophenol	88-06-2	1,600	61	29	1
10726	Triethylamine[1]	121-44-8	N.D.	5,400	1,800	1
	The stated QC limits for Triethylamine are advisory only until sufficient data points can be obtained to calculate statistical limits.					
GC Miscellaneous	**SW-846 8015C Feb 2007 Rev 3**		**mg/kg**	**mg/kg**	**mg/kg**	
12925	Ethylene glycol	107-21-1	110	11	5.4	1
12925	Propylene glycol[1]	57-55-6	97	11	5.4	1
GC Miscellaneous	**SW-846 8015D Rev.4, June 2003**		**ug/kg**	**ug/kg**	**ug/kg**	
10604	Ethanol (by Direct Injection)[1]	64-17-5	2,400 D2	1,100	130	1

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-14RX (20.5-22.5) MSD Grab Soil**
BMS Phase II RI - Syracuse, NY

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 08/24/2019 09:20
Collection Date/Time: 08/23/2019 10:20
SDG#: BMS77-01MSD

ARCADIS U.S., Inc.
ELLE Sample #: SW 1134883
ELLE Group #: 2060623
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Limit of Quantitation*	Dry Method Detection Limit	Dilution Factor
GC Miscellaneous	**SW-846 8015D Rev.4, June 2003**		**ug/kg**	**ug/kg**	**ug/kg**	
10604	Isopropanol[1]	67-63-0	2,400 D2	1,100	50	1
10604	Methanol (by Direct Injection)[1]	67-56-1	2,700 D2	1,100	220	1
Wet Chemistry	**SM 2540 G-2011 %Moisture Calc**		**%**	**%**	**%**	
00118	Moisture[1]	n.a.	7.2	0.50	0.50	1
00121	Moisture Duplicate[1]	n.a.	6.8	0.50	0.50	1

The duplicate moisture value is provided to assess the precision of the moisture test. For comparability purposes, the initial moisture determination is the value used to perform dry weight calculations.

Sample Comments

State of New York Certification No. 10670

[1] = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Eurofins Lancaster Laboratories Environmental, LLC is responsible only for the certified testing of samples. We are not directly responsible for the integrity of the sample prior to laboratory receipt. Any reported concentrations less than 200 ug/kg may be biased low if they were not collected according to EPA 5035/5035A specifications.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11995	VOCs- Solid by 8260C/D	SW-846 8260C	1	B192481AA	09/05/2019 15:47	Linda C Pape	0.93
06176	GC/MS - LL DIH2O Prep	SW-846 5035A	1	201923654667	08/24/2019 19:16	Rebecca Williams	1
06176	GC/MS - LL DIH2O Prep	SW-846 5035A	2	201923654667	08/24/2019 19:16	Rebecca Williams	1
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	201923654667	08/23/2019 10:20	Client Supplied	1
10726	SVOA 8270D/E (microwave)	SW-846 8270D	1	19240SLC026	08/31/2019 07:01	Brandon K Cordova	1
10813	BNA Soil Microwave APP IX	SW-846 3546	1	19240SLC026	08/29/2019 07:00	Joshua S Ruth	1
12925	Glycols in Soil by 8015C/D	SW-846 8015C Feb 2007 Rev 3	1	192410029A	08/30/2019 00:28	Donald Brown	1
10604	Alcohols in Soil	SW-846 8015D Rev.4, June 2003	1	192410001A	08/29/2019 18:35	Johanna C Kennedy	1
13121	Glycol Solids Ext. 8015C/D	SW-846 8015C Feb 2007 Rev 3	1	192410029A	08/29/2019 19:19	Donald Brown	1
00380	Solids Extraction for Alcohols	SW-846 8015D Rev 4 06/2003 Mod	1	192410001A	08/29/2019 14:30	Johanna C Kennedy	1
00118	Moisture	SM 2540 G-2011 %Moisture Calc	1	19241820005A	08/30/2019 11:43	William C Schwebel	1
00121	Moisture Duplicate	SM 2540 G-2011 %Moisture Calc	1	19241820005A	08/30/2019 11:43	William C Schwebel	1

*=This limit was used in the evaluation of the final result

Sample Description: **Trip Blank Water**
BMS Phase II RI - Syracuse, NY

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 08/24/2019 09:20
Collection Date/Time: 08/23/2019
SDG#: BMS77-02TB

ARCADIS U.S., Inc.
ELLE Sample #: WW 1134884
ELLE Group #: 2060623
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	20	0.7	1
11997	Acetonitrile	75-05-8	N.D.	100	16	1
11997	Benzene	71-43-2	N.D.	1	0.2	1
11997	Bromochloromethane	74-97-5	N.D.	5	0.2	1
11997	Bromodichloromethane	75-27-4	N.D.	1	0.2	1
11997	Bromoform	75-25-2	N.D.	4	1	1
11997	Bromomethane	74-83-9	N.D.	1	0.3	1
11997	n-Butanol	71-36-3	N.D.	250	61	1
11997	2-Butanone	78-93-3	N.D.	10	0.3	1
11997	t-Butyl alcohol	75-65-0	N.D.	50	12	1
11997	n-Butylbenzene	104-51-8	N.D.	5	0.2	1
11997	sec-Butylbenzene	135-98-8	N.D.	5	0.2	1
11997	tert-Butylbenzene	98-06-6	N.D.	5	0.3	1
11997	Carbon Disulfide	75-15-0	N.D.	5	0.2	1
11997	Carbon Tetrachloride	56-23-5	N.D.	1	0.2	1
11997	Chlorobenzene	108-90-7	N.D.	1	0.2	1
11997	Chlorodifluoromethane[1]	75-45-6	N.D.	5	2	1
11997	Chloroethane	75-00-3	N.D.	1	0.2	1
11997	Chloroform	67-66-3	N.D.	1	0.2	1
11997	Chloromethane	74-87-3	N.D.	1	0.2	1
11997	Cyclohexane	110-82-7	N.D.	5	1	1
11997	Cyclohexanone[1]	108-94-1	N.D.	100	25	1
11997	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	5	0.3	1
11997	Dibromochloromethane	124-48-1	N.D.	1	0.2	1
11997	1,2-Dibromoethane	106-93-4	N.D.	1	0.2	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	5	0.2	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	5	0.2	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	5	0.2	1
11997	Dichlorodifluoromethane	75-71-8	N.D.	1	0.2	1
11997	1,1-Dichloroethane	75-34-3	N.D.	1	0.2	1
11997	1,2-Dichloroethane	107-06-2	N.D.	1	0.3	1
11997	1,1-Dichloroethene	75-35-4	N.D.	1	0.2	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	1	0.2	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	1	0.2	1
11997	1,2-Dichloropropane	78-87-5	N.D.	1	0.2	1
11997	cis-1,3-Dichloropropene	10061-01-5	N.D.	1	0.2	1
11997	trans-1,3-Dichloropropene	10061-02-6	N.D.	1	0.2	1
11997	1,4-Dioxane	123-91-1	N.D.	250	29	1
11997	Ethyl Acetate	141-78-6	N.D.	5	0.7	1
11997	Ethyl ether	60-29-7	N.D.	5	0.2	1
11997	Ethylbenzene	100-41-4	N.D.	1	0.4	1

*=This limit was used in the evaluation of the final result

Sample Description: **Trip Blank Water**
BMS Phase II RI - Syracuse, NY

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 08/24/2019 09:20
Collection Date/Time: 08/23/2019
SDG#: BMS77-02TB

ARCADIS U.S., Inc.
ELLE Sample #: WW 1134884
ELLE Group #: 2060623
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Freon 113	76-13-1	N.D.	10	0.2	1
11997	n-Heptane[1]	142-82-5	N.D.	5	2	1
11997	n-Hexane[1]	110-54-3	N.D.	5	2	1
11997	2-Hexanone	591-78-6	N.D.	10	0.3	1
11997	Isobutyl Alcohol	78-83-1	N.D.	250	36	1
11997	Isopropylbenzene	98-82-8	N.D.	5	0.2	1
11997	p-Isopropyltoluene	99-87-6	N.D.	5	0.2	1
11997	Methyl Acetate	79-20-9	N.D.	5	0.2	1
11997	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	1	0.2	1
11997	4-Methyl-2-pentanone	108-10-1	N.D.	10	0.5	1
11997	Methylcyclohexane	108-87-2	N.D.	5	0.5	1
11997	Methylene Chloride	75-09-2	0.6 J	1	0.3	1
11997	Naphthalene	91-20-3	N.D.	5	1	1
11997	2-Nitropropane	79-46-9	N.D.	10	0.8	1
11997	Styrene	100-42-5	N.D.	5	0.2	1
11997	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	1	0.2	1
11997	Tetrachloroethene	127-18-4	N.D.	1	0.2	1
11997	Tetrahydrofuran	109-99-9	N.D.	10	0.7	1
11997	Toluene	108-88-3	N.D.	1	0.2	1
11997	1,2,3-Trichlorobenzene	87-61-6	N.D.	5	0.4	1
11997	1,2,4-Trichlorobenzene	120-82-1	N.D.	5	0.3	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	1	0.3	1
11997	1,1,2-Trichloroethane	79-00-5	N.D.	1	0.2	1
11997	Trichloroethene	79-01-6	N.D.	1	0.2	1
11997	Trichlorofluoromethane	75-69-4	N.D.	1	0.2	1
11997	1,2,4-Trimethylbenzene	95-63-6	N.D.	5	1	1
11997	1,3,5-Trimethylbenzene	108-67-8	N.D.	5	0.3	1
11997	Vinyl Chloride	75-01-4	N.D.	1	0.2	1
11997	m+p-Xylene	179601-23-1	N.D.	5	1	1
11997	o-Xylene	95-47-6	N.D.	1	0.4	1
11997	Xylene (Total)	1330-20-7	N.D.	6	1	1

A Method Detection Limit (MDL) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The MDL standard shows adequate sensitivity at or below the reporting limit.

Project defined calibration criteria are not met. The calibration is compliant with the method defined criteria.

12027 VOA Interp. Library Search-20

The results from the volatile library search are listed on the attached FORM 1 - VOA-TIC. The qualifiers appearing in the "Q" column are defined at the end of the report.

*=This limit was used in the evaluation of the final result

Sample Description: **Trip Blank Water**
BMS Phase II RI - Syracuse, NY

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 08/24/2019 09:20
Collection Date/Time: 08/23/2019
SDG#: BMS77-02TB

ARCADIS U.S., Inc.
ELLE Sample #: WW 1134884
ELLE Group #: 2060623
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC Miscellaneous	**SW-846 8015C Feb 2007 Rev 3**		**mg/l**	**mg/l**	**mg/l**	
12926	Ethylene glycol	107-21-1	N.D.	10	5.0	1
12926	Propylene glycol[1]	57-55-6	N.D.	10	2.0	1
GC Miscellaneous	**SW-846 8015D Rev.4, June 2003**		**ug/l**	**ug/l**	**ug/l**	
10603	Ethanol	64-17-5	N.D. D2	1,000	150	1
10603	Isopropanol[1]	67-63-0	N.D. D2	1,000	110	1
10603	Methanol	67-56-1	N.D. D2	1,000	220	1

Sample Comments

State of New York Certification No. 10670

[1] = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	4192473AA	09/04/2019 22:39	Don V Viray	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	4192473AA	09/04/2019 22:38	Don V Viray	1
12926	Glycols in Water by 8015C/D	SW-846 8015C Feb 2007 Rev 3	1	192470045A	09/05/2019 00:15	Donald Brown	1
10603	Alcohols in Water	SW-846 8015D Rev.4, June 2003	1	192460015A	09/03/2019 14:27	Johanna C Kennedy	1

*=This limit was used in the evaluation of the final result

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
00272

Lab Name: Lancaster Laboratories Contract:_____
Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____
Matrix: (soil/water) WATER Lab Sample ID: 1134884
Sample wt/vol: 5.0 (g/mL)mL Lab File ID:HP23297.i/19sep04b.b/4s04s64.d
Level: (low/med) LOW Date Received: 08/24/19
% Moisture: not dec. Date Analyzed: 09/04/19
Column: (pack/cap) CAP Dilution Factor: 1.0
CONCENTRATION UNITS:
Number TICs found: 0 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	VOCTIC	Total VOC TICs		0	U
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page 1 of 1

FORM I VOA-TIC

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

Quality Control Summary

Client Name: ARCADIS U.S., Inc. Group Number: 2060623
Reported: 10/04/2019 12:51

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	LOQ**	MDL
	ug/kg	ug/kg	ug/kg
Batch number: B192481AA	Sample number(s): 1134881-1134883		
Acetone	N.D.	20	6
Acetonitrile	N.D.	100	25
Benzene	N.D.	5	0.5
Bromochloromethane	N.D.	5	0.6
Bromodichloromethane	N.D.	5	0.4
Bromoform	N.D.	10	5
Bromomethane	N.D.	5	0.7
n-Butanol	N.D.	250	56
2-Butanone	N.D.	10	1
t-Butyl alcohol	N.D.	100	15
n-Butylbenzene	N.D.	8	3
sec-Butylbenzene	N.D.	5	2
tert-Butylbenzene	N.D.	5	0.8
Carbon Disulfide	N.D.	5	0.6
Carbon Tetrachloride	N.D.	5	0.5
Chlorobenzene	N.D.	5	0.5
Chlorodifluoromethane	N.D.	10	2
Chloroethane	N.D.	5	1
Chloroform	N.D.	5	0.6
Chloromethane	N.D.	5	0.6
Cyclohexane	N.D.	5	0.5
Cyclohexanone	N.D.	250	25
1,2-Dibromo-3-chloropropane	N.D.	5	0.5
Dibromochloromethane	N.D.	5	0.5
1,2-Dibromoethane	N.D.	5	0.4
1,2-Dichlorobenzene	N.D.	5	0.5
1,3-Dichlorobenzene	N.D.	5	0.5
1,4-Dichlorobenzene	N.D.	5	0.4
Dichlorodifluoromethane	N.D.	5	0.6
1,1-Dichloroethane	N.D.	5	0.5
1,2-Dichloroethane	N.D.	5	0.6
1,1-Dichloroethene	N.D.	5	0.5
cis-1,2-Dichloroethene	N.D.	5	0.5
trans-1,2-Dichloroethene	N.D.	5	0.5
1,2-Dichloropropane	N.D.	5	0.5
cis-1,3-Dichloropropene	N.D.	5	0.4
trans-1,3-Dichloropropene	N.D.	5	0.5
1,4-Dioxane	N.D.	250	37
Ethyl Acetate	N.D.	5	1

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: ARCADIS U.S., Inc.
Reported: 10/04/2019 12:51

Group Number: 2060623

Method Blank (continued)

Analysis Name	Result	LOQ**	MDL
	ug/kg	ug/kg	ug/kg
Ethyl Ether	N.D.	5	1
Ethylbenzene	N.D.	5	0.4
Freon 113	N.D.	10	0.6
n-Heptane	N.D.	8	3
n-Hexane	N.D.	5	0.5
2-Hexanone	N.D.	10	1
Isobutyl Alcohol	N.D.	250	38
Isopropylbenzene	N.D.	5	0.4
p-Isopropyltoluene	N.D.	5	2
Methyl Acetate	N.D.	5	1
Methyl Tertiary Butyl Ether	N.D.	5	0.5
4-Methyl-2-pentanone	N.D.	10	1
Methylcyclohexane	N.D.	5	0.6
Methylene Chloride	N.D.	5	2
Naphthalene	N.D.	5	2
2-Nitropropane	N.D.	10	2
Styrene	N.D.	5	0.4
1,1,2,2-Tetrachloroethane	N.D.	5	0.4
Tetrachloroethene	N.D.	5	0.5
Tetrahydrofuran	N.D.	8	1
Toluene	N.D.	5	0.6
1,2,3-Trichlorobenzene	N.D.	10	5
1,2,4-Trichlorobenzene	N.D.	10	5
1,1,1-Trichloroethane	N.D.	5	0.6
1,1,2-Trichloroethane	N.D.	5	0.5
Trichloroethene	N.D.	5	0.5
Trichlorofluoromethane	N.D.	5	0.7
1,2,4-Trimethylbenzene	N.D.	5	0.5
1,3,5-Trimethylbenzene	N.D.	5	0.5
Vinyl Chloride	N.D.	5	0.6
m+p-Xylene	N.D.	5	1
o-Xylene	N.D.	5	0.4
Xylene (Total)	N.D.	10	1
	ug/l	ug/l	ug/l
Batch number: 4192473AA	Sample number(s): 1134884		
Acetone	N.D.	20	0.7
Acetonitrile	N.D.	100	16
Benzene	N.D.	1	0.2
Bromochloromethane	N.D.	5	0.2
Bromodichloromethane	N.D.	1	0.2
Bromoform	N.D.	4	1
Bromomethane	N.D.	1	0.3
n-Butanol	N.D.	250	61
2-Butanone	N.D.	10	0.3

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: ARCADIS U.S., Inc. Group Number: 2060623
Reported: 10/04/2019 12:51

Method Blank (continued)

Analysis Name	Result	LOQ**	MDL
	ug/l	ug/l	ug/l
t-Butyl alcohol	N.D.	50	12
n-Butylbenzene	N.D.	5	0.2
sec-Butylbenzene	N.D.	5	0.2
tert-Butylbenzene	N.D.	5	0.3
Carbon Disulfide	N.D.	5	0.2
Carbon Tetrachloride	N.D.	1	0.2
Chlorobenzene	N.D.	1	0.2
Chlorodifluoromethane	N.D.	5	2
Chloroethane	N.D.	1	0.2
Chloroform	N.D.	1	0.2
Chloromethane	N.D.	1	0.2
Cyclohexane	N.D.	5	1
Cyclohexanone	N.D.	100	25
1,2-Dibromo-3-chloropropane	N.D.	5	0.3
Dibromochloromethane	N.D.	1	0.2
1,2-Dibromoethane	N.D.	1	0.2
1,2-Dichlorobenzene	N.D.	5	0.2
1,3-Dichlorobenzene	N.D.	5	0.2
1,4-Dichlorobenzene	N.D.	5	0.2
Dichlorodifluoromethane	N.D.	1	0.2
1,1-Dichloroethane	N.D.	1	0.2
1,2-Dichloroethane	N.D.	1	0.3
1,1-Dichloroethene	N.D.	1	0.2
cis-1,2-Dichloroethene	N.D.	1	0.2
trans-1,2-Dichloroethene	N.D.	1	0.2
1,2-Dichloropropane	N.D.	1	0.2
cis-1,3-Dichloropropene	N.D.	1	0.2
trans-1,3-Dichloropropene	N.D.	1	0.2
1,4-Dioxane	N.D.	250	29
Ethyl Acetate	N.D.	5	0.7
Ethyl ether	N.D.	5	0.2
Ethylbenzene	N.D.	1	0.4
Freon 113	N.D.	10	0.2
n-Heptane	N.D.	5	2
n-Hexane	N.D.	5	2
2-Hexanone	N.D.	10	0.3
Isobutyl Alcohol	N.D.	250	36
Isopropylbenzene	N.D.	5	0.2
p-Isopropyltoluene	N.D.	5	0.2
Methyl Acetate	N.D.	5	0.2
Methyl Tertiary Butyl Ether	N.D.	1	0.2
4-Methyl-2-pentanone	N.D.	10	0.5
Methylcyclohexane	N.D.	5	0.5
Methylene Chloride	0.5 J	1	0.3
Naphthalene	N.D.	5	1

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Quality Control Summary

Client Name: ARCADIS U.S., Inc. Group Number: 2060623
Reported: 10/04/2019 12:51

Method Blank (continued)

Analysis Name	Result	LOQ**	MDL
	ug/l	ug/l	ug/l
2-Nitropropane	N.D.	10	0.8
Styrene	N.D.	5	0.2
1,1,2,2-Tetrachloroethane	N.D.	1	0.2
Tetrachloroethene	N.D.	1	0.2
Tetrahydrofuran	N.D.	10	0.7
Toluene	N.D.	1	0.2
1,2,3-Trichlorobenzene	N.D.	5	0.4
1,2,4-Trichlorobenzene	N.D.	5	0.3
1,1,1-Trichloroethane	N.D.	1	0.3
1,1,2-Trichloroethane	N.D.	1	0.2
Trichloroethene	N.D.	1	0.2
Trichlorofluoromethane	N.D.	1	0.2
1,2,4-Trimethylbenzene	N.D.	5	1
1,3,5-Trimethylbenzene	N.D.	5	0.3
Vinyl Chloride	N.D.	1	0.2
m+p-Xylene	N.D.	5	1
o-Xylene	N.D.	1	0.4
Xylene (Total)	N.D.	6	1
	ug/kg	ug/kg	ug/kg
Batch number: 19240SLC026	Sample number(s): 1134881-1134883		
Acenaphthene	N.D.	17	3
Acenaphthylene	N.D.	17	3
Acetophenone	N.D.	50	17
Aniline	N.D.	500	170
Anthracene	N.D.	17	3
Atrazine	N.D.	430	200
Benzaldehyde	N.D.	170	67
Benzo(a)anthracene	N.D.	17	7
Benzo(a)pyrene	N.D.	17	3
Benzo(b)fluoranthene	N.D.	17	3
Benzo(g,h,i)perylene	N.D.	17	3
Benzo(k)fluoranthene	N.D.	17	3
Benzyl alcohol	N.D.	500	170
1,1'-Biphenyl	N.D.	37	17
4-Bromophenyl-phenylether	N.D.	50	23
Butylbenzylphthalate	N.D.	170	67
Di-n-butylphthalate	N.D.	170	67
Caprolactam	N.D.	170	33
Carbazole	N.D.	37	17
4-Chloro-3-methylphenol	N.D.	50	23
4-Chloroaniline	N.D.	170	33
bis(2-Chloroethoxy)methane	N.D.	37	17
bis(2-Chloroethyl)ether	N.D.	50	23
bis(2-Chloroisopropyl)ether	N.D.	43	20

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Quality Control Summary

Client Name: ARCADIS U.S., Inc.
Reported: 10/04/2019 12:51

Group Number: 2060623

Method Blank (continued)

Analysis Name	Result	LOQ**	MDL
	ug/kg	ug/kg	ug/kg
2-Chloronaphthalene	N.D.	33	7
2-Chlorophenol	N.D.	37	17
4-Chlorophenyl-phenylether	N.D.	43	20
Chrysene	N.D.	17	3
Dibenz(a,h)anthracene	N.D.	17	7
Dibenzofuran	N.D.	37	17
3,3'-Dichlorobenzidine	N.D.	330	100
2,4-Dichlorophenol	N.D.	43	20
Dicyclohexylamine	N.D.	2,000	670
Diethylphthalate	N.D.	170	67
N,N-Dimethylaniline	N.D.	170	33
2,4-Dimethylphenol	N.D.	67	30
Dimethylphthalate	N.D.	170	67
4,6-Dinitro-2-methylphenol	N.D.	500	230
2,4-Dinitrophenol	N.D.	1,000	330
2,4-Dinitrotoluene	N.D.	170	67
2,6-Dinitrotoluene	N.D.	50	23
bis(2-Ethylhexyl)phthalate	N.D.	170	67
Fluoranthene	N.D.	17	3
Fluorene	N.D.	17	3
Hexachlorobenzene	N.D.	17	7
Hexachlorobutadiene	N.D.	77	37
Hexachlorocyclopentadiene	N.D.	500	200
Hexachloroethane	N.D.	170	33
Indeno(1,2,3-cd)pyrene	N.D.	17	3
Isophorone	N.D.	37	17
2-Methylnaphthalene	N.D.	33	3
2-Methylphenol	N.D.	67	17
4-Methylphenol	N.D.	50	17
Naphthalene	N.D.	17	7
2-Nitroaniline	N.D.	50	17
3-Nitroaniline	N.D.	170	67
4-Nitroaniline	N.D.	170	67
Nitrobenzene	N.D.	67	27
2-Nitrophenol	N.D.	57	27
4-Nitrophenol	N.D.	500	170
N-Nitroso-di-n-propylamine	N.D.	50	23
N-Nitrosodiphenylamine	N.D.	37	17
Di-n-octylphthalate	N.D.	170	67
Pentachlorophenol	N.D.	170	67
Phenanthrene	N.D.	17	3
Phenol	N.D.	37	17
Pyrene	N.D.	17	3
Pyridine	N.D.	170	67
1,2,4,5-Tetrachlorobenzene	N.D.	37	17

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Quality Control Summary

Client Name: ARCADIS U.S., Inc. Group Number: 2060623
Reported: 10/04/2019 12:51

Method Blank (continued)

Analysis Name	Result	LOQ**	MDL
	ug/kg	ug/kg	ug/kg
2,3,4,6-Tetrachlorophenol	N.D.	170	67
2,4,5-Trichlorophenol	N.D.	67	30
2,4,6-Trichlorophenol	N.D.	57	27
Triethylamine	N.D.	5,000	1,700
	mg/kg	mg/kg	mg/kg
Batch number: 192410029A	Sample number(s): 1134881-1134883		
Ethylene glycol	N.D.	10	5.0
Propylene glycol	N.D.	10	5.0
	mg/l	mg/l	mg/l
Batch number: 192470045A	Sample number(s): 1134884		
Ethylene glycol	N.D.	10	5.0
Propylene glycol	N.D.	10	5.0
	ug/kg	ug/kg	ug/kg
Batch number: 192410001A	Sample number(s): 1134881-1134883		
Ethanol (by Direct Injection)	N.D.	1,000	120
Isopropanol	N.D.	1,000	46
Methanol (by Direct Injection)	N.D.	1,000	200
	ug/l	ug/l	ug/l
Batch number: 192460015A	Sample number(s): 1134884		
Ethanol	N.D.	1,000	150
Isopropanol	N.D.	1,000	110
Methanol	N.D.	1,000	220

LCS/LCSD

Analysis Name	LCS Spike Added ug/kg	LCS Conc ug/kg	LCSD Spike Added ug/kg	LCSD Conc ug/kg	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: B192481AA	Sample number(s): 1134881-1134883								
Acetone	150	155.66	150	183.19	104	122	41-150	16	30
Acetonitrile	150	128.13	150	117.97	85	79	61-120	8	30
Benzene	20	20.43	20	21.61	102	108	80-120	6	30
Bromochloromethane	20	19.86	20	20.35	99	102	72-124	2	30
Bromodichloromethane	20	21.36	20	22.15	107	111	70-120	4	30
Bromoform	20	17.12	20	17.51	86	88	51-127	2	30
Bromomethane	20	15.19	20	16.12	76	81	45-140	6	30
n-Butanol	1000	792.81	1000	865.46	79	87	63-123	9	30
2-Butanone	150	136.55	150	155.66	91	104	57-128	13	30
t-Butyl alcohol	200	180.34	200	237.19	90	119	74-121	27	30

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Quality Control Summary

Client Name: ARCADIS U.S., Inc. Group Number: 2060623
Reported: 10/04/2019 12:51

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/kg	LCS Conc ug/kg	LCSD Spike Added ug/kg	LCSD Conc ug/kg	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
n-Butylbenzene	20	20.4	20	21.51	102	108	71-121	5	30
sec-Butylbenzene	20	21.63	20	23.01	108	115	72-120	6	30
tert-Butylbenzene	20	20.57	20	21.81	103	109	68-120	6	30
Carbon Disulfide	20	18.05	20	19.3	90	97	64-133	7	30
Carbon Tetrachloride	20	21	20	22.65	105	113	64-134	8	30
Chlorobenzene	20	19.84	20	20.65	99	103	80-120	4	30
Chlorodifluoromethane	20	19.79	20	22.4	99	112	60-133	12	30
Chloroethane	20	16.15	20	16.95	81	85	43-135	5	30
Chloroform	20	21.86	20	22.66	109	113	80-120	4	30
Chloromethane	20	17.41	20	18.21	87	91	56-120	5	30
Cyclohexane	20	19.93	20	20.81	100	104	58-126	4	30
Cyclohexanone	500	321.59	500	355.39	64	71	47-136	10	30
1,2-Dibromo-3-chloropropane	20	19.1	20	19.4	95	97	48-134	2	30
Dibromochloromethane	20	20.32	20	21.13	102	106	69-125	4	30
1,2-Dibromoethane	20	20.7	20	20.96	103	105	76-120	1	30
1,2-Dichlorobenzene	20	20.21	20	21.05	101	105	76-120	4	30
1,3-Dichlorobenzene	20	19.26	20	20.15	96	101	75-120	5	30
1,4-Dichlorobenzene	20	18.75	20	19.75	94	99	80-120	5	30
Dichlorodifluoromethane	20	16.93	20	17.7	85	88	21-127	4	30
1,1-Dichloroethane	20	20.66	20	21.5	103	108	79-120	4	30
1,2-Dichloroethane	20	22.68	20	23.39	113	117	71-128	3	30
1,1-Dichloroethene	20	21.82	20	23.09	109	115	73-129	6	30
cis-1,2-Dichloroethene	20	22.18	20	23.28	111	116	80-125	5	30
trans-1,2-Dichloroethene	20	20.79	20	22.09	104	110	80-126	6	30
1,2-Dichloropropane	20	20.77	20	21.57	104	108	80-120	4	30
cis-1,3-Dichloropropene	20	20.17	20	21.15	101	106	66-120	5	30
trans-1,3-Dichloropropene	20	19.47	20	20.37	97	102	68-122	5	30
1,4-Dioxane	500	426.59	500	482.46	85	96	62-131	12	30
Ethyl Acetate	20	19.71	20	21.53	99	108	65-133	9	30
Ethyl Ether	20	16.71	20	17.19	84	86	59-135	3	30
Ethylbenzene	20	20.21	20	21.41	101	107	78-120	6	30
Freon 113	20	22.4	20	23.48	112	117	64-135	5	30
n-Heptane	20	20.98	20	21.64	105	108	50-141	3	30
n-Hexane	20	19.92	20	21.08	100	105	50-132	6	30
2-Hexanone	100	106.72	100	104.07	107	104	54-140	3	30
Isobutyl Alcohol	500	429.37	500	479.03	86	96	69-129	11	30
Isopropylbenzene	20	21.47	20	22.79	107	114	77-120	6	30
p-Isopropyltoluene	20	21.53	20	22.82	108	114	72-120	6	30
Methyl Acetate	20	21.53	20	20.42	108	102	67-128	5	30
Methyl Tertiary Butyl Ether	20	20.7	20	20.67	104	103	72-120	0	30
4-Methyl-2-pentanone	100	104.23	100	98.65	104	99	67-128	5	30
Methylcyclohexane	20	19.74	20	20.72	99	104	61-124	5	30
Methylene Chloride	20	21.43	20	21.74	107	109	76-122	1	30
Naphthalene	20	16.81	20	17.32	84	87	48-130	3	30

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Quality Control Summary

Client Name: ARCADIS U.S., Inc. Group Number: 2060623
Reported: 10/04/2019 12:51

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/kg	LCS Conc ug/kg	LCSD Spike Added ug/kg	LCSD Conc ug/kg	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
2-Nitropropane	20	12.61	20	14.44	63	72	27-183	14	30
Styrene	20	19.81	20	20.53	99	103	76-120	4	30
1,1,2,2-Tetrachloroethane	20	20.58	20	20.61	103	103	69-125	0	30
Tetrachloroethene	20	21.11	20	22.32	106	112	73-120	6	30
Tetrahydrofuran	100	86.84	100	94.78	87	95	71-127	9	30
Toluene	20	19.56	20	20.51	98	103	80-120	5	30
1,2,3-Trichlorobenzene	20	18.51	20	19.55	93	98	57-131	5	30
1,2,4-Trichlorobenzene	20	18.44	20	19.27	92	96	56-130	4	30
1,1,1-Trichloroethane	20	21.57	20	22.64	108	113	69-123	5	30
1,1,2-Trichloroethane	20	21.86	20	22.05	109	110	80-120	1	30
Trichloroethene	20	20.83	20	21.94	104	110	80-120	5	30
Trichlorofluoromethane	20	17.65	20	18.32	88	92	55-134	4	30
1,2,4-Trimethylbenzene	20	20.08	20	21.43	100	107	73-120	6	30
1,3,5-Trimethylbenzene	20	20.83	20	22.09	104	110	73-120	6	30
Vinyl Chloride	20	17.04	20	18.09	85	90	52-120	6	30
m+p-Xylene	40	41.46	40	43.14	104	108	80-120	4	30
o-Xylene	20	20.45	20	21.25	102	106	75-120	4	30
Xylene (Total)	60	61.92	60	64.39	103	107	75-120	4	30
	ug/l	**ug/l**	**ug/l**	**ug/l**					
Batch number: 4192473AA	Sample number(s): 1134884								
Acetone	150	150.29			100		54-157		
Acetonitrile	150	146.36	150	136.43	98	91	66-149	7	30
Benzene	20	20.93			105		80-120		
Bromochloromethane	20	17.56			88		80-120		
Bromodichloromethane	20	17.27			86		71-120		
Bromoform	20	13.03			65		51-120		
Bromomethane	20	14.9			75		53-128		
n-Butanol	1000	966.54			97		57-130		
2-Butanone	150	131.78			88		59-135		
t-Butyl alcohol	200	172.67			86		60-130		
n-Butylbenzene	20	20.11			101		76-120		
sec-Butylbenzene	20	19.82			99		77-120		
tert-Butylbenzene	20	19.29			96		78-120		
Carbon Disulfide	20	17.43			87		65-128		
Carbon Tetrachloride	20	16.65			83		64-134		
Chlorobenzene	20	20.2			101		80-120		
Chlorodifluoromethane	20	16.84	20	15.67	84	78	45-149	7	30
Chloroethane	20	16.28			81		55-123		
Chloroform	20	19.51			98		80-120		
Chloromethane	20	16.5			82		56-121		
Cyclohexane	20	17.52			88		68-126		
Cyclohexanone	500	509.82			102		27-141		
1,2-Dibromo-3-chloropropane	20	16.62			83		47-131		

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Quality Control Summary

Client Name: ARCADIS U.S., Inc. Group Number: 2060623
Reported: 10/04/2019 12:51

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Dibromochloromethane	20	15.88			79		71-120		
1,2-Dibromoethane	20	19.4			97		77-120		
1,2-Dichlorobenzene	20	19.62			98		80-120		
1,3-Dichlorobenzene	20	19.62			98		80-120		
1,4-Dichlorobenzene	20	20.16			101		80-120		
Dichlorodifluoromethane	20	12.79			64		41-127		
1,1-Dichloroethane	20	20.83			104		80-120		
1,2-Dichloroethane	20	19.77			99		73-124		
1,1-Dichloroethene	20	21.42			107		80-131		
cis-1,2-Dichloroethene	20	21.68			108		80-125		
trans-1,2-Dichloroethene	20	20.8			104		80-126		
1,2-Dichloropropane	20	21.59			108		80-120		
cis-1,3-Dichloropropene	20	17.92			90		75-120		
trans-1,3-Dichloropropene	20	16.82			84		67-120		
1,4-Dioxane	500	529.38			106		63-146		
Ethyl Acetate	20	21.35	20	20.34	107	102	67-131	5	30
Ethyl ether	20	19.09	20	17.96	95	90	59-141	6	30
Ethylbenzene	20	19.63			98		80-120		
Freon 113	20	18.8			94		73-139		
n-Heptane	20	16.51			83		56-133		
n-Hexane	20	18.54			93		61-138		
2-Hexanone	100	93.07			93		56-135		
Isobutyl Alcohol	500	513.68			103		61-136		
Isopropylbenzene	20	18.49			92		80-120		
p-Isopropyltoluene	20	19.11			96		76-120		
Methyl Acetate	20	18.77			94		54-136		
Methyl Tertiary Butyl Ether	20	17.93			90		69-122		
4-Methyl-2-pentanone	100	88.71			89		62-133		
Methylcyclohexane	20	15.57			78		67-121		
Methylene Chloride	20	21.87			109		80-120		
Naphthalene	20	17.57			88		53-124		
2-Nitropropane	20	11.62			58		19-144		
Styrene	20	18.9			95		80-120		
1,1,2,2-Tetrachloroethane	20	21.73			109		72-120		
Tetrachloroethene	20	18.85			94		80-120		
Tetrahydrofuran	100	96.77			97		54-144		
Toluene	20	20.33			102		80-120		
1,2,3-Trichlorobenzene	20	17.95			90		66-120		
1,2,4-Trichlorobenzene	20	17.01			85		63-120		
1,1,1-Trichloroethane	20	17.9			90		67-126		
1,1,2-Trichloroethane	20	20.66			103		80-120		
Trichloroethene	20	19.83			99		80-120		
Trichlorofluoromethane	20	14.08			70		55-135		
1,2,4-Trimethylbenzene	20	19.96			100		75-120		

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Quality Control Summary

Client Name: ARCADIS U.S., Inc. Group Number: 2060623
Reported: 10/04/2019 12:51

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
1,3,5-Trimethylbenzene	20	19.86			99		75-120		
Vinyl Chloride	20	16.38			82		56-120		
m+p-Xylene	40	39.09			98		80-120		
o-Xylene	20	18.58			93		80-120		
Xylene (Total)	60	57.67			96		80-120		
	ug/kg	**ug/kg**	**ug/kg**	**ug/kg**					
Batch number: 19240SLC026	Sample number(s): 1134881-1134883								
Acenaphthene	1666.67	1717.39			103		58-107		
Acenaphthylene	1666.67	1895.83			114		62-115		
Acetophenone	1666.67	1523.58			91		47-102		
Aniline	1666.67	1351.09			81		22-91		
Anthracene	1666.67	1795.18			108		67-111		
Atrazine	1666.67	1688.12			101		68-122		
Benzaldehyde	1666.67	1100.59			66		20-101		
Benzo(a)anthracene	1666.67	1834.55			110		67-112		
Benzo(a)pyrene	1666.67	1780.35			107		68-119		
Benzo(b)fluoranthene	1666.67	1716.81			103		65-117		
Benzo(g,h,i)perylene	1666.67	1879.55			113		65-119		
Benzo(k)fluoranthene	1666.67	1648.7			99		66-122		
Benzyl alcohol	1666.67	1549.9			93		45-115		
1,1'-Biphenyl	1666.67	1704.96			102		59-106		
4-Bromophenyl-phenylether	1666.67	1838.45			110		63-115		
Butylbenzylphthalate	1666.67	1739.72			104		67-115		
Di-n-butylphthalate	1666.67	1713.03			103		67-118		
Caprolactam	1666.67	1776.51			107		61-113		
Carbazole	1666.67	1835.15			110		72-114		
4-Chloro-3-methylphenol	1666.67	1615			97		62-109		
4-Chloroaniline	1666.67	1452.19			87		14-97		
bis(2-Chloroethoxy)methane	1666.67	1498.74			90		50-103		
bis(2-Chloroethyl)ether	1666.67	1453.26			87		40-99		
bis(2-Chloroisopropyl)ether	1666.67	1334.48			80		35-93		
2-Chloronaphthalene	1666.67	1841.71			111		43-124		
2-Chlorophenol	1666.67	1628.33			98		47-103		
4-Chlorophenyl-phenylether	1666.67	1678.12			101		58-110		
Chrysene	1666.67	1722.91			103		66-111		
Dibenz(a,h)anthracene	1666.67	2065.21			124		72-127		
Dibenzofuran	1666.67	1659.29			100		60-108		
3,3'-Dichlorobenzidine	1666.67	1543.73			93		16-107		
2,4-Dichlorophenol	1666.67	1673.7			100		58-107		
Dicyclohexylamine	1666.67	1649.73	1666.67	1646.58	99	99	49-141	0	30
Diethylphthalate	1666.67	1711.39			103		58-115		
N,N-Dimethylaniline	1666.67	556.49	1666.67	567	33	34	32-133	2	30
2,4-Dimethylphenol	1666.67	1284.25			77		46-89		

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Quality Control Summary

Client Name: ARCADIS U.S., Inc. Group Number: 2060623
Reported: 10/04/2019 12:51

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/kg	LCS Conc ug/kg	LCSD Spike Added ug/kg	LCSD Conc ug/kg	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Dimethylphthalate	1666.67	1667.42			100		56-116		
4,6-Dinitro-2-methylphenol	1666.67	2004.96			120		45-134		
2,4-Dinitrophenol	3333.33	4083.09			122		10-138		
2,4-Dinitrotoluene	1666.67	1812.94			109		61-121		
2,6-Dinitrotoluene	1666.67	1849.96			111		64-115		
bis(2-Ethylhexyl)phthalate	1666.67	1825.42			110		66-121		
Fluoranthene	1666.67	1761.31			106		65-114		
Fluorene	1666.67	1656.88			99		62-110		
Hexachlorobenzene	1666.67	1767.61			106		57-123		
Hexachlorobutadiene	1666.67	1475.7			89		32-123		
Hexachlorocyclopentadiene	3333.33	3092.45			93		14-109		
Hexachloroethane	1666.67	1335.73			80		25-107		
Indeno(1,2,3-cd)pyrene	1666.67	1920.7			115		67-119		
Isophorone	1666.67	1480.07			89		49-103		
2-Methylnaphthalene	1666.67	1548.82			93		52-104		
2-Methylphenol	1666.67	1592.46			96		41-113		
4-Methylphenol	1666.67	1711.38			103		46-112		
Naphthalene	1666.67	1487.89			89		46-99		
2-Nitroaniline	1666.67	2056.07			123*		65-119		
3-Nitroaniline	1666.67	1842.08			111		58-115		
4-Nitroaniline	1666.67	1400.78			84		41-91		
Nitrobenzene	1666.67	1450.38			87		33-115		
2-Nitrophenol	1666.67	1698.57			102		50-107		
4-Nitrophenol	1666.67	1725.37			104		54-107		
N-Nitroso-di-n-propylamine	1666.67	1437.61			86		43-100		
N-Nitrosodiphenylamine	1666.67	1832.69			110		68-115		
Di-n-octylphthalate	1666.67	1688.27			101		64-125		
Pentachlorophenol	1666.67	1857.12			111		48-127		
Phenanthrene	1666.67	1759.64			106		66-110		
Phenol	1666.67	1434			86		43-105		
Pyrene	1666.67	1647.07			99		67-109		
Pyridine	1666.67	954.62			57		10-117		
1,2,4,5-Tetrachlorobenzene	1666.67	1699.41			102*		54-101		
2,3,4,6-Tetrachlorophenol	1666.67	1966.03			118*		62-116		
2,4,5-Trichlorophenol	1666.67	1823.45			109		60-116		
2,4,6-Trichlorophenol	1666.67	1822.02			109		60-120		
Triethylamine	3333.33	1086.57	3333.33	1084.86	33*	33*	70-130	0	30
	mg/kg	**mg/kg**	**mg/kg**	**mg/kg**					
Batch number: 192410029A	Sample number(s): 1134881-1134883								
Ethylene glycol	99.8	114.4			115		76-122		
Propylene glycol	98.51	103.78			105		67-131		
	mg/l	**mg/l**	**mg/l**	**mg/l**					

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Quality Control Summary

Client Name: ARCADIS U.S., Inc. Group Number: 2060623
Reported: 10/04/2019 12:51

LCS/LCSD (continued)

Analysis Name	LCS Spike Added mg/l	LCS Conc mg/l	LCSD Spike Added mg/l	LCSD Conc mg/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 192470045A	Sample number(s): 1134884								
Ethylene glycol	102.78	96.02			93		77-121		
Propylene glycol	98.9	89.78			91		78-131		
	ug/kg	**ug/kg**	**ug/kg**	**ug/kg**					
Batch number: 192410001A	Sample number(s): 1134881-1134883								
Ethanol (by Direct Injection)	2501	2222.14			89		77-120		
Isopropanol	2505	2237.78			89		75-125		
Methanol (by Direct Injection)	2503	2432.76			97		76-119		
	ug/l	**ug/l**	**ug/l**	**ug/l**					
Batch number: 192460015A	Sample number(s): 1134884								
Ethanol	2501	2694.5			108		80-115		
Isopropanol	2505	2679.65			107		85-115		
Methanol	2503	2838.66			113		79-120		
	%	**%**	**%**	**%**					
Batch number: 19241820005A	Sample number(s): 1134881-1134883								
Moisture	89.5	89.45			100		99-101		
Moisture	89.5	89.45			100		99-101		
Moisture Duplicate	89.5	89.45			100		99-101		

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/kg	MS Spike Added ug/kg	MS Conc ug/kg	MSD Spike Added ug/kg	MSD Conc ug/kg	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: B192481AA	Sample number(s): 1134881-1134883 UNSPK: 1134881									
Acetone	36.23	146.21	248.84	140.19	255.35	145	156*	41-150	3	30
Benzene	N.D.	19.49	23.62	18.69	22.56	121*	121*	80-120	5	30
Bromochloromethane	N.D.	19.49	21.9	18.69	21.31	112	114	72-124	3	30
Bromodichloromethane	N.D.	19.49	23.1	18.69	21.92	119	117	70-120	5	30
Bromoform	N.D.	19.49	18.33	18.69	17.72	94	95	51-127	3	30
Bromomethane	N.D.	19.49	17.45	18.69	15.88	89	85	45-140	9	30
n-Butanol	N.D.	974.7	829.64	934.6	858	85	92	63-123	3	30
2-Butanone	N.D.	146.21	175.17	140.19	179	120	128	57-128	2	30
t-Butyl alcohol	N.D.	194.94	193.1	186.92	187.75	99	100	74-121	3	30
n-Butylbenzene	N.D.	19.49	31.92	18.69	32.82	164*	176*	71-121	3	30
sec-Butylbenzene	N.D.	19.49	44.42	18.69	47.75	228*	255*	72-120	7	30

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Quality Control Summary

Client Name: ARCADIS U.S., Inc. Group Number: 2060623
Reported: 10/04/2019 12:51

MS/MSD (continued)

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/kg	MS Spike Added ug/kg	MS Conc ug/kg	MSD Spike Added ug/kg	MSD Conc ug/kg	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
tert-Butylbenzene	N.D.	19.49	49.59	18.69	53.05	254*	284*	68-120	7	30
Carbon Disulfide	1.21	19.49	23.36	18.69	23.26	114	118	64-133	0	30
Carbon Tetrachloride	N.D.	19.49	25.63	18.69	24.84	131	133	64-134	3	30
Chlorobenzene	N.D.	19.49	22.67	18.69	21.51	116	115	80-120	5	30
Chloroethane	N.D.	19.49	18.52	18.69	16.86	95	90	43-135	9	30
Chloroform	N.D.	19.49	24.62	18.69	23.92	126*	128*	80-120	3	30
Chloromethane	N.D.	19.49	20.28	18.69	19.27	104	103	56-120	5	30
Cyclohexane	0.685	19.49	28.46	18.69	23.85	143*	124	58-126	18	30
Cyclohexanone	N.D.	487.35	333.17	467.3	291.24	68	62	47-136	13	30
1,2-Dibromo-3-chloropropane	N.D.	19.49	32.33	18.69	34.35	166*	184*	48-134	6	30
Dibromochloromethane	N.D.	19.49	24.43	18.69	24.17	125	129*	69-125	1	30
1,2-Dibromoethane	N.D.	19.49	21.6	18.69	21.63	111	116	76-120	0	30
1,2-Dichlorobenzene	N.D.	19.49	28.16	18.69	29.27	144*	157*	76-120	4	30
1,3-Dichlorobenzene	N.D.	19.49	25.82	18.69	27.05	132*	145*	75-120	5	30
1,4-Dichlorobenzene	N.D.	19.49	23.9	18.69	24.63	123*	132*	80-120	3	30
Dichlorodifluoromethane	N.D.	19.49	19.35	18.69	17.7	99	95	21-127	9	30
1,1-Dichloroethane	N.D.	19.49	24.14	18.69	23.37	124*	125*	79-120	3	30
1,2-Dichloroethane	N.D.	19.49	23.88	18.69	23.34	123	125	71-128	2	30
1,1-Dichloroethene	N.D.	19.49	26.87	18.69	25.96	138*	139*	73-129	3	30
cis-1,2-Dichloroethene	N.D.	19.49	25.16	18.69	24.23	129*	130*	80-123	4	30
trans-1,2-Dichloroethene	N.D.	19.49	24.2	18.69	23.35	124	125	80-125	4	30
1,2-Dichloropropane	N.D.	19.49	23.34	18.69	22.13	120	118	80-120	5	30
cis-1,3-Dichloropropene	N.D.	19.49	19.66	18.69	18.68	101	100	66-120	5	30
trans-1,3-Dichloropropene	N.D.	19.49	19.63	18.69	19.79	101	106	68-122	1	30
1,4-Dioxane	N.D.	487.35	464.45	467.3	457.03	95	98	62-131	2	30
Ethylbenzene	N.D.	19.49	24.48	18.69	22.87	126*	122*	78-120	7	30
Freon 113	N.D.	19.49	28.1	18.69	27.11	144*	145*	64-135	4	30
n-Heptane	3.45	19.49	19.65	18.69	19.34	83	85	50-141	2	30
n-Hexane	1.20	19.49	22.28	18.69	21.61	108	109	50-132	3	30
2-Hexanone	N.D.	97.47	133.84	93.46	146.47	137	157*	54-140	9	30
Isobutyl Alcohol	N.D.	487.35	468.75	467.3	471.61	96	101	69-129	1	30
Isopropylbenzene	N.D.	19.49	26.17	18.69	23.84	134*	128*	77-120	9	30
p-Isopropyltoluene	N.D.	19.49	40.24	18.69	42.59	206*	228*	72-120	6	30
Methyl Acetate	1.74	19.49	20.29	18.69	20.71	95	102	67-128	2	30
Methyl Tertiary Butyl Ether	N.D.	19.49	22.04	18.69	22.39	113	120	72-120	2	30
4-Methyl-2-pentanone	N.D.	97.47	102.4	93.46	108.96	105	117	67-128	6	30
Methylcyclohexane	2.39	19.49	24	18.69	22.02	111	105	61-124	9	30
Methylene Chloride	N.D.	19.49	24.41	18.69	23.19	125*	124*	76-122	5	30
Naphthalene	N.D.	19.49	12.86	18.69	12.36	66	66	48-130	4	30
2-Nitropropane	N.D.	19.49	14.6	18.69	15.25	75	82	27-183	4	30
Styrene	N.D.	19.49	19.44	18.69	17.63	100	94	76-120	10	30
1,1,2,2-Tetrachloroethane	N.D.	19.49	44.62	18.69	52.34	229*	280*	69-125	16	30
Tetrachloroethene	N.D.	19.49	28.4	18.69	27.28	146*	146*	73-120	4	30

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Quality Control Summary

Client Name: ARCADIS U.S., Inc. Group Number: 2060623
Reported: 10/04/2019 12:51

MS/MSD (continued)

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/kg	MS Spike Added ug/kg	MS Conc ug/kg	MSD Spike Added ug/kg	MSD Conc ug/kg	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Tetrahydrofuran	N.D.	97.47	98.48	93.46	104.09	101	111	71-127	6	30
Toluene	N.D.	19.49	26.07	18.69	25.42	134*	136*	80-120	3	30
1,2,3-Trichlorobenzene	N.D.	19.49	11.61	18.69	10.94	60	59	57-131	6	30
1,2,4-Trichlorobenzene	N.D.	19.49	11.27	18.69	10.37	58	55*	56-130	8	30
1,1,1-Trichloroethane	N.D.	19.49	25.93	18.69	24.96	133*	134*	69-123	4	30
1,1,2-Trichloroethane	N.D.	19.49	26.9	18.69	27.07	138*	145*	80-120	1	30
Trichloroethene	N.D.	19.49	23	18.69	21.64	118	116	80-120	6	30
Trichlorofluoromethane	N.D.	19.49	21.62	18.69	19.33	111	103	55-134	11	30
1,2,4-Trimethylbenzene	N.D.	19.49	38.21	18.69	40.03	196*	214*	73-120	5	30
1,3,5-Trimethylbenzene	N.D.	19.49	43.43	18.69	46.3	223*	248*	73-120	6	30
Vinyl Chloride	N.D.	19.49	20.66	18.69	18.42	106	99	52-120	11	30
m+p-Xylene	N.D.	38.99	48.21	37.38	44.68	124*	120	80-120	8	30
o-Xylene	N.D.	19.49	24.87	18.69	23.14	128*	124*	75-120	7	30
Xylene (Total)	N.D.	58.48	73.08	56.08	67.82	125*	121*	75-120	7	30
	ug/kg	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**					
Batch number: 19240SLC026	Sample number(s): 1134881-1134883 UNSPK: 1134881									
Acenaphthene	N.D.	1645.28	1497.76	1659.48	1397.33	91	84	58-107	7	30
Acenaphthylene	N.D.	1645.28	1633.76	1659.48	1570.68	99	95	62-115	4	30
Acetophenone	N.D.	1645.28	1345.28	1659.48	1202.59	82	72	47-102	11	30
Aniline	N.D.	1645.28	1029.48	1659.48	845.57	63	51	22-91	20	30
Anthracene	5.42	1645.28	1576.81	1659.48	1559.07	96	94	67-111	1	30
Atrazine	N.D.	1645.28	1487.94	1659.48	1527.16	90	92	68-122	3	30
Benzaldehyde	N.D.	1645.28	1034.47	1659.48	851.97	63	51	20-101	19	30
Benzo(a)anthracene	N.D.	1645.28	1610.61	1659.48	1684.42	98	102	67-112	4	30
Benzo(a)pyrene	N.D.	1645.28	1612.51	1659.48	1572.23	98	95	68-119	3	30
Benzo(b)fluoranthene	6.09	1645.28	1533.71	1659.48	1542.93	93	93	65-117	1	30
Benzo(g,h,i)perylene	N.D.	1645.28	1587.74	1659.48	1596.87	97	96	65-119	1	30
Benzo(k)fluoranthene	N.D.	1645.28	1449.16	1659.48	1413.62	88	85	66-122	2	30
Benzyl alcohol	N.D.	1645.28	1413.75	1659.48	1242.95	86	75	45-115	13	30
1,1'-Biphenyl	N.D.	1645.28	1450.99	1659.48	1372.02	88	83	59-106	6	30
4-Bromophenyl-phenylether	N.D.	1645.28	1601.8	1659.48	1492.49	97	90	63-115	7	30
Butylbenzylphthalate	N.D.	1645.28	1601.75	1659.48	1673.95	97	101	67-115	4	30
Di-n-butylphthalate	N.D.	1645.28	1531.88	1659.48	1564.86	93	94	67-118	2	30
Caprolactam	N.D.	1645.28	1609.41	1659.48	1553.58	98	94	61-113	4	30
Carbazole	N.D.	1645.28	1584.75	1659.48	1631.94	96	98	72-114	3	30
4-Chloro-3-methylphenol	N.D.	1645.28	1422.04	1659.48	1375.73	86	83	62-109	3	30
4-Chloroaniline	N.D.	1645.28	1234.07	1659.48	1109.01	75	67	14-97	11	30
bis(2-Chloroethoxy)methane	N.D.	1645.28	1256.26	1659.48	1168.45	76	70	50-103	7	30
bis(2-Chloroethyl)ether	N.D.	1645.28	1205.85	1659.48	1037.82	73	63	40-99	15	30
bis(2-Chloroisopropyl)ether	N.D.	1645.28	1112.19	1659.48	962.57	68	58	35-93	14	30
2-Chloronaphthalene	N.D.	1645.28	1444.16	1659.48	1349.09	88	81	43-124	7	30
2-Chlorophenol	N.D.	1645.28	1427.84	1659.48	1228.8	87	74	47-103	15	30

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Quality Control Summary

Client Name: ARCADIS U.S., Inc. Group Number: 2060623
Reported: 10/04/2019 12:51

MS/MSD (continued)

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/kg	MS Spike Added ug/kg	MS Conc ug/kg	MSD Spike Added ug/kg	MSD Conc ug/kg	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
4-Chlorophenyl-phenylether	N.D.	1645.28	1487.65	1659.48	1388.09	90	84	58-110	7	30
Chrysene	6.82	1645.28	1536.18	1659.48	1595.4	93	96	66-111	4	30
Dibenz(a,h)anthracene	N.D.	1645.28	1724.25	1659.48	1726.35	105	104	72-127	0	30
Dibenzofuran	N.D.	1645.28	1456.23	1659.48	1370.32	89	83	60-108	6	30
3,3'-Dichlorobenzidine	N.D.	1645.28	1522.31	1659.48	1545.05	93	93	16-107	1	30
2,4-Dichlorophenol	N.D.	1645.28	1415.6	1659.48	1335.48	86	80	58-107	6	30
Diethylphthalate	N.D.	1645.28	1491.15	1659.48	1450.27	91	87	58-115	3	30
2,4-Dimethylphenol	N.D.	1645.28	1111.88	1659.48	1011.62	68	61	46-89	9	30
Dimethylphthalate	N.D.	1645.28	1407.67	1659.48	1366.44	86	82	56-116	3	30
4,6-Dinitro-2-methylphenol	N.D.	1645.28	563.46	1659.48	580.44	34*	35*	45-134	3	30
2,4-Dinitrophenol	N.D.	3290.56	656.12	3318.95	612.18	20	18	10-138	7	30
2,4-Dinitrotoluene	N.D.	1645.28	1594.21	1659.48	1568.54	97	95	61-121	2	30
2,6-Dinitrotoluene	N.D.	1645.28	1576.37	1659.48	1535.7	96	93	64-115	3	30
bis(2-Ethylhexyl)phthalate	N.D.	1645.28	1742.69	1659.48	1775.41	106	107	66-121	2	30
Fluoranthene	5.89	1645.28	1549.94	1659.48	1586.35	94	95	65-114	2	30
Fluorene	4.53	1645.28	1490.61	1659.48	1410.74	90	85	62-110	6	30
Hexachlorobenzene	N.D.	1645.28	1562.85	1659.48	1517.54	95	91	57-123	3	30
Hexachlorobutadiene	N.D.	1645.28	1255.27	1659.48	1146.8	76	69	32-123	9	30
Hexachlorocyclopentadiene	N.D.	3290.56	N.D.	3318.95	N.D.	0*	0*	14-109	0	30
Hexachloroethane	N.D.	1645.28	732.35	1659.48	630.69	45	38	25-107	15	30
Indeno(1,2,3-cd)pyrene	N.D.	1645.28	1644.13	1659.48	1627.59	100	98	67-119	1	30
Isophorone	N.D.	1645.28	1261.96	1659.48	1146.19	77	69	49-103	10	30
2-Methylnaphthalene	3.61	1645.28	1368.66	1659.48	1264.69	83	76	52-104	8	30
2-Methylphenol	N.D.	1645.28	1383.84	1659.48	1229.01	84	74	41-113	12	30
4-Methylphenol	N.D.	1645.28	1485.58	1659.48	1342.82	90	81	46-112	10	30
Naphthalene	N.D.	1645.28	1251.98	1659.48	1172.32	76	71	46-99	7	30
2-Nitroaniline	N.D.	1645.28	1775.27	1659.48	1708.58	108	103	65-119	4	30
3-Nitroaniline	N.D.	1645.28	1662.9	1659.48	1566.8	101	94	58-115	6	30
4-Nitroaniline	N.D.	1645.28	1304.11	1659.48	1289.63	79	78	41-91	1	30
Nitrobenzene	N.D.	1645.28	1195.98	1659.48	1100.4	73	66	33-115	8	30
2-Nitrophenol	N.D.	1645.28	1493.25	1659.48	1290.8	91	78	50-107	15	30
4-Nitrophenol	N.D.	1645.28	1444.97	1659.48	1418.01	88	85	54-107	2	30
N-Nitroso-di-n-propylamine	N.D.	1645.28	1244.81	1659.48	1089.95	76	66	43-100	13	30
N-Nitrosodiphenylamine	N.D.	1645.28	1567.37	1659.48	1520.68	95	92	68-115	3	30
Di-n-octylphthalate	N.D.	1645.28	1596.38	1659.48	1533.47	97	92	64-125	4	30
Pentachlorophenol	N.D.	1645.28	1415.2	1659.48	1446.57	86	87	48-127	2	30
Phenanthrene	7.00	1645.28	1536.79	1659.48	1535.88	93	92	66-110	0	30
Phenol	N.D.	1645.28	1252.94	1659.48	1106.52	76	67	43-105	12	30
Pyrene	8.39	1645.28	1468.7	1659.48	1534.39	89	92	67-109	4	30
Pyridine	N.D.	1645.28	766.6	1659.48	590.87	47	36	10-117	26	30
1,2,4,5-Tetrachlorobenzene	N.D.	1645.28	1406.19	1659.48	1343.2	85	81	54-101	5	30
2,3,4,6-Tetrachlorophenol	N.D.	1645.28	1639.54	1659.48	1721.58	100	104	62-116	5	30
2,4,5-Trichlorophenol	N.D.	1645.28	1534.6	1659.48	1483.61	93	89	60-116	3	30

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: ARCADIS U.S., Inc.
Reported: 10/04/2019 12:51

Group Number: 2060623

MS/MSD (continued)

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/kg	MS Spike Added ug/kg	MS Conc ug/kg	MSD Spike Added ug/kg	MSD Conc ug/kg	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
2,4,6-Trichlorophenol	N.D.	1645.28	1455.56	1659.48	1492.14	88	90	60-120	2	30
	mg/kg	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**					
Batch number: 192410029A	Sample number(s): 1134881-1134883 UNSPK: 1134881									
Ethylene glycol	N.D.	99.8	94.72	99.8	99.83	95	100	76-122	5	20
Propylene glycol	N.D.	98.51	86.42	98.51	89.59	88	91	67-131	4	20
	mg/l	**mg/l**	**mg/l**	**mg/l**	**mg/l**					
Batch number: 192470045A	Sample number(s): 1134884 UNSPK: 1134884									
Ethylene glycol	N.D.	102.78	97.83	102.78	99.36	95	97	77-121	2	20
Propylene glycol	N.D.	98.9	89.97	98.9	91.99	91	93	78-131	2	20
	ug/kg	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**					
Batch number: 192410001A	Sample number(s): 1134881-1134883 UNSPK: 1134881									
Ethanol (by Direct Injection)	N.D.	2501	2148.89	2501	2256.4	86	90	77-120	5	20
Isopropanol	N.D.	2505	2157.24	2505	2260.53	86	90	75-125	5	20
Methanol (by Direct Injection)	N.D.	2503	2448.65	2503	2503.19	98	100	76-119	2	20

Laboratory Duplicate

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc	DUP Conc	DUP RPD	DUP RPD Max
	%	%		
Batch number: 19241820005A	Sample number(s): 1134881-1134883 BKG: 1134881			
Moisture	7.23	6.80	6*	5
Moisture	7.23	6.80	6*	5
Moisture Duplicate	7.23	6.80	6*	5

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs- 5ml Water by 8260C/D
Batch number: 4192473AA

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: ARCADIS U.S., Inc. Group Number: 2060623
Reported: 10/04/2019 12:51

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs- 5ml Water by 8260C/D
Batch number: 4192473AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
1134884	99	104	101	95
Blank	98	104	102	94
LCS	95	103	102	92
LCSD	94	101	101	93
Limits:	80-120	80-120	80-120	80-120

Analysis Name: VOCs- Solid by 8260C/D
Batch number: B192481AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
1134881	101	97	111	79
1134882	104	103	113	77
1134883	105	104	117	79
Blank	100	97	98	97
LCS	104	106	98	101
LCSD	102	102	98	100
MS	104	103	113	77
MSD	105	104	117	79
Limits:	50-141	54-135	52-141	50-131

Analysis Name: SVOA 8270D/E (microwave)
Batch number: 19240SLC026

	Phenol-d6	2-Fluorophenol	2,4,6-Tribromophenol	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14
1134881	75	76	90	77	85	104
1134882	82	83	95	77	82	102
1134883	73	74	103	73	79	110
Blank	92	98	121	96	101	120
LCS	90	95	126	89	96	111
LCSD	85	83	123	81	92	115
MS	82	83	95	77	82	102
MSD	73	74	103	73	79	110
Limits:	21-112	18-115	10-136	14-115	22-122	23-141

Analysis Name: Alcohols in Soil
Batch number: 192410001A

	Acetone-D1	Acetone-D2
1134881	102	90
1134882	90	85
1134883	94	89
Blank	107	94

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: ARCADIS U.S., Inc. Group Number: 2060623
Reported: 10/04/2019 12:51

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: Alcohols in Soil
Batch number: 192410001A

	Acetone-D1	Acetone-D2
LCS	98	88
MS	90	85
MSD	94	89
Limits:	10-179	10-179

Analysis Name: Glycols in Soil by 8015C/D
Batch number: 192410029A

	Tetramethylene glycol
1134881	92
1134882	101
1134883	97
Blank	90
LCS	124
MS	101
MSD	97
Limits:	36-143

Analysis Name: Alcohols in Water
Batch number: 192460015A

	Acetone-D1	Acetone-D2
1134884	95	99
Blank	93	97
LCS	91	98
Limits:	58-149	58-149

Analysis Name: Glycols in Water by 8015C/D
Batch number: 192470045A

	Tetramethylene glycol
1134884	64
Blank	67
LCS	91
MS	93
MSD	92
Limits:	17-134

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

3074 2066823 1134881-4 – LANCASTER –

ARCADIS

ID#:

CHAIN OF CUSTODY & LABORATORY ANALYSIS REQUEST FORM

Page 1 of 1

Lab Work Order #: 247282

Send Results to:

Contact & Company Name: William McCune Arcadis-US	Telephone: (315) – 420-4344
Address: 110 W. Fayette #300	Fax:
City: Syracuse State: NY Zip: 13202	E-mail Address: William.McCune@Arcadis.com
Project Name/Location (City, State): BMS Phase IIRI (Syracuse, NY)	Project #: 30033396
Sampler's Printed Name: Evan Green	Sampler's Signature:

Sample ID	Collection Date	Collection Time	Type (✓) Comp	Type (✓) Grab	Matrix	Preservative	Filtered (✓)	# of Containers	Container Information	Moisture	SVOA 8270 (microwave)	Alcohols in soil (Methods)	Glycols in soil by 8015C	VOCs-Soil/1D NYS 8260C			
										PARAMETER ANALYSIS & METHOD								
										F/G							
								1		1	1	1	1	3			
BDA-114RX (20.5-22.5)	8/23/14	1020		X	SO					X	X	X	X	X			
BDA-114RX (20.5-22.5) MS	8/23/14	1020		X	SO					X	X	X	X	X			
BDA-114RX (20.5-22.5 MSD	8/23/14	1020		X	SO					X	X	X	X	X			

Keys

Preservation Key:
A. H_2SO_4
B. HCL
C. HNO_3
D. NaOH
E. None
F. Other: MeOH
G. Other: DI
H. Other:

Container Information Key:
1. 40 ml Vial
2. 1 L Amber
3. 250 ml Plastic
4. 500 ml Plastic
5. Encore
6. 2 oz. Glass
7. 4 oz. Glass
8. 8 oz. Glass
9. Other:
10. Other:

Matrix Key:
SO - Soil; SE - Sediment; NL - NAPL/Oil; W - Water; SL - Sludge; SW - Sample Wipe; T - Tissue; A - Air; Other:

REMARKS

RL 8-23-19

Syracuse #225

Special Instructions/Comments: – Samples are not for permit Compliance
– Data Package to be submitted as NYSDEC Category B

☐ Special QA/QC Instructions(✓):

Laboratory Information and Receipt		Relinquished By	Received By	Relinquished By	Laboratory Received By
Lab Name: Eurofins Lancaster Laboratories Environmental	Cooler Custody Seal (✓)	Printed Name: Evan Green	Printed Name: R English	Printed Name:	Printed Name: Jessenia Colon Martinez
☐ Cooler packed with ice (✓)	☒ Intact ☐ Not Intact	Signature:	Signature:	Signature:	Signature:
Specify Turnaround Requirements: Standard (10 days)	Sample Receipt:	Firm: Arcadis	Firm/Courier: Eurofins Lancaster	Firm/Courier:	Firm: ELLE
Shipping Tracking #:	Condition/Cooler Temp: 3.7	Date/Time: 8/23/14 1630	Date/Time: 8-23-19, 16:30	Date/Time:	Date/Time: 8-24-19 9:20

20730826 CofC AR Form 08.27.2015

Distribution: WHITE – Laboratory returns with results; YELLOW – Lab copy; PINK – Retained by Arcadis

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Sample Administration Receipt Documentation Log

Doc Log ID: 258282

Group Number(s): 2060623

Client: ARCADIS

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Timestamp:	08/24/2019 9:20
Number of Packages:	1	Number of Projects:	1

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	Total Trip Blank Qty:	6
Samples Chilled:	Yes	Trip Blank Type:	UNP
Paperwork Enclosed:	Yes	Air Quality Samples Present:	No
Samples Intact:	Yes		
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Jessenia Colon Martinez (30 856) at 11:50 on 08/24/2019

Samples Chilled Details

Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	192099060	3.7	IR	Wet	Y	Loose/Bag	N

2425 New Holland Pike
Lancaster, PA 17605-2425
T | 717-656-2300
F | 717-656-2681
www.LancasterLabs.com

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mL**	milliliter(s)
C	degrees Celsius	**MPN**	Most Probable Number
cfu	colony forming units	**N.D.**	non-detect
CP Units	cobalt-chloroplatinate units	**ng**	nanogram(s)
F	degrees Fahrenheit	**NTU**	nephelometric turbidity units
g	gram(s)	**pg/L**	picogram/liter
IU	International Units	**RL**	Reporting Limit
kg	kilogram(s)	**TNTC**	Too Numerous To Count
L	liter(s)	**µg**	microgram(s)
lb.	pound(s)	**µL**	microliter(s)
m3	cubic meter(s)	**umhos/cm**	micromhos/cm
meq	milliequivalents	**MCL**	Maximum Contamination Limit
mg	milligram(s)		

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

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Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
P^	Concentration difference between the primary and confirmation column > 40%. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

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REVISED

ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

ARCADIS U.S., Inc.
630 Plaza Drive
Suite 600
Highlands Ranch CO 80129

Report Date: January 27, 2020 16:57

Project: Bristol-Myers Squibb

Account #: 03074
Group Number: 2071526
SDG: BMS81
PO Number: 30033396
State of Sample Origin: NY

Electronic Copy To	Arcadis	Attn: William McCune
Electronic Copy To	Arcadis	Attn: Lawrence Carey Healy

Respectfully Submitted,

Megan A. Moeller
Senior Specialist

(717) 556-7261

A previous version of this report was generated on 11/26/2019 09:30.

To view our laboratory's current scopes of accreditation please go to https://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/certifications-and-accreditations-eurofins-lancaster-laboratories-environmental/ . Historical copies may be requested through your project manager.

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REVISED

SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
PW-6T Grab Groundwater	10/28/2019 13:55	1186458
PW-6L Grab Groundwater	10/28/2019 15:10	1186459
PW-3MD Grab Groundwater	10/28/2019 13:55	1186460
PW-3MS Grab Groundwater	10/28/2019 15:05	1186461
PW-3T Grab Groundwater	10/28/2019 11:25	1186462
PW-4LD Grab Groundwater	10/28/2019 14:36	1186463
PW-4F Grab Groundwater	10/28/2019 11:31	1186464
PW-4LS Grab Groundwater	10/28/2019 13:27	1186465
Trip Blank Water	10/23/2019	1186466

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

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Project Name: Bristol-Myers Squibb
ELLE Group #: 2071526

General Comments:

Through our technical processes and second person review of data, we have established that our data/deliverables are in compliance with the methods and project requirements unless otherwise noted or previously resolved with the client. The compliance signature is located on the cover page of the Analysis Reports.

See the Laboratory Sample Analysis Record section of the Analysis Report for the method references.

All QC met criteria unless otherwise noted in an Analysis Specific Comment below.

Refer to the QC Summary for specific values and acceptance criteria.

Project specific QC samples are not included in this data set.

Matrix QC may not be reported if site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

Surrogate recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in an Analysis Specific Comment below.

The samples were received at the appropriate temperature and in accordance with the chain of custody unless otherwise noted.

Analysis Specific Comments:

SW-846 8270D, GC/MS Semivolatiles

Sample #s: 1186458, 1186459, 1186460, 1186461, 1186462, 1186463, 1186464, 1186465

The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the TNI/DoD Standards. The following analytes are accepted based on this allowance: Benzo(k)fluoranthene

Batch #: 19305WAF026 (Sample number(s): 1186458-1186465)

The recovery(ies) for the following analyte(s) in the LCS and/or LCSD were below the acceptance window: Benzo(k)fluoranthene

SW-846 8315A, Aldehydes & Ketones

Sample #s: 1186458, 1186459, 1186460, 1186461, 1186462, 1186463, 1186464, 1186465

The response for a target analyte(s) in the initial calibration verification standard is outside the QC acceptance limits.

SW-846 8015C Feb 2007 Rev 3, GC Miscellaneous

Sample #s: 1186458, 1186459, 1186460, 1186461, 1186462, 1186463, 1186464, 1186465

The response for tetramethylene glycol in the continuing calibration verification standard is outside the QC acceptance limits low. The following action was taken:
The analysis was repeated and the continuing calibration verification standard bracketing the sample on the second trial is also outside the acceptance limits. This effect is attributed

to the sample matrix and the data is reported.

Batch #: 193080027A (Sample number(s): 1186458, 1186462, 1186464-1186465)

The recovery(ies) for one or more surrogates were below the acceptance window for sample(s) 1186458, 1186462, 1186464, 1186465

Batch #: 193100032A (Sample number(s): 1186459-1186461, 1186463 UNSPK: 1186458)

The relative percent difference(s) for the following analyte(s) in the MS/MSD were outside acceptance windows: Ethylene glycol

The recovery(ies) for one or more surrogates were below the acceptance window for sample(s) 1186460, 1186461, 1186463

REVISED

Sample Description: **PW-6T Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/29/2019 11:13
Collection Date/Time: 10/28/2019 13:55
SDG#: BMS81-01

ARCADIS U.S., Inc.
ELLE Sample #: GW 1186458
ELLE Group #: 2071526
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	20	0.7	1
11997	Acetonitrile	75-05-8	N.D.	100	16	1
11997	Benzene	71-43-2	N.D.	1	0.2	1
11997	Bromochloromethane	74-97-5	N.D.	5	0.2	1
11997	Bromodichloromethane	75-27-4	N.D.	1	0.2	1
11997	Bromoform	75-25-2	N.D.	4	1	1
11997	Bromomethane	74-83-9	N.D.	1	0.3	1
11997	n-Butanol	71-36-3	N.D.	250	61	1
11997	2-Butanone	78-93-3	N.D.	10	0.3	1
11997	t-Butyl alcohol	75-65-0	N.D.	50	12	1
11997	n-Butylbenzene	104-51-8	N.D.	5	0.2	1
11997	sec-Butylbenzene	135-98-8	N.D.	5	0.2	1
11997	tert-Butylbenzene	98-06-6	N.D.	5	0.3	1
11997	Carbon Disulfide	75-15-0	N.D.	5	0.2	1
11997	Carbon Tetrachloride	56-23-5	N.D.	1	0.2	1
11997	Chlorobenzene	108-90-7	N.D.	1	0.2	1
11997	Chlorodifluoromethane[1]	75-45-6	N.D.	5	2	1
11997	Chloroethane	75-00-3	N.D.	1	0.2	1
11997	Chloroform	67-66-3	0.3 J	1	0.2	1
11997	Chloromethane	74-87-3	N.D.	1	0.2	1
11997	Cyclohexane	110-82-7	N.D.	5	1	1
11997	Cyclohexanone[1]	108-94-1	N.D.	100	25	1
11997	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	5	0.3	1
11997	Dibromochloromethane	124-48-1	N.D.	1	0.2	1
11997	1,2-Dibromoethane	106-93-4	N.D.	1	0.2	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	5	0.2	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	5	0.2	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	5	0.2	1
11997	Dichlorodifluoromethane	75-71-8	N.D.	1	0.2	1
11997	1,1-Dichloroethane	75-34-3	N.D.	1	0.2	1
11997	1,2-Dichloroethane	107-06-2	N.D.	1	0.3	1
11997	1,1-Dichloroethene	75-35-4	N.D.	1	0.2	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	1	0.2	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	1	0.2	1
11997	1,2-Dichloropropane	78-87-5	N.D.	1	0.2	1
11997	cis-1,3-Dichloropropene	10061-01-5	N.D.	1	0.2	1
11997	trans-1,3-Dichloropropene	10061-02-6	N.D.	1	0.2	1
11997	1,4-Dioxane	123-91-1	N.D.	250	29	1
11997	Ethyl Acetate	141-78-6	N.D.	5	0.7	1
11997	Ethyl ether	60-29-7	N.D.	5	0.2	1
11997	Ethylbenzene	100-41-4	N.D.	1	0.4	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **PW-6T Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/29/2019 11:13
Collection Date/Time: 10/28/2019 13:55
SDG#: BMS81-01

ARCADIS U.S., Inc.
ELLE Sample #: GW 1186458
ELLE Group #: 2071526
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Freon 113	76-13-1	N.D.	10	0.2	1
11997	n-Heptane[1]	142-82-5	N.D.	5	2	1
11997	n-Hexane[1]	110-54-3	N.D.	5	2	1
11997	2-Hexanone	591-78-6	N.D.	10	0.3	1
11997	Isobutyl Alcohol	78-83-1	N.D.	250	36	1
11997	Isopropylbenzene	98-82-8	N.D.	5	0.2	1
11997	p-Isopropyltoluene	99-87-6	N.D.	5	0.2	1
11997	Methyl Acetate	79-20-9	N.D.	5	0.2	1
11997	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	1	0.2	1
11997	4-Methyl-2-pentanone	108-10-1	N.D.	10	0.5	1
11997	Methylcyclohexane	108-87-2	N.D.	5	0.5	1
11997	Methylene Chloride	75-09-2	N.D.	1	0.3	1
11997	Naphthalene	91-20-3	N.D.	5	1	1
11997	2-Nitropropane	79-46-9	N.D.	10	0.8	1
11997	Styrene	100-42-5	N.D.	5	0.2	1
11997	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	1	0.2	1
11997	Tetrachloroethene	127-18-4	N.D.	1	0.2	1
11997	Tetrahydrofuran	109-99-9	N.D.	10	0.7	1
11997	Toluene	108-88-3	N.D.	1	0.2	1
11997	1,2,3-Trichlorobenzene	87-61-6	N.D.	5	0.4	1
11997	1,2,4-Trichlorobenzene	120-82-1	N.D.	5	0.3	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	1	0.3	1
11997	1,1,2-Trichloroethane	79-00-5	N.D.	1	0.2	1
11997	Trichloroethene	79-01-6	N.D.	1	0.2	1
11997	Trichlorofluoromethane	75-69-4	N.D.	1	0.2	1
11997	1,2,4-Trimethylbenzene	95-63-6	N.D.	5	1	1
11997	1,3,5-Trimethylbenzene	108-67-8	N.D.	5	0.3	1
11997	Vinyl Chloride	75-01-4	N.D.	1	0.2	1
11997	m+p-Xylene	179601-23-1	N.D.	5	1	1
11997	o-Xylene	95-47-6	N.D.	1	0.4	1
11997	Xylene (Total)	1330-20-7	N.D.	6	1	1

12027 VOA Interp. Library Search-20

The results from the volatile library search are listed on the attached FORM 1 - VOA-TIC. The qualifiers appearing in the "Q" column are defined at the end of the report.

GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	Acenaphthene	83-32-9	N.D.	0.51	0.10	1
14241	Acenaphthylene	208-96-8	N.D.	0.51	0.10	1
14241	Acetophenone	98-86-2	N.D.	10	4.1	1
14241	Aniline	62-53-3	N.D.	10	3.1	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **PW-6T Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/29/2019 11:13
Collection Date/Time: 10/28/2019 13:55
SDG#: BMS81-01

ARCADIS U.S., Inc.
ELLE Sample #: GW 1186458
ELLE Group #: 2071526
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	Anthracene	120-12-7	N.D.	0.51	0.10	1
14241	Atrazine	1912-24-9	N.D.	5.1	2.0	1
14241	Benzaldehyde	100-52-7	N.D.	10	3.1	1
14241	Benzo(a)anthracene	56-55-3	N.D.	0.51	0.10	1
14241	Benzo(a)pyrene	50-32-8	N.D.	0.51	0.10	1
14241	Benzo(b)fluoranthene	205-99-2	N.D.	0.51	0.10	1
14241	Benzo(g,h,i)perylene	191-24-2	N.D.	0.51	0.10	1
14241	Benzo(k)fluoranthene	207-08-9	N.D.	0.51	0.10	1
14241	Benzyl alcohol	100-51-6	N.D.	31	10	1
14241	1,1'-Biphenyl	92-52-4	N.D.	10	3.1	1
14241	4-Bromophenyl-phenylether	101-55-3	N.D.	2.0	0.51	1
14241	Butylbenzylphthalate	85-68-7	N.D.	5.1	2.0	1
14241	Di-n-butylphthalate	84-74-2	N.D.	5.1	2.0	1
14241	Caprolactam	105-60-2	N.D.	11	5.1	1
14241	Carbazole	86-74-8	N.D.	2.0	0.51	1
14241	4-Chloro-3-methylphenol	59-50-7	N.D.	2.0	0.51	1
14241	4-Chloroaniline	106-47-8	N.D.	10	4.1	1
14241	bis(2-Chloroethoxy)methane	111-91-1	N.D.	2.0	0.51	1
14241	bis(2-Chloroethyl)ether	111-44-4	N.D.	2.0	0.51	1
14241	bis(2-Chloroisopropyl)ether[1]	39638-32-9	N.D.	2.0	0.51	1
	Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.					
14241	2-Chloronaphthalene	91-58-7	N.D.	1.0	0.41	1
14241	2-Chlorophenol	95-57-8	N.D.	2.0	0.51	1
14241	4-Chlorophenyl-phenylether	7005-72-3	N.D.	2.0	0.51	1
14241	Chrysene	218-01-9	N.D.	0.51	0.10	1
14241	Dibenz(a,h)anthracene	53-70-3	N.D.	0.51	0.10	1
14241	Dibenzofuran	132-64-9	N.D.	2.0	0.51	1
14241	3,3'-Dichlorobenzidine	91-94-1	N.D.	10	3.1	1
14241	2,4-Dichlorophenol	120-83-2	N.D.	2.0	0.51	1
14241	Dicyclohexylamine[1]	101-83-7	N.D.	10	10	1
14241	Diethylphthalate	84-66-2	N.D.	5.1	2.0	1
14241	N,N-Dimethylaniline[1]	121-69-7	N.D.	1.0	0.51	1
14241	2,4-Dimethylphenol	105-67-9	N.D.	10	3.1	1
14241	Dimethylphthalate	131-11-3	N.D.	5.1	2.0	1
14241	4,6-Dinitro-2-methylphenol	534-52-1	N.D.	22	8.2	1
14241	2,4-Dinitrophenol	51-28-5	N.D.	31	14	1
14241	2,4-Dinitrotoluene	121-14-2	N.D.	5.1	1.0	1
14241	2,6-Dinitrotoluene	606-20-2	N.D.	2.0	0.51	1
14241	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	11	5.1	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **PW-6T Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/29/2019 11:13
Collection Date/Time: 10/28/2019 13:55
SDG#: BMS81-01

ARCADIS U.S., Inc.
ELLE Sample #: GW 1186458
ELLE Group #: 2071526
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	Fluoranthene	206-44-0	N.D.	0.51	0.10	1
14241	Fluorene	86-73-7	N.D.	0.51	0.10	1
14241	Hexachlorobenzene	118-74-1	N.D.	0.51	0.10	1
14241	Hexachlorobutadiene	87-68-3	N.D.	2.0	0.51	1
14241	Hexachlorocyclopentadiene	77-47-4	N.D.	11	5.1	1
14241	Hexachloroethane	67-72-1	N.D.	5.1	1.0	1
14241	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.51	0.10	1
14241	Isophorone	78-59-1	N.D.	2.0	0.51	1
14241	2-Methylnaphthalene	91-57-6	N.D.	0.51	0.10	1
14241	2-Methylphenol	95-48-7	N.D.	2.0	0.51	1
14241	4-Methylphenol	65794-96-9	N.D.	2.0	0.51	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
14241	Naphthalene	91-20-3	N.D.	0.51	0.10	1
14241	2-Nitroaniline	88-74-4	N.D.	7.2	2.0	1
14241	3-Nitroaniline	99-09-2	N.D.	7.2	3.1	1
14241	4-Nitroaniline	100-01-6	N.D.	3.1	0.92	1
14241	Nitrobenzene	98-95-3	N.D.	2.0	0.51	1
14241	2-Nitrophenol	88-75-5	N.D.	10	3.1	1
14241	4-Nitrophenol	100-02-7	N.D.	31	10	1
14241	N-Nitroso-di-n-propylamine	621-64-7	N.D.	3.1	0.72	1
14241	N-Nitrosodiphenylamine	86-30-6	N.D.	3.1	0.72	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.					
14241	Di-n-octylphthalate	117-84-0	N.D.	11	5.1	1
14241	Pentachlorophenol	87-86-5	N.D.	5.1	1.0	1
14241	Phenanthrene	85-01-8	N.D.	0.51	0.10	1
14241	Phenol	108-95-2	N.D.	2.0	0.51	1
14241	Pyrene	129-00-0	N.D.	0.51	0.10	1
14241	Pyridine	110-86-1	N.D.	5.1	2.0	1
14241	1,2,4,5-Tetrachlorobenzene	95-94-3	N.D.	2.0	0.51	1
14241	2,3,4,6-Tetrachlorophenol	58-90-2	N.D.	10	4.1	1
14241	2,4,5-Trichlorophenol	95-95-4	N.D.	2.0	0.51	1
14241	2,4,6-Trichlorophenol	88-06-2	N.D.	2.0	0.51	1
14241	Triethylamine[1]	121-44-8	N.D.	10	10	1

The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the TNI/DoD Standards. The following analytes are accepted based on this allowance: Benzo(k)fluoranthene

00886 SVOA TIC Interpretive(25)

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **PW-6T Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/29/2019 11:13
Collection Date/Time: 10/28/2019 13:55
SDG#: BMS81-01

ARCADIS U.S., Inc.
ELLE Sample #: GW 1186458
ELLE Group #: 2071526
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result		Limit of Quantitation*	Method Detection Limit	Dilution Factor
	The results from the semivolatile library search are listed on the attached FORM 1 - SV-TIC. The qualifiers appearing in the "Q" column are defined at the end of the report.						
Aldehydes & Ketones	**SW-846 8315A**		**ug/l**		**ug/l**	**ug/l**	
13022	Acetaldehyde[1]	75-07-0	N.D.		60	35	1
13022	Formaldehyde	50-00-0	33	J	50	20	1
	The response for a target analyte(s) in the initial calibration verification standard is outside the QC acceptance limits.						
GC Miscellaneous	**SW-846 8015C Feb 2007 Rev 3**		**mg/l**		**mg/l**	**mg/l**	
12926	Ethylene glycol	107-21-1	N.D.		10	5.0	1
12926	Propylene glycol[1]	57-55-6	N.D.		10	2.0	1
	The response for tetramethylene glycol in the continuing calibration verification standard is outside the QC acceptance limits low. The following action was taken: The analysis was repeated and the continuing calibration verification standard bracketing the sample on the second trial is also outside the acceptance limits. This effect is attributed to the sample matrix and the data is reported.						
GC Miscellaneous	**SW-846 8015D Rev.4, June 2003**		**ug/l**		**ug/l**	**ug/l**	
10603	Ethanol	64-17-5	N.D.	D2	1,000	150	1
10603	Isopropanol[1]	67-63-0	N.D.	D2	1,000	110	1
10603	Methanol	67-56-1	N.D.	D2	1,000	220	1

Sample Comments

State of New York Certification No. 10670

[1] = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	Y193112AA	11/07/2019 17:41	Linda C Pape	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	Y193112AA	11/07/2019 17:40	Linda C Pape	1
14241	Semi-annual Groundwater BMS	SW-846 8270D	1	19305WAF026	11/08/2019 14:40	Holly B Ziegler	1
11010	8270D BNA Extraction	SW-846 3510C	1	19305WAF026	11/01/2019 16:35	Osvaldo R Sanchez	1
13022	Short List Aldehydes- W 8315A	SW-846 8315A	1	193030019A	10/31/2019 17:15	Jessica L Miller	1
01013	Formaldehyde Extraction	SW-846 8315A	1	193030019A	10/31/2019 09:23	Alison Moll	1
12926	Glycols in Water by 8015C/D	SW-846 8015C Feb 2007 Rev 3	1	193080027A	11/05/2019 22:10	Donald Brown	1
10603	Alcohols in Water	SW-846 8015D Rev.4, June 2003	1	193080007A	11/04/2019 18:00	Johanna C Kennedy	1

*=This limit was used in the evaluation of the final result

REVISED

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
BMS01

Lab Name: Lancaster Laboratories Contract:_____
Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____
Matrix: (soil/water) WATER Lab Sample ID: 1186458
Sample wt/vol: 5.0 (g/mL)mL Lab File ID:HP09355.i/19nov07a.b/yn07s41.d
Level: (low/med) LOW Date Received: 10/29/19
% Moisture: not dec. Date Analyzed: 11/07/19
Column: (pack/cap) CAP Dilution Factor: 1.0
CONCENTRATION UNITS:
Number TICs found: 0 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	VOCTIC	Total VOC TICs		0	U
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
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30.					

page 1 of 1

FORM I VOA-TIC

REVISED

1F

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

BMS01

Lab Name: Lancaster Laboratories Contract:
Lab Code: LANCAS Case No.: SAS No.: SDG No.:
Matrix: (soil/water) WATER Lab Sample ID: 1186458
Sample wt/vol: 244 (g/mL) mL Lab File ID: lk0339.d
Level: (low/med) LOW Date Received: 10/29/19
% Moisture: Decanted: (Y/N) Date Extracted: 11/01/19
Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/08/19
Injection Volume: 1 (uL) Dilution Factor: 1
GPC Cleanup: N pH: Extraction: Sepf

CONCENTRATION UNITS:
Number TICs found: 1 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		Unknown	5.716	8	J
2.					
3.	SVOCTIC	Total SVOC TICs		8	J
4.					
5.					
6.					
7.					
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page 1 of 1

FORM I SV-1

REVISED

Sample Description: **PW-6L Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/29/2019 11:13
Collection Date/Time: 10/28/2019 15:10
SDG#: BMS81-02

ARCADIS U.S., Inc.
ELLE Sample #: GW 1186459
ELLE Group #: 2071526
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	20	0.7	1
11997	Acetonitrile	75-05-8	N.D.	100	16	1
11997	Benzene	71-43-2	N.D.	1	0.2	1
11997	Bromochloromethane	74-97-5	N.D.	5	0.2	1
11997	Bromodichloromethane	75-27-4	N.D.	1	0.2	1
11997	Bromoform	75-25-2	N.D.	4	1	1
11997	Bromomethane	74-83-9	N.D.	1	0.3	1
11997	n-Butanol	71-36-3	N.D.	250	61	1
11997	2-Butanone	78-93-3	N.D.	10	0.3	1
11997	t-Butyl alcohol	75-65-0	N.D.	50	12	1
11997	n-Butylbenzene	104-51-8	N.D.	5	0.2	1
11997	sec-Butylbenzene	135-98-8	N.D.	5	0.2	1
11997	tert-Butylbenzene	98-06-6	N.D.	5	0.3	1
11997	Carbon Disulfide	75-15-0	N.D.	5	0.2	1
11997	Carbon Tetrachloride	56-23-5	N.D.	1	0.2	1
11997	Chlorobenzene	108-90-7	N.D.	1	0.2	1
11997	Chlorodifluoromethane[1]	75-45-6	N.D.	5	2	1
11997	Chloroethane	75-00-3	N.D.	1	0.2	1
11997	Chloroform	67-66-3	N.D.	1	0.2	1
11997	Chloromethane	74-87-3	N.D.	1	0.2	1
11997	Cyclohexane	110-82-7	N.D.	5	1	1
11997	Cyclohexanone[1]	108-94-1	N.D.	100	25	1
11997	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	5	0.3	1
11997	Dibromochloromethane	124-48-1	N.D.	1	0.2	1
11997	1,2-Dibromoethane	106-93-4	N.D.	1	0.2	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	5	0.2	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	5	0.2	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	5	0.2	1
11997	Dichlorodifluoromethane	75-71-8	N.D.	1	0.2	1
11997	1,1-Dichloroethane	75-34-3	N.D.	1	0.2	1
11997	1,2-Dichloroethane	107-06-2	N.D.	1	0.3	1
11997	1,1-Dichloroethene	75-35-4	N.D.	1	0.2	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	1	0.2	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	1	0.2	1
11997	1,2-Dichloropropane	78-87-5	N.D.	1	0.2	1
11997	cis-1,3-Dichloropropene	10061-01-5	N.D.	1	0.2	1
11997	trans-1,3-Dichloropropene	10061-02-6	N.D.	1	0.2	1
11997	1,4-Dioxane	123-91-1	N.D.	250	29	1
11997	Ethyl Acetate	141-78-6	N.D.	5	0.7	1
11997	Ethyl ether	60-29-7	0.3 J	5	0.2	1
11997	Ethylbenzene	100-41-4	N.D.	1	0.4	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **PW-6L Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/29/2019 11:13
Collection Date/Time: 10/28/2019 15:10
SDG#: BMS81-02

ARCADIS U.S., Inc.
ELLE Sample #: GW 1186459
ELLE Group #: 2071526
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Freon 113	76-13-1	N.D.	10	0.2	1
11997	n-Heptane[1]	142-82-5	N.D.	5	2	1
11997	n-Hexane[1]	110-54-3	N.D.	5	2	1
11997	2-Hexanone	591-78-6	N.D.	10	0.3	1
11997	Isobutyl Alcohol	78-83-1	N.D.	250	36	1
11997	Isopropylbenzene	98-82-8	N.D.	5	0.2	1
11997	p-Isopropyltoluene	99-87-6	N.D.	5	0.2	1
11997	Methyl Acetate	79-20-9	N.D.	5	0.2	1
11997	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	1	0.2	1
11997	4-Methyl-2-pentanone	108-10-1	N.D.	10	0.5	1
11997	Methylcyclohexane	108-87-2	N.D.	5	0.5	1
11997	Methylene Chloride	75-09-2	N.D.	1	0.3	1
11997	Naphthalene	91-20-3	N.D.	5	1	1
11997	2-Nitropropane	79-46-9	N.D.	10	0.8	1
11997	Styrene	100-42-5	N.D.	5	0.2	1
11997	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	1	0.2	1
11997	Tetrachloroethene	127-18-4	N.D.	1	0.2	1
11997	Tetrahydrofuran	109-99-9	N.D.	10	0.7	1
11997	Toluene	108-88-3	N.D.	1	0.2	1
11997	1,2,3-Trichlorobenzene	87-61-6	N.D.	5	0.4	1
11997	1,2,4-Trichlorobenzene	120-82-1	N.D.	5	0.3	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	1	0.3	1
11997	1,1,2-Trichloroethane	79-00-5	N.D.	1	0.2	1
11997	Trichloroethene	79-01-6	N.D.	1	0.2	1
11997	Trichlorofluoromethane	75-69-4	N.D.	1	0.2	1
11997	1,2,4-Trimethylbenzene	95-63-6	N.D.	5	1	1
11997	1,3,5-Trimethylbenzene	108-67-8	N.D.	5	0.3	1
11997	Vinyl Chloride	75-01-4	N.D.	1	0.2	1
11997	m+p-Xylene	179601-23-1	N.D.	5	1	1
11997	o-Xylene	95-47-6	N.D.	1	0.4	1
11997	Xylene (Total)	1330-20-7	N.D.	6	1	1

12027 VOA Interp. Library Search-20

The results from the volatile library search are listed on the attached FORM 1 - VOA-TIC. The qualifiers appearing in the "Q" column are defined at the end of the report.

GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	Acenaphthene	83-32-9	N.D.	0.50	0.10	1
14241	Acenaphthylene	208-96-8	N.D.	0.50	0.10	1
14241	Acetophenone	98-86-2	N.D.	10	4.0	1
14241	Aniline	62-53-3	N.D.	10	3.0	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **PW-6L Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/29/2019 11:13
Collection Date/Time: 10/28/2019 15:10
SDG#: BMS81-02

ARCADIS U.S., Inc.
ELLE Sample #: GW 1186459
ELLE Group #: 2071526
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	Anthracene	120-12-7	N.D.	0.50	0.10	1
14241	Atrazine	1912-24-9	N.D.	5.0	2.0	1
14241	Benzaldehyde	100-52-7	N.D.	10	3.0	1
14241	Benzo(a)anthracene	56-55-3	N.D.	0.50	0.10	1
14241	Benzo(a)pyrene	50-32-8	N.D.	0.50	0.10	1
14241	Benzo(b)fluoranthene	205-99-2	N.D.	0.50	0.10	1
14241	Benzo(g,h,i)perylene	191-24-2	N.D.	0.50	0.10	1
14241	Benzo(k)fluoranthene	207-08-9	N.D.	0.50	0.10	1
14241	Benzyl alcohol	100-51-6	N.D.	30	10	1
14241	1,1'-Biphenyl	92-52-4	N.D.	10	3.0	1
14241	4-Bromophenyl-phenylether	101-55-3	N.D.	2.0	0.50	1
14241	Butylbenzylphthalate	85-68-7	N.D.	5.0	2.0	1
14241	Di-n-butylphthalate	84-74-2	N.D.	5.0	2.0	1
14241	Caprolactam	105-60-2	N.D.	11	5.0	1
14241	Carbazole	86-74-8	N.D.	2.0	0.50	1
14241	4-Chloro-3-methylphenol	59-50-7	N.D.	2.0	0.50	1
14241	4-Chloroaniline	106-47-8	N.D.	10	4.0	1
14241	bis(2-Chloroethoxy)methane	111-91-1	N.D.	2.0	0.50	1
14241	bis(2-Chloroethyl)ether	111-44-4	N.D.	2.0	0.50	1
14241	bis(2-Chloroisopropyl)ether[1]	39638-32-9	N.D.	2.0	0.50	1
	Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.					
14241	2-Chloronaphthalene	91-58-7	N.D.	1.0	0.40	1
14241	2-Chlorophenol	95-57-8	N.D.	2.0	0.50	1
14241	4-Chlorophenyl-phenylether	7005-72-3	N.D.	2.0	0.50	1
14241	Chrysene	218-01-9	N.D.	0.50	0.10	1
14241	Dibenz(a,h)anthracene	53-70-3	N.D.	0.50	0.10	1
14241	Dibenzofuran	132-64-9	N.D.	2.0	0.50	1
14241	3,3'-Dichlorobenzidine	91-94-1	N.D.	10	3.0	1
14241	2,4-Dichlorophenol	120-83-2	N.D.	2.0	0.50	1
14241	Dicyclohexylamine[1]	101-83-7	N.D.	10	10	1
14241	Diethylphthalate	84-66-2	N.D.	5.0	2.0	1
14241	N,N-Dimethylaniline[1]	121-69-7	N.D.	1.0	0.50	1
14241	2,4-Dimethylphenol	105-67-9	N.D.	10	3.0	1
14241	Dimethylphthalate	131-11-3	N.D.	5.0	2.0	1
14241	4,6-Dinitro-2-methylphenol	534-52-1	N.D.	21	8.0	1
14241	2,4-Dinitrophenol	51-28-5	N.D.	30	14	1
14241	2,4-Dinitrotoluene	121-14-2	N.D.	5.0	1.0	1
14241	2,6-Dinitrotoluene	606-20-2	N.D.	2.0	0.50	1
14241	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	11	5.0	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **PW-6L Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/29/2019 11:13
Collection Date/Time: 10/28/2019 15:10
SDG#: BMS81-02

ARCADIS U.S., Inc.
ELLE Sample #: GW 1186459
ELLE Group #: 2071526
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	Fluoranthene	206-44-0	N.D.	0.50	0.10	1
14241	Fluorene	86-73-7	N.D.	0.50	0.10	1
14241	Hexachlorobenzene	118-74-1	N.D.	0.50	0.10	1
14241	Hexachlorobutadiene	87-68-3	N.D.	2.0	0.50	1
14241	Hexachlorocyclopentadiene	77-47-4	N.D.	11	5.0	1
14241	Hexachloroethane	67-72-1	N.D.	5.0	1.0	1
14241	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.50	0.10	1
14241	Isophorone	78-59-1	N.D.	2.0	0.50	1
14241	2-Methylnaphthalene	91-57-6	N.D.	0.50	0.10	1
14241	2-Methylphenol	95-48-7	N.D.	2.0	0.50	1
14241	4-Methylphenol	65794-96-9	N.D.	2.0	0.50	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
14241	Naphthalene	91-20-3	N.D.	0.50	0.10	1
14241	2-Nitroaniline	88-74-4	N.D.	7.0	2.0	1
14241	3-Nitroaniline	99-09-2	N.D.	7.0	3.0	1
14241	4-Nitroaniline	100-01-6	N.D.	3.0	0.90	1
14241	Nitrobenzene	98-95-3	N.D.	2.0	0.50	1
14241	2-Nitrophenol	88-75-5	N.D.	10	3.0	1
14241	4-Nitrophenol	100-02-7	N.D.	30	10	1
14241	N-Nitroso-di-n-propylamine	621-64-7	N.D.	3.0	0.70	1
14241	N-Nitrosodiphenylamine	86-30-6	N.D.	3.0	0.70	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.					
14241	Di-n-octylphthalate	117-84-0	N.D.	11	5.0	1
14241	Pentachlorophenol	87-86-5	N.D.	5.0	1.0	1
14241	Phenanthrene	85-01-8	N.D.	0.50	0.10	1
14241	Phenol	108-95-2	N.D.	2.0	0.50	1
14241	Pyrene	129-00-0	N.D.	0.50	0.10	1
14241	Pyridine	110-86-1	N.D.	5.0	2.0	1
14241	1,2,4,5-Tetrachlorobenzene	95-94-3	N.D.	2.0	0.50	1
14241	2,3,4,6-Tetrachlorophenol	58-90-2	N.D.	10	4.0	1
14241	2,4,5-Trichlorophenol	95-95-4	N.D.	2.0	0.50	1
14241	2,4,6-Trichlorophenol	88-06-2	N.D.	2.0	0.50	1
14241	Triethylamine[1]	121-44-8	N.D.	10	10	1

The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the TNI/DoD Standards. The following analytes are accepted based on this allowance: Benzo(k)fluoranthene

00886 SVOA TIC Interpretive(25)

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **PW-6L Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/29/2019 11:13
Collection Date/Time: 10/28/2019 15:10
SDG#: BMS81-02

ARCADIS U.S., Inc.
ELLE Sample #: GW 1186459
ELLE Group #: 2071526
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result		Limit of Quantitation*	Method Detection Limit	Dilution Factor
	The results from the semivolatile library search are listed on the attached FORM 1 - SV-TIC. The qualifiers appearing in the "Q" column are defined at the end of the report.						
Aldehydes & Ketones	**SW-846 8315A**		**ug/l**		**ug/l**	**ug/l**	
13022	Acetaldehyde[1]	75-07-0	N.D.		60	35	1
13022	Formaldehyde	50-00-0	34	J	50	20	1
	The response for a target analyte(s) in the initial calibration verification standard is outside the QC acceptance limits.						
GC Miscellaneous	**SW-846 8015C Feb 2007 Rev 3**		**mg/l**		**mg/l**	**mg/l**	
12926	Ethylene glycol	107-21-1	N.D.		10	5.0	1
12926	Propylene glycol[1]	57-55-6	N.D.		10	2.0	1
	The response for tetramethylene glycol in the continuing calibration verification standard is outside the QC acceptance limits low. The following action was taken: The analysis was repeated and the continuing calibration verification standard bracketing the sample on the second trial is also outside the acceptance limits. This effect is attributed to the sample matrix and the data is reported.						
GC Miscellaneous	**SW-846 8015D Rev.4, June 2003**		**ug/l**		**ug/l**	**ug/l**	
10603	Ethanol	64-17-5	N.D.	D2	1,000	150	1
10603	Isopropanol[1]	67-63-0	N.D.	D2	1,000	110	1
10603	Methanol	67-56-1	N.D.	D2	1,000	220	1

Sample Comments

State of New York Certification No. 10670

[1] = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	Y193112AA	11/07/2019 18:03	Linda C Pape	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	Y193112AA	11/07/2019 18:02	Linda C Pape	1
14241	Semi-annual Groundwater BMS	SW-846 8270D	1	19305WAF026	11/08/2019 15:09	Holly B Ziegler	1
11010	8270D BNA Extraction	SW-846 3510C	1	19305WAF026	11/01/2019 16:35	Osvaldo R Sanchez	1
13022	Short List Aldehydes- W 8315A	SW-846 8315A	1	193030019A	10/31/2019 17:25	Jessica L Miller	1
01013	Formaldehyde Extraction	SW-846 8315A	1	193030019A	10/31/2019 09:23	Alison Moll	1
12926	Glycols in Water by 8015C/D	SW-846 8015C Feb 2007 Rev 3	1	193100032A	11/06/2019 22:31	Donald Brown	1
10603	Alcohols in Water	SW-846 8015D Rev.4, June 2003	1	193080007A	11/04/2019 18:16	Johanna C Kennedy	1

*=This limit was used in the evaluation of the final result

REVISED

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
BMS02

Lab Name: Lancaster Laboratories Contract:_____
Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____
Matrix: (soil/water) WATER Lab Sample ID: 1186459
Sample wt/vol: 5.0 (g/mL)mL Lab File ID:HP09355.i/19nov07a.b/yn07s42.d
Level: (low/med) LOW Date Received: 10/29/19
% Moisture: not dec. Date Analyzed: 11/07/19
Column: (pack/cap) CAP Dilution Factor: 1.0
CONCENTRATION UNITS:
Number TICs found: 0 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	VOCTIC	Total VOC TICs		0	U
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
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page 1 of 1

FORM I VOA-TIC

REVISED

1F

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

BMS02

Lab Name: Lancaster Laboratories Contract:
Lab Code: LANCAS Case No.: SAS No.: SDG No.:
Matrix: (soil/water) WATER Lab Sample ID: 1186459
Sample wt/vol: 249 (g/mL) mL Lab File ID: lk0340.d
Level: (low/med) LOW Date Received: 10/29/19
% Moisture: Decanted: (Y/N) Date Extracted: 11/01/19
Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/08/19
Injection Volume: 1 (uL) Dilution Factor: 1
GPC Cleanup: N pH: Extraction: Sepf

CONCENTRATION UNITS:
Number TICs found: 1 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		Unknown	2.373	6	J
2.					
3.	SVOCTIC	Total SVOC TICs		6	J
4.					
5.					
6.					
7.					
8.					
9.					
10.					
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page 1 of 1

FORM I SV-1

REVISED

Sample Description: **PW-3MD Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/29/2019 11:13
Collection Date/Time: 10/28/2019 13:55
SDG#: BMS81-03

ARCADIS U.S., Inc.
ELLE Sample #: GW 1186460
ELLE Group #: 2071526
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	20	0.7	1
11997	Acetonitrile	75-05-8	N.D.	100	16	1
11997	Benzene	71-43-2	N.D.	1	0.2	1
11997	Bromochloromethane	74-97-5	N.D.	5	0.2	1
11997	Bromodichloromethane	75-27-4	N.D.	1	0.2	1
11997	Bromoform	75-25-2	N.D.	4	1	1
11997	Bromomethane	74-83-9	N.D.	1	0.3	1
11997	n-Butanol	71-36-3	N.D.	250	61	1
11997	2-Butanone	78-93-3	N.D.	10	0.3	1
11997	t-Butyl alcohol	75-65-0	N.D.	50	12	1
11997	n-Butylbenzene	104-51-8	N.D.	5	0.2	1
11997	sec-Butylbenzene	135-98-8	N.D.	5	0.2	1
11997	tert-Butylbenzene	98-06-6	N.D.	5	0.3	1
11997	Carbon Disulfide	75-15-0	N.D.	5	0.2	1
11997	Carbon Tetrachloride	56-23-5	N.D.	1	0.2	1
11997	Chlorobenzene	108-90-7	N.D.	1	0.2	1
11997	Chlorodifluoromethane[1]	75-45-6	N.D.	5	2	1
11997	Chloroethane	75-00-3	N.D.	1	0.2	1
11997	Chloroform	67-66-3	N.D.	1	0.2	1
11997	Chloromethane	74-87-3	N.D.	1	0.2	1
11997	Cyclohexane	110-82-7	N.D.	5	1	1
11997	Cyclohexanone[1]	108-94-1	N.D.	100	25	1
11997	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	5	0.3	1
11997	Dibromochloromethane	124-48-1	N.D.	1	0.2	1
11997	1,2-Dibromoethane	106-93-4	N.D.	1	0.2	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	5	0.2	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	5	0.2	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	5	0.2	1
11997	Dichlorodifluoromethane	75-71-8	N.D.	1	0.2	1
11997	1,1-Dichloroethane	75-34-3	N.D.	1	0.2	1
11997	1,2-Dichloroethane	107-06-2	N.D.	1	0.3	1
11997	1,1-Dichloroethene	75-35-4	N.D.	1	0.2	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	1	0.2	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	1	0.2	1
11997	1,2-Dichloropropane	78-87-5	N.D.	1	0.2	1
11997	cis-1,3-Dichloropropene	10061-01-5	N.D.	1	0.2	1
11997	trans-1,3-Dichloropropene	10061-02-6	N.D.	1	0.2	1
11997	1,4-Dioxane	123-91-1	N.D.	250	29	1
11997	Ethyl Acetate	141-78-6	N.D.	5	0.7	1
11997	Ethyl ether	60-29-7	N.D.	5	0.2	1
11997	Ethylbenzene	100-41-4	N.D.	1	0.4	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **PW-3MD Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/29/2019 11:13
Collection Date/Time: 10/28/2019 13:55
SDG#: BMS81-03

ARCADIS U.S., Inc.
ELLE Sample #: GW 1186460
ELLE Group #: 2071526
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		ug/l	ug/l	ug/l	
11997	Freon 113	76-13-1	N.D.	10	0.2	1
11997	n-Heptane[1]	142-82-5	N.D.	5	2	1
11997	n-Hexane[1]	110-54-3	N.D.	5	2	1
11997	2-Hexanone	591-78-6	N.D.	10	0.3	1
11997	Isobutyl Alcohol	78-83-1	N.D.	250	36	1
11997	Isopropylbenzene	98-82-8	N.D.	5	0.2	1
11997	p-Isopropyltoluene	99-87-6	N.D.	5	0.2	1
11997	Methyl Acetate	79-20-9	N.D.	5	0.2	1
11997	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	1	0.2	1
11997	4-Methyl-2-pentanone	108-10-1	N.D.	10	0.5	1
11997	Methylcyclohexane	108-87-2	N.D.	5	0.5	1
11997	Methylene Chloride	75-09-2	N.D.	1	0.3	1
11997	Naphthalene	91-20-3	N.D.	5	1	1
11997	2-Nitropropane	79-46-9	N.D.	10	0.8	1
11997	Styrene	100-42-5	N.D.	5	0.2	1
11997	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	1	0.2	1
11997	Tetrachloroethene	127-18-4	N.D.	1	0.2	1
11997	Tetrahydrofuran	109-99-9	N.D.	10	0.7	1
11997	Toluene	108-88-3	N.D.	1	0.2	1
11997	1,2,3-Trichlorobenzene	87-61-6	N.D.	5	0.4	1
11997	1,2,4-Trichlorobenzene	120-82-1	N.D.	5	0.3	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	1	0.3	1
11997	1,1,2-Trichloroethane	79-00-5	N.D.	1	0.2	1
11997	Trichloroethene	79-01-6	N.D.	1	0.2	1
11997	Trichlorofluoromethane	75-69-4	N.D.	1	0.2	1
11997	1,2,4-Trimethylbenzene	95-63-6	N.D.	5	1	1
11997	1,3,5-Trimethylbenzene	108-67-8	N.D.	5	0.3	1
11997	Vinyl Chloride	75-01-4	N.D.	1	0.2	1
11997	m+p-Xylene	179601-23-1	N.D.	5	1	1
11997	o-Xylene	95-47-6	N.D.	1	0.4	1
11997	Xylene (Total)	1330-20-7	N.D.	6	1	1

12027 VOA Interp. Library Search-20

The results from the volatile library search are listed on the attached FORM 1 - VOA-TIC. The qualifiers appearing in the "Q" column are defined at the end of the report.

GC/MS Semivolatiles	**SW-846 8270D**		ug/l	ug/l	ug/l	
14241	Acenaphthene	83-32-9	N.D.	0.51	0.10	1
14241	Acenaphthylene	208-96-8	N.D.	0.51	0.10	1
14241	Acetophenone	98-86-2	N.D.	10	4.0	1
14241	Aniline	62-53-3	N.D.	10	3.0	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **PW-3MD Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/29/2019 11:13
Collection Date/Time: 10/28/2019 13:55
SDG#: BMS81-03

ARCADIS U.S., Inc.
ELLE Sample #: GW 1186460
ELLE Group #: 2071526
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	Anthracene	120-12-7	N.D.	0.51	0.10	1
14241	Atrazine	1912-24-9	N.D.	5.1	2.0	1
14241	Benzaldehyde	100-52-7	N.D.	10	3.0	1
14241	Benzo(a)anthracene	56-55-3	N.D.	0.51	0.10	1
14241	Benzo(a)pyrene	50-32-8	N.D.	0.51	0.10	1
14241	Benzo(b)fluoranthene	205-99-2	N.D.	0.51	0.10	1
14241	Benzo(g,h,i)perylene	191-24-2	N.D.	0.51	0.10	1
14241	Benzo(k)fluoranthene	207-08-9	N.D.	0.51	0.10	1
14241	Benzyl alcohol	100-51-6	N.D.	30	10	1
14241	1,1'-Biphenyl	92-52-4	N.D.	10	3.0	1
14241	4-Bromophenyl-phenylether	101-55-3	N.D.	2.0	0.51	1
14241	Butylbenzylphthalate	85-68-7	N.D.	5.1	2.0	1
14241	Di-n-butylphthalate	84-74-2	N.D.	5.1	2.0	1
14241	Caprolactam	105-60-2	N.D.	11	5.1	1
14241	Carbazole	86-74-8	N.D.	2.0	0.51	1
14241	4-Chloro-3-methylphenol	59-50-7	N.D.	2.0	0.51	1
14241	4-Chloroaniline	106-47-8	N.D.	10	4.0	1
14241	bis(2-Chloroethoxy)methane	111-91-1	N.D.	2.0	0.51	1
14241	bis(2-Chloroethyl)ether	111-44-4	N.D.	2.0	0.51	1
14241	bis(2-Chloroisopropyl)ether[1]	39638-32-9	N.D.	2.0	0.51	1
	Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.					
14241	2-Chloronaphthalene	91-58-7	N.D.	1.0	0.40	1
14241	2-Chlorophenol	95-57-8	N.D.	2.0	0.51	1
14241	4-Chlorophenyl-phenylether	7005-72-3	N.D.	2.0	0.51	1
14241	Chrysene	218-01-9	N.D.	0.51	0.10	1
14241	Dibenz(a,h)anthracene	53-70-3	N.D.	0.51	0.10	1
14241	Dibenzofuran	132-64-9	N.D.	2.0	0.51	1
14241	3,3'-Dichlorobenzidine	91-94-1	N.D.	10	3.0	1
14241	2,4-Dichlorophenol	120-83-2	N.D.	2.0	0.51	1
14241	Dicyclohexylamine[1]	101-83-7	N.D.	10	10	1
14241	Diethylphthalate	84-66-2	N.D.	5.1	2.0	1
14241	N,N-Dimethylaniline[1]	121-69-7	N.D.	1.0	0.51	1
14241	2,4-Dimethylphenol	105-67-9	N.D.	10	3.0	1
14241	Dimethylphthalate	131-11-3	N.D.	5.1	2.0	1
14241	4,6-Dinitro-2-methylphenol	534-52-1	N.D.	21	8.1	1
14241	2,4-Dinitrophenol	51-28-5	N.D.	30	14	1
14241	2,4-Dinitrotoluene	121-14-2	N.D.	5.1	1.0	1
14241	2,6-Dinitrotoluene	606-20-2	N.D.	2.0	0.51	1
14241	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	11	5.1	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **PW-3MD Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/29/2019 11:13
Collection Date/Time: 10/28/2019 13:55
SDG#: BMS81-03

ARCADIS U.S., Inc.
ELLE Sample #: GW 1186460
ELLE Group #: 2071526
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	Fluoranthene	206-44-0	N.D.	0.51	0.10	1
14241	Fluorene	86-73-7	N.D.	0.51	0.10	1
14241	Hexachlorobenzene	118-74-1	N.D.	0.51	0.10	1
14241	Hexachlorobutadiene	87-68-3	N.D.	2.0	0.51	1
14241	Hexachlorocyclopentadiene	77-47-4	N.D.	11	5.1	1
14241	Hexachloroethane	67-72-1	N.D.	5.1	1.0	1
14241	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.51	0.10	1
14241	Isophorone	78-59-1	N.D.	2.0	0.51	1
14241	2-Methylnaphthalene	91-57-6	N.D.	0.51	0.10	1
14241	2-Methylphenol	95-48-7	N.D.	2.0	0.51	1
14241	4-Methylphenol	65794-96-9	N.D.	2.0	0.51	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
14241	Naphthalene	91-20-3	N.D.	0.51	0.10	1
14241	2-Nitroaniline	88-74-4	N.D.	7.1	2.0	1
14241	3-Nitroaniline	99-09-2	N.D.	7.1	3.0	1
14241	4-Nitroaniline	100-01-6	N.D.	3.0	0.91	1
14241	Nitrobenzene	98-95-3	N.D.	2.0	0.51	1
14241	2-Nitrophenol	88-75-5	N.D.	10	3.0	1
14241	4-Nitrophenol	100-02-7	N.D.	30	10	1
14241	N-Nitroso-di-n-propylamine	621-64-7	N.D.	3.0	0.71	1
14241	N-Nitrosodiphenylamine	86-30-6	N.D.	3.0	0.71	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.					
14241	Di-n-octylphthalate	117-84-0	N.D.	11	5.1	1
14241	Pentachlorophenol	87-86-5	N.D.	5.1	1.0	1
14241	Phenanthrene	85-01-8	N.D.	0.51	0.10	1
14241	Phenol	108-95-2	N.D.	2.0	0.51	1
14241	Pyrene	129-00-0	N.D.	0.51	0.10	1
14241	Pyridine	110-86-1	N.D.	5.1	2.0	1
14241	1,2,4,5-Tetrachlorobenzene	95-94-3	N.D.	2.0	0.51	1
14241	2,3,4,6-Tetrachlorophenol	58-90-2	N.D.	10	4.0	1
14241	2,4,5-Trichlorophenol	95-95-4	N.D.	2.0	0.51	1
14241	2,4,6-Trichlorophenol	88-06-2	N.D.	2.0	0.51	1
14241	Triethylamine[1]	121-44-8	N.D.	10	10	1

The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the TNI/DoD Standards. The following analytes are accepted based on this allowance: Benzo(k)fluoranthene

00886 SVOA TIC Interpretive(25)

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **PW-3MD Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/29/2019 11:13
Collection Date/Time: 10/28/2019 13:55
SDG#: BMS81-03

ARCADIS U.S., Inc.
ELLE Sample #: GW 1186460
ELLE Group #: 2071526
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result		Limit of Quantitation*	Method Detection Limit	Dilution Factor
	The results from the semivolatile library search are listed on the attached FORM 1 - SV-TIC. The qualifiers appearing in the "Q" column are defined at the end of the report.						
Aldehydes & Ketones	**SW-846 8315A**		**ug/l**		**ug/l**	**ug/l**	
13022	Acetaldehyde[1]	75-07-0	N.D.		60	35	1
13022	Formaldehyde	50-00-0	23	J	50	20	1
	The response for a target analyte(s) in the initial calibration verification standard is outside the QC acceptance limits.						
GC Miscellaneous	**SW-846 8015C Feb 2007 Rev 3**		**mg/l**		**mg/l**	**mg/l**	
12926	Ethylene glycol	107-21-1	N.D.		10	5.0	1
12926	Propylene glycol[1]	57-55-6	N.D.		10	2.0	1
	The response for tetramethylene glycol in the continuing calibration verification standard is outside the QC acceptance limits low. The following action was taken: The analysis was repeated and the continuing calibration verification standard bracketing the sample on the second trial is also outside the acceptance limits. This effect is attributed to the sample matrix and the data is reported.						
GC Miscellaneous	**SW-846 8015D Rev.4, June 2003**		**ug/l**		**ug/l**	**ug/l**	
10603	Ethanol	64-17-5	N.D.	D2	1,000	150	1
10603	Isopropanol[1]	67-63-0	N.D.	D2	1,000	110	1
10603	Methanol	67-56-1	N.D.	D2	1,000	220	1

Sample Comments

State of New York Certification No. 10670

[1] = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	Y193112AA	11/07/2019 18:24	Linda C Pape	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	Y193112AA	11/07/2019 18:23	Linda C Pape	1
14241	Semi-annual Groundwater BMS	SW-846 8270D	1	19305WAF026	11/08/2019 15:38	Holly B Ziegler	1
11010	8270D BNA Extraction	SW-846 3510C	1	19305WAF026	11/01/2019 16:35	Osvaldo R Sanchez	1
13022	Short List Aldehydes- W 8315A	SW-846 8315A	1	193030019A	10/31/2019 17:36	Jessica L Miller	1
01013	Formaldehyde Extraction	SW-846 8315A	1	193030019A	10/31/2019 09:23	Alison Moll	1
12926	Glycols in Water by 8015C/D	SW-846 8015C Feb 2007 Rev 3	1	193100032A	11/06/2019 22:44	Donald Brown	1
10603	Alcohols in Water	SW-846 8015D Rev.4, June 2003	1	193080007A	11/04/2019 18:33	Johanna C Kennedy	1

*=This limit was used in the evaluation of the final result

REVISED

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
BMS03

Lab Name: Lancaster Laboratories Contract:_____
Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____
Matrix: (soil/water) WATER Lab Sample ID: 1186460
Sample wt/vol: 5.0 (g/mL)mL Lab File ID:HP09355.i/19nov07a.b/yn07s43.d
Level: (low/med) LOW Date Received: 10/29/19
% Moisture: not dec. Date Analyzed: 11/07/19
Column: (pack/cap) CAP Dilution Factor: 1.0
CONCENTRATION UNITS:
Number TICs found: 1 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	420-56-4	Trimethylsilyl fluoride	2.48	8	J
2.					
3.	VOCTIC	Total VOC TICs		8	J
4.					
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page 1 of 1

FORM I VOA-TIC

REVISED

1F

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

BMS03

Lab Name: Lancaster Laboratories Contract:
Lab Code: LANCAS Case No.: SAS No.: SDG No.:
Matrix: (soil/water) WATER Lab Sample ID: 1186460
Sample wt/vol: 247 (g/mL) mL Lab File ID: lk0341.d
Level: (low/med) LOW Date Received: 10/29/19
% Moisture: Decanted: (Y/N) Date Extracted: 11/01/19
Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/08/19
Injection Volume: 1 (uL) Dilution Factor: 1
GPC Cleanup: N pH: Extraction: Sepf

Number TICs found: 1 CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		Unknown	5.711	4	J
2.					
3.	SVOCTIC	Total SVOC TICs		4	J
4.					
5.					
6.					
7.					
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page 1 of 1

FORM I SV-1

REVISED

Sample Description: **PW-3MS Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/29/2019 11:13
Collection Date/Time: 10/28/2019 15:05
SDG#: BMS81-04

ARCADIS U.S., Inc.
ELLE Sample #: GW 1186461
ELLE Group #: 2071526
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	20	0.7	1
11997	Acetonitrile	75-05-8	N.D.	100	16	1
11997	Benzene	71-43-2	N.D.	1	0.2	1
11997	Bromochloromethane	74-97-5	N.D.	5	0.2	1
11997	Bromodichloromethane	75-27-4	N.D.	1	0.2	1
11997	Bromoform	75-25-2	N.D.	4	1	1
11997	Bromomethane	74-83-9	N.D.	1	0.3	1
11997	n-Butanol	71-36-3	N.D.	250	61	1
11997	2-Butanone	78-93-3	N.D.	10	0.3	1
11997	t-Butyl alcohol	75-65-0	N.D.	50	12	1
11997	n-Butylbenzene	104-51-8	N.D.	5	0.2	1
11997	sec-Butylbenzene	135-98-8	N.D.	5	0.2	1
11997	tert-Butylbenzene	98-06-6	N.D.	5	0.3	1
11997	Carbon Disulfide	75-15-0	N.D.	5	0.2	1
11997	Carbon Tetrachloride	56-23-5	N.D.	1	0.2	1
11997	Chlorobenzene	108-90-7	N.D.	1	0.2	1
11997	Chlorodifluoromethane[1]	75-45-6	N.D.	5	2	1
11997	Chloroethane	75-00-3	N.D.	1	0.2	1
11997	Chloroform	67-66-3	N.D.	1	0.2	1
11997	Chloromethane	74-87-3	N.D.	1	0.2	1
11997	Cyclohexane	110-82-7	N.D.	5	1	1
11997	Cyclohexanone[1]	108-94-1	N.D.	100	25	1
11997	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	5	0.3	1
11997	Dibromochloromethane	124-48-1	N.D.	1	0.2	1
11997	1,2-Dibromoethane	106-93-4	N.D.	1	0.2	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	5	0.2	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	5	0.2	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	5	0.2	1
11997	Dichlorodifluoromethane	75-71-8	N.D.	1	0.2	1
11997	1,1-Dichloroethane	75-34-3	N.D.	1	0.2	1
11997	1,2-Dichloroethane	107-06-2	N.D.	1	0.3	1
11997	1,1-Dichloroethene	75-35-4	N.D.	1	0.2	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	1	0.2	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	1	0.2	1
11997	1,2-Dichloropropane	78-87-5	N.D.	1	0.2	1
11997	cis-1,3-Dichloropropene	10061-01-5	N.D.	1	0.2	1
11997	trans-1,3-Dichloropropene	10061-02-6	N.D.	1	0.2	1
11997	1,4-Dioxane	123-91-1	N.D.	250	29	1
11997	Ethyl Acetate	141-78-6	N.D.	5	0.7	1
11997	Ethyl ether	60-29-7	N.D.	5	0.2	1
11997	Ethylbenzene	100-41-4	N.D.	1	0.4	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **PW-3MS Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/29/2019 11:13
Collection Date/Time: 10/28/2019 15:05
SDG#: BMS81-04

ARCADIS U.S., Inc.
ELLE Sample #: GW 1186461
ELLE Group #: 2071526
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Freon 113	76-13-1	N.D.	10	0.2	1
11997	n-Heptane[1]	142-82-5	N.D.	5	2	1
11997	n-Hexane[1]	110-54-3	N.D.	5	2	1
11997	2-Hexanone	591-78-6	N.D.	10	0.3	1
11997	Isobutyl Alcohol	78-83-1	N.D.	250	36	1
11997	Isopropylbenzene	98-82-8	N.D.	5	0.2	1
11997	p-Isopropyltoluene	99-87-6	N.D.	5	0.2	1
11997	Methyl Acetate	79-20-9	N.D.	5	0.2	1
11997	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	1	0.2	1
11997	4-Methyl-2-pentanone	108-10-1	N.D.	10	0.5	1
11997	Methylcyclohexane	108-87-2	N.D.	5	0.5	1
11997	Methylene Chloride	75-09-2	N.D.	1	0.3	1
11997	Naphthalene	91-20-3	N.D.	5	1	1
11997	2-Nitropropane	79-46-9	N.D.	10	0.8	1
11997	Styrene	100-42-5	N.D.	5	0.2	1
11997	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	1	0.2	1
11997	Tetrachloroethene	127-18-4	N.D.	1	0.2	1
11997	Tetrahydrofuran	109-99-9	N.D.	10	0.7	1
11997	Toluene	108-88-3	N.D.	1	0.2	1
11997	1,2,3-Trichlorobenzene	87-61-6	N.D.	5	0.4	1
11997	1,2,4-Trichlorobenzene	120-82-1	N.D.	5	0.3	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	1	0.3	1
11997	1,1,2-Trichloroethane	79-00-5	N.D.	1	0.2	1
11997	Trichloroethene	79-01-6	N.D.	1	0.2	1
11997	Trichlorofluoromethane	75-69-4	N.D.	1	0.2	1
11997	1,2,4-Trimethylbenzene	95-63-6	N.D.	5	1	1
11997	1,3,5-Trimethylbenzene	108-67-8	N.D.	5	0.3	1
11997	Vinyl Chloride	75-01-4	N.D.	1	0.2	1
11997	m+p-Xylene	179601-23-1	N.D.	5	1	1
11997	o-Xylene	95-47-6	N.D.	1	0.4	1
11997	Xylene (Total)	1330-20-7	N.D.	6	1	1

12027 VOA Interp. Library Search-20

The results from the volatile library search are listed on the attached FORM 1 - VOA-TIC. The qualifiers appearing in the "Q" column are defined at the end of the report.

GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	Acenaphthene	83-32-9	N.D.	0.50	0.10	1
14241	Acenaphthylene	208-96-8	N.D.	0.50	0.10	1
14241	Acetophenone	98-86-2	N.D.	10	4.0	1
14241	Aniline	62-53-3	N.D.	10	3.0	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **PW-3MS Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/29/2019 11:13
Collection Date/Time: 10/28/2019 15:05
SDG#: BMS81-04

ARCADIS U.S., Inc.
ELLE Sample #: GW 1186461
ELLE Group #: 2071526
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	Anthracene	120-12-7	N.D.	0.50	0.10	1
14241	Atrazine	1912-24-9	N.D.	5.0	2.0	1
14241	Benzaldehyde	100-52-7	N.D.	10	3.0	1
14241	Benzo(a)anthracene	56-55-3	N.D.	0.50	0.10	1
14241	Benzo(a)pyrene	50-32-8	N.D.	0.50	0.10	1
14241	Benzo(b)fluoranthene	205-99-2	N.D.	0.50	0.10	1
14241	Benzo(g,h,i)perylene	191-24-2	N.D.	0.50	0.10	1
14241	Benzo(k)fluoranthene	207-08-9	N.D.	0.50	0.10	1
14241	Benzyl alcohol	100-51-6	N.D.	30	10	1
14241	1,1'-Biphenyl	92-52-4	N.D.	10	3.0	1
14241	4-Bromophenyl-phenylether	101-55-3	N.D.	2.0	0.50	1
14241	Butylbenzylphthalate	85-68-7	N.D.	5.0	2.0	1
14241	Di-n-butylphthalate	84-74-2	N.D.	5.0	2.0	1
14241	Caprolactam	105-60-2	N.D.	11	5.0	1
14241	Carbazole	86-74-8	N.D.	2.0	0.50	1
14241	4-Chloro-3-methylphenol	59-50-7	N.D.	2.0	0.50	1
14241	4-Chloroaniline	106-47-8	N.D.	10	4.0	1
14241	bis(2-Chloroethoxy)methane	111-91-1	N.D.	2.0	0.50	1
14241	bis(2-Chloroethyl)ether	111-44-4	N.D.	2.0	0.50	1
14241	bis(2-Chloroisopropyl)ether[1]	39638-32-9	N.D.	2.0	0.50	1
	Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.					
14241	2-Chloronaphthalene	91-58-7	N.D.	1.0	0.40	1
14241	2-Chlorophenol	95-57-8	N.D.	2.0	0.50	1
14241	4-Chlorophenyl-phenylether	7005-72-3	N.D.	2.0	0.50	1
14241	Chrysene	218-01-9	N.D.	0.50	0.10	1
14241	Dibenz(a,h)anthracene	53-70-3	N.D.	0.50	0.10	1
14241	Dibenzofuran	132-64-9	N.D.	2.0	0.50	1
14241	3,3'-Dichlorobenzidine	91-94-1	N.D.	10	3.0	1
14241	2,4-Dichlorophenol	120-83-2	N.D.	2.0	0.50	1
14241	Dicyclohexylamine[1]	101-83-7	N.D.	10	10	1
14241	Diethylphthalate	84-66-2	N.D.	5.0	2.0	1
14241	N,N-Dimethylaniline[1]	121-69-7	N.D.	1.0	0.50	1
14241	2,4-Dimethylphenol	105-67-9	N.D.	10	3.0	1
14241	Dimethylphthalate	131-11-3	N.D.	5.0	2.0	1
14241	4,6-Dinitro-2-methylphenol	534-52-1	N.D.	21	8.1	1
14241	2,4-Dinitrophenol	51-28-5	N.D.	30	14	1
14241	2,4-Dinitrotoluene	121-14-2	N.D.	5.0	1.0	1
14241	2,6-Dinitrotoluene	606-20-2	N.D.	2.0	0.50	1
14241	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	11	5.0	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **PW-3MS Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/29/2019 11:13
Collection Date/Time: 10/28/2019 15:05
SDG#: BMS81-04

ARCADIS U.S., Inc.
ELLE Sample #: GW 1186461
ELLE Group #: 2071526
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	Fluoranthene	206-44-0	N.D.	0.50	0.10	1
14241	Fluorene	86-73-7	N.D.	0.50	0.10	1
14241	Hexachlorobenzene	118-74-1	N.D.	0.50	0.10	1
14241	Hexachlorobutadiene	87-68-3	N.D.	2.0	0.50	1
14241	Hexachlorocyclopentadiene	77-47-4	N.D.	11	5.0	1
14241	Hexachloroethane	67-72-1	N.D.	5.0	1.0	1
14241	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.50	0.10	1
14241	Isophorone	78-59-1	N.D.	2.0	0.50	1
14241	2-Methylnaphthalene	91-57-6	N.D.	0.50	0.10	1
14241	2-Methylphenol	95-48-7	N.D.	2.0	0.50	1
14241	4-Methylphenol	65794-96-9	N.D.	2.0	0.50	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
14241	Naphthalene	91-20-3	N.D.	0.50	0.10	1
14241	2-Nitroaniline	88-74-4	N.D.	7.1	2.0	1
14241	3-Nitroaniline	99-09-2	N.D.	7.1	3.0	1
14241	4-Nitroaniline	100-01-6	N.D.	3.0	0.91	1
14241	Nitrobenzene	98-95-3	N.D.	2.0	0.50	1
14241	2-Nitrophenol	88-75-5	N.D.	10	3.0	1
14241	4-Nitrophenol	100-02-7	N.D.	30	10	1
14241	N-Nitroso-di-n-propylamine	621-64-7	N.D.	3.0	0.71	1
14241	N-Nitrosodiphenylamine	86-30-6	N.D.	3.0	0.71	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.					
14241	Di-n-octylphthalate	117-84-0	N.D.	11	5.0	1
14241	Pentachlorophenol	87-86-5	N.D.	5.0	1.0	1
14241	Phenanthrene	85-01-8	N.D.	0.50	0.10	1
14241	Phenol	108-95-2	N.D.	2.0	0.50	1
14241	Pyrene	129-00-0	N.D.	0.50	0.10	1
14241	Pyridine	110-86-1	N.D.	5.0	2.0	1
14241	1,2,4,5-Tetrachlorobenzene	95-94-3	N.D.	2.0	0.50	1
14241	2,3,4,6-Tetrachlorophenol	58-90-2	N.D.	10	4.0	1
14241	2,4,5-Trichlorophenol	95-95-4	N.D.	2.0	0.50	1
14241	2,4,6-Trichlorophenol	88-06-2	N.D.	2.0	0.50	1
14241	Triethylamine[1]	121-44-8	N.D.	10	10	1

The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the TNI/DoD Standards. The following analytes are accepted based on this allowance: Benzo(k)fluoranthene

00886 SVOA TIC Interpretive(25)

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **PW-3MS Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/29/2019 11:13
Collection Date/Time: 10/28/2019 15:05
SDG#: BMS81-04

ARCADIS U.S., Inc.
ELLE Sample #: GW 1186461
ELLE Group #: 2071526
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result		Limit of Quantitation*	Method Detection Limit	Dilution Factor
	The results from the semivolatile library search are listed on the attached FORM 1 - SV-TIC. The qualifiers appearing in the "Q" column are defined at the end of the report.						
Aldehydes & Ketones	**SW-846 8315A**		**ug/l**		**ug/l**	**ug/l**	
13022	Acetaldehyde[1]	75-07-0	N.D.		60	35	1
13022	Formaldehyde	50-00-0	23	J	50	20	1
	The response for a target analyte(s) in the initial calibration verification standard is outside the QC acceptance limits.						
GC Miscellaneous	**SW-846 8015C Feb 2007 Rev 3**		**mg/l**		**mg/l**	**mg/l**	
12926	Ethylene glycol	107-21-1	N.D.		10	5.0	1
12926	Propylene glycol[1]	57-55-6	N.D.		10	2.0	1
	The response for tetramethylene glycol in the continuing calibration verification standard is outside the QC acceptance limits low. The following action was taken: The analysis was repeated and the continuing calibration verification standard bracketing the sample on the second trial is also outside the acceptance limits. This effect is attributed to the sample matrix and the data is reported.						
GC Miscellaneous	**SW-846 8015D Rev.4, June 2003**		**ug/l**		**ug/l**	**ug/l**	
10603	Ethanol	64-17-5	N.D.	D2	1,000	150	1
10603	Isopropanol[1]	67-63-0	N.D.	D2	1,000	110	1
10603	Methanol	67-56-1	N.D.	D2	1,000	220	1

Sample Comments

State of New York Certification No. 10670

[1] = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	Y193112AA	11/07/2019 18:47	Linda C Pape	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	Y193112AA	11/07/2019 18:46	Linda C Pape	1
14241	Semi-annual Groundwater BMS	SW-846 8270D	1	19305WAF026	11/08/2019 16:06	Holly B Ziegler	1
11010	8270D BNA Extraction	SW-846 3510C	1	19305WAF026	11/01/2019 16:35	Osvaldo R Sanchez	1
13022	Short List Aldehydes- W 8315A	SW-846 8315A	1	193030019A	10/31/2019 17:46	Jessica L Miller	1
01013	Formaldehyde Extraction	SW-846 8315A	1	193030019A	10/31/2019 09:23	Alison Moll	1
12926	Glycols in Water by 8015C/D	SW-846 8015C Feb 2007 Rev 3	1	193100032A	11/06/2019 22:57	Donald Brown	1
10603	Alcohols in Water	SW-846 8015D Rev.4, June 2003	1	193080007A	11/04/2019 18:49	Johanna C Kennedy	1

*=This limit was used in the evaluation of the final result

REVISED

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
BMS04

Lab Name: Lancaster Laboratories Contract:_____
Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____
Matrix: (soil/water) WATER Lab Sample ID: 1186461
Sample wt/vol: 5.0 (g/mL)mL Lab File ID:HP09355.i/19nov07a.b/yn07s44.d
Level: (low/med) LOW Date Received: 10/29/19
% Moisture: not dec. Date Analyzed: 11/07/19
Column: (pack/cap) CAP Dilution Factor: 1.0
CONCENTRATION UNITS:
Number TICs found: 1 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	420-56-4	Trimethylsilyl fluoride	2.48	7	J
2.					
3.	VOCTIC	Total VOC TICs		7	J
4.					
5.					
6.					
7.					
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page 1 of 1

FORM I VOA-TIC

REVISED

1F

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

BMS04

Lab Name: Lancaster Laboratories Contract:
Lab Code: LANCAS Case No.: SAS No.: SDG No.:
Matrix: (soil/water) WATER Lab Sample ID: 1186461
Sample wt/vol: 248 (g/mL) mL Lab File ID: lk0342.d
Level: (low/med) LOW Date Received: 10/29/19
% Moisture: Decanted: (Y/N) Date Extracted: 11/01/19
Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/08/19
Injection Volume: 1 (uL) Dilution Factor: 1
GPC Cleanup: N pH: Extraction: Sepf

Number TICs found: 2 CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		Unknown	5.711	17	J
2.		Unknown	6.567	8	J
3.					
4.	SVOCTIC	Total SVOC TICs		26	J
5.					
6.					
7.					
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page 1 of 1

FORM I SV-1

REVISED

Sample Description: **PW-3T Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/29/2019 11:13
Collection Date/Time: 10/28/2019 11:25
SDG#: BMS81-05

ARCADIS U.S., Inc.
ELLE Sample #: GW 1186462
ELLE Group #: 2071526
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	20	0.7	1
11997	Acetonitrile	75-05-8	N.D.	100	16	1
11997	Benzene	71-43-2	N.D.	1	0.2	1
11997	Bromochloromethane	74-97-5	N.D.	5	0.2	1
11997	Bromodichloromethane	75-27-4	N.D.	1	0.2	1
11997	Bromoform	75-25-2	N.D.	4	1	1
11997	Bromomethane	74-83-9	N.D.	1	0.3	1
11997	n-Butanol	71-36-3	N.D.	250	61	1
11997	2-Butanone	78-93-3	N.D.	10	0.3	1
11997	t-Butyl alcohol	75-65-0	N.D.	50	12	1
11997	n-Butylbenzene	104-51-8	N.D.	5	0.2	1
11997	sec-Butylbenzene	135-98-8	N.D.	5	0.2	1
11997	tert-Butylbenzene	98-06-6	N.D.	5	0.3	1
11997	Carbon Disulfide	75-15-0	N.D.	5	0.2	1
11997	Carbon Tetrachloride	56-23-5	N.D.	1	0.2	1
11997	Chlorobenzene	108-90-7	N.D.	1	0.2	1
11997	Chlorodifluoromethane[1]	75-45-6	N.D.	5	2	1
11997	Chloroethane	75-00-3	N.D.	1	0.2	1
11997	Chloroform	67-66-3	N.D.	1	0.2	1
11997	Chloromethane	74-87-3	N.D.	1	0.2	1
11997	Cyclohexane	110-82-7	N.D.	5	1	1
11997	Cyclohexanone[1]	108-94-1	N.D.	100	25	1
11997	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	5	0.3	1
11997	Dibromochloromethane	124-48-1	N.D.	1	0.2	1
11997	1,2-Dibromoethane	106-93-4	N.D.	1	0.2	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	5	0.2	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	5	0.2	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	5	0.2	1
11997	Dichlorodifluoromethane	75-71-8	N.D.	1	0.2	1
11997	1,1-Dichloroethane	75-34-3	N.D.	1	0.2	1
11997	1,2-Dichloroethane	107-06-2	N.D.	1	0.3	1
11997	1,1-Dichloroethene	75-35-4	N.D.	1	0.2	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	1	0.2	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	1	0.2	1
11997	1,2-Dichloropropane	78-87-5	N.D.	1	0.2	1
11997	cis-1,3-Dichloropropene	10061-01-5	N.D.	1	0.2	1
11997	trans-1,3-Dichloropropene	10061-02-6	N.D.	1	0.2	1
11997	1,4-Dioxane	123-91-1	N.D.	250	29	1
11997	Ethyl Acetate	141-78-6	N.D.	5	0.7	1
11997	Ethyl ether	60-29-7	N.D.	5	0.2	1
11997	Ethylbenzene	100-41-4	N.D.	1	0.4	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **PW-3T Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/29/2019 11:13
Collection Date/Time: 10/28/2019 11:25
SDG#: BMS81-05

ARCADIS U.S., Inc.
ELLE Sample #: GW 1186462
ELLE Group #: 2071526
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Freon 113	76-13-1	N.D.	10	0.2	1
11997	n-Heptane[1]	142-82-5	N.D.	5	2	1
11997	n-Hexane[1]	110-54-3	N.D.	5	2	1
11997	2-Hexanone	591-78-6	N.D.	10	0.3	1
11997	Isobutyl Alcohol	78-83-1	N.D.	250	36	1
11997	Isopropylbenzene	98-82-8	N.D.	5	0.2	1
11997	p-Isopropyltoluene	99-87-6	N.D.	5	0.2	1
11997	Methyl Acetate	79-20-9	N.D.	5	0.2	1
11997	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	1	0.2	1
11997	4-Methyl-2-pentanone	108-10-1	N.D.	10	0.5	1
11997	Methylcyclohexane	108-87-2	N.D.	5	0.5	1
11997	Methylene Chloride	75-09-2	N.D.	1	0.3	1
11997	Naphthalene	91-20-3	N.D.	5	1	1
11997	2-Nitropropane	79-46-9	N.D.	10	0.8	1
11997	Styrene	100-42-5	N.D.	5	0.2	1
11997	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	1	0.2	1
11997	Tetrachloroethene	127-18-4	N.D.	1	0.2	1
11997	Tetrahydrofuran	109-99-9	N.D.	10	0.7	1
11997	Toluene	108-88-3	N.D.	1	0.2	1
11997	1,2,3-Trichlorobenzene	87-61-6	N.D.	5	0.4	1
11997	1,2,4-Trichlorobenzene	120-82-1	N.D.	5	0.3	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	1	0.3	1
11997	1,1,2-Trichloroethane	79-00-5	N.D.	1	0.2	1
11997	Trichloroethene	79-01-6	N.D.	1	0.2	1
11997	Trichlorofluoromethane	75-69-4	N.D.	1	0.2	1
11997	1,2,4-Trimethylbenzene	95-63-6	N.D.	5	1	1
11997	1,3,5-Trimethylbenzene	108-67-8	N.D.	5	0.3	1
11997	Vinyl Chloride	75-01-4	N.D.	1	0.2	1
11997	m+p-Xylene	179601-23-1	N.D.	5	1	1
11997	o-Xylene	95-47-6	N.D.	1	0.4	1
11997	Xylene (Total)	1330-20-7	N.D.	6	1	1

12027 VOA Interp. Library Search-20

The results from the volatile library search are listed on the attached FORM 1 - VOA-TIC. The qualifiers appearing in the "Q" column are defined at the end of the report.

GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	Acenaphthene	83-32-9	N.D.	0.50	0.10	1
14241	Acenaphthylene	208-96-8	N.D.	0.50	0.10	1
14241	Acetophenone	98-86-2	N.D.	10	4.0	1
14241	Aniline	62-53-3	N.D.	10	3.0	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **PW-3T Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/29/2019 11:13
Collection Date/Time: 10/28/2019 11:25
SDG#: BMS81-05

ARCADIS U.S., Inc.
ELLE Sample #: GW 1186462
ELLE Group #: 2071526
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	Anthracene	120-12-7	N.D.	0.50	0.10	1
14241	Atrazine	1912-24-9	N.D.	5.0	2.0	1
14241	Benzaldehyde	100-52-7	N.D.	10	3.0	1
14241	Benzo(a)anthracene	56-55-3	N.D.	0.50	0.10	1
14241	Benzo(a)pyrene	50-32-8	N.D.	0.50	0.10	1
14241	Benzo(b)fluoranthene	205-99-2	N.D.	0.50	0.10	1
14241	Benzo(g,h,i)perylene	191-24-2	N.D.	0.50	0.10	1
14241	Benzo(k)fluoranthene	207-08-9	N.D.	0.50	0.10	1
14241	Benzyl alcohol	100-51-6	N.D.	30	10	1
14241	1,1'-Biphenyl	92-52-4	N.D.	10	3.0	1
14241	4-Bromophenyl-phenylether	101-55-3	N.D.	2.0	0.50	1
14241	Butylbenzylphthalate	85-68-7	N.D.	5.0	2.0	1
14241	Di-n-butylphthalate	84-74-2	N.D.	5.0	2.0	1
14241	Caprolactam	105-60-2	N.D.	11	5.0	1
14241	Carbazole	86-74-8	N.D.	2.0	0.50	1
14241	4-Chloro-3-methylphenol	59-50-7	N.D.	2.0	0.50	1
14241	4-Chloroaniline	106-47-8	N.D.	10	4.0	1
14241	bis(2-Chloroethoxy)methane	111-91-1	N.D.	2.0	0.50	1
14241	bis(2-Chloroethyl)ether	111-44-4	N.D.	2.0	0.50	1
14241	bis(2-Chloroisopropyl)ether[1]	39638-32-9	N.D.	2.0	0.50	1
	Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.					
14241	2-Chloronaphthalene	91-58-7	N.D.	1.0	0.40	1
14241	2-Chlorophenol	95-57-8	N.D.	2.0	0.50	1
14241	4-Chlorophenyl-phenylether	7005-72-3	N.D.	2.0	0.50	1
14241	Chrysene	218-01-9	N.D.	0.50	0.10	1
14241	Dibenz(a,h)anthracene	53-70-3	N.D.	0.50	0.10	1
14241	Dibenzofuran	132-64-9	N.D.	2.0	0.50	1
14241	3,3'-Dichlorobenzidine	91-94-1	N.D.	10	3.0	1
14241	2,4-Dichlorophenol	120-83-2	N.D.	2.0	0.50	1
14241	Dicyclohexylamine[1]	101-83-7	N.D.	10	10	1
14241	Diethylphthalate	84-66-2	N.D.	5.0	2.0	1
14241	N,N-Dimethylaniline[1]	121-69-7	N.D.	1.0	0.50	1
14241	2,4-Dimethylphenol	105-67-9	N.D.	10	3.0	1
14241	Dimethylphthalate	131-11-3	N.D.	5.0	2.0	1
14241	4,6-Dinitro-2-methylphenol	534-52-1	N.D.	21	8.0	1
14241	2,4-Dinitrophenol	51-28-5	N.D.	30	14	1
14241	2,4-Dinitrotoluene	121-14-2	N.D.	5.0	1.0	1
14241	2,6-Dinitrotoluene	606-20-2	N.D.	2.0	0.50	1
14241	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	11	5.0	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **PW-3T Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/29/2019 11:13
Collection Date/Time: 10/28/2019 11:25
SDG#: BMS81-05

ARCADIS U.S., Inc.
ELLE Sample #: GW 1186462
ELLE Group #: 2071526
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	Fluoranthene	206-44-0	N.D.	0.50	0.10	1
14241	Fluorene	86-73-7	N.D.	0.50	0.10	1
14241	Hexachlorobenzene	118-74-1	N.D.	0.50	0.10	1
14241	Hexachlorobutadiene	87-68-3	N.D.	2.0	0.50	1
14241	Hexachlorocyclopentadiene	77-47-4	N.D.	11	5.0	1
14241	Hexachloroethane	67-72-1	N.D.	5.0	1.0	1
14241	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.50	0.10	1
14241	Isophorone	78-59-1	N.D.	2.0	0.50	1
14241	2-Methylnaphthalene	91-57-6	N.D.	0.50	0.10	1
14241	2-Methylphenol	95-48-7	N.D.	2.0	0.50	1
14241	4-Methylphenol	65794-96-9	N.D.	2.0	0.50	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
14241	Naphthalene	91-20-3	N.D.	0.50	0.10	1
14241	2-Nitroaniline	88-74-4	N.D.	7.0	2.0	1
14241	3-Nitroaniline	99-09-2	N.D.	7.0	3.0	1
14241	4-Nitroaniline	100-01-6	N.D.	3.0	0.90	1
14241	Nitrobenzene	98-95-3	N.D.	2.0	0.50	1
14241	2-Nitrophenol	88-75-5	N.D.	10	3.0	1
14241	4-Nitrophenol	100-02-7	N.D.	30	10	1
14241	N-Nitroso-di-n-propylamine	621-64-7	N.D.	3.0	0.70	1
14241	N-Nitrosodiphenylamine	86-30-6	N.D.	3.0	0.70	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.					
14241	Di-n-octylphthalate	117-84-0	N.D.	11	5.0	1
14241	Pentachlorophenol	87-86-5	N.D.	5.0	1.0	1
14241	Phenanthrene	85-01-8	N.D.	0.50	0.10	1
14241	Phenol	108-95-2	N.D.	2.0	0.50	1
14241	Pyrene	129-00-0	N.D.	0.50	0.10	1
14241	Pyridine	110-86-1	N.D.	5.0	2.0	1
14241	1,2,4,5-Tetrachlorobenzene	95-94-3	N.D.	2.0	0.50	1
14241	2,3,4,6-Tetrachlorophenol	58-90-2	N.D.	10	4.0	1
14241	2,4,5-Trichlorophenol	95-95-4	N.D.	2.0	0.50	1
14241	2,4,6-Trichlorophenol	88-06-2	N.D.	2.0	0.50	1
14241	Triethylamine[1]	121-44-8	N.D.	10	10	1

The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the TNI/DoD Standards. The following analytes are accepted based on this allowance: Benzo(k)fluoranthene

00886 SVOA TIC Interpretive(25)

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **PW-3T Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/29/2019 11:13
Collection Date/Time: 10/28/2019 11:25
SDG#: BMS81-05

ARCADIS U.S., Inc.
ELLE Sample #: GW 1186462
ELLE Group #: 2071526
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
	The results from the semivolatile library search are listed on the attached FORM 1 - SV-TIC. The qualifiers appearing in the "Q" column are defined at the end of the report.					
Aldehydes & Ketones	**SW-846 8315A**		**ug/l**	**ug/l**	**ug/l**	
13022	Acetaldehyde[1]	75-07-0	N.D.	60	35	1
13022	Formaldehyde	50-00-0	N.D.	50	20	1
	The response for a target analyte(s) in the initial calibration verification standard is outside the QC acceptance limits.					
GC Miscellaneous	**SW-846 8015C Feb 2007 Rev 3**		**mg/l**	**mg/l**	**mg/l**	
12926	Ethylene glycol	107-21-1	N.D.	10	5.0	1
12926	Propylene glycol[1]	57-55-6	N.D.	10	2.0	1
	The response for tetramethylene glycol in the continuing calibration verification standard is outside the QC acceptance limits low. The following action was taken: The analysis was repeated and the continuing calibration verification standard bracketing the sample on the second trial is also outside the acceptance limits. This effect is attributed to the sample matrix and the data is reported.					
GC Miscellaneous	**SW-846 8015D Rev.4, June 2003**		**ug/l**	**ug/l**	**ug/l**	
10603	Ethanol	64-17-5	N.D. D2	1,000	150	1
10603	Isopropanol[1]	67-63-0	N.D. D2	1,000	110	1
10603	Methanol	67-56-1	N.D. D2	1,000	220	1

Sample Comments

State of New York Certification No. 10670

[1] = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	Y193112AA	11/07/2019 19:09	Linda C Pape	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	Y193112AA	11/07/2019 19:08	Linda C Pape	1
14241	Semi-annual Groundwater BMS	SW-846 8270D	1	19305WAF026	11/08/2019 16:35	Holly B Ziegler	1
11010	8270D BNA Extraction	SW-846 3510C	1	19305WAF026	11/01/2019 16:35	Osvaldo R Sanchez	1
13022	Short List Aldehydes- W 8315A	SW-846 8315A	1	193030019A	10/31/2019 17:56	Jessica L Miller	1
01013	Formaldehyde Extraction	SW-846 8315A	1	193030019A	10/31/2019 09:23	Alison Moll	1
12926	Glycols in Water by 8015C/D	SW-846 8015C Feb 2007 Rev 3	1	193080027A	11/05/2019 23:02	Donald Brown	1
10603	Alcohols in Water	SW-846 8015D Rev.4, June 2003	1	193080007A	11/04/2019 19:06	Johanna C Kennedy	1

*=This limit was used in the evaluation of the final result

REVISED

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
BMS05

Lab Name: Lancaster Laboratories Contract:_____
Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____
Matrix: (soil/water) WATER Lab Sample ID: 1186462
Sample wt/vol: 5.0 (g/mL)mL Lab File ID:HP09355.i/19nov07a.b/yn07s45.d
Level: (low/med) LOW Date Received: 10/29/19
% Moisture: not dec. Date Analyzed: 11/07/19
Column: (pack/cap) CAP Dilution Factor: 1.0
CONCENTRATION UNITS:
Number TICs found: 0 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	VOCTIC	Total VOC TICs		0	U
2.					
3.					
4.					
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page 1 of 1

FORM I VOA-TIC

REVISED

1F

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

BMS05

Lab Name: Lancaster Laboratories Contract:
Lab Code: LANCAS Case No.: SAS No.: SDG No.:
Matrix: (soil/water) WATER Lab Sample ID: 1186462
Sample wt/vol: 249 (g/mL) mL Lab File ID: lk0343.d
Level: (low/med) LOW Date Received: 10/29/19
% Moisture: Decanted: (Y/N) Date Extracted: 11/01/19
Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/08/19
Injection Volume: 1 (uL) Dilution Factor: 1
GPC Cleanup: N pH: Extraction: Sepf

CONCENTRATION UNITS:
Number TICs found: 0 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	SVOCTIC	Total SVOC TICs		0	U
2.					
3.					
4.					
5.					
6.					
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page 1 of 1

FORM I SV-1

REVISED

Sample Description: **PW-4LD Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/29/2019 11:13
Collection Date/Time: 10/28/2019 14:36
SDG#: BMS81-06

ARCADIS U.S., Inc.
ELLE Sample #: GW 1186463
ELLE Group #: 2071526
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	20	0.7	1
11997	Acetonitrile	75-05-8	N.D.	100	16	1
11997	Benzene	71-43-2	N.D.	1	0.2	1
11997	Bromochloromethane	74-97-5	N.D.	5	0.2	1
11997	Bromodichloromethane	75-27-4	N.D.	1	0.2	1
11997	Bromoform	75-25-2	N.D.	4	1	1
11997	Bromomethane	74-83-9	N.D.	1	0.3	1
11997	n-Butanol	71-36-3	N.D.	250	61	1
11997	2-Butanone	78-93-3	N.D.	10	0.3	1
11997	t-Butyl alcohol	75-65-0	N.D.	50	12	1
11997	n-Butylbenzene	104-51-8	N.D.	5	0.2	1
11997	sec-Butylbenzene	135-98-8	N.D.	5	0.2	1
11997	tert-Butylbenzene	98-06-6	N.D.	5	0.3	1
11997	Carbon Disulfide	75-15-0	N.D.	5	0.2	1
11997	Carbon Tetrachloride	56-23-5	N.D.	1	0.2	1
11997	Chlorobenzene	108-90-7	N.D.	1	0.2	1
11997	Chlorodifluoromethane[1]	75-45-6	N.D.	5	2	1
11997	Chloroethane	75-00-3	N.D.	1	0.2	1
11997	Chloroform	67-66-3	N.D.	1	0.2	1
11997	Chloromethane	74-87-3	N.D.	1	0.2	1
11997	Cyclohexane	110-82-7	N.D.	5	1	1
11997	Cyclohexanone[1]	108-94-1	N.D.	100	25	1
11997	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	5	0.3	1
11997	Dibromochloromethane	124-48-1	N.D.	1	0.2	1
11997	1,2-Dibromoethane	106-93-4	N.D.	1	0.2	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	5	0.2	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	5	0.2	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	5	0.2	1
11997	Dichlorodifluoromethane	75-71-8	N.D.	1	0.2	1
11997	1,1-Dichloroethane	75-34-3	N.D.	1	0.2	1
11997	1,2-Dichloroethane	107-06-2	N.D.	1	0.3	1
11997	1,1-Dichloroethene	75-35-4	N.D.	1	0.2	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	1	0.2	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	1	0.2	1
11997	1,2-Dichloropropane	78-87-5	N.D.	1	0.2	1
11997	cis-1,3-Dichloropropene	10061-01-5	N.D.	1	0.2	1
11997	trans-1,3-Dichloropropene	10061-02-6	N.D.	1	0.2	1
11997	1,4-Dioxane	123-91-1	N.D.	250	29	1
11997	Ethyl Acetate	141-78-6	N.D.	5	0.7	1
11997	Ethyl ether	60-29-7	3 J	5	0.2	1
11997	Ethylbenzene	100-41-4	N.D.	1	0.4	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **PW-4LD Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/29/2019 11:13
Collection Date/Time: 10/28/2019 14:36
SDG#: BMS81-06

ARCADIS U.S., Inc.
ELLE Sample #: GW 1186463
ELLE Group #: 2071526
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Freon 113	76-13-1	N.D.	10	0.2	1
11997	n-Heptane[1]	142-82-5	N.D.	5	2	1
11997	n-Hexane[1]	110-54-3	N.D.	5	2	1
11997	2-Hexanone	591-78-6	N.D.	10	0.3	1
11997	Isobutyl Alcohol	78-83-1	N.D.	250	36	1
11997	Isopropylbenzene	98-82-8	N.D.	5	0.2	1
11997	p-Isopropyltoluene	99-87-6	N.D.	5	0.2	1
11997	Methyl Acetate	79-20-9	N.D.	5	0.2	1
11997	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	1	0.2	1
11997	4-Methyl-2-pentanone	108-10-1	N.D.	10	0.5	1
11997	Methylcyclohexane	108-87-2	N.D.	5	0.5	1
11997	Methylene Chloride	75-09-2	N.D.	1	0.3	1
11997	Naphthalene	91-20-3	N.D.	5	1	1
11997	2-Nitropropane	79-46-9	N.D.	10	0.8	1
11997	Styrene	100-42-5	N.D.	5	0.2	1
11997	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	1	0.2	1
11997	Tetrachloroethene	127-18-4	N.D.	1	0.2	1
11997	Tetrahydrofuran	109-99-9	N.D.	10	0.7	1
11997	Toluene	108-88-3	N.D.	1	0.2	1
11997	1,2,3-Trichlorobenzene	87-61-6	N.D.	5	0.4	1
11997	1,2,4-Trichlorobenzene	120-82-1	N.D.	5	0.3	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	1	0.3	1
11997	1,1,2-Trichloroethane	79-00-5	N.D.	1	0.2	1
11997	Trichloroethene	79-01-6	N.D.	1	0.2	1
11997	Trichlorofluoromethane	75-69-4	N.D.	1	0.2	1
11997	1,2,4-Trimethylbenzene	95-63-6	N.D.	5	1	1
11997	1,3,5-Trimethylbenzene	108-67-8	N.D.	5	0.3	1
11997	Vinyl Chloride	75-01-4	N.D.	1	0.2	1
11997	m+p-Xylene	179601-23-1	N.D.	5	1	1
11997	o-Xylene	95-47-6	N.D.	1	0.4	1
11997	Xylene (Total)	1330-20-7	N.D.	6	1	1

12027 VOA Interp. Library Search-20

The results from the volatile library search are listed on the attached FORM 1 - VOA-TIC. The qualifiers appearing in the "Q" column are defined at the end of the report.

GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	Acenaphthene	83-32-9	N.D.	0.51	0.10	1
14241	Acenaphthylene	208-96-8	N.D.	0.51	0.10	1
14241	Acetophenone	98-86-2	N.D.	10	4.0	1
14241	Aniline	62-53-3	N.D.	10	3.0	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **PW-4LD Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/29/2019 11:13
Collection Date/Time: 10/28/2019 14:36
SDG#: BMS81-06

ARCADIS U.S., Inc.
ELLE Sample #: GW 1186463
ELLE Group #: 2071526
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	Anthracene	120-12-7	N.D.	0.51	0.10	1
14241	Atrazine	1912-24-9	N.D.	5.1	2.0	1
14241	Benzaldehyde	100-52-7	N.D.	10	3.0	1
14241	Benzo(a)anthracene	56-55-3	N.D.	0.51	0.10	1
14241	Benzo(a)pyrene	50-32-8	N.D.	0.51	0.10	1
14241	Benzo(b)fluoranthene	205-99-2	N.D.	0.51	0.10	1
14241	Benzo(g,h,i)perylene	191-24-2	N.D.	0.51	0.10	1
14241	Benzo(k)fluoranthene	207-08-9	N.D.	0.51	0.10	1
14241	Benzyl alcohol	100-51-6	N.D.	30	10	1
14241	1,1'-Biphenyl	92-52-4	N.D.	10	3.0	1
14241	4-Bromophenyl-phenylether	101-55-3	N.D.	2.0	0.51	1
14241	Butylbenzylphthalate	85-68-7	N.D.	5.1	2.0	1
14241	Di-n-butylphthalate	84-74-2	N.D.	5.1	2.0	1
14241	Caprolactam	105-60-2	N.D.	11	5.1	1
14241	Carbazole	86-74-8	N.D.	2.0	0.51	1
14241	4-Chloro-3-methylphenol	59-50-7	N.D.	2.0	0.51	1
14241	4-Chloroaniline	106-47-8	N.D.	10	4.0	1
14241	bis(2-Chloroethoxy)methane	111-91-1	N.D.	2.0	0.51	1
14241	bis(2-Chloroethyl)ether	111-44-4	N.D.	2.0	0.51	1
14241	bis(2-Chloroisopropyl)ether[1]	39638-32-9	N.D.	2.0	0.51	1
	Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.					
14241	2-Chloronaphthalene	91-58-7	N.D.	1.0	0.40	1
14241	2-Chlorophenol	95-57-8	N.D.	2.0	0.51	1
14241	4-Chlorophenyl-phenylether	7005-72-3	N.D.	2.0	0.51	1
14241	Chrysene	218-01-9	N.D.	0.51	0.10	1
14241	Dibenz(a,h)anthracene	53-70-3	N.D.	0.51	0.10	1
14241	Dibenzofuran	132-64-9	N.D.	2.0	0.51	1
14241	3,3'-Dichlorobenzidine	91-94-1	N.D.	10	3.0	1
14241	2,4-Dichlorophenol	120-83-2	N.D.	2.0	0.51	1
14241	Dicyclohexylamine[1]	101-83-7	N.D.	10	10	1
14241	Diethylphthalate	84-66-2	N.D.	5.1	2.0	1
14241	N,N-Dimethylaniline[1]	121-69-7	N.D.	1.0	0.51	1
14241	2,4-Dimethylphenol	105-67-9	N.D.	10	3.0	1
14241	Dimethylphthalate	131-11-3	N.D.	5.1	2.0	1
14241	4,6-Dinitro-2-methylphenol	534-52-1	N.D.	21	8.1	1
14241	2,4-Dinitrophenol	51-28-5	N.D.	30	14	1
14241	2,4-Dinitrotoluene	121-14-2	N.D.	5.1	1.0	1
14241	2,6-Dinitrotoluene	606-20-2	N.D.	2.0	0.51	1
14241	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	11	5.1	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **PW-4LD Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/29/2019 11:13
Collection Date/Time: 10/28/2019 14:36
SDG#: BMS81-06

ARCADIS U.S., Inc.
ELLE Sample #: GW 1186463
ELLE Group #: 2071526
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	Fluoranthene	206-44-0	N.D.	0.51	0.10	1
14241	Fluorene	86-73-7	N.D.	0.51	0.10	1
14241	Hexachlorobenzene	118-74-1	N.D.	0.51	0.10	1
14241	Hexachlorobutadiene	87-68-3	N.D.	2.0	0.51	1
14241	Hexachlorocyclopentadiene	77-47-4	N.D.	11	5.1	1
14241	Hexachloroethane	67-72-1	N.D.	5.1	1.0	1
14241	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.51	0.10	1
14241	Isophorone	78-59-1	N.D.	2.0	0.51	1
14241	2-Methylnaphthalene	91-57-6	N.D.	0.51	0.10	1
14241	2-Methylphenol	95-48-7	N.D.	2.0	0.51	1
14241	4-Methylphenol	65794-96-9	N.D.	2.0	0.51	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
14241	Naphthalene	91-20-3	N.D.	0.51	0.10	1
14241	2-Nitroaniline	88-74-4	N.D.	7.1	2.0	1
14241	3-Nitroaniline	99-09-2	N.D.	7.1	3.0	1
14241	4-Nitroaniline	100-01-6	N.D.	3.0	0.91	1
14241	Nitrobenzene	98-95-3	N.D.	2.0	0.51	1
14241	2-Nitrophenol	88-75-5	N.D.	10	3.0	1
14241	4-Nitrophenol	100-02-7	N.D.	30	10	1
14241	N-Nitroso-di-n-propylamine	621-64-7	N.D.	3.0	0.71	1
14241	N-Nitrosodiphenylamine	86-30-6	N.D.	3.0	0.71	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.					
14241	Di-n-octylphthalate	117-84-0	N.D.	11	5.1	1
14241	Pentachlorophenol	87-86-5	N.D.	5.1	1.0	1
14241	Phenanthrene	85-01-8	N.D.	0.51	0.10	1
14241	Phenol	108-95-2	N.D.	2.0	0.51	1
14241	Pyrene	129-00-0	N.D.	0.51	0.10	1
14241	Pyridine	110-86-1	N.D.	5.1	2.0	1
14241	1,2,4,5-Tetrachlorobenzene	95-94-3	N.D.	2.0	0.51	1
14241	2,3,4,6-Tetrachlorophenol	58-90-2	N.D.	10	4.0	1
14241	2,4,5-Trichlorophenol	95-95-4	N.D.	2.0	0.51	1
14241	2,4,6-Trichlorophenol	88-06-2	N.D.	2.0	0.51	1
14241	Triethylamine[1]	121-44-8	N.D.	10	10	1

The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the TNI/DoD Standards. The following analytes are accepted based on this allowance: Benzo(k)fluoranthene

00886 SVOA TIC Interpretive(25)

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **PW-4LD Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/29/2019 11:13
Collection Date/Time: 10/28/2019 14:36
SDG#: BMS81-06

ARCADIS U.S., Inc.
ELLE Sample #: GW 1186463
ELLE Group #: 2071526
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
	The results from the semivolatile library search are listed on the attached FORM 1 - SV-TIC. The qualifiers appearing in the "Q" column are defined at the end of the report.					
Aldehydes & Ketones	**SW-846 8315A**		**ug/l**	**ug/l**	**ug/l**	
13022	Acetaldehyde[1]	75-07-0	N.D.	60	35	1
13022	Formaldehyde	50-00-0	N.D.	50	20	1
	The response for a target analyte(s) in the initial calibration verification standard is outside the QC acceptance limits.					
GC Miscellaneous	**SW-846 8015C Feb 2007 Rev 3**		**mg/l**	**mg/l**	**mg/l**	
12926	Ethylene glycol	107-21-1	N.D.	10	5.0	1
12926	Propylene glycol[1]	57-55-6	N.D.	10	2.0	1
	The response for tetramethylene glycol in the continuing calibration verification standard is outside the QC acceptance limits low. The following action was taken: The analysis was repeated and the continuing calibration verification standard bracketing the sample on the second trial is also outside the acceptance limits. This effect is attributed to the sample matrix and the data is reported.					
GC Miscellaneous	**SW-846 8015D Rev.4, June 2003**		**ug/l**	**ug/l**	**ug/l**	
10603	Ethanol	64-17-5	N.D. D2	1,000	150	1
10603	Isopropanol[1]	67-63-0	N.D. D2	1,000	110	1
10603	Methanol	67-56-1	N.D. D2	1,000	220	1

Sample Comments

State of New York Certification No. 10670

[1] = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	Y193112AA	11/07/2019 19:31	Linda C Pape	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	Y193112AA	11/07/2019 19:30	Linda C Pape	1
14241	Semi-annual Groundwater BMS	SW-846 8270D	1	19305WAF026	11/08/2019 17:04	Holly B Ziegler	1
11010	8270D BNA Extraction	SW-846 3510C	1	19305WAF026	11/01/2019 16:35	Osvaldo R Sanchez	1
13022	Short List Aldehydes- W 8315A	SW-846 8315A	1	193030019A	10/31/2019 18:07	Jessica L Miller	1
01013	Formaldehyde Extraction	SW-846 8315A	1	193030019A	10/31/2019 09:23	Alison Moll	1
12926	Glycols in Water by 8015C/D	SW-846 8015C Feb 2007 Rev 3	1	193100032A	11/06/2019 23:22	Donald Brown	1
10603	Alcohols in Water	SW-846 8015D Rev.4, June 2003	1	193080007A	11/04/2019 19:22	Johanna C Kennedy	1

*=This limit was used in the evaluation of the final result

REVISED

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
BMS06

Lab Name: Lancaster Laboratories Contract:_____
Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____
Matrix: (soil/water) WATER Lab Sample ID: 1186463
Sample wt/vol: 5.0 (g/mL)mL Lab File ID:HP09355.i/19nov07a.b/yn07s46.d
Level: (low/med) LOW Date Received: 10/29/19
% Moisture: not dec. Date Analyzed: 11/07/19
Column: (pack/cap) CAP Dilution Factor: 1.0
CONCENTRATION UNITS:
Number TICs found: 0 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	VOCTIC	Total VOC TICs		0	U
2.					
3.					
4.					
5.					
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page 1 of 1

FORM I VOA-TIC

REVISED

1F

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

BMS06

Lab Name: Lancaster Laboratories Contract:
Lab Code: LANCAS Case No.: SAS No.: SDG No.:
Matrix: (soil/water) WATER Lab Sample ID: 1186463
Sample wt/vol: 247 (g/mL) mL Lab File ID: lk0344.d
Level: (low/med) LOW Date Received: 10/29/19
% Moisture: Decanted: (Y/N) Date Extracted: 11/01/19
Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/08/19
Injection Volume: 1 (uL) Dilution Factor: 1
GPC Cleanup: N pH: Extraction: Sepf
CONCENTRATION UNITS:
Number TICs found: 1 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		Unknown	12.504	5	J
2.					
3.	SVOCTIC	Total SVOC TICs		5	J
4.					
5.					
6.					
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page 1 of 1

FORM I SV-1

REVISED

Sample Description: **PW-4F Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/29/2019 11:13
Collection Date/Time: 10/28/2019 11:31
SDG#: BMS81-07

ARCADIS U.S., Inc.
ELLE Sample #: GW 1186464
ELLE Group #: 2071526
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	0.7 J	20	0.7	1
11997	Acetonitrile	75-05-8	N.D.	100	16	1
11997	Benzene	71-43-2	N.D.	1	0.2	1
11997	Bromochloromethane	74-97-5	N.D.	5	0.2	1
11997	Bromodichloromethane	75-27-4	N.D.	1	0.2	1
11997	Bromoform	75-25-2	N.D.	4	1	1
11997	Bromomethane	74-83-9	N.D.	1	0.3	1
11997	n-Butanol	71-36-3	N.D.	250	61	1
11997	2-Butanone	78-93-3	N.D.	10	0.3	1
11997	t-Butyl alcohol	75-65-0	N.D.	50	12	1
11997	n-Butylbenzene	104-51-8	N.D.	5	0.2	1
11997	sec-Butylbenzene	135-98-8	N.D.	5	0.2	1
11997	tert-Butylbenzene	98-06-6	N.D.	5	0.3	1
11997	Carbon Disulfide	75-15-0	N.D.	5	0.2	1
11997	Carbon Tetrachloride	56-23-5	N.D.	1	0.2	1
11997	Chlorobenzene	108-90-7	N.D.	1	0.2	1
11997	Chlorodifluoromethane[1]	75-45-6	N.D.	5	2	1
11997	Chloroethane	75-00-3	N.D.	1	0.2	1
11997	Chloroform	67-66-3	N.D.	1	0.2	1
11997	Chloromethane	74-87-3	N.D.	1	0.2	1
11997	Cyclohexane	110-82-7	N.D.	5	1	1
11997	Cyclohexanone[1]	108-94-1	N.D.	100	25	1
11997	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	5	0.3	1
11997	Dibromochloromethane	124-48-1	N.D.	1	0.2	1
11997	1,2-Dibromoethane	106-93-4	N.D.	1	0.2	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	5	0.2	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	5	0.2	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	5	0.2	1
11997	Dichlorodifluoromethane	75-71-8	N.D.	1	0.2	1
11997	1,1-Dichloroethane	75-34-3	N.D.	1	0.2	1
11997	1,2-Dichloroethane	107-06-2	N.D.	1	0.3	1
11997	1,1-Dichloroethene	75-35-4	N.D.	1	0.2	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	1	0.2	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	1	0.2	1
11997	1,2-Dichloropropane	78-87-5	N.D.	1	0.2	1
11997	cis-1,3-Dichloropropene	10061-01-5	N.D.	1	0.2	1
11997	trans-1,3-Dichloropropene	10061-02-6	N.D.	1	0.2	1
11997	1,4-Dioxane	123-91-1	N.D.	250	29	1
11997	Ethyl Acetate	141-78-6	N.D.	5	0.7	1
11997	Ethyl ether	60-29-7	1 J	5	0.2	1
11997	Ethylbenzene	100-41-4	N.D.	1	0.4	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **PW-4F Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/29/2019 11:13
Collection Date/Time: 10/28/2019 11:31
SDG#: BMS81-07

ARCADIS U.S., Inc.
ELLE Sample #: GW 1186464
ELLE Group #: 2071526
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Freon 113	76-13-1	N.D.	10	0.2	1
11997	n-Heptane[1]	142-82-5	N.D.	5	2	1
11997	n-Hexane[1]	110-54-3	N.D.	5	2	1
11997	2-Hexanone	591-78-6	N.D.	10	0.3	1
11997	Isobutyl Alcohol	78-83-1	N.D.	250	36	1
11997	Isopropylbenzene	98-82-8	N.D.	5	0.2	1
11997	p-Isopropyltoluene	99-87-6	N.D.	5	0.2	1
11997	Methyl Acetate	79-20-9	N.D.	5	0.2	1
11997	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	1	0.2	1
11997	4-Methyl-2-pentanone	108-10-1	N.D.	10	0.5	1
11997	Methylcyclohexane	108-87-2	N.D.	5	0.5	1
11997	Methylene Chloride	75-09-2	N.D.	1	0.3	1
11997	Naphthalene	91-20-3	N.D.	5	1	1
11997	2-Nitropropane	79-46-9	N.D.	10	0.8	1
11997	Styrene	100-42-5	N.D.	5	0.2	1
11997	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	1	0.2	1
11997	Tetrachloroethene	127-18-4	N.D.	1	0.2	1
11997	Tetrahydrofuran	109-99-9	N.D.	10	0.7	1
11997	Toluene	108-88-3	N.D.	1	0.2	1
11997	1,2,3-Trichlorobenzene	87-61-6	N.D.	5	0.4	1
11997	1,2,4-Trichlorobenzene	120-82-1	N.D.	5	0.3	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	1	0.3	1
11997	1,1,2-Trichloroethane	79-00-5	N.D.	1	0.2	1
11997	Trichloroethene	79-01-6	N.D.	1	0.2	1
11997	Trichlorofluoromethane	75-69-4	N.D.	1	0.2	1
11997	1,2,4-Trimethylbenzene	95-63-6	N.D.	5	1	1
11997	1,3,5-Trimethylbenzene	108-67-8	N.D.	5	0.3	1
11997	Vinyl Chloride	75-01-4	N.D.	1	0.2	1
11997	m+p-Xylene	179601-23-1	N.D.	5	1	1
11997	o-Xylene	95-47-6	N.D.	1	0.4	1
11997	Xylene (Total)	1330-20-7	N.D.	6	1	1

12027 VOA Interp. Library Search-20

The results from the volatile library search are listed on the attached FORM 1 - VOA-TIC. The qualifiers appearing in the "Q" column are defined at the end of the report.

GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	Acenaphthene	83-32-9	N.D.	0.50	0.10	1
14241	Acenaphthylene	208-96-8	N.D.	0.50	0.10	1
14241	Acetophenone	98-86-2	N.D.	10	4.0	1
14241	Aniline	62-53-3	N.D.	10	3.0	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **PW-4F Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/29/2019 11:13
Collection Date/Time: 10/28/2019 11:31
SDG#: BMS81-07

ARCADIS U.S., Inc.
ELLE Sample #: GW 1186464
ELLE Group #: 2071526
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	Anthracene	120-12-7	N.D.	0.50	0.10	1
14241	Atrazine	1912-24-9	N.D.	5.0	2.0	1
14241	Benzaldehyde	100-52-7	N.D.	10	3.0	1
14241	Benzo(a)anthracene	56-55-3	N.D.	0.50	0.10	1
14241	Benzo(a)pyrene	50-32-8	N.D.	0.50	0.10	1
14241	Benzo(b)fluoranthene	205-99-2	N.D.	0.50	0.10	1
14241	Benzo(g,h,i)perylene	191-24-2	N.D.	0.50	0.10	1
14241	Benzo(k)fluoranthene	207-08-9	N.D.	0.50	0.10	1
14241	Benzyl alcohol	100-51-6	N.D.	30	10	1
14241	1,1'-Biphenyl	92-52-4	N.D.	10	3.0	1
14241	4-Bromophenyl-phenylether	101-55-3	N.D.	2.0	0.50	1
14241	Butylbenzylphthalate	85-68-7	N.D.	5.0	2.0	1
14241	Di-n-butylphthalate	84-74-2	N.D.	5.0	2.0	1
14241	Caprolactam	105-60-2	N.D.	11	5.0	1
14241	Carbazole	86-74-8	N.D.	2.0	0.50	1
14241	4-Chloro-3-methylphenol	59-50-7	N.D.	2.0	0.50	1
14241	4-Chloroaniline	106-47-8	N.D.	10	4.0	1
14241	bis(2-Chloroethoxy)methane	111-91-1	N.D.	2.0	0.50	1
14241	bis(2-Chloroethyl)ether	111-44-4	N.D.	2.0	0.50	1
14241	bis(2-Chloroisopropyl)ether[1]	39638-32-9	N.D.	2.0	0.50	1
	Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.					
14241	2-Chloronaphthalene	91-58-7	N.D.	1.0	0.40	1
14241	2-Chlorophenol	95-57-8	N.D.	2.0	0.50	1
14241	4-Chlorophenyl-phenylether	7005-72-3	N.D.	2.0	0.50	1
14241	Chrysene	218-01-9	N.D.	0.50	0.10	1
14241	Dibenz(a,h)anthracene	53-70-3	N.D.	0.50	0.10	1
14241	Dibenzofuran	132-64-9	N.D.	2.0	0.50	1
14241	3,3'-Dichlorobenzidine	91-94-1	N.D.	10	3.0	1
14241	2,4-Dichlorophenol	120-83-2	N.D.	2.0	0.50	1
14241	Dicyclohexylamine[1]	101-83-7	N.D.	10	10	1
14241	Diethylphthalate	84-66-2	N.D.	5.0	2.0	1
14241	N,N-Dimethylaniline[1]	121-69-7	N.D.	1.0	0.50	1
14241	2,4-Dimethylphenol	105-67-9	N.D.	10	3.0	1
14241	Dimethylphthalate	131-11-3	N.D.	5.0	2.0	1
14241	4,6-Dinitro-2-methylphenol	534-52-1	N.D.	21	8.0	1
14241	2,4-Dinitrophenol	51-28-5	N.D.	30	14	1
14241	2,4-Dinitrotoluene	121-14-2	N.D.	5.0	1.0	1
14241	2,6-Dinitrotoluene	606-20-2	N.D.	2.0	0.50	1
14241	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	11	5.0	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **PW-4F Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/29/2019 11:13
Collection Date/Time: 10/28/2019 11:31
SDG#: BMS81-07

ARCADIS U.S., Inc.
ELLE Sample #: GW 1186464
ELLE Group #: 2071526
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	Fluoranthene	206-44-0	N.D.	0.50	0.10	1
14241	Fluorene	86-73-7	N.D.	0.50	0.10	1
14241	Hexachlorobenzene	118-74-1	N.D.	0.50	0.10	1
14241	Hexachlorobutadiene	87-68-3	N.D.	2.0	0.50	1
14241	Hexachlorocyclopentadiene	77-47-4	N.D.	11	5.0	1
14241	Hexachloroethane	67-72-1	N.D.	5.0	1.0	1
14241	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.50	0.10	1
14241	Isophorone	78-59-1	N.D.	2.0	0.50	1
14241	2-Methylnaphthalene	91-57-6	N.D.	0.50	0.10	1
14241	2-Methylphenol	95-48-7	N.D.	2.0	0.50	1
14241	4-Methylphenol	65794-96-9	N.D.	2.0	0.50	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
14241	Naphthalene	91-20-3	N.D.	0.50	0.10	1
14241	2-Nitroaniline	88-74-4	N.D.	7.0	2.0	1
14241	3-Nitroaniline	99-09-2	N.D.	7.0	3.0	1
14241	4-Nitroaniline	100-01-6	N.D.	3.0	0.90	1
14241	Nitrobenzene	98-95-3	N.D.	2.0	0.50	1
14241	2-Nitrophenol	88-75-5	N.D.	10	3.0	1
14241	4-Nitrophenol	100-02-7	N.D.	30	10	1
14241	N-Nitroso-di-n-propylamine	621-64-7	N.D.	3.0	0.70	1
14241	N-Nitrosodiphenylamine	86-30-6	N.D.	3.0	0.70	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.					
14241	Di-n-octylphthalate	117-84-0	N.D.	11	5.0	1
14241	Pentachlorophenol	87-86-5	N.D.	5.0	1.0	1
14241	Phenanthrene	85-01-8	N.D.	0.50	0.10	1
14241	Phenol	108-95-2	N.D.	2.0	0.50	1
14241	Pyrene	129-00-0	N.D.	0.50	0.10	1
14241	Pyridine	110-86-1	N.D.	5.0	2.0	1
14241	1,2,4,5-Tetrachlorobenzene	95-94-3	N.D.	2.0	0.50	1
14241	2,3,4,6-Tetrachlorophenol	58-90-2	N.D.	10	4.0	1
14241	2,4,5-Trichlorophenol	95-95-4	N.D.	2.0	0.50	1
14241	2,4,6-Trichlorophenol	88-06-2	N.D.	2.0	0.50	1
14241	Triethylamine[1]	121-44-8	N.D.	10	10	1

The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the TNI/DoD Standards. The following analytes are accepted based on this allowance: Benzo(k)fluoranthene

00886 SVOA TIC Interpretive(25)

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **PW-4F Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/29/2019 11:13
Collection Date/Time: 10/28/2019 11:31
SDG#: BMS81-07

ARCADIS U.S., Inc.
ELLE Sample #: GW 1186464
ELLE Group #: 2071526
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result		Limit of Quantitation*	Method Detection Limit	Dilution Factor
	The results from the semivolatile library search are listed on the attached FORM 1 - SV-TIC. The qualifiers appearing in the "Q" column are defined at the end of the report.						
Aldehydes & Ketones	**SW-846 8315A**		**ug/l**		**ug/l**	**ug/l**	
13022	Acetaldehyde[1]	75-07-0	N.D.		60	35	1
13022	Formaldehyde	50-00-0	24	J	50	20	1
	The response for a target analyte(s) in the initial calibration verification standard is outside the QC acceptance limits.						
GC Miscellaneous	**SW-846 8015C Feb 2007 Rev 3**		**mg/l**		**mg/l**	**mg/l**	
12926	Ethylene glycol	107-21-1	N.D.		10	5.0	1
12926	Propylene glycol[1]	57-55-6	N.D.		10	2.0	1
	The response for tetramethylene glycol in the continuing calibration verification standard is outside the QC acceptance limits low. The following action was taken: The analysis was repeated and the continuing calibration verification standard bracketing the sample on the second trial is also outside the acceptance limits. This effect is attributed to the sample matrix and the data is reported.						
GC Miscellaneous	**SW-846 8015D Rev.4, June 2003**		**ug/l**		**ug/l**	**ug/l**	
10603	Ethanol	64-17-5	N.D.	D2	1,000	150	1
10603	Isopropanol[1]	67-63-0	N.D.	D2	1,000	110	1
10603	Methanol	67-56-1	N.D.	D2	1,000	220	1

Sample Comments

State of New York Certification No. 10670

[1] = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	Y193112AA	11/07/2019 19:53	Linda C Pape	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	Y193112AA	11/07/2019 19:52	Linda C Pape	1
14241	Semi-annual Groundwater BMS	SW-846 8270D	1	19305WAF026	11/08/2019 17:33	Holly B Ziegler	1
11010	8270D BNA Extraction	SW-846 3510C	1	19305WAF026	11/01/2019 16:35	Osvaldo R Sanchez	1
13022	Short List Aldehydes- W 8315A	SW-846 8315A	1	193030019A	10/31/2019 18:17	Jessica L Miller	1
01013	Formaldehyde Extraction	SW-846 8315A	1	193030019A	10/31/2019 09:23	Alison Moll	1
12926	Glycols in Water by 8015C/D	SW-846 8015C Feb 2007 Rev 3	1	193080027A	11/05/2019 23:28	Donald Brown	1
10603	Alcohols in Water	SW-846 8015D Rev.4, June 2003	1	193080007A	11/04/2019 19:39	Johanna C Kennedy	1

*=This limit was used in the evaluation of the final result

REVISED

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
BMS07

Lab Name: Lancaster Laboratories Contract:_____
Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____
Matrix: (soil/water) WATER Lab Sample ID: 1186464
Sample wt/vol: 5.0 (g/mL)mL Lab File ID:HP09355.i/19nov07a.b/yn07s47.d
Level: (low/med) LOW Date Received: 10/29/19
% Moisture: not dec. Date Analyzed: 11/07/19
Column: (pack/cap) CAP Dilution Factor: 1.0
CONCENTRATION UNITS:
Number TICs found: 1 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		Unknown	5.51	10	J
2.					
3.	VOCTIC	Total VOC TICs		10	J
4.					
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page 1 of 1

FORM I VOA-TIC

REVISED

1F

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

BMS07

Lab Name: Lancaster Laboratories Contract:
Lab Code: LANCAS Case No.: SAS No.: SDG No.:
Matrix: (soil/water) WATER Lab Sample ID: 1186464
Sample wt/vol: 249 (g/mL) mL Lab File ID: lk0345.d
Level: (low/med) LOW Date Received: 10/29/19
% Moisture: Decanted: (Y/N) Date Extracted: 11/01/19
Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/08/19
Injection Volume: 1 (uL) Dilution Factor: 1
GPC Cleanup: N pH: Extraction: Sepf

CONCENTRATION UNITS:
Number TICs found: 0 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	SVOCTIC	Total SVOC TICs		0	U
2.					
3.					
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page 1 of 1

FORM I SV-1

REVISED

Sample Description: **PW-4LS Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/29/2019 11:13
Collection Date/Time: 10/28/2019 13:27
SDG#: BMS81-08

ARCADIS U.S., Inc.
ELLE Sample #: GW 1186465
ELLE Group #: 2071526
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	2 J	20	0.7	1
11997	Acetonitrile	75-05-8	N.D.	100	16	1
11997	Benzene	71-43-2	N.D.	1	0.2	1
11997	Bromochloromethane	74-97-5	N.D.	5	0.2	1
11997	Bromodichloromethane	75-27-4	N.D.	1	0.2	1
11997	Bromoform	75-25-2	N.D.	4	1	1
11997	Bromomethane	74-83-9	N.D.	1	0.3	1
11997	n-Butanol	71-36-3	N.D.	250	61	1
11997	2-Butanone	78-93-3	N.D.	10	0.3	1
11997	t-Butyl alcohol	75-65-0	N.D.	50	12	1
11997	n-Butylbenzene	104-51-8	N.D.	5	0.2	1
11997	sec-Butylbenzene	135-98-8	N.D.	5	0.2	1
11997	tert-Butylbenzene	98-06-6	N.D.	5	0.3	1
11997	Carbon Disulfide	75-15-0	N.D.	5	0.2	1
11997	Carbon Tetrachloride	56-23-5	N.D.	1	0.2	1
11997	Chlorobenzene	108-90-7	N.D.	1	0.2	1
11997	Chlorodifluoromethane[1]	75-45-6	N.D.	5	2	1
11997	Chloroethane	75-00-3	N.D.	1	0.2	1
11997	Chloroform	67-66-3	N.D.	1	0.2	1
11997	Chloromethane	74-87-3	N.D.	1	0.2	1
11997	Cyclohexane	110-82-7	N.D.	5	1	1
11997	Cyclohexanone[1]	108-94-1	N.D.	100	25	1
11997	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	5	0.3	1
11997	Dibromochloromethane	124-48-1	N.D.	1	0.2	1
11997	1,2-Dibromoethane	106-93-4	N.D.	1	0.2	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	5	0.2	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	5	0.2	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	5	0.2	1
11997	Dichlorodifluoromethane	75-71-8	N.D.	1	0.2	1
11997	1,1-Dichloroethane	75-34-3	N.D.	1	0.2	1
11997	1,2-Dichloroethane	107-06-2	N.D.	1	0.3	1
11997	1,1-Dichloroethene	75-35-4	N.D.	1	0.2	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	1	0.2	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	1	0.2	1
11997	1,2-Dichloropropane	78-87-5	N.D.	1	0.2	1
11997	cis-1,3-Dichloropropene	10061-01-5	N.D.	1	0.2	1
11997	trans-1,3-Dichloropropene	10061-02-6	N.D.	1	0.2	1
11997	1,4-Dioxane	123-91-1	N.D.	250	29	1
11997	Ethyl Acetate	141-78-6	N.D.	5	0.7	1
11997	Ethyl ether	60-29-7	0.8 J	5	0.2	1
11997	Ethylbenzene	100-41-4	N.D.	1	0.4	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **PW-4LS Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/29/2019 11:13
Collection Date/Time: 10/28/2019 13:27
SDG#: BMS81-08

ARCADIS U.S., Inc.
ELLE Sample #: GW 1186465
ELLE Group #: 2071526
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Freon 113	76-13-1	N.D.	10	0.2	1
11997	n-Heptane[1]	142-82-5	N.D.	5	2	1
11997	n-Hexane[1]	110-54-3	N.D.	5	2	1
11997	2-Hexanone	591-78-6	N.D.	10	0.3	1
11997	Isobutyl Alcohol	78-83-1	N.D.	250	36	1
11997	Isopropylbenzene	98-82-8	N.D.	5	0.2	1
11997	p-Isopropyltoluene	99-87-6	N.D.	5	0.2	1
11997	Methyl Acetate	79-20-9	N.D.	5	0.2	1
11997	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	1	0.2	1
11997	4-Methyl-2-pentanone	108-10-1	N.D.	10	0.5	1
11997	Methylcyclohexane	108-87-2	N.D.	5	0.5	1
11997	Methylene Chloride	75-09-2	N.D.	1	0.3	1
11997	Naphthalene	91-20-3	N.D.	5	1	1
11997	2-Nitropropane	79-46-9	N.D.	10	0.8	1
11997	Styrene	100-42-5	N.D.	5	0.2	1
11997	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	1	0.2	1
11997	Tetrachloroethene	127-18-4	N.D.	1	0.2	1
11997	Tetrahydrofuran	109-99-9	N.D.	10	0.7	1
11997	Toluene	108-88-3	N.D.	1	0.2	1
11997	1,2,3-Trichlorobenzene	87-61-6	N.D.	5	0.4	1
11997	1,2,4-Trichlorobenzene	120-82-1	N.D.	5	0.3	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	1	0.3	1
11997	1,1,2-Trichloroethane	79-00-5	N.D.	1	0.2	1
11997	Trichloroethene	79-01-6	N.D.	1	0.2	1
11997	Trichlorofluoromethane	75-69-4	N.D.	1	0.2	1
11997	1,2,4-Trimethylbenzene	95-63-6	N.D.	5	1	1
11997	1,3,5-Trimethylbenzene	108-67-8	N.D.	5	0.3	1
11997	Vinyl Chloride	75-01-4	N.D.	1	0.2	1
11997	m+p-Xylene	179601-23-1	N.D.	5	1	1
11997	o-Xylene	95-47-6	N.D.	1	0.4	1
11997	Xylene (Total)	1330-20-7	N.D.	6	1	1

12027 VOA Interp. Library Search-20

The results from the volatile library search are listed on the attached FORM 1 - VOA-TIC. The qualifiers appearing in the "Q" column are defined at the end of the report.

GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	Acenaphthene	83-32-9	N.D.	0.51	0.10	1
14241	Acenaphthylene	208-96-8	N.D.	0.51	0.10	1
14241	Acetophenone	98-86-2	N.D.	10	4.1	1
14241	Aniline	62-53-3	N.D.	10	3.0	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **PW-4LS Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/29/2019 11:13
Collection Date/Time: 10/28/2019 13:27
SDG#: BMS81-08

ARCADIS U.S., Inc.
ELLE Sample #: GW 1186465
ELLE Group #: 2071526
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	Anthracene	120-12-7	N.D.	0.51	0.10	1
14241	Atrazine	1912-24-9	N.D.	5.1	2.0	1
14241	Benzaldehyde	100-52-7	N.D.	10	3.0	1
14241	Benzo(a)anthracene	56-55-3	N.D.	0.51	0.10	1
14241	Benzo(a)pyrene	50-32-8	N.D.	0.51	0.10	1
14241	Benzo(b)fluoranthene	205-99-2	N.D.	0.51	0.10	1
14241	Benzo(g,h,i)perylene	191-24-2	N.D.	0.51	0.10	1
14241	Benzo(k)fluoranthene	207-08-9	N.D.	0.51	0.10	1
14241	Benzyl alcohol	100-51-6	N.D.	30	10	1
14241	1,1'-Biphenyl	92-52-4	N.D.	10	3.0	1
14241	4-Bromophenyl-phenylether	101-55-3	N.D.	2.0	0.51	1
14241	Butylbenzylphthalate	85-68-7	N.D.	5.1	2.0	1
14241	Di-n-butylphthalate	84-74-2	N.D.	5.1	2.0	1
14241	Caprolactam	105-60-2	N.D.	11	5.1	1
14241	Carbazole	86-74-8	N.D.	2.0	0.51	1
14241	4-Chloro-3-methylphenol	59-50-7	N.D.	2.0	0.51	1
14241	4-Chloroaniline	106-47-8	N.D.	10	4.1	1
14241	bis(2-Chloroethoxy)methane	111-91-1	N.D.	2.0	0.51	1
14241	bis(2-Chloroethyl)ether	111-44-4	N.D.	2.0	0.51	1
14241	bis(2-Chloroisopropyl)ether[1]	39638-32-9	N.D.	2.0	0.51	1
	Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.					
14241	2-Chloronaphthalene	91-58-7	N.D.	1.0	0.41	1
14241	2-Chlorophenol	95-57-8	N.D.	2.0	0.51	1
14241	4-Chlorophenyl-phenylether	7005-72-3	N.D.	2.0	0.51	1
14241	Chrysene	218-01-9	N.D.	0.51	0.10	1
14241	Dibenz(a,h)anthracene	53-70-3	N.D.	0.51	0.10	1
14241	Dibenzofuran	132-64-9	N.D.	2.0	0.51	1
14241	3,3'-Dichlorobenzidine	91-94-1	N.D.	10	3.0	1
14241	2,4-Dichlorophenol	120-83-2	N.D.	2.0	0.51	1
14241	Dicyclohexylamine[1]	101-83-7	N.D.	10	10	1
14241	Diethylphthalate	84-66-2	N.D.	5.1	2.0	1
14241	N,N-Dimethylaniline[1]	121-69-7	N.D.	1.0	0.51	1
14241	2,4-Dimethylphenol	105-67-9	N.D.	10	3.0	1
14241	Dimethylphthalate	131-11-3	N.D.	5.1	2.0	1
14241	4,6-Dinitro-2-methylphenol	534-52-1	N.D.	21	8.1	1
14241	2,4-Dinitrophenol	51-28-5	N.D.	30	14	1
14241	2,4-Dinitrotoluene	121-14-2	N.D.	5.1	1.0	1
14241	2,6-Dinitrotoluene	606-20-2	N.D.	2.0	0.51	1
14241	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	11	5.1	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **PW-4LS Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/29/2019 11:13
Collection Date/Time: 10/28/2019 13:27
SDG#: BMS81-08

ARCADIS U.S., Inc.
ELLE Sample #: GW 1186465
ELLE Group #: 2071526
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	Fluoranthene	206-44-0	N.D.	0.51	0.10	1
14241	Fluorene	86-73-7	N.D.	0.51	0.10	1
14241	Hexachlorobenzene	118-74-1	N.D.	0.51	0.10	1
14241	Hexachlorobutadiene	87-68-3	N.D.	2.0	0.51	1
14241	Hexachlorocyclopentadiene	77-47-4	N.D.	11	5.1	1
14241	Hexachloroethane	67-72-1	N.D.	5.1	1.0	1
14241	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.51	0.10	1
14241	Isophorone	78-59-1	N.D.	2.0	0.51	1
14241	2-Methylnaphthalene	91-57-6	N.D.	0.51	0.10	1
14241	2-Methylphenol	95-48-7	N.D.	2.0	0.51	1
14241	4-Methylphenol	65794-96-9	N.D.	2.0	0.51	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
14241	Naphthalene	91-20-3	N.D.	0.51	0.10	1
14241	2-Nitroaniline	88-74-4	N.D.	7.1	2.0	1
14241	3-Nitroaniline	99-09-2	N.D.	7.1	3.0	1
14241	4-Nitroaniline	100-01-6	N.D.	3.0	0.91	1
14241	Nitrobenzene	98-95-3	N.D.	2.0	0.51	1
14241	2-Nitrophenol	88-75-5	N.D.	10	3.0	1
14241	4-Nitrophenol	100-02-7	N.D.	30	10	1
14241	N-Nitroso-di-n-propylamine	621-64-7	N.D.	3.0	0.71	1
14241	N-Nitrosodiphenylamine	86-30-6	N.D.	3.0	0.71	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.					
14241	Di-n-octylphthalate	117-84-0	N.D.	11	5.1	1
14241	Pentachlorophenol	87-86-5	N.D.	5.1	1.0	1
14241	Phenanthrene	85-01-8	N.D.	0.51	0.10	1
14241	Phenol	108-95-2	N.D.	2.0	0.51	1
14241	Pyrene	129-00-0	N.D.	0.51	0.10	1
14241	Pyridine	110-86-1	N.D.	5.1	2.0	1
14241	1,2,4,5-Tetrachlorobenzene	95-94-3	N.D.	2.0	0.51	1
14241	2,3,4,6-Tetrachlorophenol	58-90-2	N.D.	10	4.1	1
14241	2,4,5-Trichlorophenol	95-95-4	N.D.	2.0	0.51	1
14241	2,4,6-Trichlorophenol	88-06-2	N.D.	2.0	0.51	1
14241	Triethylamine[1]	121-44-8	N.D.	10	10	1

The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the TNI/DoD Standards. The following analytes are accepted based on this allowance: Benzo(k)fluoranthene

00886 SVOA TIC Interpretive(25)

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **PW-4LS Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/29/2019 11:13
Collection Date/Time: 10/28/2019 13:27
SDG#: BMS81-08

ARCADIS U.S., Inc.
ELLE Sample #: GW 1186465
ELLE Group #: 2071526
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
	The results from the semivolatile library search are listed on the attached FORM 1 - SV-TIC. The qualifiers appearing in the "Q" column are defined at the end of the report.					
Aldehydes & Ketones	**SW-846 8315A**		**ug/l**	**ug/l**	**ug/l**	
13022	Acetaldehyde[1]	75-07-0	N.D.	60	35	1
13022	Formaldehyde	50-00-0	62	50	20	1
	The response for a target analyte(s) in the initial calibration verification standard is outside the QC acceptance limits.					
GC Miscellaneous	**SW-846 8015C Feb 2007 Rev 3**		**mg/l**	**mg/l**	**mg/l**	
12926	Ethylene glycol	107-21-1	N.D.	10	5.0	1
12926	Propylene glycol[1]	57-55-6	N.D.	10	2.0	1
	The response for tetramethylene glycol in the continuing calibration verification standard is outside the QC acceptance limits low. The following action was taken: The analysis was repeated and the continuing calibration verification standard bracketing the sample on the second trial is also outside the acceptance limits. This effect is attributed to the sample matrix and the data is reported.					
GC Miscellaneous	**SW-846 8015D Rev.4, June 2003**		**ug/l**	**ug/l**	**ug/l**	
10603	Ethanol	64-17-5	N.D. D2	1,000	150	1
10603	Isopropanol[1]	67-63-0	N.D. D2	1,000	110	1
10603	Methanol	67-56-1	N.D. D2	1,000	220	1

Sample Comments

State of New York Certification No. 10670

[1] = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	Y193112AA	11/07/2019 20:15	Linda C Pape	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	Y193112AA	11/07/2019 20:14	Linda C Pape	1
14241	Semi-annual Groundwater BMS	SW-846 8270D	1	19305WAF026	11/08/2019 18:02	Holly B Ziegler	1
11010	8270D BNA Extraction	SW-846 3510C	1	19305WAF026	11/01/2019 16:35	Osvaldo R Sanchez	1
13022	Short List Aldehydes- W 8315A	SW-846 8315A	1	193030019A	10/31/2019 18:27	Jessica L Miller	1
01013	Formaldehyde Extraction	SW-846 8315A	1	193030019A	10/31/2019 09:23	Alison Moll	1
12926	Glycols in Water by 8015C/D	SW-846 8015C Feb 2007 Rev 3	1	193080027A	11/05/2019 23:41	Donald Brown	1
10603	Alcohols in Water	SW-846 8015D Rev.4, June 2003	1	193080007A	11/04/2019 19:56	Johanna C Kennedy	1

*=This limit was used in the evaluation of the final result

REVISED

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VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
BMS08

Lab Name: Lancaster Laboratories Contract:_____
Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____
Matrix: (soil/water) WATER Lab Sample ID: 1186465
Sample wt/vol: 5.0 (g/mL)mL Lab File ID:HP09355.i/19nov07a.b/yn07s48.d
Level: (low/med) LOW Date Received: 10/29/19
% Moisture: not dec. Date Analyzed: 11/07/19
Column: (pack/cap) CAP Dilution Factor: 1.0
CONCENTRATION UNITS:
Number TICs found: 1 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	108-20-3	Diisopropyl ether	5.51	7	J
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3.	VOCTIC	Total VOC TICs		7	J
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page 1 of 1

FORM I VOA-TIC

REVISED

1F

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

BMS08

Lab Name: Lancaster Laboratories Contract:
Lab Code: LANCAS Case No.: SAS No.: SDG No.:
Matrix: (soil/water) WATER Lab Sample ID: 1186465
Sample wt/vol: 246 (g/mL) mL Lab File ID: lk0346.d
Level: (low/med) LOW Date Received: 10/29/19
% Moisture: Decanted: (Y/N) Date Extracted: 11/01/19
Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/08/19
Injection Volume: 1 (uL) Dilution Factor: 1
GPC Cleanup: N pH: Extraction: Sepf

CONCENTRATION UNITS:
Number TICs found: 0 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	SVOCTIC	Total SVOC TICs		0	U
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page 1 of 1

FORM I SV-1

REVISED

Sample Description: **Trip Blank Water**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/29/2019 11:13
Collection Date/Time: 10/23/2019
SDG#: BMS81-09TB

ARCADIS U.S., Inc.
ELLE Sample #: GW 1186466
ELLE Group #: 2071526
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	20	0.7	1
11997	Acetonitrile	75-05-8	N.D.	100	16	1
11997	Benzene	71-43-2	N.D.	1	0.2	1
11997	Bromochloromethane	74-97-5	N.D.	5	0.2	1
11997	Bromodichloromethane	75-27-4	N.D.	1	0.2	1
11997	Bromoform	75-25-2	N.D.	4	1	1
11997	Bromomethane	74-83-9	N.D.	1	0.3	1
11997	n-Butanol	71-36-3	N.D.	250	61	1
11997	2-Butanone	78-93-3	N.D.	10	0.3	1
11997	t-Butyl alcohol	75-65-0	N.D.	50	12	1
11997	n-Butylbenzene	104-51-8	N.D.	5	0.2	1
11997	sec-Butylbenzene	135-98-8	N.D.	5	0.2	1
11997	tert-Butylbenzene	98-06-6	N.D.	5	0.3	1
11997	Carbon Disulfide	75-15-0	N.D.	5	0.2	1
11997	Carbon Tetrachloride	56-23-5	N.D.	1	0.2	1
11997	Chlorobenzene	108-90-7	N.D.	1	0.2	1
11997	Chlorodifluoromethane[1]	75-45-6	N.D.	5	2	1
11997	Chloroethane	75-00-3	N.D.	1	0.2	1
11997	Chloroform	67-66-3	N.D.	1	0.2	1
11997	Chloromethane	74-87-3	N.D.	1	0.2	1
11997	Cyclohexane	110-82-7	N.D.	5	1	1
11997	Cyclohexanone[1]	108-94-1	N.D.	100	25	1
11997	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	5	0.3	1
11997	Dibromochloromethane	124-48-1	N.D.	1	0.2	1
11997	1,2-Dibromoethane	106-93-4	N.D.	1	0.2	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	5	0.2	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	5	0.2	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	5	0.2	1
11997	Dichlorodifluoromethane	75-71-8	N.D.	1	0.2	1
11997	1,1-Dichloroethane	75-34-3	N.D.	1	0.2	1
11997	1,2-Dichloroethane	107-06-2	N.D.	1	0.3	1
11997	1,1-Dichloroethene	75-35-4	N.D.	1	0.2	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	1	0.2	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	1	0.2	1
11997	1,2-Dichloropropane	78-87-5	N.D.	1	0.2	1
11997	cis-1,3-Dichloropropene	10061-01-5	N.D.	1	0.2	1
11997	trans-1,3-Dichloropropene	10061-02-6	N.D.	1	0.2	1
11997	1,4-Dioxane	123-91-1	N.D.	250	29	1
11997	Ethyl Acetate	141-78-6	N.D.	5	0.7	1
11997	Ethyl ether	60-29-7	N.D.	5	0.2	1
11997	Ethylbenzene	100-41-4	N.D.	1	0.4	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **Trip Blank Water**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/29/2019 11:13
Collection Date/Time: 10/23/2019
SDG#: BMS81-09TB

ARCADIS U.S., Inc.
ELLE Sample #: GW 1186466
ELLE Group #: 2071526
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Freon 113	76-13-1	N.D.	10	0.2	1
11997	n-Heptane[1]	142-82-5	N.D.	5	2	1
11997	n-Hexane[1]	110-54-3	N.D.	5	2	1
11997	2-Hexanone	591-78-6	N.D.	10	0.3	1
11997	Isobutyl Alcohol	78-83-1	N.D.	250	36	1
11997	Isopropylbenzene	98-82-8	N.D.	5	0.2	1
11997	p-Isopropyltoluene	99-87-6	N.D.	5	0.2	1
11997	Methyl Acetate	79-20-9	N.D.	5	0.2	1
11997	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	1	0.2	1
11997	4-Methyl-2-pentanone	108-10-1	N.D.	10	0.5	1
11997	Methylcyclohexane	108-87-2	N.D.	5	0.5	1
11997	Methylene Chloride	75-09-2	N.D.	1	0.3	1
11997	Naphthalene	91-20-3	N.D.	5	1	1
11997	2-Nitropropane	79-46-9	N.D.	10	0.8	1
11997	Styrene	100-42-5	N.D.	5	0.2	1
11997	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	1	0.2	1
11997	Tetrachloroethene	127-18-4	N.D.	1	0.2	1
11997	Tetrahydrofuran	109-99-9	N.D.	10	0.7	1
11997	Toluene	108-88-3	N.D.	1	0.2	1
11997	1,2,3-Trichlorobenzene	87-61-6	N.D.	5	0.4	1
11997	1,2,4-Trichlorobenzene	120-82-1	N.D.	5	0.3	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	1	0.3	1
11997	1,1,2-Trichloroethane	79-00-5	N.D.	1	0.2	1
11997	Trichloroethene	79-01-6	N.D.	1	0.2	1
11997	Trichlorofluoromethane	75-69-4	N.D.	1	0.2	1
11997	1,2,4-Trimethylbenzene	95-63-6	N.D.	5	1	1
11997	1,3,5-Trimethylbenzene	108-67-8	N.D.	5	0.3	1
11997	Vinyl Chloride	75-01-4	N.D.	1	0.2	1
11997	m+p-Xylene	179601-23-1	N.D.	5	1	1
11997	o-Xylene	95-47-6	N.D.	1	0.4	1
11997	Xylene (Total)	1330-20-7	N.D.	6	1	1

12027 VOA Interp. Library Search-20
The results from the volatile library search are listed on the attached FORM 1 - VOA-TIC. The qualifiers appearing in the "Q" column are defined at the end of the report.

Sample Comments

State of New York Certification No. 10670

[1] = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **Trip Blank Water**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/29/2019 11:13
Collection Date/Time: 10/23/2019
SDG#: BMS81-09TB

ARCADIS U.S., Inc.
ELLE Sample #: GW 1186466
ELLE Group #: 2071526
Matrix: Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	Y193112AA	11/07/2019 16:12	Linda C Pape	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	Y193112AA	11/07/2019 16:11	Linda C Pape	1

*=This limit was used in the evaluation of the final result

REVISED

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
BMS09

Lab Name: Lancaster Laboratories Contract:_____
Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____
Matrix: (soil/water) WATER Lab Sample ID: 1186466
Sample wt/vol: 5.0 (g/mL)mL Lab File ID:HP09355.i/19nov07a.b/yn07s35.d
Level: (low/med) LOW Date Received: 10/29/19
% Moisture: not dec. Date Analyzed: 11/07/19
Column: (pack/cap) CAP Dilution Factor: 1.0
CONCENTRATION UNITS:
Number TICs found: 0 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	VOCTIC	Total VOC TICs		0	U
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page 1 of 1

FORM I VOA-TIC

REVISED

Quality Control Summary

Client Name: ARCADIS U.S., Inc. Group Number: 2071526
Reported: 01/27/2020 16:57

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	LOQ**	MDL
	ug/l	ug/l	ug/l
Batch number: Y193112AA	Sample number(s): 1186458-1186466		
Acetone	N.D.	20	0.7
Acetonitrile	N.D.	100	16
Benzene	N.D.	1	0.2
Bromochloromethane	N.D.	5	0.2
Bromodichloromethane	N.D.	1	0.2
Bromoform	N.D.	4	1
Bromomethane	N.D.	1	0.3
n-Butanol	N.D.	250	61
2-Butanone	N.D.	10	0.3
t-Butyl alcohol	N.D.	50	12
n-Butylbenzene	N.D.	5	0.2
sec-Butylbenzene	N.D.	5	0.2
tert-Butylbenzene	N.D.	5	0.3
Carbon Disulfide	N.D.	5	0.2
Carbon Tetrachloride	N.D.	1	0.2
Chlorobenzene	N.D.	1	0.2
Chlorodifluoromethane	N.D.	5	2
Chloroethane	N.D.	1	0.2
Chloroform	N.D.	1	0.2
Chloromethane	N.D.	1	0.2
Cyclohexane	N.D.	5	1
Cyclohexanone	N.D.	100	25
1,2-Dibromo-3-chloropropane	N.D.	5	0.3
Dibromochloromethane	N.D.	1	0.2
1,2-Dibromoethane	N.D.	1	0.2
1,2-Dichlorobenzene	N.D.	5	0.2
1,3-Dichlorobenzene	N.D.	5	0.2
1,4-Dichlorobenzene	N.D.	5	0.2
Dichlorodifluoromethane	N.D.	1	0.2
1,1-Dichloroethane	N.D.	1	0.2
1,2-Dichloroethane	N.D.	1	0.3
1,1-Dichloroethene	N.D.	1	0.2
cis-1,2-Dichloroethene	N.D.	1	0.2
trans-1,2-Dichloroethene	N.D.	1	0.2
1,2-Dichloropropane	N.D.	1	0.2
cis-1,3-Dichloropropene	N.D.	1	0.2
trans-1,3-Dichloropropene	N.D.	1	0.2
1,4-Dioxane	N.D.	250	29
Ethyl Acetate	N.D.	5	0.7

*- Outside of specification
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REVISED

Quality Control Summary

Client Name: ARCADIS U.S., Inc.
Reported: 01/27/2020 16:57

Group Number: 2071526

Method Blank (continued)

Analysis Name	Result	LOQ**	MDL
	ug/l	ug/l	ug/l
Ethyl ether	N.D.	5	0.2
Ethylbenzene	N.D.	1	0.4
Freon 113	N.D.	10	0.2
n-Heptane	N.D.	5	2
n-Hexane	N.D.	5	2
2-Hexanone	N.D.	10	0.3
Isobutyl Alcohol	N.D.	250	36
Isopropylbenzene	N.D.	5	0.2
p-Isopropyltoluene	N.D.	5	0.2
Methyl Acetate	N.D.	5	0.2
Methyl Tertiary Butyl Ether	N.D.	1	0.2
4-Methyl-2-pentanone	N.D.	10	0.5
Methylcyclohexane	N.D.	5	0.5
Methylene Chloride	N.D.	1	0.3
Naphthalene	N.D.	5	1
2-Nitropropane	N.D.	10	0.8
Styrene	N.D.	5	0.2
1,1,2,2-Tetrachloroethane	N.D.	1	0.2
Tetrachloroethene	N.D.	1	0.2
Tetrahydrofuran	N.D.	10	0.7
Toluene	N.D.	1	0.2
1,2,3-Trichlorobenzene	N.D.	5	0.4
1,2,4-Trichlorobenzene	N.D.	5	0.3
1,1,1-Trichloroethane	N.D.	1	0.3
1,1,2-Trichloroethane	N.D.	1	0.2
Trichloroethene	N.D.	1	0.2
Trichlorofluoromethane	N.D.	1	0.2
1,2,4-Trimethylbenzene	N.D.	5	1
1,3,5-Trimethylbenzene	N.D.	5	0.3
Vinyl Chloride	N.D.	1	0.2
m+p-Xylene	N.D.	5	1
o-Xylene	N.D.	1	0.4
Xylene (Total)	N.D.	6	1
Batch number: 19305WAF026	Sample number(s): 1186458-1186465		
Acenaphthene	N.D.	0.50	0.10
Acenaphthylene	N.D.	0.50	0.10
Acetophenone	N.D.	10	4.0
Aniline	N.D.	10	3.0
Anthracene	N.D.	0.50	0.10
Atrazine	N.D.	5.0	2.0
Benzaldehyde	N.D.	10	3.0
Benzo(a)anthracene	N.D.	0.50	0.10
Benzo(a)pyrene	N.D.	0.50	0.10
Benzo(b)fluoranthene	N.D.	0.50	0.10

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REVISED

Quality Control Summary

Client Name: ARCADIS U.S., Inc.
Reported: 01/27/2020 16:57

Group Number: 2071526

Method Blank (continued)

Analysis Name	Result	LOQ**	MDL
	ug/l	ug/l	ug/l
Benzo(g,h,i)perylene	N.D.	0.50	0.10
Benzo(k)fluoranthene	N.D.	0.50	0.10
Benzyl alcohol	N.D.	30	10
1,1'-Biphenyl	N.D.	10	3.0
4-Bromophenyl-phenylether	N.D.	2.0	0.50
Butylbenzylphthalate	N.D.	5.0	2.0
Di-n-butylphthalate	N.D.	5.0	2.0
Caprolactam	N.D.	11	5.0
Carbazole	N.D.	2.0	0.50
4-Chloro-3-methylphenol	N.D.	2.0	0.50
4-Chloroaniline	N.D.	10	4.0
bis(2-Chloroethoxy)methane	N.D.	2.0	0.50
bis(2-Chloroethyl)ether	N.D.	2.0	0.50
bis(2-Chloroisopropyl)ether	N.D.	2.0	0.50
2-Chloronaphthalene	N.D.	1.0	0.40
2-Chlorophenol	N.D.	2.0	0.50
4-Chlorophenyl-phenylether	N.D.	2.0	0.50
Chrysene	N.D.	0.50	0.10
Dibenz(a,h)anthracene	N.D.	0.50	0.10
Dibenzofuran	N.D.	2.0	0.50
3,3'-Dichlorobenzidine	N.D.	10	3.0
2,4-Dichlorophenol	N.D.	2.0	0.50
Dicyclohexylamine	N.D.	10	10
Diethylphthalate	N.D.	5.0	2.0
N,N-Dimethylaniline	N.D.	1.0	0.50
2,4-Dimethylphenol	N.D.	10	3.0
Dimethylphthalate	N.D.	5.0	2.0
4,6-Dinitro-2-methylphenol	N.D.	21	8.0
2,4-Dinitrophenol	N.D.	30	14
2,4-Dinitrotoluene	N.D.	5.0	1.0
2,6-Dinitrotoluene	N.D.	2.0	0.50
bis(2-Ethylhexyl)phthalate	N.D.	11	5.0
Fluoranthene	N.D.	0.50	0.10
Fluorene	N.D.	0.50	0.10
Hexachlorobenzene	N.D.	0.50	0.10
Hexachlorobutadiene	N.D.	2.0	0.50
Hexachlorocyclopentadiene	N.D.	11	5.0
Hexachloroethane	N.D.	5.0	1.0
Indeno(1,2,3-cd)pyrene	N.D.	0.50	0.10
Isophorone	N.D.	2.0	0.50
2-Methylnaphthalene	N.D.	0.50	0.10
2-Methylphenol	N.D.	2.0	0.50
4-Methylphenol	N.D.	2.0	0.50
Naphthalene	N.D.	0.50	0.10
2-Nitroaniline	N.D.	7.0	2.0

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REVISED

Quality Control Summary

Client Name: ARCADIS U.S., Inc.
Reported: 01/27/2020 16:57

Group Number: 2071526

Method Blank (continued)

Analysis Name	Result	LOQ**	MDL
	ug/l	ug/l	ug/l
3-Nitroaniline	N.D.	7.0	3.0
4-Nitroaniline	N.D.	3.0	0.90
Nitrobenzene	N.D.	2.0	0.50
2-Nitrophenol	N.D.	10	3.0
4-Nitrophenol	N.D.	30	10
N-Nitroso-di-n-propylamine	N.D.	3.0	0.70
N-Nitrosodiphenylamine	N.D.	3.0	0.70
Di-n-octylphthalate	N.D.	11	5.0
Pentachlorophenol	N.D.	5.0	1.0
Phenanthrene	N.D.	0.50	0.10
Phenol	N.D.	2.0	0.50
Pyrene	N.D.	0.50	0.10
Pyridine	N.D.	5.0	2.0
1,2,4,5-Tetrachlorobenzene	N.D.	2.0	0.50
2,3,4,6-Tetrachlorophenol	N.D.	10	4.0
2,4,5-Trichlorophenol	N.D.	2.0	0.50
2,4,6-Trichlorophenol	N.D.	2.0	0.50
Triethylamine	N.D.	10	10
Batch number: 193030019A	Sample number(s): 1186458-1186465		
Acetaldehyde	N.D.	60	35
Formaldehyde	N.D.	50	20
	mg/l	mg/l	mg/l
Batch number: 193080027A	Sample number(s): 1186458,1186462,1186464-1186465		
Ethylene glycol	N.D.	10	5.0
Propylene glycol	N.D.	10	5.0
Batch number: 193100032A	Sample number(s): 1186459-1186461,1186463		
Ethylene glycol	N.D.	10	5.0
Propylene glycol	N.D.	10	5.0
	ug/l	ug/l	ug/l
Batch number: 193080007A	Sample number(s): 1186458-1186465		
Ethanol	N.D.	1,000	150
Isopropanol	N.D.	1,000	110
Methanol	N.D.	1,000	220

LCS/LCSD

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max

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REVISED

Quality Control Summary

Client Name: ARCADIS U.S., Inc.
Reported: 01/27/2020 16:57

Group Number: 2071526

LCS/LCSD

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: Y193112AA	Sample number(s): 1186458-1186466								
Acetone	150	169.62	150	184.03	113	123	54-157	8	30
Acetonitrile	150	163.76	150	160.73	109	107	66-149	2	30
Benzene	20	21.94	20	21.62	110	108	80-120	1	30
Bromochloromethane	20	20.57	20	20.31	103	102	80-120	1	30
Bromodichloromethane	20	21.67	20	21.36	108	107	71-120	1	30
Bromoform	20	21.07	20	20.77	105	104	51-120	1	30
Bromomethane	20	14.6	20	14.81	73	74	53-128	1	30
n-Butanol	1000	1084.79	1000	1156.88	108	116	57-130	6	30
2-Butanone	150	165.63	150	160.77	110	107	59-135	3	30
t-Butyl alcohol	200	234.12	200	233.4	117	117	60-130	0	30
n-Butylbenzene	20	21.64	20	21.4	108	107	76-120	1	30
sec-Butylbenzene	20	21	20	20.82	105	104	77-120	1	30
tert-Butylbenzene	20	20.12	20	19.84	101	99	78-120	1	30
Carbon Disulfide	20	18.19	20	17.77	91	89	65-128	2	30
Carbon Tetrachloride	20	21.47	20	21.18	107	106	64-134	1	30
Chlorobenzene	20	21.69	20	21.43	108	107	80-120	1	30
Chlorodifluoromethane	20	15.77	20	16.05	79	80	45-149	2	30
Chloroethane	20	15.61	20	15.68	78	78	55-123	0	30
Chloroform	20	21.97	20	21.62	110	108	80-120	2	30
Chloromethane	20	16.94	20	16.62	85	83	56-121	2	30
Cyclohexane	20	18.66	20	18.18	93	91	68-126	3	30
Cyclohexanone	500	474.17	500	486.75	95	97	27-141	3	30
1,2-Dibromo-3-chloropropane	20	18.92	20	18.52	95	93	47-131	2	30
Dibromochloromethane	20	21.38	20	21.09	107	105	71-120	1	30
1,2-Dibromoethane	20	21.78	20	21.81	109	109	77-120	0	30
1,2-Dichlorobenzene	20	22.13	20	22.07	111	110	80-120	0	30
1,3-Dichlorobenzene	20	22.44	20	22.32	112	112	80-120	1	30
1,4-Dichlorobenzene	20	22.54	20	22.71	113	114	80-120	1	30
Dichlorodifluoromethane	20	15.15	20	14.92	76	75	41-127	2	30
1,1-Dichloroethane	20	21.41	20	21.03	107	105	80-120	2	30
1,2-Dichloroethane	20	21.16	20	21.57	106	108	73-124	2	30
1,1-Dichloroethene	20	22.01	20	21.8	110	109	80-131	1	30
cis-1,2-Dichloroethene	20	22.73	20	22.52	114	113	80-125	1	30
trans-1,2-Dichloroethene	20	21.59	20	21.67	108	108	80-126	0	30
1,2-Dichloropropane	20	22.67	20	22.43	113	112	80-120	1	30
cis-1,3-Dichloropropene	20	21.23	20	20.8	106	104	75-120	2	30
trans-1,3-Dichloropropene	20	20.09	20	19.64	100	98	67-120	2	30
1,4-Dioxane	500	685.37	500	689.21	137	138	63-146	1	30
Ethyl Acetate	20	22.21	20	22.54	111	113	67-131	1	30
Ethyl ether	20	20.05	20	21.11	100	106	59-141	5	30
Ethylbenzene	20	21.61	20	21.37	108	107	80-120	1	30
Freon 113	20	20.28	20	20.06	101	100	73-139	1	30
n-Heptane	20	21.11	20	20.54	106	103	56-133	3	30

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REVISED

Quality Control Summary

Client Name: ARCADIS U.S., Inc.
Reported: 01/27/2020 16:57

Group Number: 2071526

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
n-Hexane	20	20.2	20	19.8	101	99	61-138	2	30
2-Hexanone	100	107.19	100	104.7	107	105	56-135	2	30
Isobutyl Alcohol	500	607.42	500	637.18	121	127	61-136	5	30
Isopropylbenzene	20	20.95	20	20.7	105	104	80-120	1	30
p-Isopropyltoluene	20	21.28	20	21.1	106	105	76-120	1	30
Methyl Acetate	20	22.67	20	22.58	113	113	54-136	0	30
Methyl Tertiary Butyl Ether	20	18.26	20	17.68	91	88	69-122	3	30
4-Methyl-2-pentanone	100	106.46	100	104.41	106	104	62-133	2	30
Methylcyclohexane	20	19.55	20	19.04	98	95	67-121	3	30
Methylene Chloride	20	22.25	20	21.91	111	110	80-120	2	30
Naphthalene	20	20.27	20	19.72	101	99	53-124	3	30
2-Nitropropane	20	19.17	20	18.81	96	94	19-144	2	30
Styrene	20	21.96	20	21.65	110	108	80-120	1	30
1,1,2,2-Tetrachloroethane	20	21.13	20	20.73	106	104	72-120	2	30
Tetrachloroethene	20	22.29	20	21.85	111	109	80-120	2	30
Tetrahydrofuran	100	103.28	100	113.37	103	113	54-144	9	30
Toluene	20	21.45	20	21.03	107	105	80-120	2	30
1,2,3-Trichlorobenzene	20	21.43	20	20.93	107	105	66-120	2	30
1,2,4-Trichlorobenzene	20	20.8	20	20.54	104	103	63-120	1	30
1,1,1-Trichloroethane	20	21.32	20	21.07	107	105	67-126	1	30
1,1,2-Trichloroethane	20	22.46	20	22.35	112	112	80-120	0	30
Trichloroethene	20	21.59	20	21.53	108	108	80-120	0	30
Trichlorofluoromethane	20	17.18	20	16.92	86	85	55-135	2	30
1,2,4-Trimethylbenzene	20	20.71	20	20.59	104	103	75-120	1	30
1,3,5-Trimethylbenzene	20	20.99	20	20.82	105	104	75-120	1	30
Vinyl Chloride	20	16.54	20	16.26	83	81	56-120	2	30
m+p-Xylene	40	43.42	40	42.58	109	106	80-120	2	30
o-Xylene	20	20.57	20	20.36	103	102	80-120	1	30
Xylene (Total)	60	63.99	60	62.93	107	105	80-120	2	30
	ug/l	**ug/l**	**ug/l**	**ug/l**					
Batch number: 19305WAF026	Sample number(s): 1186458-1186465								
Acenaphthene	50	36.99	50	41.68	74	83	52-114	12	30
Acenaphthylene	50	37.14	50	41.61	74	83	57-121	11	30
Acetophenone	50	34.51	50	40.77	69	82	61-114	17	30
Aniline	50	29.56	50	33.14	59	66	35-84	11	30
Anthracene	50	40.1	50	46.77	80	94	62-116	15	30
Atrazine	50	40.21	50	45.42	80	91	71-133	12	30
Benzaldehyde	50	37.96	50	47.9	76	96	48-118	23	30
Benzo(a)anthracene	50	38.49	50	46.86	77	94	70-118	20	30
Benzo(a)pyrene	50	41.73	50	45.78	83	92	71-117	9	30
Benzo(b)fluoranthene	50	35.66	50	46.4	71	93	71-115	26	30
Benzo(g,h,i)perylene	50	45.72	50	50.32	91	101	60-119	10	30
Benzo(k)fluoranthene	50	35.08	50	46.25	70*	93	71-116	27	30

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REVISED

Quality Control Summary

Client Name: ARCADIS U.S., Inc.
Reported: 01/27/2020 16:57

Group Number: 2071526

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Benzyl alcohol	50	37.41	50	42.7	75	85	58-121	13	30
1,1'-Biphenyl	50	36.39	50	40.63	73	81	51-112	11	30
4-Bromophenyl-phenylether	50	40.96	50	44.27	82	89	53-117	8	30
Butylbenzylphthalate	50	35.92	50	42.08	72	84	44-124	16	30
Di-n-butylphthalate	50	37.58	50	46.31	75	93	62-118	21	30
Caprolactam	50	11.69	50	13.11	23	26	10-57	11	30
Carbazole	50	38.98	50	48.03	78	96	64-127	21	30
4-Chloro-3-methylphenol	50	40.07	50	44.18	80	88	60-118	10	30
4-Chloroaniline	50	35.42	50	40.79	71	82	35-108	14	30
bis(2-Chloroethoxy)methane	50	35.36	50	43.6	71	87	53-119	21	30
bis(2-Chloroethyl)ether	50	33.62	50	39.55	67	79	49-110	16	30
bis(2-Chloroisopropyl)ether	50	34.59	50	39.72	69	79	33-119	14	30
2-Chloronaphthalene	50	35.06	50	38.44	70	77	42-111	9	30
2-Chlorophenol	50	36.35	50	38.79	73	78	52-109	6	30
4-Chlorophenyl-phenylether	50	40.09	50	42.45	80	85	46-113	6	30
Chrysene	50	36.44	50	45.36	73	91	69-116	22	30
Dibenz(a,h)anthracene	50	47.04	50	51.41	94	103	68-121	9	30
Dibenzofuran	50	38.58	50	41.25	77	83	53-114	7	30
3,3'-Dichlorobenzidine	50	26.4	50	35.42	53	71	42-107	29	30
2,4-Dichlorophenol	50	40.75	50	44.24	82	88	58-114	8	30
Dicyclohexylamine	50	22.5	50	29.38	45	59	22-75	27	30
Diethylphthalate	50	36.02	50	41.71	72	83	48-113	15	30
N,N-Dimethylaniline	25	15.81	25	20.34	63	81	59-114	25	30
2,4-Dimethylphenol	50	30.01	50	35.31	60	71	48-91	16	30
Dimethylphthalate	50	34.3	50	37.86	69	76	14-123	10	30
4,6-Dinitro-2-methylphenol	50	54.34	50	62.4	109	125	63-129	14	30
2,4-Dinitrophenol	100	105.98	100	107.14	106	107	44-134	1	30
2,4-Dinitrotoluene	50	40.52	50	43.87	81	88	69-117	8	30
2,6-Dinitrotoluene	50	40.1	50	43.62	80	87	63-122	8	30
bis(2-Ethylhexyl)phthalate	50	37.67	50	44.39	75	89	68-120	16	30
Fluoranthene	50	40.2	50	49.41	80	99	63-122	21	30
Fluorene	50	38.49	50	42.74	77	85	56-115	10	30
Hexachlorobenzene	50	40.7	50	41.56	81	83	60-117	2	30
Hexachlorobutadiene	50	30.14	50	34.8	60	70	20-108	14	30
Hexachlorocyclopentadiene	100	31.97	100	34.09	32	34	10-91	6	30
Hexachloroethane	50	26.04	50	33.22	52	66	23-95	24	30
Indeno(1,2,3-cd)pyrene	50	43.92	50	49.85	88	100	63-114	13	30
Isophorone	50	36.25	50	44.44	73	89	56-120	20	30
2-Methylnaphthalene	50	35.15	50	41.24	70	82	44-111	16	30
2-Methylphenol	50	36.32	50	41.9	73	84	53-107	14	30
4-Methylphenol	50	37.4	50	42.39	75	85	49-108	13	30
Naphthalene	50	35.08	50	41.12	70	82	45-105	16	30
2-Nitroaniline	50	38.49	50	44.31	77	89	66-126	14	30
3-Nitroaniline	50	38.32	50	41.63	77	83	47-119	8	30

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REVISED

Quality Control Summary

Client Name: ARCADIS U.S., Inc.
Reported: 01/27/2020 16:57

Group Number: 2071526

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
4-Nitroaniline	50	36.79	50	38.03	74	76	45-107	3	30
Nitrobenzene	50	34.34	50	45.49	69	91	49-113	28	30
2-Nitrophenol	50	43.51	50	49.32	87	99	57-116	13	30
4-Nitrophenol	50	26.77	50	28.47	54	57	23-89	6	30
N-Nitroso-di-n-propylamine	50	36.16	50	42.56	72	85	51-122	16	30
N-Nitrosodiphenylamine	50	38.63	50	44.73	77	89	63-119	15	30
Di-n-octylphthalate	50	36.68	50	44.04	73	88	67-120	18	30
Pentachlorophenol	50	48.18	50	46.58	96	93	54-131	3	30
Phenanthrene	50	40.05	50	45.89	80	92	65-113	14	30
Phenol	50	24.69	50	26.89	49	54	19-79	9	30
Pyrene	50	38.59	50	45.32	77	91	65-115	16	30
Pyridine	50	20.3	50	21.99	41	44	13-83	8	30
1,2,4,5-Tetrachlorobenzene	50	35	50	38.11	70	76	33-105	9	30
2,3,4,6-Tetrachlorophenol	50	48.55	50	49.66	97	99	68-118	2	30
2,4,5-Trichlorophenol	50	44.9	50	43.86	90	88	66-118	2	30
2,4,6-Trichlorophenol	50	45.94	50	46.47	92	93	69-122	1	30
Triethylamine	50	6.80	50	8.29	14	17	10-88	20	30
	ug/l	**ug/l**	**ug/l**	**ug/l**					
Batch number: 193030019A	Sample number(s): 1186458-1186465								
Acetaldehyde	500	416.43			83		76-119		
Formaldehyde	500	508.38			102		77-122		
	mg/l	**mg/l**	**mg/l**	**mg/l**					
Batch number: 193080027A	Sample number(s): 1186458,1186462,1186464-1186465								
Ethylene glycol	102.78	99.47			97		69-118		
Propylene glycol	98.9	93.22			94		60-121		
Batch number: 193100032A	Sample number(s): 1186459-1186461,1186463								
Ethylene glycol	102.78	98.75			96		69-118		
Propylene glycol	98.9	94.68			96		60-121		
	ug/l	**ug/l**	**ug/l**	**ug/l**					
Batch number: 193080007A	Sample number(s): 1186458-1186465								
Ethanol	2501	2256.23			90		80-115		
Isopropanol	2505	2463.38			98		85-115		
Methanol	2503	2349.23			94		79-120		

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

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Quality Control Summary

Client Name: ARCADIS U.S., Inc.
Reported: 01/27/2020 16:57

Group Number: 2071526

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc mg/l	MS Spike Added mg/l	MS Conc mg/l	MSD Spike Added mg/l	MSD Conc mg/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: 193100032A	Sample number(s): 1186459-1186461,1186463 UNSPK: 1186458									
Ethylene glycol	N.D.	102.78	79.27	102.78	97.7	77	95	69-118	21*	20
Propylene glycol	N.D.	98.9	81.01	98.9	89.01	82	90	60-121	9	20

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs- 5ml Water by 8260C/D
Batch number: Y193112AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
1186458	100	100	93	90
1186459	99	100	92	89
1186460	101	101	93	90
1186461	100	100	92	89
1186462	101	100	92	90
1186463	101	99	92	89
1186464	102	100	92	89
1186465	102	100	91	90
1186466	98	100	93	90
Blank	98	98	92	90
LCS	97	99	95	97
LCSD	97	97	95	95
Limits:	80-120	80-120	80-120	80-120

Analysis Name: Semi-annual Groundwater BMS
Batch number: 19305WAF026

	Phenol-d6	2-Fluorophenol	2,4,6-Tribromophenol	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14
1186458	31	35	81	74	72	94
1186459	51	58	84	75	73	89
1186460	38	45	74	74	74	89
1186461	32	37	72	66	67	83
1186462	32	39	82	69	69	94
1186463	44	49	87	71	69	94
1186464	44	44	91	69	71	95
1186465	48	54	68	78	70	80
Blank	29	38	71	44	50	72
LCS	44	58	92	68	71	82

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

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Quality Control Summary

Client Name: ARCADIS U.S., Inc. Group Number: 2071526
Reported: 01/27/2020 16:57

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: Semi-annual Groundwater BMS
Batch number: 19305WAF026

	Phenol-d6	2-Fluorophenol	2,4,6-Tribromophenol	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14
LCSD	46	61	75	86	79	87
Limits:	10-67	10-84	23-135	33-113	44-102	39-125

Analysis Name: Short List Aldehydes- W 8315A
Batch number: 193030019A

	Butyraldehyde
1186458	106
1186459	108
1186460	105
1186461	104
1186462	108
1186463	102
1186464	103
1186465	107
Blank	109
LCS	108
Limits:	39-153

Analysis Name: Alcohols in Water
Batch number: 193080007A

	Acetone-D1	Acetone-D2
1186458	93	95
1186459	100	93
1186460	94	94
1186461	94	94
1186462	103	95
1186463	94	94
1186464	97	94
1186465	105	94
Blank	102	99
LCS	101	96
Limits:	58-149	58-149

Analysis Name: Glycols in Water by 8015C/D
Batch number: 193080027A

	Tetramethylene glycol
1186458	6*
1186462	10*
1186464	10*

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

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Quality Control Summary

Client Name: ARCADIS U.S., Inc. Group Number: 2071526
Reported: 01/27/2020 16:57

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: Glycols in Water by 8015C/D
Batch number: 193080027A

	Tetramethylene glycol
1186465	13*
Blank	36
LCS	89
Limits:	22-129

Analysis Name: Glycols in Water by 8015C/D
Batch number: 193100032A

	Tetramethylene glycol
1186459	25
1186460	18*
1186461	17*
1186463	5*
Blank	54
LCS	90
MS	38
MSD	65
Limits:	22-129

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Environmental Analysis Request/Chain of Custody

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Acct. # 3074 Group # 2071526 Sample # 1186458-66

Client: Arcadis			
Project Name/#: BMS Syracuse	Site ID #:		
Project Manager: Bill McCune	P.O. #: 30033396		
Sampler: Austin George, Josh Miller, Evan Green	PWSID #:		
Phone #: 315 671 6712	Quote #:		
State where samples were collected: NY	For Compliance: Yes ☐ No ☐		

Sample Identification	Collection Date	Collection Time	Grab	Composite	Matrix: Soil ☐ Sediment ☐ Tissue ☐	Water: Potable ☐ Ground ☑ Surface ☐ NPDES ☐	Other:	Total # of Containers	VOCs 8260C	SVOCs 8270D	Glycols 8015C	Alcohols	Aldehydes 8315A			Remarks
									Preservation and Filtration Codes: H			H				
PW-6T	10/28/19	1355	X			X		10	X	X	X	X	X			
PW-6L	10/28/19	1510	X			X		10	X	X	X	X	X			
PW-3MD	10/28/19	1355	X			X		10	X	X	X	X	X			
PW-3MS	10/28/19	1505	X			X		10	X	X	X	X	X			
PW-3T	10/28/19	1125	X			X		10	X	X	X	X	X			
PW-4LD	10/28/19	1436	X			X		10	X	X	X	X	X			
PW-4F	10/28/19	1131	X			X		10	X	X	X	X	X			
PW-4LS	10/28/19	1327	X			X		10	X	X	X	X	X			
Trip blank	10/23/19	/	X			X		2	X							
	RS															

For Lab Use Only
SF #: _____
SCR #: _____

Preservation Codes: H = HCl; T = Thiosulfate; N = HNO_3; B = NaOH; S = H_2SO_4; P = H_3PO_4; F = Field Filtered; O = Other

Turnaround Time Requested (TAT) (please check): Standard ☑ Rush ☐
(Rush TAT is subject to laboratory approval and surcharges.)

Date results are needed:

Rush results requested by (please check): E-Mail ☐ Phone ☐

E-mail Address: William.McCune@arcadis.com

Phone: 315 671 6712

Data Package Options (please check if required)

Type I (Validation/non-CLP)	☐	MA MCP	☐
Type III (Reduced non-CLP)	☐	CT RCP	☐
Type VI (Raw Data Only)	☐	TX TRRP-13	☐
NJ DKQP	☐	NYSDEC Category	☐ A or ☐ B

EDD Required? Yes ☑ No ☐ If yes, format:

Relinquished by:	Date	Time	Received by:	Date	Time
Josh Sinn	10/28/19	1615	Received by:	10.28.19	16:15
Relinquished by:	Date	Time		Date	Time
Relinquished by:	10.29.19	19:00			
Relinquished by:	Date	Time		Date	Time
Relinquished by:	Date	Time		Date	Time
Relinquished by:	Date	Time	CM Webb	Date 10/29/19	Time 11:13

Relinquished by Commercial Carrier:
UPS _____ FedEx X Other _____

Syracuse #225

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Sample Administration Receipt Documentation Log

Doc Log ID: 264402

Group Number(s): 2071526

Client: Arcadis

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Date:	10/29/2019
Number of Packages:	2	Number of Projects:	1

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	Total Trip Blank Qty:	2
Samples Chilled:	Yes	Trip Blank Type:	HCl
Paperwork Enclosed:	Yes	Air Quality Samples Present:	No
Samples Intact:	Yes		
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Tamara Lugardo

Samples Chilled Details

Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	192050133	5.8	IR	Wet	Y	Bagged	N
2	192050133	2.3	IR	Wet	Y	Bagged	N

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Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mL**	milliliter(s)
C	degrees Celsius	**MPN**	Most Probable Number
cfu	colony forming units	**N.D.**	non-detect
CP Units	cobalt-chloroplatinate units	**ng**	nanogram(s)
F	degrees Fahrenheit	**NTU**	nephelometric turbidity units
g	gram(s)	**pg/L**	picogram/liter
IU	International Units	**RL**	Reporting Limit
kg	kilogram(s)	**TNTC**	Too Numerous To Count
L	liter(s)	**µg**	microgram(s)
lb.	pound(s)	**µL**	microliter(s)
m3	cubic meter(s)	**umhos/cm**	micromhos/cm
meq	milliequivalents	**MCL**	Maximum Contamination Limit
mg	milligram(s)		

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

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Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
P^	Concentration difference between the primary and confirmation column > 40%. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

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REVISED

ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

ARCADIS U.S., Inc.
630 Plaza Drive
Suite 600
Highlands Ranch CO 80129

Report Date: January 27, 2020 17:04

Project: Bristol-Myers Squibb

Account #: 03074
Group Number: 2071744
SDG: BMS81
PO Number: B0087363.0033.00003
State of Sample Origin: NY

Electronic Copy To	Arcadis	Attn: William McCune
Electronic Copy To	Arcadis	Attn: Lawrence Carey Healy

Respectfully Submitted,

Megan A. Moeller
Senior Specialist

(717) 556-7261

A previous version of this report was generated on 11/11/2019 15:32.

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SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
BDA-14RX Grab Groundwater	10/29/2019 11:05	1187623
BDA-14RX Filtered Grab Groundwater	10/29/2019 11:05	1187624
BDA-17RX Grab Groundwater	10/29/2019 14:45	1187625
BDA-17RX Filtered Grab Groundwater	10/29/2019 14:45	1187626
BDA-17T Grab Groundwater	10/29/2019 11:10	1187627
BDA-17T Filtered Grab Groundwater	10/29/2019 11:10	1187628
BDA-17WT Grab Groundwater	10/29/2019 11:48	1187629
BDA-17WT MS Grab Groundwater	10/29/2019 11:48	1187630
BDA-17WT MSD Grab Groundwater	10/29/2019 11:48	1187631
BDA-17WT DUP Grab Groundwater	10/29/2019 11:48	1187632
BDA-17WT Filtered Grab Groundwater	10/29/2019 11:48	1187633
BDA-17WT MS Filtered Grab Groundwater	10/29/2019 11:48	1187634
BDA-17WT MSD Filtered Grab Groundwater	10/29/2019 11:48	1187635
BDA-17WT DUP Filtered Grab Groundwater	10/29/2019 11:48	1187636
BDA-17WR Grab Groundwater	10/29/2019 15:40	1187637
BDA-17WR Filtered Grab Groundwater	10/29/2019 15:40	1187638
DUP-102919 Grab Groundwater	10/29/2019	1187639
DUP-102919 Filtered Grab Groundwater	10/29/2019	1187640
Trip Blank Water	10/29/2019	1187641
DUP-102919-02 Grab Groundwater	10/29/2019	1187642
FB-102919 Grab Water	10/29/2019 16:20	1187643
EB-102919 Grab Water	10/29/2019 16:30	1187644

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

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Project Name: Bristol-Myers Squibb
ELLE Group #: 2071744

General Comments:

Through our technical processes and second person review of data, we have established that our data/deliverables are in compliance with the methods and project requirements unless otherwise noted or previously resolved with the client. The compliance signature is located on the cover page of the Analysis Reports.

See the Laboratory Sample Analysis Record section of the Analysis Report for the method references.

All QC met criteria unless otherwise noted in an Analysis Specific Comment below.

Refer to the QC Summary for specific values and acceptance criteria.

Project specific QC samples are included in this data set.

Matrix QC may not be reported if site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

Surrogate recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in an Analysis Specific Comment below.

The samples were received at the appropriate temperature and in accordance with the chain of custody unless otherwise noted.

Analysis Specific Comments:

SW-846 8260C, GC/MS Volatiles

Sample #s: 1187630, 1187631

Project defined calibration criteria are not met. The calibration is compliant with the method defined criteria.

Sample #s: 1187623, 1187625, 1187627, 1187629, 1187637, 1187639, 1187641

Project defined calibration criteria are not met. The calibration is compliant with the method defined criteria.

A Report Limit Verification (RLV) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The RLV standard shows adequate sensitivity at or below the reporting limit.

SW-846 8270D, GC/MS Semivolatiles

Sample #s: 1187623

The holding time was not met.

The first extraction for this sample was preformed within the method required holding time however the recovery for the sample surrogate(s) is outside the QC acceptance limits. The sample was re-extracted outside the method required holding time and the sample surrogates are compliant. Per client request, the data is reported from the second extraction.

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. Since the recovery is high and the target analyte(s) was not detected in the sample, the data is reported.

Batch #: 19303WAN026 (Sample number(s): 1187625, 1187627, 1187629-1187631, 1187637, 1187642 UNSPK: 1187629)

The relative percent difference(s) for the following analyte(s) in the LCS/LCSD were outside acceptance windows: Triethylamine

The recovery(ies) for the following analyte(s) in the MS and/or MSD were below the acceptance window: 2,3,4,6-Tetrachlorophenol, 2,4,5-Trichlorophenol, 2-Chlorophenol, 2,4-Dichlorophenol, 2,4,6-Trichlorophenol, 4-Methylphenol, 4-Chloro-3-methylphenol, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, 2-Methylphenol

The relative percent difference(s) for the following analyte(s) in the MS/MSD were outside acceptance windows: 2,4-Dichlorophenol, Dimethylphthalate

The recovery(ies) for one or more surrogates were below the acceptance window for sample(s) 1187629

Batch #: 19311WAK026 (Sample number(s): 1187623 UNSPK: 1187629)

The recovery(ies) for the following analyte(s) in the LCS and/or LCSD exceeded the acceptance window indicating a positive bias: Dicyclohexylamine

The recovery(ies) for the following analyte(s) in the MS and/or MSD were below the acceptance window: 2,3,4,6-Tetrachlorophenol, 2,4,5-Trichlorophenol, 2-Chlorophenol, 2,4-Dichlorophenol, 2,4,6-Trichlorophenol

The relative percent difference(s) for the following analyte(s) in the MS/MSD were outside acceptance windows: 2-Chlorophenol, 2-Nitrophenol, 4-Nitrophenol

SW-846 8270D SIM, GC/MS Semivolatiles

Sample #s: 1187629, 1187630, 1187631

In the first extraction, the recovery for the sample surrogate(s) is outside the QC acceptance limits. The sample was re-extracted within the method required holding time and the surrogates are compliant.

The recovery for a target analyte(s) in the Laboratory Control Spike(s) from the second extraction is outside the QC acceptance limits as noted on the QC Summary. The recoveries for the target analytes in the Laboratory Control Spike(s) from the first extraction are compliant. All data is reported from the second extraction.

Batch #: 19308WAC026 (Sample number(s): 1187629-1187631 UNSPK: 1187629)

The recovery(ies) for the following analyte(s) in the LCS were below the acceptance window: 1,4-Dioxane

SW-846 8315A, Aldehydes & Ketones

Sample #s: 1187623, 1187625, 1187627, 1187629, 1187630, 1187631, 1187637, 1187639

The response for a target analyte(s) in the initial calibration verification standard is outside the QC acceptance limits.

SW-846 8015D Rev.4, June 2003, GC Miscellaneous

Sample #s: 1187623, 1187625, 1187627, 1187629, 1187630, 1187631, 1187637, 1187639, 1187641

The response for a target analyte(s) in the continuing calibration verification standard is outside the QC acceptance limits low. The following action was taken:

The analysis was repeated and the continuing calibration verification standard bracketing the sample on the second trial is also outside the acceptance limits. This effect is attributed to the sample matrix and the data is reported.

Batch #: 193040002A (Sample number(s): 1187623, 1187625, 1187627, 1187629-1187631, 1187637, 1187639, 1187641 UNSPK: 1187629)

The recovery(ies) for the following analyte(s) in the MS and/or MSD were below the acceptance window: Ethylene glycol, Propylene glycol

The relative percent difference(s) for the following analyte(s) in the MS/MSD were outside acceptance windows: Ethylene glycol, Propylene glycol

The recovery(ies) for one or more surrogates were below the acceptance window for sample(s) 1187625, 1187627, 1187629, 1187637, 1187639, 1187641

EPA 537 mod QSM 5.1 table B-15, LC/MS/MS Miscellaneous

Sample #s: 1187625

The recovery for extraction standard 13C8-PFOSA is outside of the QC acceptance limits as noted on the QC Summary. The following action was taken:
The sample was re-extracted within the method holding time and the recovery for extraction standard 13C8-PFOSA was again outside of the QC acceptance limits. The data is reported from the initial trial and both sets of data are included in the data package.

Sample #s: 1187627

The recovery for extraction standard d5-NEtFOSAA is outside of the QC acceptance limits as noted on the QC Summary.

Sample #s: 1187637

The recovery for the sample extraction standard(s) is outside the QC acceptance limits as noted on the QC Summary. The following action was taken: This sample was re-extracted within the method holding time and the recovery for the sample extraction standard(s) is again outside the QC acceptance limits. The data is reported from the initial trial of the sample and both sets of data are included in the data package.

Batch #: 19304003 (Sample number(s): 1187623, 1187625, 1187627, 1187629-1187631, 1187637, 1187643 UNSPK: 1187629)

The recovery(ies) for one or more surrogates exceeded the acceptance window indicating a positive bias for sample(s) 1187627

The recovery(ies) for one or more surrogates were below the acceptance window for sample(s) 1187625, 1187637

SW-846 6010D Rev.4, July 2014, Metals

Batch #: 193041404403 (Sample number(s): 1187623, 1187625, 1187627, 1187629-1187632, 1187637, 1187639 UNSPK: 1187629 BKG: 1187629)

The recovery(ies) for the following analyte(s) in the MS and/or MSD exceeded the acceptance window indicating a positive bias: Sodium, Arsenic

The recovery(ies) for the following analyte(s) in the MS and/or MSD were below the acceptance window: Calcium, Iron, Magnesium, Barium, Chromium, Cobalt, Copper, Lead, Manganese, Vanadium

SW-846 6010D Rev.4, July 2014, Metals Dissolved

Batch #: 193041404402 (Sample number(s): 1187624, 1187626, 1187628, 1187633-1187636, 1187638, 1187640 UNSPK: 1187633 BKG: 1187633)

The recovery(ies) for the following analyte(s) in the MS and/or MSD exceeded the acceptance window indicating a positive bias: Manganese, Calcium, Iron

The recovery(ies) for the following analyte(s) in the MS and/or MSD were below the acceptance window: Calcium, Iron, Magnesium, Sodium, Barium

The relative percent difference(s) for the following analyte(s) in the MS/MSD were outside acceptance windows: Iron

The duplicate RPD for the following analyte(s) exceeded the acceptance window: Thallium, Arsenic

SW-846 6020B Rev.2, July 2014, Metals

Batch #: 193111404701A (Sample number(s): 1187623-1187632, 1187637-1187640 UNSPK: 1187629 BKG: 1187629)

The recovery(ies) for the following analyte(s) in the MS and/or MSD were below the acceptance window: Aluminum

The relative percent difference(s) for the following analyte(s) in the MS/MSD were outside acceptance windows: Aluminum

SW-846 6020B Rev.2, July 2014, Metals Dissolved

Batch #: 193111404701A (Sample number(s): 1187623-1187632, 1187637-1187640 UNSPK: 1187629 BKG: 1187629)

The recovery(ies) for the following analyte(s) in the MS and/or MSD were below the acceptance window: Aluminum

The relative percent difference(s) for the following analyte(s) in the MS/MSD were outside acceptance windows: Aluminum

Batch #: 193111404702A (Sample number(s): 1187633-1187636 UNSPK: 1187633 BKG: 1187633)

The recovery(ies) for the following analyte(s) in the MS and/or MSD exceeded the acceptance window indicating a positive bias: Aluminum

The recovery(ies) for the following analyte(s) in the MS and/or MSD were below the acceptance window: Aluminum

The relative percent difference(s) for the following analyte(s) in the MS/MSD were outside acceptance windows: Aluminum

SW-846 7470A, Metals

Batch #: 193040571302 (Sample number(s): 1187623-1187627, 1187629-1187632, 1187638-1187639 UNSPK: 1187629 BKG: 1187629)

The recovery(ies) for the following analyte(s) in the MS and/or MSD were below the acceptance window: Mercury

SW-846 7470A, Metals Dissolved

Batch #: 193040571302 (Sample number(s): 1187623-1187627, 1187629-1187632, 1187638-1187639 UNSPK: 1187629 BKG: 1187629)

The recovery(ies) for the following analyte(s) in the MS and/or MSD were below the acceptance window: Mercury

EPA 300.0, Wet Chemistry

Batch #: 19304135213B (Sample number(s): 1187629-1187630, 1187632 UNSPK: 1187629 BKG: 1187629)

The recovery(ies) for the following analyte(s) in the MS exceeded the acceptance window indicating a positive bias: Fluoride

The recovery(ies) for the following analyte(s) in the MS were below the acceptance window: Chloride

EPA 353.2, Wet Chemistry

Sample #s: 1187623, 1187627, 1187629, 1187630, 1187632, 1187639

The holding time was not met.

Batch #: 19308106102A (Sample number(s): 1187623, 1187625, 1187627, 1187629-1187630, 1187632, 1187637, 1187639 UNSPK: 1187629 BKG: 1187629)

The recovery(ies) for the following analyte(s) in the MS exceeded the acceptance window indicating a positive bias: Nitrate Nitrogen

SM 5310 C-2011, Wet Chemistry

Batch #: 19309304504A (Sample number(s): 1187623, 1187625, 1187627, 1187629-1187630, 1187632, 1187637 UNSPK: 1187629 BKG: 1187629)

The duplicate RPD for the following analyte(s) exceeded the acceptance window: Total Organic Carbon

SM 2320 B-2011, Wet Chemistry

Batch #: 19304002103A (Sample number(s): 1187627, 1187629-1187630, 1187632 UNSPK: 1187629 BKG: 1187629)

The recovery(ies) for the following analyte(s) in the MS were below the acceptance window: Total Alkalinity to pH 4.5

SM 5210 B-2011, Wet Chemistry

Batch #: 19304141081A (Sample number(s): 1187623, 1187625, 1187627, 1187629, 1187632, 1187637 BKG: 1187629)

The duplicate RPD for the following analyte(s) exceeded the acceptance window: Biochemical Oxygen Demand-BOD

REVISED

Sample Description: **BDA-14RX Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/30/2019 11:22
Collection Date/Time: 10/29/2019 11:05
SDG#: BMS81-10

ARCADIS U.S., Inc.
ELLE Sample #: GW 1187623
ELLE Group #: 2071744
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	20	0.7	1
11997	Acetonitrile	75-05-8	N.D.	100	16	1
11997	Benzene	71-43-2	N.D.	1	0.2	1
11997	Bromochloromethane	74-97-5	N.D.	5	0.2	1
11997	Bromodichloromethane	75-27-4	N.D.	1	0.2	1
11997	Bromoform	75-25-2	N.D.	4	1	1
11997	Bromomethane	74-83-9	N.D.	1	0.3	1
11997	n-Butanol	71-36-3	N.D.	250	61	1
11997	2-Butanone	78-93-3	N.D.	10	0.3	1
11997	t-Butyl alcohol	75-65-0	N.D.	50	12	1
11997	n-Butylbenzene	104-51-8	N.D.	5	0.2	1
11997	sec-Butylbenzene	135-98-8	N.D.	5	0.2	1
11997	tert-Butylbenzene	98-06-6	N.D.	5	0.3	1
11997	Carbon Disulfide	75-15-0	N.D.	5	0.2	1
11997	Carbon Tetrachloride	56-23-5	N.D.	1	0.2	1
11997	Chlorobenzene	108-90-7	N.D.	1	0.2	1
11997	Chlorodifluoromethane[1]	75-45-6	N.D.	5	2	1
11997	Chloroethane	75-00-3	N.D.	1	0.2	1
11997	Chloroform	67-66-3	N.D.	1	0.2	1
11997	Chloromethane	74-87-3	N.D.	1	0.2	1
11997	Cyclohexane	110-82-7	N.D.	5	1	1
11997	Cyclohexanone[1]	108-94-1	N.D.	100	25	1
11997	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	5	0.3	1
11997	Dibromochloromethane	124-48-1	N.D.	1	0.2	1
11997	1,2-Dibromoethane	106-93-4	N.D.	1	0.2	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	5	0.2	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	5	0.2	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	5	0.2	1
11997	Dichlorodifluoromethane	75-71-8	N.D.	1	0.2	1
11997	1,1-Dichloroethane	75-34-3	N.D.	1	0.2	1
11997	1,2-Dichloroethane	107-06-2	N.D.	1	0.3	1
11997	1,1-Dichloroethene	75-35-4	N.D.	1	0.2	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	1	0.2	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	1	0.2	1
11997	1,2-Dichloropropane	78-87-5	N.D.	1	0.2	1
11997	cis-1,3-Dichloropropene	10061-01-5	N.D.	1	0.2	1
11997	trans-1,3-Dichloropropene	10061-02-6	N.D.	1	0.2	1
11997	1,4-Dioxane	123-91-1	N.D.	250	29	1
11997	Ethyl Acetate	141-78-6	N.D.	5	0.7	1
11997	Ethyl ether	60-29-7	N.D.	5	0.2	1
11997	Ethylbenzene	100-41-4	N.D.	1	0.4	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **BDA-14RX Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/30/2019 11:22
Collection Date/Time: 10/29/2019 11:05
SDG#: BMS81-10

ARCADIS U.S., Inc.
ELLE Sample #: GW 1187623
ELLE Group #: 2071744
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Freon 113	76-13-1	N.D.	10	0.2	1
11997	n-Heptane[1]	142-82-5	N.D.	5	2	1
11997	n-Hexane[1]	110-54-3	N.D.	5	2	1
11997	2-Hexanone	591-78-6	N.D.	10	0.3	1
11997	Isobutyl Alcohol	78-83-1	N.D.	250	36	1
11997	Isopropylbenzene	98-82-8	N.D.	5	0.2	1
11997	p-Isopropyltoluene	99-87-6	N.D.	5	0.2	1
11997	Methyl Acetate	79-20-9	N.D.	5	0.2	1
11997	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	1	0.2	1
11997	4-Methyl-2-pentanone	108-10-1	N.D.	10	0.5	1
11997	Methylcyclohexane	108-87-2	N.D.	5	0.5	1
11997	Methylene Chloride	75-09-2	N.D.	1	0.3	1
11997	Naphthalene	91-20-3	N.D.	5	1	1
11997	2-Nitropropane	79-46-9	N.D.	10	0.8	1
11997	Styrene	100-42-5	N.D.	5	0.2	1
11997	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	1	0.2	1
11997	Tetrachloroethene	127-18-4	N.D.	1	0.2	1
11997	Tetrahydrofuran	109-99-9	N.D.	10	0.7	1
11997	Toluene	108-88-3	0.7 J	1	0.2	1
11997	1,2,3-Trichlorobenzene	87-61-6	N.D.	5	0.4	1
11997	1,2,4-Trichlorobenzene	120-82-1	N.D.	5	0.3	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	1	0.3	1
11997	1,1,2-Trichloroethane	79-00-5	N.D.	1	0.2	1
11997	Trichloroethene	79-01-6	N.D.	1	0.2	1
11997	Trichlorofluoromethane	75-69-4	N.D.	1	0.2	1
11997	1,2,4-Trimethylbenzene	95-63-6	N.D.	5	1	1
11997	1,3,5-Trimethylbenzene	108-67-8	N.D.	5	0.3	1
11997	Vinyl Chloride	75-01-4	N.D.	1	0.2	1
11997	m+p-Xylene	179601-23-1	N.D.	5	1	1
11997	o-Xylene	95-47-6	N.D.	1	0.4	1
11997	Xylene (Total)	1330-20-7	N.D.	6	1	1

Project defined calibration criteria are not met. The calibration is compliant with the method defined criteria.

A Report Limit Verification (RLV) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The RLV standard shows adequate sensitivity at or below the reporting limit.

00882 VOA Interp. Library Search-10

The results from the volatile library search are listed on the attached FORM 1 - VOA-TIC. The qualifiers appearing in the "Q" column are defined at the end of the report.

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **BDA-14RX Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/30/2019 11:22
Collection Date/Time: 10/29/2019 11:05
SDG#: BMS81-10

ARCADIS U.S., Inc.
ELLE Sample #: GW 1187623
ELLE Group #: 2071744
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	Acenaphthene	83-32-9	N.D.	0.51	0.10	1
14241	Acenaphthylene	208-96-8	N.D.	0.51	0.10	1
14241	Acetophenone	98-86-2	N.D.	10	4.1	1
14241	Aniline	62-53-3	N.D.	10	3.0	1
14241	Anthracene	120-12-7	N.D.	0.51	0.10	1
14241	Atrazine	1912-24-9	N.D.	5.1	2.0	1
14241	Benzaldehyde	100-52-7	N.D.	10	3.0	1
14241	Benzo(a)anthracene	56-55-3	N.D.	0.51	0.10	1
14241	Benzo(a)pyrene	50-32-8	N.D.	0.51	0.10	1
14241	Benzo(b)fluoranthene	205-99-2	N.D.	0.51	0.10	1
14241	Benzo(g,h,i)perylene	191-24-2	N.D.	0.51	0.10	1
14241	Benzo(k)fluoranthene	207-08-9	N.D.	0.51	0.10	1
14241	Benzyl alcohol	100-51-6	N.D.	30	10	1
14241	1,1'-Biphenyl	92-52-4	N.D.	10	3.0	1
14241	4-Bromophenyl-phenylether	101-55-3	N.D.	2.0	0.51	1
14241	Butylbenzylphthalate	85-68-7	N.D.	5.1	2.0	1
14241	Di-n-butylphthalate	84-74-2	N.D.	5.1	2.0	1
14241	Caprolactam	105-60-2	N.D.	11	5.1	1
14241	Carbazole	86-74-8	N.D.	2.0	0.51	1
14241	4-Chloro-3-methylphenol	59-50-7	N.D.	2.0	0.51	1
14241	4-Chloroaniline	106-47-8	N.D.	10	4.1	1
14241	bis(2-Chloroethoxy)methane	111-91-1	N.D.	2.0	0.51	1
14241	bis(2-Chloroethyl)ether	111-44-4	N.D.	2.0	0.51	1
14241	bis(2-Chloroisopropyl)ether[1]	39638-32-9	N.D.	2.0	0.51	1
	Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.					
14241	2-Chloronaphthalene	91-58-7	N.D.	1.0	0.41	1
14241	2-Chlorophenol	95-57-8	N.D.	2.0	0.51	1
14241	4-Chlorophenyl-phenylether	7005-72-3	N.D.	2.0	0.51	1
14241	Chrysene	218-01-9	N.D.	0.51	0.10	1
14241	Dibenz(a,h)anthracene	53-70-3	N.D.	0.51	0.10	1
14241	Dibenzofuran	132-64-9	N.D.	2.0	0.51	1
14241	3,3'-Dichlorobenzidine	91-94-1	N.D.	10	3.0	1
14241	2,4-Dichlorophenol	120-83-2	N.D.	2.0	0.51	1
14241	Dicyclohexylamine[1]	101-83-7	N.D.	10	10	1
14241	Diethylphthalate	84-66-2	N.D.	5.1	2.0	1
14241	N,N-Dimethylaniline[1]	121-69-7	N.D.	1.0	0.51	1
14241	2,4-Dimethylphenol	105-67-9	N.D.	10	3.0	1
14241	Dimethylphthalate	131-11-3	N.D.	5.1	2.0	1
14241	4,6-Dinitro-2-methylphenol	534-52-1	N.D.	21	8.1	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **BDA-14RX Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/30/2019 11:22
Collection Date/Time: 10/29/2019 11:05
SDG#: BMS81-10

ARCADIS U.S., Inc.
ELLE Sample #: GW 1187623
ELLE Group #: 2071744
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	2,4-Dinitrophenol	51-28-5	N.D.	30	14	1
14241	2,4-Dinitrotoluene	121-14-2	N.D.	5.1	1.0	1
14241	2,6-Dinitrotoluene	606-20-2	N.D.	2.0	0.51	1
14241	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	11	5.1	1
14241	Fluoranthene	206-44-0	N.D.	0.51	0.10	1
14241	Fluorene	86-73-7	N.D.	0.51	0.10	1
14241	Hexachlorobenzene	118-74-1	N.D.	0.51	0.10	1
14241	Hexachlorobutadiene	87-68-3	N.D.	2.0	0.51	1
14241	Hexachlorocyclopentadiene	77-47-4	N.D.	11	5.1	1
14241	Hexachloroethane	67-72-1	N.D.	5.1	1.0	1
14241	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.51	0.10	1
14241	Isophorone	78-59-1	N.D.	2.0	0.51	1
14241	2-Methylnaphthalene	91-57-6	N.D.	0.51	0.10	1
14241	2-Methylphenol	95-48-7	N.D.	2.0	0.51	1
14241	4-Methylphenol	65794-96-9	N.D.	2.0	0.51	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
14241	Naphthalene	91-20-3	N.D.	0.51	0.10	1
14241	2-Nitroaniline	88-74-4	N.D.	7.1	2.0	1
14241	3-Nitroaniline	99-09-2	N.D.	7.1	3.0	1
14241	4-Nitroaniline	100-01-6	N.D.	3.0	0.91	1
14241	Nitrobenzene	98-95-3	N.D.	2.0	0.51	1
14241	2-Nitrophenol	88-75-5	N.D.	10	3.0	1
14241	4-Nitrophenol	100-02-7	N.D.	30	10	1
14241	N-Nitroso-di-n-propylamine	621-64-7	N.D.	3.0	0.71	1
14241	N-Nitrosodiphenylamine	86-30-6	N.D.	3.0	0.71	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.					
14241	Di-n-octylphthalate	117-84-0	N.D.	11	5.1	1
14241	Pentachlorophenol	87-86-5	N.D.	5.1	1.0	1
14241	Phenanthrene	85-01-8	N.D.	0.51	0.10	1
14241	Phenol	108-95-2	N.D.	2.0	0.51	1
14241	Pyrene	129-00-0	N.D.	0.51	0.10	1
14241	Pyridine	110-86-1	N.D.	5.1	2.0	1
14241	1,2,4,5-Tetrachlorobenzene	95-94-3	N.D.	2.0	0.51	1
14241	2,3,4,6-Tetrachlorophenol	58-90-2	N.D.	10	4.1	1
14241	2,4,5-Trichlorophenol	95-95-4	N.D.	2.0	0.51	1
14241	2,4,6-Trichlorophenol	88-06-2	N.D.	2.0	0.51	1
14241	Triethylamine[1]	121-44-8	N.D.	10	10	1

[1] The holding time was not met.

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **BDA-14RX Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/30/2019 11:22
Collection Date/Time: 10/29/2019 11:05
SDG#: BMS81-10

ARCADIS U.S., Inc.
ELLE Sample #: GW 1187623
ELLE Group #: 2071744
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result		Limit of Quantitation*	Method Detection Limit	Dilution Factor
	The first extraction for this sample was preformed within the method required holding time however the recovery for the sample surrogate(s) is outside the QC acceptance limits. The sample was re-extracted outside the method required holding time and the sample surrogates are compliant. Per client request, the data is reported from the second extraction.						
	The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. Since the recovery is high and the target analyte(s) was not detected in the sample, the data is reported.						
GC/MS Semivolatiles	**SW-846 8270D SIM**		**ug/l**		**ug/l**	**ug/l**	
14244	1,4-Dioxane	123-91-1	N.D.		0.3	0.1	1
00886	**SVOA TIC Interpretive(25)**						
	The results from the semivolatile library search are listed on the attached FORM 1 - SV-TIC. The qualifiers appearing in the "Q" column are defined at the end of the report.						
Aldehydes & Ketones	**SW-846 8315A**		**ug/l**		**ug/l**	**ug/l**	
13022	Acetaldehyde[1]	75-07-0	36	J	60	35	1
13022	Formaldehyde	50-00-0	75		50	20	1
	The response for a target analyte(s) in the initial calibration verification standard is outside the QC acceptance limits.						
GC Miscellaneous	**SW-846 8015D Rev.4, June 2003**		**ug/l**		**ug/l**	**ug/l**	
10603	Ethanol	64-17-5	N.D.	D2	1,000	150	1
12926	Ethylene glycol[1]	107-21-1	N.D.		10,000	5,000	1
10603	Isopropanol[1]	67-63-0	N.D.	D2	1,000	110	1
10603	Methanol	67-56-1	N.D.	D2	1,000	220	1
12926	Propylene glycol[1]	57-55-6	N.D.		10,000	2,000	1
	The response for a target analyte(s) in the continuing calibration verification standard is outside the QC acceptance limits low. The following action was taken: The analysis was repeated and the continuing calibration verification standard bracketing the sample on the second trial is also outside the acceptance limits. This effect is attributed to the sample matrix and the data is reported.						
LC/MS/MS Miscellaneous	**EPA 537 mod QSM 5.1 table B-15**		**ng/l**		**ng/l**	**ng/l**	
14434	6:2-Fluorotelomersulfonic acid[1]	27619-97-2	7.8		4.3	1.7	1
14434	8:2-Fluorotelomersulfonic acid[1]	39108-34-4	N.D.		2.6	0.85	1
14434	NEtFOSAA[1]	2991-50-6	N.D.		2.6	0.43	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.						
14434	NMeFOSAA[1]	2355-31-9	N.D.		1.7	0.51	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.						

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **BDA-14RX Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/30/2019 11:22
Collection Date/Time: 10/29/2019 11:05
SDG#: BMS81-10

ARCADIS U.S., Inc.
ELLE Sample #: GW 1187623
ELLE Group #: 2071744
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
LC/MS/MS Miscellaneous	**EPA 537 mod QSM 5.1 table B-15**		**ng/l**	**ng/l**	**ng/l**	
14434	Perfluorobutanesulfonic acid[1]	375-73-5	N.D.	1.7	0.43	1
14434	Perfluorobutanoic acid[1]	375-22-4	N.D.	4.3	1.7	1
14434	Perfluorodecanesulfonic acid[1]	335-77-3	N.D.	1.7	0.43	1
14434	Perfluorodecanoic acid[1]	335-76-2	N.D.	1.7	0.43	1
14434	Perfluorododecanoic acid[1]	307-55-1	N.D.	1.7	0.43	1
14434	Perfluoroheptanesulfonic acid[1]	375-92-8	N.D.	1.7	0.43	1
14434	Perfluoroheptanoic acid[1]	375-85-9	N.D.	1.7	0.43	1
14434	Perfluorohexanesulfonic acid[1]	355-46-4	N.D.	1.7	0.43	1
14434	Perfluorohexanoic acid[1]	307-24-4	N.D.	1.7	0.43	1
14434	Perfluorononanoic acid[1]	375-95-1	N.D.	1.7	0.43	1
14434	Perfluorooctanesulfonamide[1]	754-91-6	N.D.	1.7	0.43	1
14434	Perfluorooctanesulfonic acid[1]	1763-23-1	N.D.	1.7	0.43	1
14434	Perfluorooctanoic acid[1]	335-67-1	N.D.	1.7	0.43	1
14434	Perfluoropentanoic acid[1]	2706-90-3	N.D.	1.7	0.43	1
14434	Perfluorotetradecanoic acid[1]	376-06-7	N.D.	1.7	0.43	1
14434	Perfluorotridecanoic acid[1]	72629-94-8	N.D.	1.7	0.43	1
14434	Perfluoroundecanoic acid[1]	2058-94-8	N.D.	1.7	0.43	1
Metals	**SW-846 6010D Rev.4, July 2014**		**mg/l**	**mg/l**	**mg/l**	
07044	Antimony	7440-36-0	N.D.	0.0500	0.0160	1
07035	Arsenic	7440-38-2	N.D.	0.0300	0.0160	1
07046	Barium	7440-39-3	0.0198	0.0050	0.0010	1
07047	Beryllium	7440-41-7	N.D.	0.0050	0.0010	1
07049	Cadmium	7440-43-9	N.D.	0.0050	0.0010	1
01750	Calcium	7440-70-2	695	1.00	0.480	5
07051	Chromium	7440-47-3	0.0052 J	0.0150	0.0016	1
07052	Cobalt	7440-48-4	0.0027 J	0.0050	0.0015	1
07053	Copper	7440-50-8	N.D.	0.100	0.0600	5
01754	Iron	7439-89-6	3.96	0.200	0.0400	1
07055	Lead	7439-92-1	N.D.	0.0150	0.0071	1
01757	Magnesium	7439-95-4	116	0.100	0.0400	1
07058	Manganese	7439-96-5	0.549	0.0100	0.0030	1
07061	Nickel	7440-02-0	0.0901	0.0100	0.0021	1
01762	Potassium	7440-09-7	178	0.500	0.204	1
07036	Selenium	7782-49-2	N.D.	0.0500	0.0160	1
07066	Silver	7440-22-4	N.D.	0.0100	0.0050	1
01767	Sodium	7440-23-5	1,550	5.00	1.20	5
07022	Thallium[1]	7440-28-0	0.0090 J	0.0300	0.0081	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **BDA-14RX Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/30/2019 11:22
Collection Date/Time: 10/29/2019 11:05
SDG#: BMS81-10

ARCADIS U.S., Inc.
ELLE Sample #: GW 1187623
ELLE Group #: 2071744
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
Metals	**SW-846 6010D Rev.4, July 2014**		**ug/l**	**ug/l**	**ug/l**	
07071	Vanadium	7440-62-2	N.D.	10.0	1.9	1
07072	Zinc	7440-66-6	6.3 J	20.0	3.7	1
	SW-846 6020B Rev.2, July 2014		**ug/l**	**ug/l**	**ug/l**	
06023	Aluminum	7429-90-5	1,310	25.0	19.7	1
	SW-846 7470A		**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	N.D.	0.00020	0.000050	1
Wet Chemistry	**EPA 300.0**		**ug/l**	**ug/l**	**ug/l**	
00224	Chloride	16887-00-6	2,830,000	800,000	400,000	2000
01504	Fluoride	16984-48-8	N.D.	500	250	5
00228	Sulfate	14808-79-8	2,190,000	500,000	150,000	500
	EPA 350.1		**ug/l**	**ug/l**	**ug/l**	
12892	Ammonia Nitrogen	7664-41-7	7,800	2,000	1,000	20
	EPA 353.2		**mg/l**	**mg/l**	**mg/l**	
00220	Nitrate Nitrogen	14797-55-8	N.D.	0.10	0.040	1
00219	Nitrite Nitrogen	14797-65-0	N.D.	0.050	0.015	1
	The holding time was not met.					
	SM 4500-P F-2011		**ug/l**	**ug/l**	**ug/l**	
00227	Total Phosphorus as P (water)	7723-14-0	N.D.	100	50	1
	SM 5310 C-2011		**ug/l**	**ug/l**	**ug/l**	
00273	Total Organic Carbon	n.a.	N.D.	1,000	500	1
	EPA 410.4		**ug/l**	**ug/l**	**ug/l**	
04001	Chemical Oxygen Demand	n.a.	114,000	50,000	12,800	1
	SM 2320 B-2011		**mg/l as CaCO3**	**mg/l as CaCO3**	**mg/l as CaCO3**	
12150	Total Alkalinity to pH 4.5	n.a.	68.4	8.0	2.6	1
	SM 5210 B-2011		**ug/l**	**ug/l**	**ug/l**	
14108	Biochemical Oxygen Demand-BOD	n.a.	N.D.	2,000	2,000	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **BDA-14RX Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/30/2019 11:22
Collection Date/Time: 10/29/2019 11:05
SDG#: BMS81-10

ARCADIS U.S., Inc.
ELLE Sample #: GW 1187623
ELLE Group #: 2071744
Matrix: Groundwater

Sample Comments

State of New York Certification No. 10670

[1] = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	Y193091AA	11/05/2019 18:16	Corie Mellinger	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	Y193091AA	11/05/2019 18:15	Corie Mellinger	1
14241	Semi-annual Groundwater BMS	SW-846 8270D	1	19311WAK026	11/09/2019 00:30	Ashley R Transue	1
14244	SIM SVOAs 8270D MINI	SW-846 8270D SIM	1	19303WAP026	10/31/2019 20:46	Ashley R Transue	1
10466	BNA Water Extraction SIM	SW-846 3510C	1	19303WAP026	10/31/2019 09:30	Joshua S Ruth	1
11010	8270D BNA Extraction	SW-846 3510C	2	19311WAK026	11/08/2019 09:00	Joshua S Ruth	1
13022	Short List Aldehydes- W 8315A	SW-846 8315A	1	193030019A	10/31/2019 18:48	Jessica L Miller	1
01013	Formaldehyde Extraction	SW-846 8315A	1	193030019A	10/31/2019 09:23	Alison Moll	1
10603	Alcohols in Water	SW-846 8015D Rev.4, June 2003	1	193080007A	11/04/2019 14:25	Johanna C Kennedy	1
12926	Glycols in Water by 8015C/D	SW-846 8015D Rev.4, June 2003	1	193040002A	11/01/2019 11:05	Donald Brown	1
14434	PFAS in Water by LC/MS/MS-DoD	EPA 537 mod QSM 5.1 table B-15	1	19304003	11/01/2019 15:48	Devon M Whooley	1
14465	PFAS Water Prep - DoD	EPA 537 mod QSM 5.1 table B-15	1	19304003	10/31/2019 07:00	Toby Barnhart	1
07044	Antimony	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 16:08	Patrick J Engle	1
07035	Arsenic	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 16:08	Patrick J Engle	1
07046	Barium	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 16:08	Patrick J Engle	1
07047	Beryllium	SW-846 6010D Rev.4, July 2014	1	193041404403	11/05/2019 20:03	Cindy M Gehman	1
07049	Cadmium	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 16:08	Patrick J Engle	1
01750	Calcium	SW-846 6010D Rev.4, July 2014	1	193041404403	11/05/2019 10:19	Patrick J Engle	5
07051	Chromium	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 16:08	Patrick J Engle	1
07052	Cobalt	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 16:08	Patrick J Engle	1
07053	Copper	SW-846 6010D Rev.4, July 2014	1	193041404403	11/05/2019 14:18	Patrick J Engle	5
01754	Iron	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 16:08	Patrick J Engle	1
07055	Lead	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 16:08	Patrick J Engle	1
01757	Magnesium	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 16:08	Patrick J Engle	1
07058	Manganese	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 16:08	Patrick J Engle	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **BDA-14RX Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/30/2019 11:22
Collection Date/Time: 10/29/2019 11:05
SDG#: BMS81-10

ARCADIS U.S., Inc.
ELLE Sample #: GW 1187623
ELLE Group #: 2071744
Matrix: Groundwater

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07061	Nickel	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 16:08	Patrick J Engle	1
01762	Potassium	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 16:08	Patrick J Engle	1
07036	Selenium	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 16:08	Patrick J Engle	1
07066	Silver	SW-846 6010D Rev.4, July 2014	1	193041404403	11/05/2019 20:03	Cindy M Gehman	1
01767	Sodium	SW-846 6010D Rev.4, July 2014	1	193041404403	11/05/2019 14:18	Patrick J Engle	5
07022	Thallium	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 16:08	Patrick J Engle	1
07071	Vanadium	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 16:08	Patrick J Engle	1
07072	Zinc	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 16:08	Patrick J Engle	1
06023	Aluminum	SW-846 6020B Rev.2, July 2014	1	193111404701A	11/08/2019 11:14	Janeyah Rivers-Hamilton	1
00259	Mercury	SW-846 7470A	1	193040571302	11/01/2019 08:07	Damary Valentin	1
14044	ICP-WW, 3005A (tot rec) - U345	SW-846 3005A	1	193041404403	10/31/2019 11:21	James L Mertz	1
14047	ICPMS - Water, 3020A - U345	SW-846 3020A	1	193111404701	11/07/2019 14:15	JoElla L Rice	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	193040571302	10/31/2019 15:15	JoElla L Rice	1
00224	Chloride	EPA 300.0	1	19304135213A	11/05/2019 10:50	Samantha Faverio	2000
01504	Fluoride	EPA 300.0	1	19304135213A	10/31/2019 22:33	Kevin Litwa	5
00228	Sulfate	EPA 300.0	1	19304135213A	10/31/2019 22:48	Kevin Litwa	500
12892	Ammonia Nitrogen	EPA 350.1	1	19307107103A	11/03/2019 09:47	Ashlynn M Cornelius	20
00220	Nitrate Nitrogen	EPA 353.2	1	19308106102A	11/04/2019 12:01	Ashlynn M Cornelius	1
00219	Nitrite Nitrogen	EPA 353.2	1	19304105102A	10/31/2019 12:42	Bethany Sandone	1
00227	Total Phosphorus as P (water)	SM 4500-P F-2011	1	19305109101B	11/04/2019 14:27	Jonathan Saul	1
00273	Total Organic Carbon	SM 5310 C-2011	1	19309304504A	11/05/2019 18:46	Bethany Sandone	1
08263	Total Phos as P Prep (water)	SM 4500-P B(5)-2011	1	19305109101B	11/01/2019 20:00	Barbara A Washington	1
04001	Chemical Oxygen Demand	EPA 410.4	1	19304400101A	10/31/2019 09:15	Susan A Engle	1
12150	Total Alkalinity to pH 4.5	SM 2320 B-2011	1	19304007203A	11/01/2019 02:23	Jeremy L Bolf	1
14108	Biochemical Oxygen Demand-BOD	SM 5210 B-2011	1	19304141081A	10/31/2019 10:50	Benjamin M Morrison	1

*=This limit was used in the evaluation of the final result

REVISED

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
S8110

Lab Name: Lancaster Laboratories Contract:_____
Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____
Matrix: (soil/water) WATER Lab Sample ID: 1187623
Sample wt/vol: 5.0 (g/mL)mL Lab File ID:HP09355.i/19nov05a.b/yn05s11.d
Level: (low/med) LOW Date Received: 10/30/19
% Moisture: not dec. Date Analyzed: 11/05/19
Column: (pack/cap) CAP Dilution Factor: 1.0
CONCENTRATION UNITS:
Number TICs found: 0 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	VOCTIC	Total VOC TICs		0	U
2.					
3.					
4.					
5.					
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page 1 of 1

FORM I VOA-TIC

REVISED

1F

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

S8110

Lab Name: Lancaster Laboratories Contract:
Lab Code: LANCAS Case No.: SAS No.: SDG No.:
Matrix: (soil/water) WATER Lab Sample ID: 1187623
Sample wt/vol: 246 (g/mL) mL Lab File ID: lk0407.d
Level: (low/med) LOW Date Received: 10/30/19
% Moisture: Decanted: (Y/N) Date Extracted: 11/08/19
Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/09/19
Injection Volume: 1 (uL) Dilution Factor: 1
GPC Cleanup: N pH: Extraction: Sepf
CONCENTRATION UNITS:
Number TICs found: 2 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		Unknown	5.705	12	J
2.		Unknown	6.561	50	J
3.					
4.	SVOCTIC	Total SVOC TICs		62	J
5.					
6.					
7.					
8.					
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page 1 of 1

FORM I SV-1

REVISED

Sample Description: **BDA-14RX Filtered Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/30/2019 11:22
Collection Date/Time: 10/29/2019 11:05
SDG#: BMS81-11

ARCADIS U.S., Inc.
ELLE Sample #: GW 1187624
ELLE Group #: 2071744
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
Metals Dissolved	**SW-846 6010D Rev.4, July 2014**		**mg/l**	**mg/l**	**mg/l**	
07044	Antimony	7440-36-0	N.D.	0.0500	0.0160	1
07035	Arsenic	7440-38-2	0.0172 J	0.0300	0.0160	1
07046	Barium	7440-39-3	0.0203	0.0050	0.0010	1
07047	Beryllium	7440-41-7	N.D.	0.0050	0.0010	1
07049	Cadmium	7440-43-9	N.D.	0.0050	0.0010	1
01750	Calcium	7440-70-2	672	1.00	0.480	5
07051	Chromium	7440-47-3	0.0031 J	0.0150	0.0016	1
07052	Cobalt	7440-48-4	0.0048 J	0.0050	0.0015	1
07053	Copper	7440-50-8	N.D.	0.100	0.0600	5
01754	Iron	7439-89-6	3.34	0.200	0.0400	1
07055	Lead	7439-92-1	N.D.	0.0150	0.0071	1
01757	Magnesium	7439-95-4	118	0.100	0.0400	1
07058	Manganese	7439-96-5	0.553	0.0100	0.0030	1
07061	Nickel	7440-02-0	0.110	0.0100	0.0021	1
01762	Potassium	7440-09-7	181	0.500	0.204	1
07036	Selenium	7782-49-2	N.D.	0.0500	0.0160	1
07066	Silver	7440-22-4	N.D.	0.0100	0.0050	1
01767	Sodium	7440-23-5	1,430	5.00	1.20	5
07022	Thallium[1]	7440-28-0	N.D.	0.0300	0.0081	1
	SW-846 6010D Rev.4, July 2014		**ug/l**	**ug/l**	**ug/l**	
07071	Vanadium	7440-62-2	N.D.	10.0	1.9	1
07072	Zinc	7440-66-6	5.8 J	20.0	3.7	1
	SW-846 6020B Rev.2, July 2014		**ug/l**	**ug/l**	**ug/l**	
06023	Aluminum	7429-90-5	27.0	25.0	19.7	1
	SW-846 7470A		**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	N.D.	0.00020	0.000050	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals.

[1] = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **BDA-14RX Filtered Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/30/2019 11:22
Collection Date/Time: 10/29/2019 11:05
SDG#: BMS81-11

ARCADIS U.S., Inc.
ELLE Sample #: GW 1187624
ELLE Group #: 2071744
Matrix: Groundwater

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07044	Antimony	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:23	Patrick J Engle	1
07035	Arsenic	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:23	Patrick J Engle	1
07046	Barium	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:23	Patrick J Engle	1
07047	Beryllium	SW-846 6010D Rev.4, July 2014	1	193041404402	11/05/2019 23:41	Elaine F Stoltzfus	1
07049	Cadmium	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:23	Patrick J Engle	1
01750	Calcium	SW-846 6010D Rev.4, July 2014	1	193041404402	11/05/2019 08:44	Patrick J Engle	5
07051	Chromium	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:23	Patrick J Engle	1
07052	Cobalt	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:23	Patrick J Engle	1
07053	Copper	SW-846 6010D Rev.4, July 2014	1	193041404402	11/05/2019 17:23	Patrick J Engle	5
01754	Iron	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:23	Patrick J Engle	1
07055	Lead	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:23	Patrick J Engle	1
01757	Magnesium	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:23	Patrick J Engle	1
07058	Manganese	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:23	Patrick J Engle	1
07061	Nickel	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:23	Patrick J Engle	1
01762	Potassium	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:23	Patrick J Engle	1
07036	Selenium	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:23	Patrick J Engle	1
07066	Silver	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:23	Patrick J Engle	1
01767	Sodium	SW-846 6010D Rev.4, July 2014	1	193041404402	11/05/2019 08:44	Patrick J Engle	5
07022	Thallium	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:23	Patrick J Engle	1
07071	Vanadium	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:23	Patrick J Engle	1
07072	Zinc	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:23	Patrick J Engle	1
06023	Aluminum	SW-846 6020B Rev.2, July 2014	1	193111404701A	11/08/2019 14:48	Janeyah Rivers-Hamilton	1
00259	Mercury	SW-846 7470A	1	193040571302	11/01/2019 07:58	Damary Valentin	1
14044	ICP-WW, 3005A (tot rec) - U345	SW-846 3005A	1	193041404402	10/31/2019 11:21	James L Mertz	1
14047	ICPMS - Water, 3020A - U345	SW-846 3020A	1	193111404701	11/07/2019 14:15	JoElla L Rice	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	193040571302	10/31/2019 15:15	JoElla L Rice	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **BDA-17RX Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/30/2019 11:22
Collection Date/Time: 10/29/2019 14:45
SDG#: BMS81-12

ARCADIS U.S., Inc.
ELLE Sample #: GW 1187625
ELLE Group #: 2071744
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	14 J	20	0.7	1
11997	Acetonitrile	75-05-8	N.D.	100	16	1
11997	Benzene	71-43-2	N.D.	1	0.2	1
11997	Bromochloromethane	74-97-5	N.D.	5	0.2	1
11997	Bromodichloromethane	75-27-4	4	1	0.2	1
11997	Bromoform	75-25-2	N.D.	4	1	1
11997	Bromomethane	74-83-9	N.D.	1	0.3	1
11997	n-Butanol	71-36-3	N.D.	250	61	1
11997	2-Butanone	78-93-3	0.8 J	10	0.3	1
11997	t-Butyl alcohol	75-65-0	N.D.	50	12	1
11997	n-Butylbenzene	104-51-8	N.D.	5	0.2	1
11997	sec-Butylbenzene	135-98-8	N.D.	5	0.2	1
11997	tert-Butylbenzene	98-06-6	N.D.	5	0.3	1
11997	Carbon Disulfide	75-15-0	N.D.	5	0.2	1
11997	Carbon Tetrachloride	56-23-5	N.D.	1	0.2	1
11997	Chlorobenzene	108-90-7	N.D.	1	0.2	1
11997	Chlorodifluoromethane[1]	75-45-6	N.D.	5	2	1
11997	Chloroethane	75-00-3	N.D.	1	0.2	1
11997	Chloroform	67-66-3	21	1	0.2	1
11997	Chloromethane	74-87-3	N.D.	1	0.2	1
11997	Cyclohexane	110-82-7	N.D.	5	1	1
11997	Cyclohexanone[1]	108-94-1	N.D.	100	25	1
11997	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	5	0.3	1
11997	Dibromochloromethane	124-48-1	0.9 J	1	0.2	1
11997	1,2-Dibromoethane	106-93-4	N.D.	1	0.2	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	5	0.2	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	5	0.2	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	5	0.2	1
11997	Dichlorodifluoromethane	75-71-8	N.D.	1	0.2	1
11997	1,1-Dichloroethane	75-34-3	N.D.	1	0.2	1
11997	1,2-Dichloroethane	107-06-2	N.D.	1	0.3	1
11997	1,1-Dichloroethene	75-35-4	N.D.	1	0.2	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	1	0.2	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	1	0.2	1
11997	1,2-Dichloropropane	78-87-5	N.D.	1	0.2	1
11997	cis-1,3-Dichloropropene	10061-01-5	N.D.	1	0.2	1
11997	trans-1,3-Dichloropropene	10061-02-6	N.D.	1	0.2	1
11997	1,4-Dioxane	123-91-1	N.D.	250	29	1
11997	Ethyl Acetate	141-78-6	N.D.	5	0.7	1
11997	Ethyl ether	60-29-7	N.D.	5	0.2	1
11997	Ethylbenzene	100-41-4	N.D.	1	0.4	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **BDA-17RX Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/30/2019 11:22
Collection Date/Time: 10/29/2019 14:45
SDG#: BMS81-12

ARCADIS U.S., Inc.
ELLE Sample #: GW 1187625
ELLE Group #: 2071744
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result		Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**		**ug/l**	**ug/l**	
11997	Freon 113	76-13-1	N.D.		10	0.2	1
11997	n-Heptane[1]	142-82-5	N.D.		5	2	1
11997	n-Hexane[1]	110-54-3	N.D.		5	2	1
11997	2-Hexanone	591-78-6	N.D.		10	0.3	1
11997	Isobutyl Alcohol	78-83-1	N.D.		250	36	1
11997	Isopropylbenzene	98-82-8	N.D.		5	0.2	1
11997	p-Isopropyltoluene	99-87-6	N.D.		5	0.2	1
11997	Methyl Acetate	79-20-9	N.D.		5	0.2	1
11997	Methyl Tertiary Butyl Ether	1634-04-4	N.D.		1	0.2	1
11997	4-Methyl-2-pentanone	108-10-1	N.D.		10	0.5	1
11997	Methylcyclohexane	108-87-2	N.D.		5	0.5	1
11997	Methylene Chloride	75-09-2	N.D.		1	0.3	1
11997	Naphthalene	91-20-3	N.D.		5	1	1
11997	2-Nitropropane	79-46-9	N.D.		10	0.8	1
11997	Styrene	100-42-5	N.D.		5	0.2	1
11997	1,1,2,2-Tetrachloroethane	79-34-5	N.D.		1	0.2	1
11997	Tetrachloroethene	127-18-4	N.D.		1	0.2	1
11997	Tetrahydrofuran	109-99-9	N.D.		10	0.7	1
11997	Toluene	108-88-3	0.4	J	1	0.2	1
11997	1,2,3-Trichlorobenzene	87-61-6	N.D.		5	0.4	1
11997	1,2,4-Trichlorobenzene	120-82-1	N.D.		5	0.3	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.		1	0.3	1
11997	1,1,2-Trichloroethane	79-00-5	N.D.		1	0.2	1
11997	Trichloroethene	79-01-6	N.D.		1	0.2	1
11997	Trichlorofluoromethane	75-69-4	N.D.		1	0.2	1
11997	1,2,4-Trimethylbenzene	95-63-6	N.D.		5	1	1
11997	1,3,5-Trimethylbenzene	108-67-8	N.D.		5	0.3	1
11997	Vinyl Chloride	75-01-4	N.D.		1	0.2	1
11997	m+p-Xylene	179601-23-1	N.D.		5	1	1
11997	o-Xylene	95-47-6	N.D.		1	0.4	1
11997	Xylene (Total)	1330-20-7	N.D.		6	1	1

Project defined calibration criteria are not met. The calibration is compliant with the method defined criteria.

A Report Limit Verification (RLV) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The RLV standard shows adequate sensitivity at or below the reporting limit.

00882 VOA Interp. Library Search-10

The results from the volatile library search are listed on the attached FORM 1 - VOA-TIC. The qualifiers appearing in the "Q" column are defined at the end of the report.

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **BDA-17RX Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/30/2019 11:22
Collection Date/Time: 10/29/2019 14:45
SDG#: BMS81-12

ARCADIS U.S., Inc.
ELLE Sample #: GW 1187625
ELLE Group #: 2071744
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	Acenaphthene	83-32-9	N.D.	0.50	0.10	1
14241	Acenaphthylene	208-96-8	N.D.	0.50	0.10	1
14241	Acetophenone	98-86-2	N.D.	10	4.0	1
14241	Aniline	62-53-3	N.D.	10	3.0	1
14241	Anthracene	120-12-7	N.D.	0.50	0.10	1
14241	Atrazine	1912-24-9	N.D.	5.0	2.0	1
14241	Benzaldehyde	100-52-7	N.D.	10	3.0	1
14241	Benzo(a)anthracene	56-55-3	N.D.	0.50	0.10	1
14241	Benzo(a)pyrene	50-32-8	N.D.	0.50	0.10	1
14241	Benzo(b)fluoranthene	205-99-2	N.D.	0.50	0.10	1
14241	Benzo(g,h,i)perylene	191-24-2	N.D.	0.50	0.10	1
14241	Benzo(k)fluoranthene	207-08-9	N.D.	0.50	0.10	1
14241	Benzyl alcohol	100-51-6	N.D.	30	10	1
14241	1,1'-Biphenyl	92-52-4	N.D.	10	3.0	1
14241	4-Bromophenyl-phenylether	101-55-3	N.D.	2.0	0.50	1
14241	Butylbenzylphthalate	85-68-7	N.D.	5.0	2.0	1
14241	Di-n-butylphthalate	84-74-2	N.D.	5.0	2.0	1
14241	Caprolactam	105-60-2	N.D.	11	5.0	1
14241	Carbazole	86-74-8	N.D.	2.0	0.50	1
14241	4-Chloro-3-methylphenol	59-50-7	N.D.	2.0	0.50	1
14241	4-Chloroaniline	106-47-8	N.D.	10	4.0	1
14241	bis(2-Chloroethoxy)methane	111-91-1	N.D.	2.0	0.50	1
14241	bis(2-Chloroethyl)ether	111-44-4	N.D.	2.0	0.50	1
14241	bis(2-Chloroisopropyl)ether[1]	39638-32-9	N.D.	2.0	0.50	1
	Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.					
14241	2-Chloronaphthalene	91-58-7	N.D.	1.0	0.40	1
14241	2-Chlorophenol	95-57-8	N.D.	2.0	0.50	1
14241	4-Chlorophenyl-phenylether	7005-72-3	N.D.	2.0	0.50	1
14241	Chrysene	218-01-9	N.D.	0.50	0.10	1
14241	Dibenz(a,h)anthracene	53-70-3	N.D.	0.50	0.10	1
14241	Dibenzofuran	132-64-9	N.D.	2.0	0.50	1
14241	3,3'-Dichlorobenzidine	91-94-1	N.D.	10	3.0	1
14241	2,4-Dichlorophenol	120-83-2	N.D.	2.0	0.50	1
14241	Dicyclohexylamine[1]	101-83-7	N.D.	10	10	1
14241	Diethylphthalate	84-66-2	N.D.	5.0	2.0	1
14241	N,N-Dimethylaniline[1]	121-69-7	N.D.	1.0	0.50	1
14241	2,4-Dimethylphenol	105-67-9	N.D.	10	3.0	1
14241	Dimethylphthalate	131-11-3	N.D.	5.0	2.0	1
14241	4,6-Dinitro-2-methylphenol	534-52-1	N.D.	21	8.1	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **BDA-17RX Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/30/2019 11:22
Collection Date/Time: 10/29/2019 14:45
SDG#: BMS81-12

ARCADIS U.S., Inc.
ELLE Sample #: GW 1187625
ELLE Group #: 2071744
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	2,4-Dinitrophenol	51-28-5	N.D.	30	14	1
14241	2,4-Dinitrotoluene	121-14-2	N.D.	5.0	1.0	1
14241	2,6-Dinitrotoluene	606-20-2	N.D.	2.0	0.50	1
14241	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	11	5.0	1
14241	Fluoranthene	206-44-0	N.D.	0.50	0.10	1
14241	Fluorene	86-73-7	N.D.	0.50	0.10	1
14241	Hexachlorobenzene	118-74-1	N.D.	0.50	0.10	1
14241	Hexachlorobutadiene	87-68-3	N.D.	2.0	0.50	1
14241	Hexachlorocyclopentadiene	77-47-4	N.D.	11	5.0	1
14241	Hexachloroethane	67-72-1	N.D.	5.0	1.0	1
14241	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.50	0.10	1
14241	Isophorone	78-59-1	N.D.	2.0	0.50	1
14241	2-Methylnaphthalene	91-57-6	N.D.	0.50	0.10	1
14241	2-Methylphenol	95-48-7	N.D.	2.0	0.50	1
14241	4-Methylphenol	65794-96-9	N.D.	2.0	0.50	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
14241	Naphthalene	91-20-3	N.D.	0.50	0.10	1
14241	2-Nitroaniline	88-74-4	N.D.	7.1	2.0	1
14241	3-Nitroaniline	99-09-2	N.D.	7.1	3.0	1
14241	4-Nitroaniline	100-01-6	N.D.	3.0	0.91	1
14241	Nitrobenzene	98-95-3	N.D.	2.0	0.50	1
14241	2-Nitrophenol	88-75-5	N.D.	10	3.0	1
14241	4-Nitrophenol	100-02-7	N.D.	30	10	1
14241	N-Nitroso-di-n-propylamine	621-64-7	N.D.	3.0	0.71	1
14241	N-Nitrosodiphenylamine	86-30-6	N.D.	3.0	0.71	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.					
14241	Di-n-octylphthalate	117-84-0	N.D.	11	5.0	1
14241	Pentachlorophenol	87-86-5	N.D.	5.0	1.0	1
14241	Phenanthrene	85-01-8	N.D.	0.50	0.10	1
14241	Phenol	108-95-2	N.D.	2.0	0.50	1
14241	Pyrene	129-00-0	N.D.	0.50	0.10	1
14241	Pyridine	110-86-1	N.D.	5.0	2.0	1
14241	1,2,4,5-Tetrachlorobenzene	95-94-3	N.D.	2.0	0.50	1
14241	2,3,4,6-Tetrachlorophenol	58-90-2	N.D.	10	4.0	1
14241	2,4,5-Trichlorophenol	95-95-4	N.D.	2.0	0.50	1
14241	2,4,6-Trichlorophenol	88-06-2	N.D.	2.0	0.50	1
14241	Triethylamine[1]	121-44-8	N.D.	10	10	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **BDA-17RX Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/30/2019 11:22
Collection Date/Time: 10/29/2019 14:45
SDG#: BMS81-12

ARCADIS U.S., Inc.
ELLE Sample #: GW 1187625
ELLE Group #: 2071744
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D SIM**		**ug/l**	**ug/l**	**ug/l**	
14244	1,4-Dioxane	123-91-1	N.D.	0.3	0.1	1
00886	**SVOA TIC Interpretive(25)**					
	The results from the semivolatile library search are listed on the attached FORM 1 - SV-TIC. The qualifiers appearing in the "Q" column are defined at the end of the report.					
Aldehydes & Ketones	**SW-846 8315A**		**ug/l**	**ug/l**	**ug/l**	
13022	Acetaldehyde[1]	75-07-0	N.D.	60	35	1
13022	Formaldehyde	50-00-0	32 J	50	20	1
	The response for a target analyte(s) in the initial calibration verification standard is outside the QC acceptance limits.					
GC Miscellaneous	**SW-846 8015D Rev.4, June 2003**		**ug/l**	**ug/l**	**ug/l**	
10603	Ethanol	64-17-5	N.D. D2	1,000	150	1
12926	Ethylene glycol[1]	107-21-1	N.D.	10,000	5,000	1
10603	Isopropanol[1]	67-63-0	140 JD2	1,000	110	1
10603	Methanol	67-56-1	N.D. D2	1,000	220	1
12926	Propylene glycol[1]	57-55-6	N.D.	10,000	2,000	1
	The response for a target analyte(s) in the continuing calibration verification standard is outside the QC acceptance limits low. The following action was taken: The analysis was repeated and the continuing calibration verification standard bracketing the sample on the second trial is also outside the acceptance limits. This effect is attributed to the sample matrix and the data is reported.					
LC/MS/MS Miscellaneous	**EPA 537 mod QSM 5.1 table B-15**		**ng/l**	**ng/l**	**ng/l**	
14434	6:2-Fluorotelomersulfonic acid[1]	27619-97-2	20	4.5	1.8	1
14434	8:2-Fluorotelomersulfonic acid[1]	39108-34-4	N.D.	2.7	0.90	1
14434	NEtFOSAA[1]	2991-50-6	N.D.	2.7	0.45	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.					
14434	NMeFOSAA[1]	2355-31-9	N.D.	1.8	0.54	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.					
14434	Perfluorobutanesulfonic acid[1]	375-73-5	N.D.	1.8	0.45	1
14434	Perfluorobutanoic acid[1]	375-22-4	3.6 J	4.5	1.8	1
14434	Perfluorodecanesulfonic acid[1]	335-77-3	N.D.	1.8	0.45	1
14434	Perfluorodecanoic acid[1]	335-76-2	N.D.	1.8	0.45	1
14434	Perfluorododecanoic acid[1]	307-55-1	N.D.	1.8	0.45	1
14434	Perfluoroheptanesulfonic acid[1]	375-92-8	N.D.	1.8	0.45	1
14434	Perfluoroheptanoic acid[1]	375-85-9	N.D.	1.8	0.45	1
14434	Perfluorohexanesulfonic acid[1]	355-46-4	N.D.	1.8	0.45	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **BDA-17RX Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/30/2019 11:22
Collection Date/Time: 10/29/2019 14:45
SDG#: BMS81-12

ARCADIS U.S., Inc.
ELLE Sample #: GW 1187625
ELLE Group #: 2071744
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
LC/MS/MS Miscellaneous	**EPA 537 mod QSM 5.1 table B-15**		**ng/l**	**ng/l**	**ng/l**	
14434	Perfluorohexanoic acid[1]	307-24-4	N.D.	1.8	0.45	1
14434	Perfluorononanoic acid[1]	375-95-1	N.D.	1.8	0.45	1
14434	Perfluorooctanesulfonamide[1]	754-91-6	N.D.	1.8	0.45	1
14434	Perfluorooctanesulfonic acid[1]	1763-23-1	0.54 J	1.8	0.45	1
14434	Perfluorooctanoic acid[1]	335-67-1	0.49 J	1.8	0.45	1
14434	Perfluoropentanoic acid[1]	2706-90-3	0.55 J	1.8	0.45	1
14434	Perfluorotetradecanoic acid[1]	376-06-7	N.D.	1.8	0.45	1
14434	Perfluorotridecanoic acid[1]	72629-94-8	N.D.	1.8	0.45	1
14434	Perfluoroundecanoic acid[1]	2058-94-8	N.D.	1.8	0.45	1

The recovery for extraction standard 13C8-PFOSA is outside of the QC acceptance limits as noted on the QC Summary. The following action was taken:
The sample was re-extracted within the method holding time and the recovery for extraction standard 13C8-PFOSA was again outside of the QC acceptance limits. The data is reported from the initial trial and both sets of data are included in the data package.

Metals	**SW-846 6010D Rev.4, July 2014**		**mg/l**	**mg/l**	**mg/l**	
07044	Antimony	7440-36-0	N.D.	0.0500	0.0160	1
07035	Arsenic	7440-38-2	N.D.	0.0300	0.0160	1
07046	Barium	7440-39-3	0.622	0.0050	0.0010	1
07047	Beryllium	7440-41-7	N.D.	0.0050	0.0010	1
07049	Cadmium	7440-43-9	N.D.	0.0050	0.0010	1
01750	Calcium	7440-70-2	481	1.00	0.480	5
07051	Chromium	7440-47-3	0.0078 J	0.0150	0.0016	1
07052	Cobalt	7440-48-4	0.0015 J	0.0050	0.0015	1
07053	Copper	7440-50-8	N.D.	0.100	0.0600	5
01754	Iron	7439-89-6	0.0888 J	0.200	0.0400	1
07055	Lead	7439-92-1	N.D.	0.0150	0.0071	1
01757	Magnesium	7439-95-4	49.1	0.100	0.0400	1
07058	Manganese	7439-96-5	0.0581	0.0100	0.0030	1
07061	Nickel	7440-02-0	0.0027 J	0.0100	0.0021	1
01762	Potassium	7440-09-7	216	0.500	0.204	1
07036	Selenium	7782-49-2	N.D.	0.0500	0.0160	1
07066	Silver	7440-22-4	N.D.	0.0100	0.0050	1
01767	Sodium	7440-23-5	1,170	5.00	1.20	5
07022	Thallium[1]	7440-28-0	N.D.	0.0300	0.0081	1
	SW-846 6010D Rev.4, July 2014		**ug/l**	**ug/l**	**ug/l**	
07071	Vanadium	7440-62-2	N.D.	10.0	1.9	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **BDA-17RX Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/30/2019 11:22
Collection Date/Time: 10/29/2019 14:45
SDG#: BMS81-12

ARCADIS U.S., Inc.
ELLE Sample #: GW 1187625
ELLE Group #: 2071744
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
Metals	**SW-846 6010D Rev.4, July 2014**		**ug/l**	**ug/l**	**ug/l**	
07072	Zinc	7440-66-6	10.4 J	20.0	3.7	1
Metals	**SW-846 6020B Rev.2, July 2014**		**ug/l**	**ug/l**	**ug/l**	
06023	Aluminum	7429-90-5	332	25.0	19.7	1
	SW-846 7470A		**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	N.D.	0.00020	0.000050	1
Wet Chemistry	**EPA 300.0**		**ug/l**	**ug/l**	**ug/l**	
00224	Chloride	16887-00-6	3,680,000	800,000	400,000	2000
01504	Fluoride	16984-48-8	N.D.	500	250	5
00228	Sulfate	14808-79-8	1,140,000	500,000	150,000	500
	EPA 350.1		**ug/l**	**ug/l**	**ug/l**	
12892	Ammonia Nitrogen	7664-41-7	9,200	2,000	1,000	20
	EPA 353.2		**mg/l**	**mg/l**	**mg/l**	
00220	Nitrate Nitrogen	14797-55-8	0.35	0.10	0.040	1
00219	Nitrite Nitrogen	14797-65-0	0.061	0.050	0.015	1
	SM 4500-P F-2011		**ug/l**	**ug/l**	**ug/l**	
00227	Total Phosphorus as P (water)	7723-14-0	50 J	100	50	1
	SM 5310 C-2011		**ug/l**	**ug/l**	**ug/l**	
00273	Total Organic Carbon	n.a.	3,100	1,000	500	1
	EPA 410.4		**ug/l**	**ug/l**	**ug/l**	
04001	Chemical Oxygen Demand	n.a.	137,000	50,000	12,800	1
	SM 2320 B-2011		**mg/l as CaCO3**	**mg/l as CaCO3**	**mg/l as CaCO3**	
12150	Total Alkalinity to pH 4.5	n.a.	38.4	8.0	2.6	1
	SM 5210 B-2011		**ug/l**	**ug/l**	**ug/l**	
14108	Biochemical Oxygen Demand-BOD	n.a.	N.D.	2,000	2,000	1

Sample Comments

State of New York Certification No. 10670

[1] = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **BDA-17RX Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/30/2019 11:22
Collection Date/Time: 10/29/2019 14:45
SDG#: BMS81-12

ARCADIS U.S., Inc.
ELLE Sample #: GW 1187625
ELLE Group #: 2071744
Matrix: Groundwater

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	Y193091AA	11/05/2019 18:38	Corie Mellinger	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	Y193091AA	11/05/2019 18:37	Corie Mellinger	1
14241	Semi-annual Groundwater BMS	SW-846 8270D	1	19303WAN026	11/06/2019 16:53	Kira N Beck	1
14244	SIM SVOAs 8270D MINI	SW-846 8270D SIM	1	19303WAP026	10/31/2019 21:17	Ashley R Transue	1
10466	BNA Water Extraction SIM	SW-846 3510C	1	19303WAP026	10/31/2019 09:30	Joshua S Ruth	1
11010	8270D BNA Extraction	SW-846 3510C	1	19303WAN026	10/31/2019 09:30	Joshua S Ruth	1
13022	Short List Aldehydes- W 8315A	SW-846 8315A	1	193030019A	10/31/2019 18:58	Jessica L Miller	1
01013	Formaldehyde Extraction	SW-846 8315A	1	193030019A	10/31/2019 09:23	Alison Moll	1
10603	Alcohols in Water	SW-846 8015D Rev.4, June 2003	1	193080007A	11/04/2019 14:42	Johanna C Kennedy	1
12926	Glycols in Water by 8015C/D	SW-846 8015D Rev.4, June 2003	1	193040002A	11/01/2019 11:18	Donald Brown	1
14434	PFAS in Water by LC/MS/MS-DoD	EPA 537 mod QSM 5.1 table B-15	1	19304003	11/01/2019 15:57	Devon M Whooley	1
14465	PFAS Water Prep - DoD	EPA 537 mod QSM 5.1 table B-15	1	19304003	10/31/2019 07:00	Toby Barnhart	1
07044	Antimony	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 15:58	Patrick J Engle	1
07035	Arsenic	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 15:58	Patrick J Engle	1
07046	Barium	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 15:58	Patrick J Engle	1
07047	Beryllium	SW-846 6010D Rev.4, July 2014	1	193041404403	11/05/2019 19:54	Cindy M Gehman	1
07049	Cadmium	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 15:58	Patrick J Engle	1
01750	Calcium	SW-846 6010D Rev.4, July 2014	1	193041404403	11/05/2019 10:12	Patrick J Engle	5
07051	Chromium	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 15:58	Patrick J Engle	1
07052	Cobalt	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 15:58	Patrick J Engle	1
07053	Copper	SW-846 6010D Rev.4, July 2014	1	193041404403	11/05/2019 14:11	Patrick J Engle	5
01754	Iron	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 15:58	Patrick J Engle	1
07055	Lead	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 15:58	Patrick J Engle	1
01757	Magnesium	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 15:58	Patrick J Engle	1
07058	Manganese	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 15:58	Patrick J Engle	1
07061	Nickel	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 15:58	Patrick J Engle	1
01762	Potassium	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 15:58	Patrick J Engle	1
07036	Selenium	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 15:58	Patrick J Engle	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **BDA-17RX Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/30/2019 11:22
Collection Date/Time: 10/29/2019 14:45
SDG#: BMS81-12

ARCADIS U.S., Inc.
ELLE Sample #: GW 1187625
ELLE Group #: 2071744
Matrix: Groundwater

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07066	Silver	SW-846 6010D Rev.4, July 2014	1	193041404403	11/05/2019 19:54	Cindy M Gehman	1
01767	Sodium	SW-846 6010D Rev.4, July 2014	1	193041404403	11/05/2019 14:11	Patrick J Engle	5
07022	Thallium	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 15:58	Patrick J Engle	1
07071	Vanadium	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 15:58	Patrick J Engle	1
07072	Zinc	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 15:58	Patrick J Engle	1
06023	Aluminum	SW-846 6020B Rev.2, July 2014	1	193111404701A	11/08/2019 11:22	Janeyah Rivers-Hamilton	1
00259	Mercury	SW-846 7470A	1	193040571302	11/01/2019 08:01	Damary Valentin	1
14044	ICP-WW, 3005A (tot rec) - U345	SW-846 3005A	1	193041404403	10/31/2019 11:21	James L Mertz	1
14047	ICPMS - Water, 3020A - U345	SW-846 3020A	1	193111404701	11/07/2019 14:15	JoElla L Rice	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	193040571302	10/31/2019 15:15	JoElla L Rice	1
00224	Chloride	EPA 300.0	1	19304135213A	11/05/2019 11:08	Samantha Faverio	2000
01504	Fluoride	EPA 300.0	1	19304135213A	10/31/2019 23:03	Kevin Litwa	5
00228	Sulfate	EPA 300.0	1	19304135213A	10/31/2019 23:18	Kevin Litwa	500
12892	Ammonia Nitrogen	EPA 350.1	1	19307107103A	11/03/2019 09:48	Ashlynn M Cornelius	20
00220	Nitrate Nitrogen	EPA 353.2	1	19308106102A	11/04/2019 12:03	Ashlynn M Cornelius	1
00219	Nitrite Nitrogen	EPA 353.2	1	19304105102A	10/31/2019 12:45	Bethany Sandone	1
00227	Total Phosphorus as P (water)	SM 4500-P F-2011	1	19305109101B	11/04/2019 14:27	Jonathan Saul	1
00273	Total Organic Carbon	SM 5310 C-2011	1	19309304504A	11/05/2019 19:02	Bethany Sandone	1
08263	Total Phos as P Prep (water)	SM 4500-P B(5)-2011	1	19305109101B	11/01/2019 20:00	Barbara A Washington	1
04001	Chemical Oxygen Demand	EPA 410.4	1	19304400101A	10/31/2019 09:15	Susan A Engle	1
12150	Total Alkalinity to pH 4.5	SM 2320 B-2011	1	19304007203A	11/01/2019 02:29	Jeremy L Bolf	1
14108	Biochemical Oxygen Demand-BOD	SM 5210 B-2011	1	19304141081A	10/31/2019 10:50	Benjamin M Morrison	1

*=This limit was used in the evaluation of the final result

REVISED

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
S8112

Lab Name: Lancaster Laboratories Contract:_____
Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____
Matrix: (soil/water) WATER Lab Sample ID: 1187625
Sample wt/vol: 5.0 (g/mL)mL Lab File ID:HP09355.i/19nov05a.b/yn05s12.d
Level: (low/med) LOW Date Received: 10/30/19
% Moisture: not dec. Date Analyzed: 11/05/19
Column: (pack/cap) CAP Dilution Factor: 1.0
CONCENTRATION UNITS:
Number TICs found: 0 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	VOCTIC	Total VOC TICs		0	U
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page 1 of 1

FORM I VOA-TIC

REVISED

1F

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

S8112

Lab Name: Lancaster Laboratories Contract:
Lab Code: LANCAS Case No.: SAS No.: SDG No.:
Matrix: (soil/water) WATER Lab Sample ID: 1187625
Sample wt/vol: 248 (g/mL) mL Lab File ID: lk0185.d
Level: (low/med) LOW Date Received: 10/30/19
% Moisture: Decanted: (Y/N) Date Extracted: 10/31/19
Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/06/19
Injection Volume: 1 (uL) Dilution Factor: 1
GPC Cleanup: N pH: Extraction: Sepf
CONCENTRATION UNITS:
Number TICs found: 0 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	SVOCTIC	Total SVOC TICs		0	U
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page 1 of 1

FORM I SV-1

REVISED

Sample Description: **BDA-17RX Filtered Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/30/2019 11:22
Collection Date/Time: 10/29/2019 14:45
SDG#: BMS81-13

ARCADIS U.S., Inc.
ELLE Sample #: GW 1187626
ELLE Group #: 2071744
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
Metals Dissolved	**SW-846 6010D Rev.4, July 2014**		**mg/l**	**mg/l**	**mg/l**	
07044	Antimony	7440-36-0	N.D.	0.0500	0.0160	1
07035	Arsenic	7440-38-2	N.D.	0.0300	0.0160	1
07046	Barium	7440-39-3	0.743	0.0050	0.0010	1
07047	Beryllium	7440-41-7	N.D.	0.0050	0.0010	1
07049	Cadmium	7440-43-9	N.D.	0.0050	0.0010	1
01750	Calcium	7440-70-2	440	1.00	0.480	5
07051	Chromium	7440-47-3	0.0088 J	0.0150	0.0016	1
07052	Cobalt	7440-48-4	N.D.	0.0050	0.0015	1
07053	Copper	7440-50-8	N.D.	0.100	0.0600	5
01754	Iron	7439-89-6	N.D.	0.200	0.0400	1
07055	Lead	7439-92-1	N.D.	0.0150	0.0071	1
01757	Magnesium	7439-95-4	1.30	0.100	0.0400	1
07058	Manganese	7439-96-5	N.D.	0.0100	0.0030	1
07061	Nickel	7440-02-0	N.D.	0.0100	0.0021	1
01762	Potassium	7440-09-7	233	0.500	0.204	1
07036	Selenium	7782-49-2	N.D.	0.0500	0.0160	1
07066	Silver	7440-22-4	N.D.	0.0100	0.0050	1
01767	Sodium	7440-23-5	994	5.00	1.20	5
07022	Thallium[1]	7440-28-0	N.D.	0.0300	0.0081	1
	SW-846 6010D Rev.4, July 2014		**ug/l**	**ug/l**	**ug/l**	
07071	Vanadium	7440-62-2	N.D.	10.0	1.9	1
07072	Zinc	7440-66-6	3.8 J	20.0	3.7	1
	SW-846 6020B Rev.2, July 2014		**ug/l**	**ug/l**	**ug/l**	
06023	Aluminum	7429-90-5	N.D.	25.0	19.7	1
	SW-846 7470A		**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	N.D.	0.00020	0.000050	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals.

[1] = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **BDA-17RX Filtered Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/30/2019 11:22
Collection Date/Time: 10/29/2019 14:45
SDG#: BMS81-13

ARCADIS U.S., Inc.
ELLE Sample #: GW 1187626
ELLE Group #: 2071744
Matrix: Groundwater

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07044	Antimony	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:27	Patrick J Engle	1
07035	Arsenic	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:27	Patrick J Engle	1
07046	Barium	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:27	Patrick J Engle	1
07047	Beryllium	SW-846 6010D Rev.4, July 2014	1	193041404402	11/05/2019 23:44	Elaine F Stoltzfus	1
07049	Cadmium	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:27	Patrick J Engle	1
01750	Calcium	SW-846 6010D Rev.4, July 2014	1	193041404402	11/05/2019 08:58	Patrick J Engle	5
07051	Chromium	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:27	Patrick J Engle	1
07052	Cobalt	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:27	Patrick J Engle	1
07053	Copper	SW-846 6010D Rev.4, July 2014	1	193041404402	11/05/2019 17:30	Patrick J Engle	5
01754	Iron	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:27	Patrick J Engle	1
07055	Lead	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:27	Patrick J Engle	1
01757	Magnesium	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:27	Patrick J Engle	1
07058	Manganese	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:27	Patrick J Engle	1
07061	Nickel	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:27	Patrick J Engle	1
01762	Potassium	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:27	Patrick J Engle	1
07036	Selenium	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:27	Patrick J Engle	1
07066	Silver	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:27	Patrick J Engle	1
01767	Sodium	SW-846 6010D Rev.4, July 2014	1	193041404402	11/05/2019 08:58	Patrick J Engle	5
07022	Thallium	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:27	Patrick J Engle	1
07071	Vanadium	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:27	Patrick J Engle	1
07072	Zinc	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:27	Patrick J Engle	1
06023	Aluminum	SW-846 6020B Rev.2, July 2014	1	193111404701A	11/08/2019 11:24	Janeyah Rivers-Hamilton	1
00259	Mercury	SW-846 7470A	1	193040571302	11/01/2019 07:56	Damary Valentin	1
14044	ICP-WW, 3005A (tot rec) - U345	SW-846 3005A	1	193041404402	10/31/2019 11:21	James L Mertz	1
14047	ICPMS - Water, 3020A - U345	SW-846 3020A	1	193111404701	11/07/2019 14:15	JoElla L Rice	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	193040571302	10/31/2019 15:15	JoElla L Rice	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **BDA-17T Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/30/2019 11:22
Collection Date/Time: 10/29/2019 11:10
SDG#: BMS81-14

ARCADIS U.S., Inc.
ELLE Sample #: GW 1187627
ELLE Group #: 2071744
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	20	0.7	1
11997	Acetonitrile	75-05-8	N.D.	100	16	1
11997	Benzene	71-43-2	N.D.	1	0.2	1
11997	Bromochloromethane	74-97-5	N.D.	5	0.2	1
11997	Bromodichloromethane	75-27-4	1	1	0.2	1
11997	Bromoform	75-25-2	N.D.	4	1	1
11997	Bromomethane	74-83-9	N.D.	1	0.3	1
11997	n-Butanol	71-36-3	N.D.	250	61	1
11997	2-Butanone	78-93-3	N.D.	10	0.3	1
11997	t-Butyl alcohol	75-65-0	N.D.	50	12	1
11997	n-Butylbenzene	104-51-8	N.D.	5	0.2	1
11997	sec-Butylbenzene	135-98-8	N.D.	5	0.2	1
11997	tert-Butylbenzene	98-06-6	N.D.	5	0.3	1
11997	Carbon Disulfide	75-15-0	N.D.	5	0.2	1
11997	Carbon Tetrachloride	56-23-5	N.D.	1	0.2	1
11997	Chlorobenzene	108-90-7	N.D.	1	0.2	1
11997	Chlorodifluoromethane[1]	75-45-6	N.D.	5	2	1
11997	Chloroethane	75-00-3	N.D.	1	0.2	1
11997	Chloroform	67-66-3	7	1	0.2	1
11997	Chloromethane	74-87-3	N.D.	1	0.2	1
11997	Cyclohexane	110-82-7	N.D.	5	1	1
11997	Cyclohexanone[1]	108-94-1	N.D.	100	25	1
11997	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	5	0.3	1
11997	Dibromochloromethane	124-48-1	N.D.	1	0.2	1
11997	1,2-Dibromoethane	106-93-4	N.D.	1	0.2	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	5	0.2	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	5	0.2	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	5	0.2	1
11997	Dichlorodifluoromethane	75-71-8	N.D.	1	0.2	1
11997	1,1-Dichloroethane	75-34-3	N.D.	1	0.2	1
11997	1,2-Dichloroethane	107-06-2	N.D.	1	0.3	1
11997	1,1-Dichloroethene	75-35-4	N.D.	1	0.2	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	1	0.2	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	1	0.2	1
11997	1,2-Dichloropropane	78-87-5	N.D.	1	0.2	1
11997	cis-1,3-Dichloropropene	10061-01-5	N.D.	1	0.2	1
11997	trans-1,3-Dichloropropene	10061-02-6	N.D.	1	0.2	1
11997	1,4-Dioxane	123-91-1	N.D.	250	29	1
11997	Ethyl Acetate	141-78-6	N.D.	5	0.7	1
11997	Ethyl ether	60-29-7	N.D.	5	0.2	1
11997	Ethylbenzene	100-41-4	N.D.	1	0.4	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **BDA-17T Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/30/2019 11:22
Collection Date/Time: 10/29/2019 11:10
SDG#: BMS81-14

ARCADIS U.S., Inc.
ELLE Sample #: GW 1187627
ELLE Group #: 2071744
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Freon 113	76-13-1	N.D.	10	0.2	1
11997	n-Heptane[1]	142-82-5	N.D.	5	2	1
11997	n-Hexane[1]	110-54-3	N.D.	5	2	1
11997	2-Hexanone	591-78-6	N.D.	10	0.3	1
11997	Isobutyl Alcohol	78-83-1	N.D.	250	36	1
11997	Isopropylbenzene	98-82-8	N.D.	5	0.2	1
11997	p-Isopropyltoluene	99-87-6	N.D.	5	0.2	1
11997	Methyl Acetate	79-20-9	N.D.	5	0.2	1
11997	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	1	0.2	1
11997	4-Methyl-2-pentanone	108-10-1	N.D.	10	0.5	1
11997	Methylcyclohexane	108-87-2	N.D.	5	0.5	1
11997	Methylene Chloride	75-09-2	N.D.	1	0.3	1
11997	Naphthalene	91-20-3	N.D.	5	1	1
11997	2-Nitropropane	79-46-9	N.D.	10	0.8	1
11997	Styrene	100-42-5	N.D.	5	0.2	1
11997	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	1	0.2	1
11997	Tetrachloroethene	127-18-4	N.D.	1	0.2	1
11997	Tetrahydrofuran	109-99-9	N.D.	10	0.7	1
11997	Toluene	108-88-3	N.D.	1	0.2	1
11997	1,2,3-Trichlorobenzene	87-61-6	N.D.	5	0.4	1
11997	1,2,4-Trichlorobenzene	120-82-1	N.D.	5	0.3	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	1	0.3	1
11997	1,1,2-Trichloroethane	79-00-5	N.D.	1	0.2	1
11997	Trichloroethene	79-01-6	N.D.	1	0.2	1
11997	Trichlorofluoromethane	75-69-4	N.D.	1	0.2	1
11997	1,2,4-Trimethylbenzene	95-63-6	N.D.	5	1	1
11997	1,3,5-Trimethylbenzene	108-67-8	N.D.	5	0.3	1
11997	Vinyl Chloride	75-01-4	N.D.	1	0.2	1
11997	m+p-Xylene	179601-23-1	N.D.	5	1	1
11997	o-Xylene	95-47-6	N.D.	1	0.4	1
11997	Xylene (Total)	1330-20-7	N.D.	6	1	1

Project defined calibration criteria are not met. The calibration is compliant with the method defined criteria.

A Report Limit Verification (RLV) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The RLV standard shows adequate sensitivity at or below the reporting limit.

00882 VOA Interp. Library Search-10

The results from the volatile library search are listed on the attached FORM 1 - VOA-TIC. The qualifiers appearing in the "Q" column are defined at the end of the report.

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **BDA-17T Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/30/2019 11:22
Collection Date/Time: 10/29/2019 11:10
SDG#: BMS81-14

ARCADIS U.S., Inc.
ELLE Sample #: GW 1187627
ELLE Group #: 2071744
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	Acenaphthene	83-32-9	N.D.	0.53	0.11	1
14241	Acenaphthylene	208-96-8	N.D.	0.53	0.11	1
14241	Acetophenone	98-86-2	N.D.	11	4.3	1
14241	Aniline	62-53-3	N.D.	11	3.2	1
14241	Anthracene	120-12-7	N.D.	0.53	0.11	1
14241	Atrazine	1912-24-9	N.D.	5.3	2.1	1
14241	Benzaldehyde	100-52-7	N.D.	11	3.2	1
14241	Benzo(a)anthracene	56-55-3	N.D.	0.53	0.11	1
14241	Benzo(a)pyrene	50-32-8	N.D.	0.53	0.11	1
14241	Benzo(b)fluoranthene	205-99-2	N.D.	0.53	0.11	1
14241	Benzo(g,h,i)perylene	191-24-2	N.D.	0.53	0.11	1
14241	Benzo(k)fluoranthene	207-08-9	N.D.	0.53	0.11	1
14241	Benzyl alcohol	100-51-6	N.D.	32	11	1
14241	1,1'-Biphenyl	92-52-4	N.D.	11	3.2	1
14241	4-Bromophenyl-phenylether	101-55-3	N.D.	2.1	0.53	1
14241	Butylbenzylphthalate	85-68-7	N.D.	5.3	2.1	1
14241	Di-n-butylphthalate	84-74-2	N.D.	5.3	2.1	1
14241	Caprolactam	105-60-2	N.D.	12	5.3	1
14241	Carbazole	86-74-8	N.D.	2.1	0.53	1
14241	4-Chloro-3-methylphenol	59-50-7	N.D.	2.1	0.53	1
14241	4-Chloroaniline	106-47-8	N.D.	11	4.3	1
14241	bis(2-Chloroethoxy)methane	111-91-1	N.D.	2.1	0.53	1
14241	bis(2-Chloroethyl)ether	111-44-4	N.D.	2.1	0.53	1
14241	bis(2-Chloroisopropyl)ether[1]	39638-32-9	N.D.	2.1	0.53	1
	Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.					
14241	2-Chloronaphthalene	91-58-7	N.D.	1.1	0.43	1
14241	2-Chlorophenol	95-57-8	N.D.	2.1	0.53	1
14241	4-Chlorophenyl-phenylether	7005-72-3	N.D.	2.1	0.53	1
14241	Chrysene	218-01-9	N.D.	0.53	0.11	1
14241	Dibenz(a,h)anthracene	53-70-3	N.D.	0.53	0.11	1
14241	Dibenzofuran	132-64-9	N.D.	2.1	0.53	1
14241	3,3'-Dichlorobenzidine	91-94-1	N.D.	11	3.2	1
14241	2,4-Dichlorophenol	120-83-2	N.D.	2.1	0.53	1
14241	Dicyclohexylamine[1]	101-83-7	N.D.	11	11	1
14241	Diethylphthalate	84-66-2	N.D.	5.3	2.1	1
14241	N,N-Dimethylaniline[1]	121-69-7	N.D.	1.1	0.53	1
14241	2,4-Dimethylphenol	105-67-9	N.D.	11	3.2	1
14241	Dimethylphthalate	131-11-3	N.D.	5.3	2.1	1
14241	4,6-Dinitro-2-methylphenol	534-52-1	N.D.	22	8.5	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **BDA-17T Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/30/2019 11:22
Collection Date/Time: 10/29/2019 11:10
SDG#: BMS81-14

ARCADIS U.S., Inc.
ELLE Sample #: GW 1187627
ELLE Group #: 2071744
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	2,4-Dinitrophenol	51-28-5	N.D.	32	15	1
14241	2,4-Dinitrotoluene	121-14-2	N.D.	5.3	1.1	1
14241	2,6-Dinitrotoluene	606-20-2	N.D.	2.1	0.53	1
14241	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	12	5.3	1
14241	Fluoranthene	206-44-0	N.D.	0.53	0.11	1
14241	Fluorene	86-73-7	N.D.	0.53	0.11	1
14241	Hexachlorobenzene	118-74-1	N.D.	0.53	0.11	1
14241	Hexachlorobutadiene	87-68-3	N.D.	2.1	0.53	1
14241	Hexachlorocyclopentadiene	77-47-4	N.D.	12	5.3	1
14241	Hexachloroethane	67-72-1	N.D.	5.3	1.1	1
14241	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.53	0.11	1
14241	Isophorone	78-59-1	N.D.	2.1	0.53	1
14241	2-Methylnaphthalene	91-57-6	N.D.	0.53	0.11	1
14241	2-Methylphenol	95-48-7	N.D.	2.1	0.53	1
14241	4-Methylphenol	65794-96-9	N.D.	2.1	0.53	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
14241	Naphthalene	91-20-3	N.D.	0.53	0.11	1
14241	2-Nitroaniline	88-74-4	N.D.	7.5	2.1	1
14241	3-Nitroaniline	99-09-2	N.D.	7.5	3.2	1
14241	4-Nitroaniline	100-01-6	N.D.	3.2	0.96	1
14241	Nitrobenzene	98-95-3	N.D.	2.1	0.53	1
14241	2-Nitrophenol	88-75-5	N.D.	11	3.2	1
14241	4-Nitrophenol	100-02-7	N.D.	32	11	1
14241	N-Nitroso-di-n-propylamine	621-64-7	N.D.	3.2	0.75	1
14241	N-Nitrosodiphenylamine	86-30-6	N.D.	3.2	0.75	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.					
14241	Di-n-octylphthalate	117-84-0	N.D.	12	5.3	1
14241	Pentachlorophenol	87-86-5	N.D.	5.3	1.1	1
14241	Phenanthrene	85-01-8	N.D.	0.53	0.11	1
14241	Phenol	108-95-2	N.D.	2.1	0.53	1
14241	Pyrene	129-00-0	N.D.	0.53	0.11	1
14241	Pyridine	110-86-1	N.D.	5.3	2.1	1
14241	1,2,4,5-Tetrachlorobenzene	95-94-3	N.D.	2.1	0.53	1
14241	2,3,4,6-Tetrachlorophenol	58-90-2	N.D.	11	4.3	1
14241	2,4,5-Trichlorophenol	95-95-4	N.D.	2.1	0.53	1
14241	2,4,6-Trichlorophenol	88-06-2	N.D.	2.1	0.53	1
14241	Triethylamine[1]	121-44-8	N.D.	11	11	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **BDA-17T Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/30/2019 11:22
Collection Date/Time: 10/29/2019 11:10
SDG#: BMS81-14

ARCADIS U.S., Inc.
ELLE Sample #: GW 1187627
ELLE Group #: 2071744
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D SIM**		**ug/l**	**ug/l**	**ug/l**	
14244	1,4-Dioxane	123-91-1	N.D.	0.3	0.1	1
00886	**SVOA TIC Interpretive(25)**					
	The results from the semivolatile library search are listed on the attached FORM 1 - SV-TIC. The qualifiers appearing in the "Q" column are defined at the end of the report.					
Aldehydes & Ketones	**SW-846 8315A**		**ug/l**	**ug/l**	**ug/l**	
13022	Acetaldehyde[1]	75-07-0	N.D.	60	35	1
13022	Formaldehyde	50-00-0	20 J	50	20	1
	The response for a target analyte(s) in the initial calibration verification standard is outside the QC acceptance limits.					
GC Miscellaneous	**SW-846 8015D Rev.4, June 2003**		**ug/l**	**ug/l**	**ug/l**	
10603	Ethanol	64-17-5	N.D. D2	1,000	150	1
12926	Ethylene glycol[1]	107-21-1	N.D.	10,000	5,000	1
10603	Isopropanol[1]	67-63-0	N.D. D2	1,000	110	1
10603	Methanol	67-56-1	N.D. D2	1,000	220	1
12926	Propylene glycol[1]	57-55-6	N.D.	10,000	2,000	1
	The response for a target analyte(s) in the continuing calibration verification standard is outside the QC acceptance limits low. The following action was taken: The analysis was repeated and the continuing calibration verification standard bracketing the sample on the second trial is also outside the acceptance limits. This effect is attributed to the sample matrix and the data is reported.					
LC/MS/MS Miscellaneous	**EPA 537 mod QSM 5.1 table B-15**		**ng/l**	**ng/l**	**ng/l**	
14434	6:2-Fluorotelomersulfonic acid[1]	27619-97-2	110	4.4	1.8	1
14434	8:2-Fluorotelomersulfonic acid[1]	39108-34-4	N.D.	2.6	0.88	1
14434	NEtFOSAA[1]	2991-50-6	N.D.	2.6	0.44	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.					
14434	NMeFOSAA[1]	2355-31-9	N.D.	1.8	0.53	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.					
14434	Perfluorobutanesulfonic acid[1]	375-73-5	N.D.	1.8	0.44	1
14434	Perfluorobutanoic acid[1]	375-22-4	2.3 J	4.4	1.8	1
14434	Perfluorodecanesulfonic acid[1]	335-77-3	N.D.	1.8	0.44	1
14434	Perfluorodecanoic acid[1]	335-76-2	N.D.	1.8	0.44	1
14434	Perfluorododecanoic acid[1]	307-55-1	N.D.	1.8	0.44	1
14434	Perfluoroheptanesulfonic acid[1]	375-92-8	N.D.	1.8	0.44	1
14434	Perfluoroheptanoic acid[1]	375-85-9	1.6 J	1.8	0.44	1
14434	Perfluorohexanesulfonic acid[1]	355-46-4	N.D.	1.8	0.44	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **BDA-17T Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/30/2019 11:22
Collection Date/Time: 10/29/2019 11:10
SDG#: BMS81-14

ARCADIS U.S., Inc.
ELLE Sample #: GW 1187627
ELLE Group #: 2071744
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
LC/MS/MS Miscellaneous	**EPA 537 mod QSM 5.1 table B-15**		**ng/l**	**ng/l**	**ng/l**	
14434	Perfluorohexanoic acid[1]	307-24-4	8.5	1.8	0.44	1
14434	Perfluorononanoic acid[1]	375-95-1	N.D.	1.8	0.44	1
14434	Perfluorooctanesulfonamide[1]	754-91-6	N.D.	1.8	0.44	1
14434	Perfluorooctanesulfonic acid[1]	1763-23-1	0.63 J	1.8	0.44	1
14434	Perfluorooctanoic acid[1]	335-67-1	0.62 J	1.8	0.44	1
14434	Perfluoropentanoic acid[1]	2706-90-3	1.4 J	1.8	0.44	1
14434	Perfluorotetradecanoic acid[1]	376-06-7	N.D.	1.8	0.44	1
14434	Perfluorotridecanoic acid[1]	72629-94-8	N.D.	1.8	0.44	1
14434	Perfluoroundecanoic acid[1]	2058-94-8	N.D.	1.8	0.44	1
	The recovery for extraction standard d5-NEtFOSAA is outside of the QC acceptance limits as noted on the QC Summary.					
Metals	**SW-846 6010D Rev.4, July 2014**		**mg/l**	**mg/l**	**mg/l**	
07044	Antimony	7440-36-0	N.D.	0.0500	0.0160	1
07035	Arsenic	7440-38-2	N.D.	0.0300	0.0160	1
07046	Barium	7440-39-3	0.0359	0.0050	0.0010	1
07047	Beryllium	7440-41-7	N.D.	0.0050	0.0010	1
07049	Cadmium	7440-43-9	N.D.	0.0050	0.0010	1
01750	Calcium	7440-70-2	138	0.200	0.0960	1
07051	Chromium	7440-47-3	0.0023 J	0.0150	0.0016	1
07052	Cobalt	7440-48-4	N.D.	0.0050	0.0015	1
07053	Copper	7440-50-8	N.D.	0.0200	0.0120	1
01754	Iron	7439-89-6	0.0727 J	0.200	0.0400	1
07055	Lead	7439-92-1	N.D.	0.0150	0.0071	1
01757	Magnesium	7439-95-4	25.8	0.100	0.0400	1
07058	Manganese	7439-96-5	0.0525	0.0100	0.0030	1
07061	Nickel	7440-02-0	0.0060 J	0.0100	0.0021	1
01762	Potassium	7440-09-7	7.18	0.500	0.204	1
07036	Selenium	7782-49-2	N.D.	0.0500	0.0160	1
07066	Silver	7440-22-4	N.D.	0.0100	0.0050	1
01767	Sodium	7440-23-5	70.2	1.00	0.239	1
07022	Thallium[1]	7440-28-0	N.D.	0.0300	0.0081	1
	SW-846 6010D Rev.4, July 2014		**ug/l**	**ug/l**	**ug/l**	
07071	Vanadium	7440-62-2	N.D.	10.0	1.9	1
07072	Zinc	7440-66-6	3.9 J	20.0	3.7	1
	SW-846 6020B Rev.2, July 2014		**ug/l**	**ug/l**	**ug/l**	

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **BDA-17T Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/30/2019 11:22
Collection Date/Time: 10/29/2019 11:10
SDG#: BMS81-14

ARCADIS U.S., Inc.
ELLE Sample #: GW 1187627
ELLE Group #: 2071744
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
Metals	**SW-846 6020B Rev.2, July 2014**		**ug/l**	**ug/l**	**ug/l**	
06023	Aluminum	7429-90-5	55.9	25.0	19.7	1
Metals	**SW-846 7470A**		**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	N.D.	0.00020	0.000050	1
Wet Chemistry	**EPA 300.0**		**ug/l**	**ug/l**	**ug/l**	
00224	Chloride	16887-00-6	77,500	20,000	10,000	50
01504	Fluoride	16984-48-8	340 J	500	250	5
00228	Sulfate	14808-79-8	354,000	50,000	15,000	50
	EPA 350.1		**ug/l**	**ug/l**	**ug/l**	
12892	Ammonia Nitrogen	7664-41-7	75 J	100	50	1
	EPA 353.2		**mg/l**	**mg/l**	**mg/l**	
00220	Nitrate Nitrogen	14797-55-8	0.44	0.10	0.040	1
00219	Nitrite Nitrogen	14797-65-0	N.D.	0.050	0.015	1
	The holding time was not met.					
	SM 4500-P F-2011		**ug/l**	**ug/l**	**ug/l**	
00227	Total Phosphorus as P (water)	7723-14-0	120	100	50	1
	SM 5310 C-2011		**ug/l**	**ug/l**	**ug/l**	
00273	Total Organic Carbon	n.a.	1,500	1,000	500	1
	EPA 410.4		**ug/l**	**ug/l**	**ug/l**	
04001	Chemical Oxygen Demand	n.a.	N.D.	50,000	12,800	1
	SM 2320 B-2011		**mg/l as CaCO3**	**mg/l as CaCO3**	**mg/l as CaCO3**	
12150	Total Alkalinity to pH 4.5	n.a.	99.1	8.0	2.6	1
	SM 5210 B-2011		**ug/l**	**ug/l**	**ug/l**	
14108	Biochemical Oxygen Demand-BOD	n.a.	N.D.	2,000	2,000	1

Sample Comments

State of New York Certification No. 10670

[1] = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **BDA-17T Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/30/2019 11:22
Collection Date/Time: 10/29/2019 11:10
SDG#: BMS81-14

ARCADIS U.S., Inc.
ELLE Sample #: GW 1187627
ELLE Group #: 2071744
Matrix: Groundwater

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	Y193091AA	11/05/2019 19:00	Corie Mellinger	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	Y193091AA	11/05/2019 18:59	Corie Mellinger	1
14241	Semi-annual Groundwater BMS	SW-846 8270D	1	19303WAN026	11/06/2019 16:24	Kira N Beck	1
14244	SIM SVOAs 8270D MINI	SW-846 8270D SIM	1	19303WAP026	10/31/2019 21:48	Ashley R Transue	1
10466	BNA Water Extraction SIM	SW-846 3510C	1	19303WAP026	10/31/2019 09:30	Joshua S Ruth	1
11010	8270D BNA Extraction	SW-846 3510C	1	19303WAN026	10/31/2019 09:30	Joshua S Ruth	1
13022	Short List Aldehydes- W 8315A	SW-846 8315A	1	193030019A	10/31/2019 19:09	Jessica L Miller	1
01013	Formaldehyde Extraction	SW-846 8315A	1	193030019A	10/31/2019 09:23	Alison Moll	1
10603	Alcohols in Water	SW-846 8015D Rev.4, June 2003	1	193080007A	11/04/2019 14:58	Johanna C Kennedy	1
12926	Glycols in Water by 8015C/D	SW-846 8015D Rev.4, June 2003	1	193040002A	11/01/2019 11:30	Donald Brown	1
14434	PFAS in Water by LC/MS/MS-DoD	EPA 537 mod QSM 5.1 table B-15	1	19304003	11/01/2019 16:06	Devon M Whooley	1
14465	PFAS Water Prep - DoD	EPA 537 mod QSM 5.1 table B-15	1	19304003	10/31/2019 07:00	Toby Barnhart	1
07044	Antimony	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 15:55	Patrick J Engle	1
07035	Arsenic	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 15:55	Patrick J Engle	1
07046	Barium	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 15:55	Patrick J Engle	1
07047	Beryllium	SW-846 6010D Rev.4, July 2014	1	193041404403	11/05/2019 19:51	Cindy M Gehman	1
07049	Cadmium	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 15:55	Patrick J Engle	1
01750	Calcium	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 15:55	Patrick J Engle	1
07051	Chromium	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 15:55	Patrick J Engle	1
07052	Cobalt	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 15:55	Patrick J Engle	1
07053	Copper	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 15:55	Patrick J Engle	1
01754	Iron	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 15:55	Patrick J Engle	1
07055	Lead	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 15:55	Patrick J Engle	1
01757	Magnesium	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 15:55	Patrick J Engle	1
07058	Manganese	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 15:55	Patrick J Engle	1
07061	Nickel	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 15:55	Patrick J Engle	1
01762	Potassium	SW-846 6010D Rev.4, July 2014	1	193041404403	11/05/2019 09:59	Patrick J Engle	1
07036	Selenium	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 15:55	Patrick J Engle	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **BDA-17T Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/30/2019 11:22
Collection Date/Time: 10/29/2019 11:10
SDG#: BMS81-14

ARCADIS U.S., Inc.
ELLE Sample #: GW 1187627
ELLE Group #: 2071744
Matrix: Groundwater

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07066	Silver	SW-846 6010D Rev.4, July 2014	1	193041404403	11/05/2019 19:51	Cindy M Gehman	1
01767	Sodium	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 15:55	Patrick J Engle	1
07022	Thallium	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 15:55	Patrick J Engle	1
07071	Vanadium	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 15:55	Patrick J Engle	1
07072	Zinc	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 15:55	Patrick J Engle	1
06023	Aluminum	SW-846 6020B Rev.2, July 2014	1	193111404701A	11/08/2019 14:50	Janeyah Rivers-Hamilton	1
00259	Mercury	SW-846 7470A	1	193040571302	11/01/2019 07:54	Damary Valentin	1
14044	ICP-WW, 3005A (tot rec) - U345	SW-846 3005A	1	193041404403	10/31/2019 11:21	James L Mertz	1
14047	ICPMS - Water, 3020A - U345	SW-846 3020A	1	193111404701	11/07/2019 14:15	JoElla L Rice	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	193040571302	10/31/2019 15:15	JoElla L Rice	1
00224	Chloride	EPA 300.0	1	19304135213A	11/01/2019 01:34	Kevin Litwa	50
01504	Fluoride	EPA 300.0	1	19304135213A	11/01/2019 00:48	Kevin Litwa	5
00228	Sulfate	EPA 300.0	1	19304135213A	11/01/2019 01:34	Kevin Litwa	50
12892	Ammonia Nitrogen	EPA 350.1	1	19307107103A	11/03/2019 09:50	Ashlynn M Cornelius	1
00220	Nitrate Nitrogen	EPA 353.2	1	19308106102A	11/04/2019 12:05	Ashlynn M Cornelius	1
00219	Nitrite Nitrogen	EPA 353.2	1	19304105102A	10/31/2019 12:44	Bethany Sandone	1
00227	Total Phosphorus as P (water)	SM 4500-P F-2011	1	19305109101B	11/04/2019 14:28	Jonathan Saul	1
00273	Total Organic Carbon	SM 5310 C-2011	1	19309304504A	11/05/2019 19:16	Bethany Sandone	1
08263	Total Phos as P Prep (water)	SM 4500-P B(5)-2011	1	19305109101B	11/01/2019 20:00	Barbara A Washington	1
04001	Chemical Oxygen Demand	EPA 410.4	1	19304400101A	10/31/2019 09:15	Susan A Engle	1
12150	Total Alkalinity to pH 4.5	SM 2320 B-2011	1	19304002103A	10/31/2019 23:34	Jeremy L Bolf	1
14108	Biochemical Oxygen Demand-BOD	SM 5210 B-2011	1	19304141081A	10/31/2019 10:50	Benjamin M Morrison	1

*=This limit was used in the evaluation of the final result

REVISED

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
S8114

Lab Name: Lancaster Laboratories Contract:_____
Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____
Matrix: (soil/water) WATER Lab Sample ID: 1187627
Sample wt/vol: 5.0 (g/mL)mL Lab File ID:HP09355.i/19nov05a.b/yn05s13.d
Level: (low/med) LOW Date Received: 10/30/19
% Moisture: not dec. Date Analyzed: 11/05/19
Column: (pack/cap) CAP Dilution Factor: 1.0
CONCENTRATION UNITS:
Number TICs found: 0 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	VOCTIC	Total VOC TICs		0	U
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page 1 of 1

FORM I VOA-TIC

REVISED

1F

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

S8114

Lab Name: Lancaster Laboratories Contract:
Lab Code: LANCAS Case No.: SAS No.: SDG No.:
Matrix: (soil/water) WATER Lab Sample ID: 1187627
Sample wt/vol: 234 (g/mL) mL Lab File ID: lk0184.d
Level: (low/med) LOW Date Received: 10/30/19
% Moisture: Decanted: (Y/N) Date Extracted: 10/31/19
Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/06/19
Injection Volume: 1 (uL) Dilution Factor: 1
GPC Cleanup: N pH: Extraction: Sepf
CONCENTRATION UNITS:
Number TICs found: 0 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	SVOCTIC	Total SVOC TICs		0	U
2.					
3.					
4.					
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page 1 of 1

FORM I SV-1

REVISED

Sample Description: **BDA-17T Filtered Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/30/2019 11:22
Collection Date/Time: 10/29/2019 11:10
SDG#: BMS81-15

ARCADIS U.S., Inc.
ELLE Sample #: GW 1187628
ELLE Group #: 2071744
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
Metals Dissolved	**SW-846 6010D Rev.4, July 2014**		**mg/l**	**mg/l**	**mg/l**	
07044	Antimony	7440-36-0	N.D.	0.0500	0.0160	1
07035	Arsenic	7440-38-2	N.D.	0.0300	0.0160	1
07046	Barium	7440-39-3	0.0531	0.0050	0.0010	1
07047	Beryllium	7440-41-7	N.D.	0.0050	0.0010	1
07049	Cadmium	7440-43-9	N.D.	0.0050	0.0010	1
01750	Calcium	7440-70-2	476	1.00	0.480	5
07051	Chromium	7440-47-3	0.0034 J	0.0150	0.0016	1
07052	Cobalt	7440-48-4	0.0041 J	0.0050	0.0015	1
07053	Copper	7440-50-8	N.D.	0.100	0.0600	5
01754	Iron	7439-89-6	0.317	0.200	0.0400	1
07055	Lead	7439-92-1	N.D.	0.0150	0.0071	1
01757	Magnesium	7439-95-4	83.0	0.100	0.0400	1
07058	Manganese	7439-96-5	0.284	0.0100	0.0030	1
07061	Nickel	7440-02-0	0.0419	0.0100	0.0021	1
01762	Potassium	7440-09-7	10.3	0.500	0.204	1
07036	Selenium	7782-49-2	N.D.	0.0500	0.0160	1
07066	Silver	7440-22-4	N.D.	0.0100	0.0050	1
01767	Sodium	7440-23-5	207	1.00	0.239	1
07022	Thallium[1]	7440-28-0	N.D.	0.0300	0.0081	1
	SW-846 6010D Rev.4, July 2014		**ug/l**	**ug/l**	**ug/l**	
07071	Vanadium	7440-62-2	N.D.	10.0	1.9	1
07072	Zinc	7440-66-6	5.6 J	20.0	3.7	1
	SW-846 6020B Rev.2, July 2014		**ug/l**	**ug/l**	**ug/l**	
06023	Aluminum	7429-90-5	624	25.0	19.7	1
	SW-846 7470A		**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	N.D.	0.00020	0.000050	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals.

[1] = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **BDA-17T Filtered Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/30/2019 11:22
Collection Date/Time: 10/29/2019 11:10
SDG#: BMS81-15

ARCADIS U.S., Inc.
ELLE Sample #: GW 1187628
ELLE Group #: 2071744
Matrix: Groundwater

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07044	Antimony	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:37	Patrick J Engle	1
07035	Arsenic	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:37	Patrick J Engle	1
07046	Barium	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:37	Patrick J Engle	1
07047	Beryllium	SW-846 6010D Rev.4, July 2014	1	193041404402	11/05/2019 23:53	Elaine F Stoltzfus	1
07049	Cadmium	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:37	Patrick J Engle	1
01750	Calcium	SW-846 6010D Rev.4, July 2014	1	193041404402	11/05/2019 09:09	Patrick J Engle	5
07051	Chromium	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:37	Patrick J Engle	1
07052	Cobalt	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:37	Patrick J Engle	1
07053	Copper	SW-846 6010D Rev.4, July 2014	1	193041404402	11/05/2019 17:37	Patrick J Engle	5
01754	Iron	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:37	Patrick J Engle	1
07055	Lead	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:37	Patrick J Engle	1
01757	Magnesium	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:37	Patrick J Engle	1
07058	Manganese	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:37	Patrick J Engle	1
07061	Nickel	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:37	Patrick J Engle	1
01762	Potassium	SW-846 6010D Rev.4, July 2014	1	193041404402	11/05/2019 09:01	Patrick J Engle	1
07036	Selenium	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:37	Patrick J Engle	1
07066	Silver	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:37	Patrick J Engle	1
01767	Sodium	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:37	Patrick J Engle	1
07022	Thallium	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:37	Patrick J Engle	1
07071	Vanadium	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:37	Patrick J Engle	1
07072	Zinc	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:37	Patrick J Engle	1
06023	Aluminum	SW-846 6020B Rev.2, July 2014	1	193111404701A	11/08/2019 11:28	Janeyah Rivers-Hamilton	1
00259	Mercury	SW-846 7470A	1	193050571301	11/02/2019 08:06	Damary Valentin	1
14044	ICP-WW, 3005A (tot rec) - U345	SW-846 3005A	1	193041404402	10/31/2019 11:21	James L Mertz	1
14047	ICPMS - Water, 3020A - U345	SW-846 3020A	1	193111404701	11/07/2019 14:15	JoElla L Rice	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	193050571301	11/01/2019 07:30	Annamaria Kuhns	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **BDA-17WT Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/30/2019 11:22
Collection Date/Time: 10/29/2019 11:48
SDG#: BMS81-16BKG

ARCADIS U.S., Inc.
ELLE Sample #: GW 1187629
ELLE Group #: 2071744
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	2 J	20	0.7	1
11997	Acetonitrile	75-05-8	N.D.	100	16	1
11997	Benzene	71-43-2	N.D.	1	0.2	1
11997	Bromochloromethane	74-97-5	N.D.	5	0.2	1
11997	Bromodichloromethane	75-27-4	N.D.	1	0.2	1
11997	Bromoform	75-25-2	N.D.	4	1	1
11997	Bromomethane	74-83-9	N.D.	1	0.3	1
11997	n-Butanol	71-36-3	N.D.	250	61	1
11997	2-Butanone	78-93-3	N.D.	10	0.3	1
11997	t-Butyl alcohol	75-65-0	N.D.	50	12	1
11997	n-Butylbenzene	104-51-8	N.D.	5	0.2	1
11997	sec-Butylbenzene	135-98-8	N.D.	5	0.2	1
11997	tert-Butylbenzene	98-06-6	N.D.	5	0.3	1
11997	Carbon Disulfide	75-15-0	N.D.	5	0.2	1
11997	Carbon Tetrachloride	56-23-5	N.D.	1	0.2	1
11997	Chlorobenzene	108-90-7	N.D.	1	0.2	1
11997	Chlorodifluoromethane[1]	75-45-6	N.D.	5	2	1
11997	Chloroethane	75-00-3	N.D.	1	0.2	1
11997	Chloroform	67-66-3	0.4 J	1	0.2	1
11997	Chloromethane	74-87-3	N.D.	1	0.2	1
11997	Cyclohexane	110-82-7	N.D.	5	1	1
11997	Cyclohexanone[1]	108-94-1	N.D.	100	25	1
11997	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	5	0.3	1
11997	Dibromochloromethane	124-48-1	N.D.	1	0.2	1
11997	1,2-Dibromoethane	106-93-4	N.D.	1	0.2	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	5	0.2	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	5	0.2	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	5	0.2	1
11997	Dichlorodifluoromethane	75-71-8	N.D.	1	0.2	1
11997	1,1-Dichloroethane	75-34-3	N.D.	1	0.2	1
11997	1,2-Dichloroethane	107-06-2	N.D.	1	0.3	1
11997	1,1-Dichloroethene	75-35-4	N.D.	1	0.2	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	1	0.2	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	1	0.2	1
11997	1,2-Dichloropropane	78-87-5	N.D.	1	0.2	1
11997	cis-1,3-Dichloropropene	10061-01-5	N.D.	1	0.2	1
11997	trans-1,3-Dichloropropene	10061-02-6	N.D.	1	0.2	1
11997	1,4-Dioxane	123-91-1	N.D.	250	29	1
11997	Ethyl Acetate	141-78-6	N.D.	5	0.7	1
11997	Ethyl ether	60-29-7	N.D.	5	0.2	1
11997	Ethylbenzene	100-41-4	N.D.	1	0.4	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **BDA-17WT Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/30/2019 11:22
Collection Date/Time: 10/29/2019 11:48
SDG#: BMS81-16BKG

ARCADIS U.S., Inc.
ELLE Sample #: GW 1187629
ELLE Group #: 2071744
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Freon 113	76-13-1	N.D.	10	0.2	1
11997	n-Heptane[1]	142-82-5	N.D.	5	2	1
11997	n-Hexane[1]	110-54-3	N.D.	5	2	1
11997	2-Hexanone	591-78-6	N.D.	10	0.3	1
11997	Isobutyl Alcohol	78-83-1	N.D.	250	36	1
11997	Isopropylbenzene	98-82-8	N.D.	5	0.2	1
11997	p-Isopropyltoluene	99-87-6	N.D.	5	0.2	1
11997	Methyl Acetate	79-20-9	N.D.	5	0.2	1
11997	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	1	0.2	1
11997	4-Methyl-2-pentanone	108-10-1	N.D.	10	0.5	1
11997	Methylcyclohexane	108-87-2	N.D.	5	0.5	1
11997	Methylene Chloride	75-09-2	N.D.	1	0.3	1
11997	Naphthalene	91-20-3	N.D.	5	1	1
11997	2-Nitropropane	79-46-9	N.D.	10	0.8	1
11997	Styrene	100-42-5	N.D.	5	0.2	1
11997	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	1	0.2	1
11997	Tetrachloroethene	127-18-4	N.D.	1	0.2	1
11997	Tetrahydrofuran	109-99-9	N.D.	10	0.7	1
11997	Toluene	108-88-3	N.D.	1	0.2	1
11997	1,2,3-Trichlorobenzene	87-61-6	N.D.	5	0.4	1
11997	1,2,4-Trichlorobenzene	120-82-1	N.D.	5	0.3	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	1	0.3	1
11997	1,1,2-Trichloroethane	79-00-5	N.D.	1	0.2	1
11997	Trichloroethene	79-01-6	N.D.	1	0.2	1
11997	Trichlorofluoromethane	75-69-4	N.D.	1	0.2	1
11997	1,2,4-Trimethylbenzene	95-63-6	N.D.	5	1	1
11997	1,3,5-Trimethylbenzene	108-67-8	N.D.	5	0.3	1
11997	Vinyl Chloride	75-01-4	N.D.	1	0.2	1
11997	m+p-Xylene	179601-23-1	N.D.	5	1	1
11997	o-Xylene	95-47-6	N.D.	1	0.4	1
11997	Xylene (Total)	1330-20-7	N.D.	6	1	1

Project defined calibration criteria are not met. The calibration is compliant with the method defined criteria.

A Report Limit Verification (RLV) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The RLV standard shows adequate sensitivity at or below the reporting limit.

00882 VOA Interp. Library Search-10

The results from the volatile library search are listed on the attached FORM 1 - VOA-TIC. The qualifiers appearing in the "Q" column are defined at the end of the report.

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **BDA-17WT Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/30/2019 11:22
Collection Date/Time: 10/29/2019 11:48
SDG#: BMS81-16BKG

ARCADIS U.S., Inc.
ELLE Sample #: GW 1187629
ELLE Group #: 2071744
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	Acenaphthene	83-32-9	N.D.	0.51	0.10	1
14241	Acenaphthylene	208-96-8	N.D.	0.51	0.10	1
14241	Acetophenone	98-86-2	N.D.	10	4.1	1
14241	Aniline	62-53-3	N.D.	10	3.1	1
14241	Anthracene	120-12-7	N.D.	0.51	0.10	1
14241	Atrazine	1912-24-9	N.D.	5.1	2.0	1
14241	Benzaldehyde	100-52-7	N.D.	10	3.1	1
14241	Benzo(a)anthracene	56-55-3	N.D.	0.51	0.10	1
14241	Benzo(a)pyrene	50-32-8	N.D.	0.51	0.10	1
14241	Benzo(b)fluoranthene	205-99-2	N.D.	0.51	0.10	1
14241	Benzo(g,h,i)perylene	191-24-2	N.D.	0.51	0.10	1
14241	Benzo(k)fluoranthene	207-08-9	N.D.	0.51	0.10	1
14241	Benzyl alcohol	100-51-6	N.D.	31	10	1
14241	1,1'-Biphenyl	92-52-4	N.D.	10	3.1	1
14241	4-Bromophenyl-phenylether	101-55-3	N.D.	2.0	0.51	1
14241	Butylbenzylphthalate	85-68-7	N.D.	5.1	2.0	1
14241	Di-n-butylphthalate	84-74-2	N.D.	5.1	2.0	1
14241	Caprolactam	105-60-2	N.D.	11	5.1	1
14241	Carbazole	86-74-8	N.D.	2.0	0.51	1
14241	4-Chloro-3-methylphenol	59-50-7	N.D.	2.0	0.51	1
14241	4-Chloroaniline	106-47-8	N.D.	10	4.1	1
14241	bis(2-Chloroethoxy)methane	111-91-1	N.D.	2.0	0.51	1
14241	bis(2-Chloroethyl)ether	111-44-4	N.D.	2.0	0.51	1
14241	bis(2-Chloroisopropyl)ether[1]	39638-32-9	N.D.	2.0	0.51	1
	Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.					
14241	2-Chloronaphthalene	91-58-7	N.D.	1.0	0.41	1
14241	2-Chlorophenol	95-57-8	N.D.	2.0	0.51	1
14241	4-Chlorophenyl-phenylether	7005-72-3	N.D.	2.0	0.51	1
14241	Chrysene	218-01-9	N.D.	0.51	0.10	1
14241	Dibenz(a,h)anthracene	53-70-3	N.D.	0.51	0.10	1
14241	Dibenzofuran	132-64-9	N.D.	2.0	0.51	1
14241	3,3'-Dichlorobenzidine	91-94-1	N.D.	10	3.1	1
14241	2,4-Dichlorophenol	120-83-2	N.D.	2.0	0.51	1
14241	Dicyclohexylamine[1]	101-83-7	N.D.	10	10	1
14241	Diethylphthalate	84-66-2	N.D.	5.1	2.0	1
14241	N,N-Dimethylaniline[1]	121-69-7	N.D.	1.0	0.51	1
14241	2,4-Dimethylphenol	105-67-9	N.D.	10	3.1	1
14241	Dimethylphthalate	131-11-3	N.D.	5.1	2.0	1
14241	4,6-Dinitro-2-methylphenol	534-52-1	N.D.	21	8.2	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **BDA-17WT Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/30/2019 11:22
Collection Date/Time: 10/29/2019 11:48
SDG#: BMS81-16BKG

ARCADIS U.S., Inc.
ELLE Sample #: GW 1187629
ELLE Group #: 2071744
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	2,4-Dinitrophenol	51-28-5	N.D.	31	14	1
14241	2,4-Dinitrotoluene	121-14-2	N.D.	5.1	1.0	1
14241	2,6-Dinitrotoluene	606-20-2	N.D.	2.0	0.51	1
14241	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	11	5.1	1
14241	Fluoranthene	206-44-0	N.D.	0.51	0.10	1
14241	Fluorene	86-73-7	N.D.	0.51	0.10	1
14241	Hexachlorobenzene	118-74-1	N.D.	0.51	0.10	1
14241	Hexachlorobutadiene	87-68-3	N.D.	2.0	0.51	1
14241	Hexachlorocyclopentadiene	77-47-4	N.D.	11	5.1	1
14241	Hexachloroethane	67-72-1	N.D.	5.1	1.0	1
14241	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.51	0.10	1
14241	Isophorone	78-59-1	N.D.	2.0	0.51	1
14241	2-Methylnaphthalene	91-57-6	N.D.	0.51	0.10	1
14241	2-Methylphenol	95-48-7	N.D.	2.0	0.51	1
14241	4-Methylphenol	65794-96-9	N.D.	2.0	0.51	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
14241	Naphthalene	91-20-3	N.D.	0.51	0.10	1
14241	2-Nitroaniline	88-74-4	N.D.	7.1	2.0	1
14241	3-Nitroaniline	99-09-2	N.D.	7.1	3.1	1
14241	4-Nitroaniline	100-01-6	N.D.	3.1	0.92	1
14241	Nitrobenzene	98-95-3	N.D.	2.0	0.51	1
14241	2-Nitrophenol	88-75-5	N.D.	10	3.1	1
14241	4-Nitrophenol	100-02-7	N.D.	31	10	1
14241	N-Nitroso-di-n-propylamine	621-64-7	N.D.	3.1	0.71	1
14241	N-Nitrosodiphenylamine	86-30-6	N.D.	3.1	0.71	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.					
14241	Di-n-octylphthalate	117-84-0	N.D.	11	5.1	1
14241	Pentachlorophenol	87-86-5	N.D.	5.1	1.0	1
14241	Phenanthrene	85-01-8	N.D.	0.51	0.10	1
14241	Phenol	108-95-2	N.D.	2.0	0.51	1
14241	Pyrene	129-00-0	N.D.	0.51	0.10	1
14241	Pyridine	110-86-1	N.D.	5.1	2.0	1
14241	1,2,4,5-Tetrachlorobenzene	95-94-3	N.D.	2.0	0.51	1
14241	2,3,4,6-Tetrachlorophenol	58-90-2	N.D.	10	4.1	1
14241	2,4,5-Trichlorophenol	95-95-4	N.D.	2.0	0.51	1
14241	2,4,6-Trichlorophenol	88-06-2	N.D.	2.0	0.51	1
14241	Triethylamine[1]	121-44-8	N.D.	10	10	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **BDA-17WT Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/30/2019 11:22
Collection Date/Time: 10/29/2019 11:48
SDG#: BMS81-16BKG

ARCADIS U.S., Inc.
ELLE Sample #: GW 1187629
ELLE Group #: 2071744
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result		Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D SIM**		**ug/l**		**ug/l**	**ug/l**	
14244	1,4-Dioxane	123-91-1	N.D.		0.3	0.1	1

In the first extraction, the recovery for the sample surrogate(s) is outside the QC acceptance limits. The sample was re-extracted within the method required holding time and the surrogates are compliant.

The recovery for a target analyte(s) in the Laboratory Control Spike(s) from the second extraction is outside the QC acceptance limits as noted on the QC Summary. The recoveries for the target analytes in the Laboratory Control Spike(s) from the first extraction are compliant. All data is reported from the second extraction.

00886 SVOA TIC Interpretive(25)

The results from the semivolatile library search are listed on the attached FORM 1 - SV-TIC. The qualifiers appearing in the "Q" column are defined at the end of the report.

Aldehydes & Ketones	**SW-846 8315A**		**ug/l**		**ug/l**	**ug/l**	
13022	Acetaldehyde[1]	75-07-0	N.D.		60	35	1
13022	Formaldehyde	50-00-0	42	J	50	20	1

The response for a target analyte(s) in the initial calibration verification standard is outside the QC acceptance limits.

GC Miscellaneous	**SW-846 8015D Rev.4, June 2003**		**ug/l**		**ug/l**	**ug/l**	
10603	Ethanol	64-17-5	N.D.	D2	1,000	150	1
12926	Ethylene glycol[1]	107-21-1	N.D.		10,000	5,000	1
10603	Isopropanol[1]	67-63-0	N.D.	D2	1,000	110	1
10603	Methanol	67-56-1	N.D.	D2	1,000	220	1
12926	Propylene glycol[1]	57-55-6	N.D.		10,000	2,000	1

The response for a target analyte(s) in the continuing calibration verification standard is outside the QC acceptance limits low. The following action was taken:
The analysis was repeated and the continuing calibration verification standard bracketing the sample on the second trial is also outside the acceptance limits. This effect is attributed to the sample matrix and the data is reported.

LC/MS/MS Miscellaneous	**EPA 537 mod QSM 5.1 table B-15**		**ng/l**		**ng/l**	**ng/l**	
14434	6:2-Fluorotelomersulfonic acid[1]	27619-97-2	N.D.		4.2	1.7	1
14434	8:2-Fluorotelomersulfonic acid[1]	39108-34-4	N.D.		2.5	0.85	1
14434	NEtFOSAA[1]	2991-50-6	N.D.		2.5	0.42	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.						
14434	NMeFOSAA[1]	2355-31-9	N.D.		1.7	0.51	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.						
14434	Perfluorobutanesulfonic acid[1]	375-73-5	N.D.		1.7	0.42	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **BDA-17WT Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/30/2019 11:22
Collection Date/Time: 10/29/2019 11:48
SDG#: BMS81-16BKG

ARCADIS U.S., Inc.
ELLE Sample #: GW 1187629
ELLE Group #: 2071744
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
LC/MS/MS Miscellaneous	**EPA 537 mod QSM 5.1 table B-15**		**ng/l**	**ng/l**	**ng/l**	
14434	Perfluorobutanoic acid[1]	375-22-4	9.5	4.2	1.7	1
14434	Perfluorodecanesulfonic acid[1]	335-77-3	N.D.	1.7	0.42	1
14434	Perfluorodecanoic acid[1]	335-76-2	N.D.	1.7	0.42	1
14434	Perfluorododecanoic acid[1]	307-55-1	N.D.	1.7	0.42	1
14434	Perfluoroheptanesulfonic acid[1]	375-92-8	N.D.	1.7	0.42	1
14434	Perfluoroheptanoic acid[1]	375-85-9	0.57 J	1.7	0.42	1
14434	Perfluorohexanesulfonic acid[1]	355-46-4	N.D.	1.7	0.42	1
14434	Perfluorohexanoic acid[1]	307-24-4	1.5 J	1.7	0.42	1
14434	Perfluorononanoic acid[1]	375-95-1	N.D.	1.7	0.42	1
14434	Perfluorooctanesulfonamide[1]	754-91-6	N.D.	1.7	0.42	1
14434	Perfluorooctanesulfonic acid[1]	1763-23-1	N.D.	1.7	0.42	1
14434	Perfluorooctanoic acid[1]	335-67-1	N.D.	1.7	0.42	1
14434	Perfluoropentanoic acid[1]	2706-90-3	2.3	1.7	0.42	1
14434	Perfluorotetradecanoic acid[1]	376-06-7	N.D.	1.7	0.42	1
14434	Perfluorotridecanoic acid[1]	72629-94-8	N.D.	1.7	0.42	1
14434	Perfluoroundecanoic acid[1]	2058-94-8	N.D.	1.7	0.42	1
Metals	**SW-846 6010D Rev.4, July 2014**		**mg/l**	**mg/l**	**mg/l**	
07044	Antimony	7440-36-0	N.D.	0.0500	0.0160	1
07035	Arsenic	7440-38-2	N.D.	0.0300	0.0160	1
07046	Barium	7440-39-3	0.245	0.0050	0.0010	1
07047	Beryllium	7440-41-7	N.D.	0.0050	0.0010	1
07049	Cadmium	7440-43-9	N.D.	0.0050	0.0010	1
01750	Calcium	7440-70-2	280	0.200	0.0960	1
07051	Chromium	7440-47-3	0.0258	0.0150	0.0016	1
07052	Cobalt	7440-48-4	0.0159	0.0050	0.0015	1
07053	Copper	7440-50-8	0.0513	0.0200	0.0120	1
01754	Iron	7439-89-6	9.06	0.200	0.0400	1
07055	Lead	7439-92-1	0.0126 J	0.0150	0.0071	1
01757	Magnesium	7439-95-4	158	0.100	0.0400	1
07058	Manganese	7439-96-5	2.76	0.0100	0.0030	1
07061	Nickel	7440-02-0	0.0526	0.0100	0.0021	1
01762	Potassium	7440-09-7	6.09	0.500	0.204	1
07036	Selenium	7782-49-2	N.D.	0.0500	0.0160	1
07066	Silver	7440-22-4	N.D.	0.0100	0.0050	1
01767	Sodium	7440-23-5	175	1.00	0.239	1
07022	Thallium[1]	7440-28-0	N.D.	0.0300	0.0081	1
	SW-846 6010D Rev.4, July 2014		**ug/l**	**ug/l**	**ug/l**	

*=This limit was used in the evaluation of the final result

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Analysis Report

REVISED

Sample Description: **BDA-17WT Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/30/2019 11:22
Collection Date/Time: 10/29/2019 11:48
SDG#: BMS81-16BKG

ARCADIS U.S., Inc.
ELLE Sample #: GW 1187629
ELLE Group #: 2071744
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
Metals	**SW-846 6010D Rev.4, July 2014**		**ug/l**	**ug/l**	**ug/l**	
07071	Vanadium	7440-62-2	9.5 J	10.0	1.9	1
07072	Zinc	7440-66-6	35.5	20.0	3.7	1
	SW-846 6020B Rev.2, July 2014		**ug/l**	**ug/l**	**ug/l**	
06023	Aluminum	7429-90-5	52,300	50.0	39.4	2
	SW-846 7470A		**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	N.D.	0.00020	0.000050	1
Wet Chemistry	**EPA 300.0**		**ug/l**	**ug/l**	**ug/l**	
00224	Chloride	16887-00-6	556,000	80,000	40,000	200
01504	Fluoride	16984-48-8	N.D.	500	250	5
00228	Sulfate	14808-79-8	243,000	200,000	60,000	200
	EPA 353.2		**mg/l**	**mg/l**	**mg/l**	
00220	Nitrate Nitrogen	14797-55-8	N.D.	0.10	0.040	1
00219	Nitrite Nitrogen	14797-65-0	0.038 J	0.050	0.015	1
	The holding time was not met.					
	SM 5310 C-2011		**ug/l**	**ug/l**	**ug/l**	
00273	Total Organic Carbon	n.a.	15,000	1,000	500	1
	SM 2320 B-2011		**mg/l as CaCO3**	**mg/l as CaCO3**	**mg/l as CaCO3**	
12150	Total Alkalinity to pH 4.5	n.a.	297	8.0	2.6	1
	SM 5210 B-2011		**ug/l**	**ug/l**	**ug/l**	
14108	Biochemical Oxygen Demand-BOD	n.a.	6,210	2,000	2,000	1

Sample Comments

State of New York Certification No. 10670

[1] = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	Y193091AA	11/05/2019 16:26	Corie Mellinger	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	Y193091AA	11/05/2019 16:25	Corie Mellinger	1
14241	Semi-annual Groundwater BMS	SW-846 8270D	1	19303WAN026	11/06/2019 15:56	Kira N Beck	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **BDA-17WT Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/30/2019 11:22
Collection Date/Time: 10/29/2019 11:48
SDG#: BMS81-16BKG

ARCADIS U.S., Inc.
ELLE Sample #: GW 1187629
ELLE Group #: 2071744
Matrix: Groundwater

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14244	SIM SVOAs 8270D MINI	SW-846 8270D SIM	1	19308WAC026	11/06/2019 13:42	Kira N Beck	1
10466	BNA Water Extraction SIM	SW-846 3510C	2	19308WAC026	11/04/2019 17:30	Laura Duquette	1
11010	8270D BNA Extraction	SW-846 3510C	1	19303WAN026	10/31/2019 09:30	Joshua S Ruth	1
13022	Short List Aldehydes- W 8315A	SW-846 8315A	1	193030019A	10/31/2019 19:19	Jessica L Miller	1
01013	Formaldehyde Extraction	SW-846 8315A	1	193030019A	10/31/2019 09:23	Alison Moll	1
10603	Alcohols in Water	SW-846 8015D Rev.4, June 2003	1	193080007A	11/04/2019 13:36	Johanna C Kennedy	1
12926	Glycols in Water by 8015C/D	SW-846 8015D Rev.4, June 2003	1	193040002A	11/01/2019 11:43	Donald Brown	1
14434	PFAS in Water by LC/MS/MS-DoD	EPA 537 mod QSM 5.1 table B-15	1	19304003	11/01/2019 16:15	Devon M Whooley	1
14465	PFAS Water Prep - DoD	EPA 537 mod QSM 5.1 table B-15	1	19304003	10/31/2019 07:00	Toby Barnhart	1
07044	Antimony	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 15:35	Patrick J Engle	1
07035	Arsenic	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 15:35	Patrick J Engle	1
07046	Barium	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 15:35	Patrick J Engle	1
07047	Beryllium	SW-846 6010D Rev.4, July 2014	1	193041404403	11/05/2019 19:32	Cindy M Gehman	1
07049	Cadmium	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 15:35	Patrick J Engle	1
01750	Calcium	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 15:35	Patrick J Engle	1
07051	Chromium	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 15:35	Patrick J Engle	1
07052	Cobalt	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 15:35	Patrick J Engle	1
07053	Copper	SW-846 6010D Rev.4, July 2014	1	193041404403	11/05/2019 13:38	Patrick J Engle	1
01754	Iron	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 15:35	Patrick J Engle	1
07055	Lead	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 15:35	Patrick J Engle	1
01757	Magnesium	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 15:35	Patrick J Engle	1
07058	Manganese	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 15:35	Patrick J Engle	1
07061	Nickel	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 15:35	Patrick J Engle	1
01762	Potassium	SW-846 6010D Rev.4, July 2014	1	193041404403	11/05/2019 09:39	Patrick J Engle	1
07036	Selenium	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 15:35	Patrick J Engle	1
07066	Silver	SW-846 6010D Rev.4, July 2014	1	193041404403	11/05/2019 19:32	Cindy M Gehman	1
01767	Sodium	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 15:35	Patrick J Engle	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **BDA-17WT Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/30/2019 11:22
Collection Date/Time: 10/29/2019 11:48
SDG#: BMS81-16BKG

ARCADIS U.S., Inc.
ELLE Sample #: GW 1187629
ELLE Group #: 2071744
Matrix: Groundwater

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07022	Thallium	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 15:35	Patrick J Engle	1
07071	Vanadium	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 15:35	Patrick J Engle	1
07072	Zinc	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 15:35	Patrick J Engle	1
06023	Aluminum	SW-846 6020B Rev.2, July 2014	1	193111404701A	11/08/2019 14:40	Janeyah Rivers-Hamilton	2
00259	Mercury	SW-846 7470A	1	193040571302	11/01/2019 07:42	Damary Valentin	1
14044	ICP-WW, 3005A (tot rec) - U345	SW-846 3005A	1	193041404403	10/31/2019 11:21	James L Mertz	1
14047	ICPMS - Water, 3020A - U345	SW-846 3020A	1	193111404701	11/07/2019 14:15	JoElla L Rice	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	193040571302	10/31/2019 15:15	JoElla L Rice	1
00224	Chloride	EPA 300.0	2	19304135213B	11/01/2019 02:19	Kevin Litwa	200
01504	Fluoride	EPA 300.0	2	19304135213B	11/01/2019 02:04	Kevin Litwa	5
00228	Sulfate	EPA 300.0	2	19304135213B	11/01/2019 02:19	Kevin Litwa	200
00220	Nitrate Nitrogen	EPA 353.2	1	19308106102A	11/04/2019 11:55	Ashlynn M Cornelius	1
00219	Nitrite Nitrogen	EPA 353.2	1	19304105102A	10/31/2019 12:46	Bethany Sandone	1
00273	Total Organic Carbon	SM 5310 C-2011	1	19309304504A	11/05/2019 20:02	Bethany Sandone	1
12150	Total Alkalinity to pH 4.5	SM 2320 B-2011	1	19304002103A	10/31/2019 22:39	Jeremy L Bolf	1
14108	Biochemical Oxygen Demand-BOD	SM 5210 B-2011	1	19304141081A	10/31/2019 10:50	Benjamin M Morrison	1

*=This limit was used in the evaluation of the final result

REVISED

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
S8116

Lab Name: Lancaster Laboratories Contract:_____
Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____
Matrix: (soil/water) WATER Lab Sample ID: 1187629
Sample wt/vol: 5.0 (g/mL)mL Lab File ID:HP09355.i/19nov05a.b/yn05s06.d
Level: (low/med) LOW Date Received: 10/30/19
% Moisture: not dec. Date Analyzed: 11/05/19
Column: (pack/cap) CAP Dilution Factor: 1.0
CONCENTRATION UNITS:
Number TICs found: 0 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	VOCTIC	Total VOC TICs		0	U
2.					
3.					
4.					
5.					
6.					
7.					
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29.					
30.					

page 1 of 1

FORM I VOA-TIC

REVISED

1F

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

S8116

Lab Name: Lancaster Laboratories Contract:

Lab Code: LANCAS Case No.: SAS No.: SDG No.:

Matrix: (soil/water) WATER Lab Sample ID: 1187629

Sample wt/vol: 245 (g/mL) mL Lab File ID: lk0183.d

Level: (low/med) LOW Date Received: 10/30/19

% Moisture: Decanted: (Y/N) Date Extracted: 10/31/19

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/06/19

Injection Volume: 1 (uL) Dilution Factor: 1

GPC Cleanup: N pH: Extraction: Sepf

CONCENTRATION UNITS:

Number TICs found: 11 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		Unknown	2.068	17	J
2.		Unknown	5.770	24	J
3.	556-67-2	Cyclotetrasiloxane, octameth	6.513	9	J
4.		Unknown	6.588	7	J
5.		Unknown	6.620	48	J
6.		Unknown	8.278	5	J
7.		Unknown	8.353	10	J
8.	1526-17-6	2-Fluoro-6-nitrophenol	8.540	4	J
9.		Unknown	8.893	5	J
10.		Unknown	11.241	4	J
11.		Unknown	12.001	6	J
12.					
13.	SVOCTIC	Total SVOC TICs		140	J
14.					
15.					
16.					
17.					
18.					
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page 1 of 1

FORM I SV-1

REVISED

Sample Description: **BDA-17WT MS Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/30/2019 11:22
Collection Date/Time: 10/29/2019 11:48
SDG#: BMS81-16MS

ARCADIS U.S., Inc.
ELLE Sample #: GW 1187630
ELLE Group #: 2071744
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	180	20	0.7	1
11997	Acetonitrile	75-05-8	160	100	16	1
11997	Benzene	71-43-2	22	1	0.2	1
11997	Bromochloromethane	74-97-5	20	5	0.2	1
11997	Bromodichloromethane	75-27-4	21	1	0.2	1
11997	Bromoform	75-25-2	20	4	1	1
11997	Bromomethane	74-83-9	14	1	0.3	1
11997	n-Butanol	71-36-3	1,100	250	61	1
11997	2-Butanone	78-93-3	150	10	0.3	1
11997	t-Butyl alcohol	75-65-0	200	50	12	1
11997	n-Butylbenzene	104-51-8	20	5	0.2	1
11997	sec-Butylbenzene	135-98-8	21	5	0.2	1
11997	tert-Butylbenzene	98-06-6	20	5	0.3	1
11997	Carbon Disulfide	75-15-0	20	5	0.2	1
11997	Carbon Tetrachloride	56-23-5	22	1	0.2	1
11997	Chlorobenzene	108-90-7	21	1	0.2	1
11997	Chlorodifluoromethane[1]	75-45-6	19	5	2	1
11997	Chloroethane	75-00-3	15	1	0.2	1
11997	Chloroform	67-66-3	22	1	0.2	1
11997	Chloromethane	74-87-3	15	1	0.2	1
11997	Cyclohexane	110-82-7	20	5	1	1
11997	Cyclohexanone[1]	108-94-1	550	100	25	1
11997	1,2-Dibromo-3-chloropropane	96-12-8	18	5	0.3	1
11997	Dibromochloromethane	124-48-1	21	1	0.2	1
11997	1,2-Dibromoethane	106-93-4	21	1	0.2	1
11997	1,2-Dichlorobenzene	95-50-1	21	5	0.2	1
11997	1,3-Dichlorobenzene	541-73-1	22	5	0.2	1
11997	1,4-Dichlorobenzene	106-46-7	22	5	0.2	1
11997	Dichlorodifluoromethane	75-71-8	13	1	0.2	1
11997	1,1-Dichloroethane	75-34-3	21	1	0.2	1
11997	1,2-Dichloroethane	107-06-2	21	1	0.3	1
11997	1,1-Dichloroethene	75-35-4	23	1	0.2	1
11997	cis-1,2-Dichloroethene	156-59-2	23	1	0.2	1
11997	trans-1,2-Dichloroethene	156-60-5	22	1	0.2	1
11997	1,2-Dichloropropane	78-87-5	23	1	0.2	1
11997	cis-1,3-Dichloropropene	10061-01-5	19	1	0.2	1
11997	trans-1,3-Dichloropropene	10061-02-6	19	1	0.2	1
11997	1,4-Dioxane	123-91-1	650	250	29	1
11997	Ethyl Acetate	141-78-6	22	5	0.7	1
11997	Ethyl ether	60-29-7	20	5	0.2	1
11997	Ethylbenzene	100-41-4	21	1	0.4	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **BDA-17WT MS Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/30/2019 11:22
Collection Date/Time: 10/29/2019 11:48
SDG#: BMS81-16MS

ARCADIS U.S., Inc.
ELLE Sample #: GW 1187630
ELLE Group #: 2071744
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Freon 113	76-13-1	22	10	0.2	1
11997	n-Heptane[1]	142-82-5	21	5	2	1
11997	n-Hexane[1]	110-54-3	21	5	2	1
11997	2-Hexanone	591-78-6	100	10	0.3	1
11997	Isobutyl Alcohol	78-83-1	610	250	36	1
11997	Isopropylbenzene	98-82-8	21	5	0.2	1
11997	p-Isopropyltoluene	99-87-6	21	5	0.2	1
11997	Methyl Acetate	79-20-9	22	5	0.2	1
11997	Methyl Tertiary Butyl Ether	1634-04-4	17	1	0.2	1
11997	4-Methyl-2-pentanone	108-10-1	100	10	0.5	1
11997	Methylcyclohexane	108-87-2	20	5	0.5	1
11997	Methylene Chloride	75-09-2	22	1	0.3	1
11997	Naphthalene	91-20-3	18	5	1	1
11997	2-Nitropropane	79-46-9	18	10	0.8	1
11997	Styrene	100-42-5	21	5	0.2	1
11997	1,1,2,2-Tetrachloroethane	79-34-5	20	1	0.2	1
11997	Tetrachloroethene	127-18-4	22	1	0.2	1
11997	Tetrahydrofuran	109-99-9	100	10	0.7	1
11997	Toluene	108-88-3	21	1	0.2	1
11997	1,2,3-Trichlorobenzene	87-61-6	19	5	0.4	1
11997	1,2,4-Trichlorobenzene	120-82-1	19	5	0.3	1
11997	1,1,1-Trichloroethane	71-55-6	22	1	0.3	1
11997	1,1,2-Trichloroethane	79-00-5	22	1	0.2	1
11997	Trichloroethene	79-01-6	22	1	0.2	1
11997	Trichlorofluoromethane	75-69-4	17	1	0.2	1
11997	1,2,4-Trimethylbenzene	95-63-6	20	5	1	1
11997	1,3,5-Trimethylbenzene	108-67-8	20	5	0.3	1
11997	Vinyl Chloride	75-01-4	16	1	0.2	1
11997	m+p-Xylene	179601-23-1	43	5	1	1
11997	o-Xylene	95-47-6	20	1	0.4	1
11997	Xylene (Total)	1330-20-7	63	6	1	1

Project defined calibration criteria are not met. The calibration is compliant with the method defined criteria.

GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	Acenaphthene	83-32-9	46	0.57	0.11	1
14241	Acenaphthylene	208-96-8	48	0.57	0.11	1
14241	Acetophenone	98-86-2	44	11	4.5	1
14241	Aniline	62-53-3	31	11	3.4	1
14241	Anthracene	120-12-7	52	0.57	0.11	1
14241	Atrazine	1912-24-9	52	5.7	2.3	1
14241	Benzaldehyde	100-52-7	46	11	3.4	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **BDA-17WT MS Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/30/2019 11:22
Collection Date/Time: 10/29/2019 11:48
SDG#: BMS81-16MS

ARCADIS U.S., Inc.
ELLE Sample #: GW 1187630
ELLE Group #: 2071744
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	Benzo(a)anthracene	56-55-3	46	0.57	0.11	1
14241	Benzo(a)pyrene	50-32-8	39	0.57	0.11	1
14241	Benzo(b)fluoranthene	205-99-2	40	0.57	0.11	1
14241	Benzo(g,h,i)perylene	191-24-2	37	0.57	0.11	1
14241	Benzo(k)fluoranthene	207-08-9	39	0.57	0.11	1
14241	Benzyl alcohol	100-51-6	46	34	11	1
14241	1,1'-Biphenyl	92-52-4	46	11	3.4	1
14241	4-Bromophenyl-phenylether	101-55-3	51	2.3	0.57	1
14241	Butylbenzylphthalate	85-68-7	40	5.7	2.3	1
14241	Di-n-butylphthalate	84-74-2	45	5.7	2.3	1
14241	Caprolactam	105-60-2	17	12	5.7	1
14241	Carbazole	86-74-8	52	2.3	0.57	1
14241	4-Chloro-3-methylphenol	59-50-7	33	2.3	0.57	1
14241	4-Chloroaniline	106-47-8	41	11	4.5	1
14241	bis(2-Chloroethoxy)methane	111-91-1	49	2.3	0.57	1
14241	bis(2-Chloroethyl)ether	111-44-4	42	2.3	0.57	1
14241	bis(2-Chloroisopropyl)ether[1]	39638-32-9	41	2.3	0.57	1
	Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.					
14241	2-Chloronaphthalene	91-58-7	45	1.1	0.45	1
14241	2-Chlorophenol	95-57-8	30	2.3	0.57	1
14241	4-Chlorophenyl-phenylether	7005-72-3	49	2.3	0.57	1
14241	Chrysene	218-01-9	43	0.57	0.11	1
14241	Dibenz(a,h)anthracene	53-70-3	40	0.57	0.11	1
14241	Dibenzofuran	132-64-9	50	2.3	0.57	1
14241	3,3'-Dichlorobenzidine	91-94-1	34	11	3.4	1
14241	2,4-Dichlorophenol	120-83-2	36	2.3	0.57	1
14241	Dicyclohexylamine[1]	101-83-7	N.D.	11	11	1
14241	Diethylphthalate	84-66-2	44	5.7	2.3	1
14241	N,N-Dimethylaniline[1]	121-69-7	N.D.	1.1	0.57	1
14241	2,4-Dimethylphenol	105-67-9	28	11	3.4	1
14241	Dimethylphthalate	131-11-3	36	5.7	2.3	1
14241	4,6-Dinitro-2-methylphenol	534-52-1	49	24	9.0	1
14241	2,4-Dinitrophenol	51-28-5	83	34	16	1
14241	2,4-Dinitrotoluene	121-14-2	53	5.7	1.1	1
14241	2,6-Dinitrotoluene	606-20-2	55	2.3	0.57	1
14241	bis(2-Ethylhexyl)phthalate	117-81-7	41	12	5.7	1
14241	Fluoranthene	206-44-0	47	0.57	0.11	1
14241	Fluorene	86-73-7	49	0.57	0.11	1
14241	Hexachlorobenzene	118-74-1	48	0.57	0.11	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **BDA-17WT MS Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/30/2019 11:22
Collection Date/Time: 10/29/2019 11:48
SDG#: BMS81-16MS

ARCADIS U.S., Inc.
ELLE Sample #: GW 1187630
ELLE Group #: 2071744
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result		Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**		**ug/l**	**ug/l**	
14241	Hexachlorobutadiene	87-68-3	42		2.3	0.57	1
14241	Hexachlorocyclopentadiene	77-47-4	47		12	5.7	1
14241	Hexachloroethane	67-72-1	37		5.7	1.1	1
14241	Indeno(1,2,3-cd)pyrene	193-39-5	37		0.57	0.11	1
14241	Isophorone	78-59-1	48		2.3	0.57	1
14241	2-Methylnaphthalene	91-57-6	46		0.57	0.11	1
14241	2-Methylphenol	95-48-7	29		2.3	0.57	1
14241	4-Methylphenol	65794-96-9	26		2.3	0.57	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.						
14241	Naphthalene	91-20-3	45		0.57	0.11	1
14241	2-Nitroaniline	88-74-4	54		7.9	2.3	1
14241	3-Nitroaniline	99-09-2	47		7.9	3.4	1
14241	4-Nitroaniline	100-01-6	46		3.4	1.0	1
14241	Nitrobenzene	98-95-3	48		2.3	0.57	1
14241	2-Nitrophenol	88-75-5	50		11	3.4	1
14241	4-Nitrophenol	100-02-7	29	J	34	11	1
14241	N-Nitroso-di-n-propylamine	621-64-7	46		3.4	0.79	1
14241	N-Nitrosodiphenylamine	86-30-6	48		3.4	0.79	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.						
14241	Di-n-octylphthalate	117-84-0	38		12	5.7	1
14241	Pentachlorophenol	87-86-5	41		5.7	1.1	1
14241	Phenanthrene	85-01-8	50		0.57	0.11	1
14241	Phenol	108-95-2	18		2.3	0.57	1
14241	Pyrene	129-00-0	46		0.57	0.11	1
14241	Pyridine	110-86-1	23		5.7	2.3	1
14241	1,2,4,5-Tetrachlorobenzene	95-94-3	43		2.3	0.57	1
14241	2,3,4,6-Tetrachlorophenol	58-90-2	45		11	4.5	1
14241	2,4,5-Trichlorophenol	95-95-4	41		2.3	0.57	1
14241	2,4,6-Trichlorophenol	88-06-2	42		2.3	0.57	1
14241	Triethylamine[1]	121-44-8	N.D.		11	11	1
GC/MS Semivolatiles	**SW-846 8270D SIM**		**ug/l**		**ug/l**	**ug/l**	
14244	1,4-Dioxane	123-91-1	0.6		0.3	0.1	1

In the first extraction, the recovery for the sample surrogate(s) is outside the QC acceptance limits. The sample was re-extracted within the method required holding time and the surrogates are compliant.

The recovery for a target analyte(s) in the Laboratory Control Spike(s) from the second extraction is outside the QC acceptance limits as noted on the QC

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **BDA-17WT MS Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/30/2019 11:22
Collection Date/Time: 10/29/2019 11:48
SDG#: BMS81-16MS

ARCADIS U.S., Inc.
ELLE Sample #: GW 1187630
ELLE Group #: 2071744
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
	Summary. The recoveries for the target analytes in the Laboratory Control Spike(s) from the first extraction are compliant. All data is reported from the second extraction.					
Aldehydes & Ketones	**SW-846 8315A**		**ug/l**	**ug/l**	**ug/l**	
13022	Acetaldehyde[1]	75-07-0	440	60	35	1
13022	Formaldehyde	50-00-0	530	50	20	1
	The response for a target analyte(s) in the initial calibration verification standard is outside the QC acceptance limits.					
GC Miscellaneous	**SW-846 8015D Rev.4, June 2003**		**ug/l**	**ug/l**	**ug/l**	
10603	Ethanol	64-17-5	2,200 D2	1,000	150	1
12926	Ethylene glycol[1]	107-21-1	59,000	10,000	5,000	1
10603	Isopropanol[1]	67-63-0	2,500 D2	1,000	110	1
10603	Methanol	67-56-1	2,400 D2	1,000	220	1
12926	Propylene glycol[1]	57-55-6	58,000	10,000	2,000	1
	The response for a target analyte(s) in the continuing calibration verification standard is outside the QC acceptance limits low. The following action was taken: The analysis was repeated and the continuing calibration verification standard bracketing the sample on the second trial is also outside the acceptance limits. This effect is attributed to the sample matrix and the data is reported.					
LC/MS/MS Miscellaneous	**EPA 537 mod QSM 5.1 table B-15**		**ng/l**	**ng/l**	**ng/l**	
14434	6:2-Fluorotelomersulfonic acid[1]	27619-97-2	20	4.2	1.7	1
14434	8:2-Fluorotelomersulfonic acid[1]	39108-34-4	19	2.5	0.84	1
14434	NEtFOSAA[1]	2991-50-6	20	2.5	0.42	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.					
14434	NMeFOSAA[1]	2355-31-9	22	1.7	0.51	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.					
14434	Perfluorobutanesulfonic acid[1]	375-73-5	18	1.7	0.42	1
14434	Perfluorobutanoic acid[1]	375-22-4	31	4.2	1.7	1
14434	Perfluorodecanesulfonic acid[1]	335-77-3	23	1.7	0.42	1
14434	Perfluorodecanoic acid[1]	335-76-2	19	1.7	0.42	1
14434	Perfluorododecanoic acid[1]	307-55-1	21	1.7	0.42	1
14434	Perfluoroheptanesulfonic acid[1]	375-92-8	20	1.7	0.42	1
14434	Perfluoroheptanoic acid[1]	375-85-9	21	1.7	0.42	1
14434	Perfluorohexanesulfonic acid[1]	355-46-4	18	1.7	0.42	1
14434	Perfluorohexanoic acid[1]	307-24-4	23	1.7	0.42	1
14434	Perfluorononanoic acid[1]	375-95-1	20	1.7	0.42	1
14434	Perfluorooctanesulfonamide[1]	754-91-6	20	1.7	0.42	1
14434	Perfluorooctanesulfonic acid[1]	1763-23-1	18	1.7	0.42	1
14434	Perfluorooctanoic acid[1]	335-67-1	21	1.7	0.42	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **BDA-17WT MS Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/30/2019 11:22
Collection Date/Time: 10/29/2019 11:48
SDG#: BMS81-16MS

ARCADIS U.S., Inc.
ELLE Sample #: GW 1187630
ELLE Group #: 2071744
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
LC/MS/MS Miscellaneous	**EPA 537 mod QSM 5.1 table B-15**		**ng/l**	**ng/l**	**ng/l**	
14434	Perfluoropentanoic acid[1]	2706-90-3	25	1.7	0.42	1
14434	Perfluorotetradecanoic acid[1]	376-06-7	19	1.7	0.42	1
14434	Perfluorotridecanoic acid[1]	72629-94-8	21	1.7	0.42	1
14434	Perfluoroundecanoic acid[1]	2058-94-8	21	1.7	0.42	1
Metals	**SW-846 6010D Rev.4, July 2014**		**mg/l**	**mg/l**	**mg/l**	
07044	Antimony	7440-36-0	0.108	0.0500	0.0160	1
07035	Arsenic	7440-38-2	0.0709	0.0300	0.0160	1
07046	Barium	7440-39-3	0.237	0.0050	0.0010	1
07047	Beryllium	7440-41-7	0.0101	0.0050	0.0010	1
07049	Cadmium	7440-43-9	0.0091	0.0050	0.0010	1
01750	Calcium	7440-70-2	170	0.200	0.0960	1
07051	Chromium	7440-47-3	0.0409	0.0150	0.0016	1
07052	Cobalt	7440-48-4	0.0177	0.0050	0.0015	1
07053	Copper	7440-50-8	0.0428	0.0200	0.0120	1
01754	Iron	7439-89-6	1.71	0.200	0.0400	1
07055	Lead	7439-92-1	0.0348	0.0150	0.0071	1
01757	Magnesium	7439-95-4	124	0.100	0.0400	1
07058	Manganese	7439-96-5	1.80	0.0100	0.0030	1
07061	Nickel	7440-02-0	2.00	0.0100	0.0021	1
01762	Potassium	7440-09-7	10.6	0.500	0.204	1
07036	Selenium	7782-49-2	0.0952	0.0500	0.0160	1
07066	Silver	7440-22-4	0.0202	0.0100	0.0050	1
01767	Sodium	7440-23-5	179	1.00	0.239	1
07022	Thallium[1]	7440-28-0	0.0618	0.0300	0.0081	1
	SW-846 6010D Rev.4, July 2014		**ug/l**	**ug/l**	**ug/l**	
07071	Vanadium	7440-62-2	21.7	10.0	1.9	1
07072	Zinc	7440-66-6	439	20.0	3.7	1
	SW-846 6020B Rev.2, July 2014		**ug/l**	**ug/l**	**ug/l**	
06023	Aluminum	7429-90-5	8,270	25.0	19.7	1
	SW-846 7470A		**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	0.00086	0.00020	0.000050	1
Wet Chemistry	**EPA 300.0**		**ug/l**	**ug/l**	**ug/l**	
00224	Chloride	16887-00-6	899,000	80,000	40,000	200

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **BDA-17WT MS Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/30/2019 11:22
Collection Date/Time: 10/29/2019 11:48
SDG#: BMS81-16MS

ARCADIS U.S., Inc.
ELLE Sample #: GW 1187630
ELLE Group #: 2071744
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
Wet Chemistry	**EPA 300.0**		**ug/l**	**ug/l**	**ug/l**	
01504	Fluoride	16984-48-8	3,000	500	250	5
00228	Sulfate	14808-79-8	1,190,000	200,000	60,000	200
	EPA 353.2		**mg/l**	**mg/l**	**mg/l**	
00220	Nitrate Nitrogen	14797-55-8	0.86	0.10	0.040	1
00219	Nitrite Nitrogen	14797-65-0	0.25	0.050	0.015	1
	The holding time was not met.					
	SM 5310 C-2011		**ug/l**	**ug/l**	**ug/l**	
00273	Total Organic Carbon	n.a.	26,200	1,000	500	1
	SM 2320 B-2011		**mg/l as CaCO3**	**mg/l as CaCO3**	**mg/l as CaCO3**	
12150	Total Alkalinity to pH 4.5	n.a.	349	8.0	2.6	1

Sample Comments

State of New York Certification No. 10670

[1] = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	Y193091AA	11/05/2019 16:48	Corie Mellinger	1
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	Y193091AA	11/05/2019 17:32	Corie Mellinger	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	Y193091AA	11/05/2019 16:47	Corie Mellinger	1
01163	GC/MS VOA Water Prep	SW-846 5030C	2	Y193091AA	11/05/2019 17:31	Corie Mellinger	1
14241	Semi-annual Groundwater BMS	SW-846 8270D	1	19303WAN026	11/06/2019 15:27	Kira N Beck	1
14244	SIM SVOAs 8270D MINI	SW-846 8270D SIM	1	19308WAC026	11/06/2019 14:10	Kira N Beck	1
10466	BNA Water Extraction SIM	SW-846 3510C	2	19308WAC026	11/04/2019 17:30	Laura Duquette	1
11010	8270D BNA Extraction	SW-846 3510C	1	19303WAN026	10/31/2019 09:30	Joshua S Ruth	1
13022	Short List Aldehydes- W 8315A	SW-846 8315A	1	193030019A	10/31/2019 19:30	Jessica L Miller	1
01013	Formaldehyde Extraction	SW-846 8315A	1	193030019A	10/31/2019 09:23	Alison Moll	1
10603	Alcohols in Water	SW-846 8015D Rev.4, June 2003	1	193080007A	11/04/2019 13:53	Johanna C Kennedy	1
12926	Glycols in Water by 8015C/D	SW-846 8015D Rev.4, June 2003	1	193040002A	11/01/2019 11:56	Donald Brown	1
14434	PFAS in Water by LC/MS/MS-DoD	EPA 537 mod QSM 5.1 table B-15	1	19304003	11/01/2019 16:24	Devon M Whooley	1
14465	PFAS Water Prep - DoD	EPA 537 mod QSM 5.1 table B-15	1	19304003	10/31/2019 07:00	Toby Barnhart	1
07044	Antimony	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 15:45	Patrick J Engle	1
07035	Arsenic	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 15:45	Patrick J Engle	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **BDA-17WT MS Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/30/2019 11:22
Collection Date/Time: 10/29/2019 11:48
SDG#: BMS81-16MS

ARCADIS U.S., Inc.
ELLE Sample #: GW 1187630
ELLE Group #: 2071744
Matrix: Groundwater

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07046	Barium	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 15:45	Patrick J Engle	1
07047	Beryllium	SW-846 6010D Rev.4, July 2014	1	193041404403	11/05/2019 19:41	Cindy M Gehman	1
07049	Cadmium	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 15:45	Patrick J Engle	1
01750	Calcium	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 15:45	Patrick J Engle	1
07051	Chromium	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 15:45	Patrick J Engle	1
07052	Cobalt	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 15:45	Patrick J Engle	1
07053	Copper	SW-846 6010D Rev.4, July 2014	1	193041404403	11/05/2019 13:48	Patrick J Engle	1
01754	Iron	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 15:45	Patrick J Engle	1
07055	Lead	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 15:45	Patrick J Engle	1
01757	Magnesium	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 15:45	Patrick J Engle	1
07058	Manganese	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 15:45	Patrick J Engle	1
07061	Nickel	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 15:45	Patrick J Engle	1
01762	Potassium	SW-846 6010D Rev.4, July 2014	1	193041404403	11/05/2019 09:49	Patrick J Engle	1
07036	Selenium	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 15:45	Patrick J Engle	1
07066	Silver	SW-846 6010D Rev.4, July 2014	1	193041404403	11/05/2019 19:41	Cindy M Gehman	1
01767	Sodium	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 15:45	Patrick J Engle	1
07022	Thallium	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 15:45	Patrick J Engle	1
07071	Vanadium	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 15:45	Patrick J Engle	1
07072	Zinc	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 15:45	Patrick J Engle	1
06023	Aluminum	SW-846 6020B Rev.2, July 2014	1	193111404701A	11/08/2019 11:09	Janeyah Rivers-Hamilton	1
00259	Mercury	SW-846 7470A	1	193040571302	11/01/2019 07:50	Damary Valentin	1
14044	ICP-WW, 3005A (tot rec) - U345	SW-846 3005A	1	193041404403	10/31/2019 11:21	James L Mertz	1
14047	ICPMS - Water, 3020A - U345	SW-846 3020A	1	193111404701	11/07/2019 14:15	JoElla L Rice	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	193040571302	10/31/2019 15:15	JoElla L Rice	1
00224	Chloride	EPA 300.0	3	19304135213B	11/05/2019 16:09	Samantha Faverio	200
01504	Fluoride	EPA 300.0	3	19304135213B	11/05/2019 15:52	Samantha Faverio	5
00228	Sulfate	EPA 300.0	2	19304135213B	11/05/2019 16:09	Samantha Faverio	200
00220	Nitrate Nitrogen	EPA 353.2	1	19308106102A	11/04/2019 11:59	Ashlynn M Cornelius	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **BDA-17WT MS Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/30/2019 11:22
Collection Date/Time: 10/29/2019 11:48
SDG#: BMS81-16MS

ARCADIS U.S., Inc.
ELLE Sample #: GW 1187630
ELLE Group #: 2071744
Matrix: Groundwater

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
00219	Nitrite Nitrogen	EPA 353.2	1	19304105102A	10/31/2019 12:47	Bethany Sandone	1
00273	Total Organic Carbon	SM 5310 C-2011	1	19309304504A	11/05/2019 20:17	Bethany Sandone	1
12150	Total Alkalinity to pH 4.5	SM 2320 B-2011	1	19304002103A	10/31/2019 22:47	Jeremy L Bolf	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **BDA-17WT MSD Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/30/2019 11:22
Collection Date/Time: 10/29/2019 11:48
SDG#: BMS81-16MSD

ARCADIS U.S., Inc.
ELLE Sample #: GW 1187631
ELLE Group #: 2071744
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	170	20	0.7	1
11997	Acetonitrile	75-05-8	160	100	16	1
11997	Benzene	71-43-2	22	1	0.2	1
11997	Bromochloromethane	74-97-5	19	5	0.2	1
11997	Bromodichloromethane	75-27-4	21	1	0.2	1
11997	Bromoform	75-25-2	20	4	1	1
11997	Bromomethane	74-83-9	15	1	0.3	1
11997	n-Butanol	71-36-3	1,100	250	61	1
11997	2-Butanone	78-93-3	150	10	0.3	1
11997	t-Butyl alcohol	75-65-0	210	50	12	1
11997	n-Butylbenzene	104-51-8	20	5	0.2	1
11997	sec-Butylbenzene	135-98-8	21	5	0.2	1
11997	tert-Butylbenzene	98-06-6	20	5	0.3	1
11997	Carbon Disulfide	75-15-0	20	5	0.2	1
11997	Carbon Tetrachloride	56-23-5	22	1	0.2	1
11997	Chlorobenzene	108-90-7	21	1	0.2	1
11997	Chlorodifluoromethane[1]	75-45-6	18	5	2	1
11997	Chloroethane	75-00-3	16	1	0.2	1
11997	Chloroform	67-66-3	22	1	0.2	1
11997	Chloromethane	74-87-3	17	1	0.2	1
11997	Cyclohexane	110-82-7	20	5	1	1
11997	Cyclohexanone[1]	108-94-1	500	100	25	1
11997	1,2-Dibromo-3-chloropropane	96-12-8	17	5	0.3	1
11997	Dibromochloromethane	124-48-1	20	1	0.2	1
11997	1,2-Dibromoethane	106-93-4	21	1	0.2	1
11997	1,2-Dichlorobenzene	95-50-1	21	5	0.2	1
11997	1,3-Dichlorobenzene	541-73-1	21	5	0.2	1
11997	1,4-Dichlorobenzene	106-46-7	22	5	0.2	1
11997	Dichlorodifluoromethane	75-71-8	15	1	0.2	1
11997	1,1-Dichloroethane	75-34-3	21	1	0.2	1
11997	1,2-Dichloroethane	107-06-2	21	1	0.3	1
11997	1,1-Dichloroethene	75-35-4	23	1	0.2	1
11997	cis-1,2-Dichloroethene	156-59-2	23	1	0.2	1
11997	trans-1,2-Dichloroethene	156-60-5	22	1	0.2	1
11997	1,2-Dichloropropane	78-87-5	22	1	0.2	1
11997	cis-1,3-Dichloropropene	10061-01-5	20	1	0.2	1
11997	trans-1,3-Dichloropropene	10061-02-6	19	1	0.2	1
11997	1,4-Dioxane	123-91-1	650	250	29	1
11997	Ethyl Acetate	141-78-6	22	5	0.7	1
11997	Ethyl ether	60-29-7	19	5	0.2	1
11997	Ethylbenzene	100-41-4	21	1	0.4	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **BDA-17WT MSD Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/30/2019 11:22
Collection Date/Time: 10/29/2019 11:48
SDG#: BMS81-16MSD

ARCADIS U.S., Inc.
ELLE Sample #: GW 1187631
ELLE Group #: 2071744
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Freon 113	76-13-1	22	10	0.2	1
11997	n-Heptane[1]	142-82-5	20	5	2	1
11997	n-Hexane[1]	110-54-3	21	5	2	1
11997	2-Hexanone	591-78-6	100	10	0.3	1
11997	Isobutyl Alcohol	78-83-1	600	250	36	1
11997	Isopropylbenzene	98-82-8	21	5	0.2	1
11997	p-Isopropyltoluene	99-87-6	21	5	0.2	1
11997	Methyl Acetate	79-20-9	20	5	0.2	1
11997	Methyl Tertiary Butyl Ether	1634-04-4	17	1	0.2	1
11997	4-Methyl-2-pentanone	108-10-1	100	10	0.5	1
11997	Methylcyclohexane	108-87-2	19	5	0.5	1
11997	Methylene Chloride	75-09-2	22	1	0.3	1
11997	Naphthalene	91-20-3	18	5	1	1
11997	2-Nitropropane	79-46-9	18	10	0.8	1
11997	Styrene	100-42-5	21	5	0.2	1
11997	1,1,2,2-Tetrachloroethane	79-34-5	20	1	0.2	1
11997	Tetrachloroethene	127-18-4	22	1	0.2	1
11997	Tetrahydrofuran	109-99-9	100	10	0.7	1
11997	Toluene	108-88-3	21	1	0.2	1
11997	1,2,3-Trichlorobenzene	87-61-6	19	5	0.4	1
11997	1,2,4-Trichlorobenzene	120-82-1	19	5	0.3	1
11997	1,1,1-Trichloroethane	71-55-6	22	1	0.3	1
11997	1,1,2-Trichloroethane	79-00-5	22	1	0.2	1
11997	Trichloroethene	79-01-6	22	1	0.2	1
11997	Trichlorofluoromethane	75-69-4	18	1	0.2	1
11997	1,2,4-Trimethylbenzene	95-63-6	20	5	1	1
11997	1,3,5-Trimethylbenzene	108-67-8	20	5	0.3	1
11997	Vinyl Chloride	75-01-4	17	1	0.2	1
11997	m+p-Xylene	179601-23-1	43	5	1	1
11997	o-Xylene	95-47-6	20	1	0.4	1
11997	Xylene (Total)	1330-20-7	63	6	1	1

Project defined calibration criteria are not met. The calibration is compliant with the method defined criteria.

GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	Acenaphthene	83-32-9	47	0.54	0.11	1
14241	Acenaphthylene	208-96-8	48	0.54	0.11	1
14241	Acetophenone	98-86-2	43	11	4.3	1
14241	Aniline	62-53-3	35	11	3.3	1
14241	Anthracene	120-12-7	50	0.54	0.11	1
14241	Atrazine	1912-24-9	50	5.4	2.2	1
14241	Benzaldehyde	100-52-7	46	11	3.3	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **BDA-17WT MSD Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/30/2019 11:22
Collection Date/Time: 10/29/2019 11:48
SDG#: BMS81-16MSD

ARCADIS U.S., Inc.
ELLE Sample #: GW 1187631
ELLE Group #: 2071744
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	Benzo(a)anthracene	56-55-3	50	0.54	0.11	1
14241	Benzo(a)pyrene	50-32-8	45	0.54	0.11	1
14241	Benzo(b)fluoranthene	205-99-2	46	0.54	0.11	1
14241	Benzo(g,h,i)perylene	191-24-2	46	0.54	0.11	1
14241	Benzo(k)fluoranthene	207-08-9	46	0.54	0.11	1
14241	Benzyl alcohol	100-51-6	43	33	11	1
14241	1,1'-Biphenyl	92-52-4	45	11	3.3	1
14241	4-Bromophenyl-phenylether	101-55-3	53	2.2	0.54	1
14241	Butylbenzylphthalate	85-68-7	48	5.4	2.2	1
14241	Di-n-butylphthalate	84-74-2	48	5.4	2.2	1
14241	Caprolactam	105-60-2	15	12	5.4	1
14241	Carbazole	86-74-8	52	2.2	0.54	1
14241	4-Chloro-3-methylphenol	59-50-7	38	2.2	0.54	1
14241	4-Chloroaniline	106-47-8	44	11	4.3	1
14241	bis(2-Chloroethoxy)methane	111-91-1	47	2.2	0.54	1
14241	bis(2-Chloroethyl)ether	111-44-4	41	2.2	0.54	1
14241	bis(2-Chloroisopropyl)ether[1]	39638-32-9	39	2.2	0.54	1
	Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.					
14241	2-Chloronaphthalene	91-58-7	44	1.1	0.43	1
14241	2-Chlorophenol	95-57-8	23	2.2	0.54	1
14241	4-Chlorophenyl-phenylether	7005-72-3	52	2.2	0.54	1
14241	Chrysene	218-01-9	48	0.54	0.11	1
14241	Dibenz(a,h)anthracene	53-70-3	48	0.54	0.11	1
14241	Dibenzofuran	132-64-9	49	2.2	0.54	1
14241	3,3'-Dichlorobenzidine	91-94-1	39	11	3.3	1
14241	2,4-Dichlorophenol	120-83-2	26	2.2	0.54	1
14241	Dicyclohexylamine[1]	101-83-7	N.D.	11	11	1
14241	Diethylphthalate	84-66-2	48	5.4	2.2	1
14241	N,N-Dimethylaniline[1]	121-69-7	N.D.	1.1	0.54	1
14241	2,4-Dimethylphenol	105-67-9	36	11	3.3	1
14241	Dimethylphthalate	131-11-3	50	5.4	2.2	1
14241	4,6-Dinitro-2-methylphenol	534-52-1	53	23	8.7	1
14241	2,4-Dinitrophenol	51-28-5	83	33	15	1
14241	2,4-Dinitrotoluene	121-14-2	50	5.4	1.1	1
14241	2,6-Dinitrotoluene	606-20-2	51	2.2	0.54	1
14241	bis(2-Ethylhexyl)phthalate	117-81-7	46	12	5.4	1
14241	Fluoranthene	206-44-0	51	0.54	0.11	1
14241	Fluorene	86-73-7	50	0.54	0.11	1
14241	Hexachlorobenzene	118-74-1	51	0.54	0.11	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **BDA-17WT MSD Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/30/2019 11:22
Collection Date/Time: 10/29/2019 11:48
SDG#: BMS81-16MSD

ARCADIS U.S., Inc.
ELLE Sample #: GW 1187631
ELLE Group #: 2071744
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result		Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**		**ug/l**	**ug/l**	
14241	Hexachlorobutadiene	87-68-3	40		2.2	0.54	1
14241	Hexachlorocyclopentadiene	77-47-4	60		12	5.4	1
14241	Hexachloroethane	67-72-1	35		5.4	1.1	1
14241	Indeno(1,2,3-cd)pyrene	193-39-5	47		0.54	0.11	1
14241	Isophorone	78-59-1	46		2.2	0.54	1
14241	2-Methylnaphthalene	91-57-6	44		0.54	0.11	1
14241	2-Methylphenol	95-48-7	37		2.2	0.54	1
14241	4-Methylphenol	65794-96-9	33		2.2	0.54	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.						
14241	Naphthalene	91-20-3	42		0.54	0.11	1
14241	2-Nitroaniline	88-74-4	52		7.6	2.2	1
14241	3-Nitroaniline	99-09-2	51		7.6	3.3	1
14241	4-Nitroaniline	100-01-6	46		3.3	0.98	1
14241	Nitrobenzene	98-95-3	45		2.2	0.54	1
14241	2-Nitrophenol	88-75-5	44		11	3.3	1
14241	4-Nitrophenol	100-02-7	25	J	33	11	1
14241	N-Nitroso-di-n-propylamine	621-64-7	44		3.3	0.76	1
14241	N-Nitrosodiphenylamine	86-30-6	49		3.3	0.76	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.						
14241	Di-n-octylphthalate	117-84-0	44		12	5.4	1
14241	Pentachlorophenol	87-86-5	37		5.4	1.1	1
14241	Phenanthrene	85-01-8	51		0.54	0.11	1
14241	Phenol	108-95-2	17		2.2	0.54	1
14241	Pyrene	129-00-0	47		0.54	0.11	1
14241	Pyridine	110-86-1	22		5.4	2.2	1
14241	1,2,4,5-Tetrachlorobenzene	95-94-3	44		2.2	0.54	1
14241	2,3,4,6-Tetrachlorophenol	58-90-2	36		11	4.3	1
14241	2,4,5-Trichlorophenol	95-95-4	31		2.2	0.54	1
14241	2,4,6-Trichlorophenol	88-06-2	33		2.2	0.54	1
14241	Triethylamine[1]	121-44-8	N.D.		11	11	1
GC/MS Semivolatiles	**SW-846 8270D SIM**		**ug/l**		**ug/l**	**ug/l**	
14244	1,4-Dioxane	123-91-1	0.6		0.3	0.1	1

In the first extraction, the recovery for the sample surrogate(s) is outside the QC acceptance limits. The sample was re-extracted within the method required holding time and the surrogates are compliant.

The recovery for a target analyte(s) in the Laboratory Control Spike(s) from the second extraction is outside the QC acceptance limits as noted on the QC

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **BDA-17WT MSD Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/30/2019 11:22
Collection Date/Time: 10/29/2019 11:48
SDG#: BMS81-16MSD

ARCADIS U.S., Inc.
ELLE Sample #: GW 1187631
ELLE Group #: 2071744
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
	Summary. The recoveries for the target analytes in the Laboratory Control Spike(s) from the first extraction are compliant. All data is reported from the second extraction.					
Aldehydes & Ketones	**SW-846 8315A**		**ug/l**	**ug/l**	**ug/l**	
13022	Acetaldehyde[1]	75-07-0	420	60	35	1
13022	Formaldehyde	50-00-0	510	50	20	1
	The response for a target analyte(s) in the initial calibration verification standard is outside the QC acceptance limits.					
GC Miscellaneous	**SW-846 8015D Rev.4, June 2003**		**ug/l**	**ug/l**	**ug/l**	
10603	Ethanol	64-17-5	2,300 D2	1,000	150	1
12926	Ethylene glycol[1]	107-21-1	84,000	10,000	5,000	1
10603	Isopropanol[1]	67-63-0	2,500 D2	1,000	110	1
10603	Methanol	67-56-1	2,400 D2	1,000	220	1
12926	Propylene glycol[1]	57-55-6	75,000	10,000	2,000	1
	The response for a target analyte(s) in the continuing calibration verification standard is outside the QC acceptance limits low. The following action was taken: The analysis was repeated and the continuing calibration verification standard bracketing the sample on the second trial is also outside the acceptance limits. This effect is attributed to the sample matrix and the data is reported.					
LC/MS/MS Miscellaneous	**EPA 537 mod QSM 5.1 table B-15**		**ng/l**	**ng/l**	**ng/l**	
14434	6:2-Fluorotelomersulfonic acid[1]	27619-97-2	24	4.3	1.7	1
14434	8:2-Fluorotelomersulfonic acid[1]	39108-34-4	23	2.6	0.86	1
14434	NEtFOSAA[1]	2991-50-6	21	2.6	0.43	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.					
14434	NMeFOSAA[1]	2355-31-9	22	1.7	0.51	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.					
14434	Perfluorobutanesulfonic acid[1]	375-73-5	18	1.7	0.43	1
14434	Perfluorobutanoic acid[1]	375-22-4	34	4.3	1.7	1
14434	Perfluorodecanesulfonic acid[1]	335-77-3	20	1.7	0.43	1
14434	Perfluorodecanoic acid[1]	335-76-2	21	1.7	0.43	1
14434	Perfluorododecanoic acid[1]	307-55-1	22	1.7	0.43	1
14434	Perfluoroheptanesulfonic acid[1]	375-92-8	20	1.7	0.43	1
14434	Perfluoroheptanoic acid[1]	375-85-9	22	1.7	0.43	1
14434	Perfluorohexanesulfonic acid[1]	355-46-4	18	1.7	0.43	1
14434	Perfluorohexanoic acid[1]	307-24-4	25	1.7	0.43	1
14434	Perfluorononanoic acid[1]	375-95-1	21	1.7	0.43	1
14434	Perfluorooctanesulfonamide[1]	754-91-6	20	1.7	0.43	1
14434	Perfluorooctanesulfonic acid[1]	1763-23-1	18	1.7	0.43	1
14434	Perfluorooctanoic acid[1]	335-67-1	23	1.7	0.43	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **BDA-17WT MSD Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/30/2019 11:22
Collection Date/Time: 10/29/2019 11:48
SDG#: BMS81-16MSD

ARCADIS U.S., Inc.
ELLE Sample #: GW 1187631
ELLE Group #: 2071744
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
LC/MS/MS Miscellaneous	**EPA 537 mod QSM 5.1 table B-15**		**ng/l**	**ng/l**	**ng/l**	
14434	Perfluoropentanoic acid[1]	2706-90-3	28	1.7	0.43	1
14434	Perfluorotetradecanoic acid[1]	376-06-7	21	1.7	0.43	1
14434	Perfluorotridecanoic acid[1]	72629-94-8	19	1.7	0.43	1
14434	Perfluoroundecanoic acid[1]	2058-94-8	19	1.7	0.43	1
Metals	**SW-846 6010D Rev.4, July 2014**		**mg/l**	**mg/l**	**mg/l**	
07044	Antimony	7440-36-0	0.111	0.0500	0.0160	1
07035	Arsenic	7440-38-2	0.0761	0.0300	0.0160	1
07046	Barium	7440-39-3	0.238	0.0050	0.0010	1
07047	Beryllium	7440-41-7	0.0101	0.0050	0.0010	1
07049	Cadmium	7440-43-9	0.0089	0.0050	0.0010	1
01750	Calcium	7440-70-2	171	0.200	0.0960	1
07051	Chromium	7440-47-3	0.0365	0.0150	0.0016	1
07052	Cobalt	7440-48-4	0.0165	0.0050	0.0015	1
07053	Copper	7440-50-8	0.0437	0.0200	0.0120	1
01754	Iron	7439-89-6	1.92	0.200	0.0400	1
07055	Lead	7439-92-1	0.0328	0.0150	0.0071	1
01757	Magnesium	7439-95-4	123	0.100	0.0400	1
07058	Manganese	7439-96-5	1.85	0.0100	0.0030	1
07061	Nickel	7440-02-0	1.99	0.0100	0.0021	1
01762	Potassium	7440-09-7	10.6	0.500	0.204	1
07036	Selenium	7782-49-2	0.101	0.0500	0.0160	1
07066	Silver	7440-22-4	0.0204	0.0100	0.0050	1
01767	Sodium	7440-23-5	179	1.00	0.239	1
07022	Thallium[1]	7440-28-0	0.0592	0.0300	0.0081	1
	SW-846 6010D Rev.4, July 2014		**ug/l**	**ug/l**	**ug/l**	
07071	Vanadium	7440-62-2	22.1	10.0	1.9	1
07072	Zinc	7440-66-6	435	20.0	3.7	1
	SW-846 6020B Rev.2, July 2014		**ug/l**	**ug/l**	**ug/l**	
06023	Aluminum	7429-90-5	12,600	25.0	19.7	1
	SW-846 7470A		**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	0.00079	0.00020	0.000050	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **BDA-17WT MSD Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/30/2019 11:22
Collection Date/Time: 10/29/2019 11:48
SDG#: BMS81-16MSD

ARCADIS U.S., Inc.
ELLE Sample #: GW 1187631
ELLE Group #: 2071744
Matrix: Groundwater

Sample Comments

State of New York Certification No. 10670

[1] = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	Y193091AA	11/05/2019 17:10	Corie Mellinger	1
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	Y193091AA	11/05/2019 17:54	Corie Mellinger	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	Y193091AA	11/05/2019 17:09	Corie Mellinger	1
01163	GC/MS VOA Water Prep	SW-846 5030C	2	Y193091AA	11/05/2019 17:53	Corie Mellinger	1
14241	Semi-annual Groundwater BMS	SW-846 8270D	1	19303WAN026	11/06/2019 14:58	Kira N Beck	1
14244	SIM SVOAs 8270D MINI	SW-846 8270D SIM	1	19308WAC026	11/06/2019 14:37	Kira N Beck	1
10466	BNA Water Extraction SIM	SW-846 3510C	2	19308WAC026	11/04/2019 17:30	Laura Duquette	1
11010	8270D BNA Extraction	SW-846 3510C	1	19303WAN026	10/31/2019 09:30	Joshua S Ruth	1
13022	Short List Aldehydes- W 8315A	SW-846 8315A	1	193030019A	10/31/2019 19:40	Jessica L Miller	1
01013	Formaldehyde Extraction	SW-846 8315A	1	193030019A	10/31/2019 09:23	Alison Moll	1
10603	Alcohols in Water	SW-846 8015D Rev.4, June 2003	1	193080007A	11/04/2019 14:09	Johanna C Kennedy	1
12926	Glycols in Water by 8015C/D	SW-846 8015D Rev.4, June 2003	1	193040002A	11/01/2019 12:08	Donald Brown	1
14434	PFAS in Water by LC/MS/MS-DoD	EPA 537 mod QSM 5.1 table B-15	1	19304003	11/01/2019 16:33	Devon M Whooley	1
14465	PFAS Water Prep - DoD	EPA 537 mod QSM 5.1 table B-15	1	19304003	10/31/2019 07:00	Toby Barnhart	1
07044	Antimony	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 15:48	Patrick J Engle	1
07035	Arsenic	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 15:48	Patrick J Engle	1
07046	Barium	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 15:48	Patrick J Engle	1
07047	Beryllium	SW-846 6010D Rev.4, July 2014	1	193041404403	11/05/2019 19:44	Cindy M Gehman	1
07049	Cadmium	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 15:48	Patrick J Engle	1
01750	Calcium	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 15:48	Patrick J Engle	1
07051	Chromium	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 15:48	Patrick J Engle	1
07052	Cobalt	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 15:48	Patrick J Engle	1
07053	Copper	SW-846 6010D Rev.4, July 2014	1	193041404403	11/05/2019 13:51	Patrick J Engle	1
01754	Iron	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 15:48	Patrick J Engle	1
07055	Lead	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 15:48	Patrick J Engle	1
01757	Magnesium	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 15:48	Patrick J Engle	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **BDA-17WT MSD Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/30/2019 11:22
Collection Date/Time: 10/29/2019 11:48
SDG#: BMS81-16MSD

ARCADIS U.S., Inc.
ELLE Sample #: GW 1187631
ELLE Group #: 2071744
Matrix: Groundwater

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07058	Manganese	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 15:48	Patrick J Engle	1
07061	Nickel	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 15:48	Patrick J Engle	1
01762	Potassium	SW-846 6010D Rev.4, July 2014	1	193041404403	11/05/2019 09:52	Patrick J Engle	1
07036	Selenium	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 15:48	Patrick J Engle	1
07066	Silver	SW-846 6010D Rev.4, July 2014	1	193041404403	11/05/2019 19:44	Cindy M Gehman	1
01767	Sodium	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 15:48	Patrick J Engle	1
07022	Thallium	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 15:48	Patrick J Engle	1
07071	Vanadium	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 15:48	Patrick J Engle	1
07072	Zinc	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 15:48	Patrick J Engle	1
06023	Aluminum	SW-846 6020B Rev.2, July 2014	1	193111404701A	11/08/2019 11:10	Janeyah Rivers-Hamilton	1
00259	Mercury	SW-846 7470A	1	193040571302	11/01/2019 07:52	Damary Valentin	1
14044	ICP-WW, 3005A (tot rec) - U345	SW-846 3005A	1	193041404403	10/31/2019 11:21	James L Mertz	1
14047	ICPMS - Water, 3020A - U345	SW-846 3020A	1	193111404701	11/07/2019 14:15	JoElla L Rice	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	193040571302	10/31/2019 15:15	JoElla L Rice	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **BDA-17WT DUP Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/30/2019 11:22
Collection Date/Time: 10/29/2019 11:48
SDG#: BMS81-16DUP

ARCADIS U.S., Inc.
ELLE Sample #: GW 1187632
ELLE Group #: 2071744
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
Metals	**SW-846 6010D Rev.4, July 2014**		**mg/l**	**mg/l**	**mg/l**	
07044	Antimony	7440-36-0	N.D.	0.0500	0.0160	1
07035	Arsenic	7440-38-2	N.D.	0.0300	0.0160	1
07046	Barium	7440-39-3	0.247	0.0050	0.0010	1
07047	Beryllium	7440-41-7	N.D.	0.0050	0.0010	1
07049	Cadmium	7440-43-9	N.D.	0.0050	0.0010	1
01750	Calcium	7440-70-2	278	0.200	0.0960	1
07051	Chromium	7440-47-3	0.0271	0.0150	0.0016	1
07052	Cobalt	7440-48-4	0.0156	0.0050	0.0015	1
07053	Copper	7440-50-8	0.0523	0.0200	0.0120	1
01754	Iron	7439-89-6	9.94	0.200	0.0400	1
07055	Lead	7439-92-1	0.0109 J	0.0150	0.0071	1
01757	Magnesium	7439-95-4	158	0.100	0.0400	1
07058	Manganese	7439-96-5	2.74	0.0100	0.0030	1
07061	Nickel	7440-02-0	0.0545	0.0100	0.0021	1
01762	Potassium	7440-09-7	6.17	0.500	0.204	1
07036	Selenium	7782-49-2	N.D.	0.0500	0.0160	1
07066	Silver	7440-22-4	N.D.	0.0100	0.0050	1
01767	Sodium	7440-23-5	174	1.00	0.239	1
07022	Thallium[1]	7440-28-0	N.D.	0.0300	0.0081	1
	SW-846 6010D Rev.4, July 2014		**ug/l**	**ug/l**	**ug/l**	
07071	Vanadium	7440-62-2	10.8	10.0	1.9	1
07072	Zinc	7440-66-6	38.6	20.0	3.7	1
	SW-846 6020B Rev.2, July 2014		**ug/l**	**ug/l**	**ug/l**	
06023	Aluminum	7429-90-5	51,700	50.0	39.4	2
	SW-846 7470A		**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	N.D.	0.00020	0.000050	1
Wet Chemistry	**EPA 300.0**		**ug/l**	**ug/l**	**ug/l**	
00224	Chloride	16887-00-6	517,000	80,000	40,000	200
01504	Fluoride	16984-48-8	N.D.	500	250	5
00228	Sulfate	14808-79-8	229,000	200,000	60,000	200
	EPA 353.2		**mg/l**	**mg/l**	**mg/l**	
00220	Nitrate Nitrogen	14797-55-8	N.D.	0.10	0.040	1
00219	Nitrite Nitrogen	14797-65-0	0.037 J	0.050	0.015	1

The holding time was not met.

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **BDA-17WT DUP Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/30/2019 11:22
Collection Date/Time: 10/29/2019 11:48
SDG#: BMS81-16DUP

ARCADIS U.S., Inc.
ELLE Sample #: GW 1187632
ELLE Group #: 2071744
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
Wet Chemistry	**SM 5310 C-2011**		**ug/l**	**ug/l**	**ug/l**	
00273	Total Organic Carbon	n.a.	16,600	1,000	500	1
	SM 2320 B-2011		**mg/l as CaCO3**	**mg/l as CaCO3**	**mg/l as CaCO3**	
12150	Total Alkalinity to pH 4.5	n.a.	300	8.0	2.6	1
	SM 5210 B-2011		**ug/l**	**ug/l**	**ug/l**	
14108	Biochemical Oxygen Demand-BOD	n.a.	11,700	2,000	2,000	1

Sample Comments

State of New York Certification No. 10670

[1] = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07044	Antimony	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 15:42	Patrick J Engle	1
07035	Arsenic	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 15:42	Patrick J Engle	1
07046	Barium	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 15:42	Patrick J Engle	1
07047	Beryllium	SW-846 6010D Rev.4, July 2014	1	193041404403	11/05/2019 19:38	Cindy M Gehman	1
07049	Cadmium	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 15:42	Patrick J Engle	1
01750	Calcium	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 15:42	Patrick J Engle	1
07051	Chromium	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 15:42	Patrick J Engle	1
07052	Cobalt	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 15:42	Patrick J Engle	1
07053	Copper	SW-846 6010D Rev.4, July 2014	1	193041404403	11/05/2019 13:44	Patrick J Engle	1
01754	Iron	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 15:42	Patrick J Engle	1
07055	Lead	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 15:42	Patrick J Engle	1
01757	Magnesium	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 15:42	Patrick J Engle	1
07058	Manganese	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 15:42	Patrick J Engle	1
07061	Nickel	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 15:42	Patrick J Engle	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **BDA-17WT DUP Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/30/2019 11:22
Collection Date/Time: 10/29/2019 11:48
SDG#: BMS81-16DUP

ARCADIS U.S., Inc.
ELLE Sample #: GW 1187632
ELLE Group #: 2071744
Matrix: Groundwater

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01762	Potassium	SW-846 6010D Rev.4, July 2014	1	193041404403	11/05/2019 09:46	Patrick J Engle	1
07036	Selenium	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 15:42	Patrick J Engle	1
07066	Silver	SW-846 6010D Rev.4, July 2014	1	193041404403	11/05/2019 19:38	Cindy M Gehman	1
01767	Sodium	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 15:42	Patrick J Engle	1
07022	Thallium	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 15:42	Patrick J Engle	1
07071	Vanadium	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 15:42	Patrick J Engle	1
07072	Zinc	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 15:42	Patrick J Engle	1
06023	Aluminum	SW-846 6020B Rev.2, July 2014	1	193111404701A	11/08/2019 14:44	Janeyah Rivers-Hamilton	2
00259	Mercury	SW-846 7470A	1	193040571302	11/01/2019 07:48	Damary Valentin	1
14044	ICP-WW, 3005A (tot rec) - U345	SW-846 3005A	1	193041404403	10/31/2019 11:21	James L Mertz	1
14047	ICPMS - Water, 3020A - U345	SW-846 3020A	1	193111404701	11/07/2019 14:15	JoElla L Rice	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	193040571302	10/31/2019 15:15	JoElla L Rice	1
00224	Chloride	EPA 300.0	2	19304135213B	11/01/2019 00:18	Kevin Litwa	200
01504	Fluoride	EPA 300.0	2	19304135213B	11/01/2019 00:03	Kevin Litwa	5
00228	Sulfate	EPA 300.0	2	19304135213B	11/01/2019 00:18	Kevin Litwa	200
00220	Nitrate Nitrogen	EPA 353.2	1	19308106102A	11/04/2019 11:57	Ashlynn M Cornelius	1
00219	Nitrite Nitrogen	EPA 353.2	1	19304105102A	10/31/2019 12:51	Bethany Sandone	1
00273	Total Organic Carbon	SM 5310 C-2011	1	19309304504A	11/05/2019 20:32	Bethany Sandone	1
12150	Total Alkalinity to pH 4.5	SM 2320 B-2011	1	19304002103A	10/31/2019 23:04	Jeremy L Bolf	1
14108	Biochemical Oxygen Demand-BOD	SM 5210 B-2011	1	19304141081A	10/31/2019 10:50	Benjamin M Morrison	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **BDA-17WT Filtered Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/30/2019 11:22
Collection Date/Time: 10/29/2019 11:48
SDG#: BMS81-17BKG

ARCADIS U.S., Inc.
ELLE Sample #: GW 1187633
ELLE Group #: 2071744
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
Metals Dissolved	**SW-846 6010D Rev.4, July 2014**		**mg/l**	**mg/l**	**mg/l**	
07044	Antimony	7440-36-0	N.D.	0.0500	0.0160	1
07035	Arsenic	7440-38-2	N.D.	0.0300	0.0160	1
07046	Barium	7440-39-3	0.198	0.0050	0.0010	1
07047	Beryllium	7440-41-7	N.D.	0.0050	0.0010	1
07049	Cadmium	7440-43-9	N.D.	0.0050	0.0010	1
01750	Calcium	7440-70-2	158	0.200	0.0960	1
07051	Chromium	7440-47-3	0.0032 J	0.0150	0.0016	1
07052	Cobalt	7440-48-4	0.0044 J	0.0050	0.0015	1
07053	Copper	7440-50-8	N.D.	0.0200	0.0120	1
01754	Iron	7439-89-6	1.07	0.200	0.0400	1
07055	Lead	7439-92-1	N.D.	0.0150	0.0071	1
01757	Magnesium	7439-95-4	122	0.100	0.0400	1
07058	Manganese	7439-96-5	1.45	0.0100	0.0030	1
07061	Nickel	7440-02-0	0.0227	0.0100	0.0021	1
01762	Potassium	7440-09-7	5.74	0.500	0.204	1
07036	Selenium	7782-49-2	N.D.	0.0500	0.0160	1
07066	Silver	7440-22-4	N.D.	0.0100	0.0050	1
01767	Sodium	7440-23-5	176	1.00	0.239	1
07022	Thallium[1]	7440-28-0	N.D.	0.0300	0.0081	1
	SW-846 6010D Rev.4, July 2014		**ug/l**	**ug/l**	**ug/l**	
07071	Vanadium	7440-62-2	N.D.	10.0	1.9	1
07072	Zinc	7440-66-6	5.4 J	20.0	3.7	1
	SW-846 6020B Rev.2, July 2014		**ug/l**	**ug/l**	**ug/l**	
06023	Aluminum	7429-90-5	906	25.0	19.7	1
	SW-846 7470A		**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	N.D.	0.00020	0.000050	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals.

[1] = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **BDA-17WT Filtered Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/30/2019 11:22
Collection Date/Time: 10/29/2019 11:48
SDG#: BMS81-17BKG

ARCADIS U.S., Inc.
ELLE Sample #: GW 1187633
ELLE Group #: 2071744
Matrix: Groundwater

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07044	Antimony	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:04	Patrick J Engle	1
07035	Arsenic	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:04	Patrick J Engle	1
07046	Barium	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:04	Patrick J Engle	1
07047	Beryllium	SW-846 6010D Rev.4, July 2014	1	193041404402	11/05/2019 23:21	Elaine F Stoltzfus	1
07049	Cadmium	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:04	Patrick J Engle	1
01750	Calcium	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:04	Patrick J Engle	1
07051	Chromium	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:04	Patrick J Engle	1
07052	Cobalt	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:04	Patrick J Engle	1
07053	Copper	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:04	Patrick J Engle	1
01754	Iron	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:04	Patrick J Engle	1
07055	Lead	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:04	Patrick J Engle	1
01757	Magnesium	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:04	Patrick J Engle	1
07058	Manganese	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:04	Patrick J Engle	1
07061	Nickel	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:04	Patrick J Engle	1
01762	Potassium	SW-846 6010D Rev.4, July 2014	1	193041404402	11/05/2019 08:21	Patrick J Engle	1
07036	Selenium	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:04	Patrick J Engle	1
07066	Silver	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:04	Patrick J Engle	1
01767	Sodium	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:04	Patrick J Engle	1
07022	Thallium	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:04	Patrick J Engle	1
07071	Vanadium	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:04	Patrick J Engle	1
07072	Zinc	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:04	Patrick J Engle	1
06023	Aluminum	SW-846 6020B Rev.2, July 2014	1	193111404702A	11/08/2019 09:10	Choon Y Tian	1
00259	Mercury	SW-846 7470A	1	193050571301	11/02/2019 07:58	Damary Valentin	1
14044	ICP-WW, 3005A (tot rec) - U345	SW-846 3005A	1	193041404402	10/31/2019 11:21	James L Mertz	1
14047	ICPMS - Water, 3020A - U345	SW-846 3020A	1	193111404702	11/07/2019 14:15	JoElla L Rice	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	193050571301	11/01/2019 07:30	Annamaria Kuhns	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **BDA-17WT MS Filtered Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/30/2019 11:22
Collection Date/Time: 10/29/2019 11:48
SDG#: BMS81-17MS

ARCADIS U.S., Inc.
ELLE Sample #: GW 1187634
ELLE Group #: 2071744
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
Metals Dissolved	**SW-846 6010D Rev.4, July 2014**		**mg/l**	**mg/l**	**mg/l**	
07044	Antimony	7440-36-0	0.109	0.0500	0.0160	1
07035	Arsenic	7440-38-2	0.0751	0.0300	0.0160	1
07046	Barium	7440-39-3	0.194	0.0050	0.0010	1
07047	Beryllium	7440-41-7	0.0101	0.0050	0.0010	1
07049	Cadmium	7440-43-9	0.0094	0.0050	0.0010	1
01750	Calcium	7440-70-2	172	0.200	0.0960	1
07051	Chromium	7440-47-3	0.0355	0.0150	0.0016	1
07052	Cobalt	7440-48-4	0.0131	0.0050	0.0015	1
07053	Copper	7440-50-8	0.0474	0.0200	0.0120	1
01754	Iron	7439-89-6	3.83	0.200	0.0400	1
07055	Lead	7439-92-1	0.0307	0.0150	0.0071	1
01757	Magnesium	7439-95-4	122	0.100	0.0400	1
07058	Manganese	7439-96-5	1.50	0.0100	0.0030	1
07061	Nickel	7440-02-0	2.03	0.0100	0.0021	1
01762	Potassium	7440-09-7	11.8	0.500	0.204	1
07036	Selenium	7782-49-2	0.0973	0.0500	0.0160	1
07066	Silver	7440-22-4	0.0212	0.0100	0.0050	1
01767	Sodium	7440-23-5	174	1.00	0.239	1
07022	Thallium[1]	7440-28-0	0.0609	0.0300	0.0081	1
	SW-846 6010D Rev.4, July 2014		**ug/l**	**ug/l**	**ug/l**	
07071	Vanadium	7440-62-2	22.1	10.0	1.9	1
07072	Zinc	7440-66-6	446	20.0	3.7	1
	SW-846 6020B Rev.2, July 2014		**ug/l**	**ug/l**	**ug/l**	
06023	Aluminum	7429-90-5	11,800	25.0	19.7	1
	SW-846 7470A		**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	0.00089	0.00020	0.000050	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals.

[1] = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **BDA-17WT MS Filtered Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/30/2019 11:22
Collection Date/Time: 10/29/2019 11:48
SDG#: BMS81-17MS

ARCADIS U.S., Inc.
ELLE Sample #: GW 1187634
ELLE Group #: 2071744
Matrix: Groundwater

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07044	Antimony	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:13	Patrick J Engle	1
07035	Arsenic	SW-846 6010D Rev.4, July 2014	1	193041404402	11/05/2019 17:03	Patrick J Engle	1
07046	Barium	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:13	Patrick J Engle	1
07047	Beryllium	SW-846 6010D Rev.4, July 2014	1	193041404402	11/05/2019 23:31	Elaine F Stoltzfus	1
07049	Cadmium	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:13	Patrick J Engle	1
01750	Calcium	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:13	Patrick J Engle	1
07051	Chromium	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:13	Patrick J Engle	1
07052	Cobalt	SW-846 6010D Rev.4, July 2014	1	193041404402	11/05/2019 08:31	Patrick J Engle	1
07053	Copper	SW-846 6010D Rev.4, July 2014	1	193041404402	11/05/2019 17:03	Patrick J Engle	1
01754	Iron	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:13	Patrick J Engle	1
07055	Lead	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:13	Patrick J Engle	1
01757	Magnesium	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:13	Patrick J Engle	1
07058	Manganese	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:13	Patrick J Engle	1
07061	Nickel	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:13	Patrick J Engle	1
01762	Potassium	SW-846 6010D Rev.4, July 2014	1	193041404402	11/05/2019 08:31	Patrick J Engle	1
07036	Selenium	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:13	Patrick J Engle	1
07066	Silver	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:13	Patrick J Engle	1
01767	Sodium	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:13	Patrick J Engle	1
07022	Thallium	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:13	Patrick J Engle	1
07071	Vanadium	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:13	Patrick J Engle	1
07072	Zinc	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:13	Patrick J Engle	1
06023	Aluminum	SW-846 6020B Rev.2, July 2014	1	193111404702A	11/08/2019 09:16	Choon Y Tian	1
00259	Mercury	SW-846 7470A	1	193050571301	11/02/2019 08:02	Damary Valentin	1
14044	ICP-WW, 3005A (tot rec) - U345	SW-846 3005A	1	193041404402	10/31/2019 11:21	James L Mertz	1
14047	ICPMS - Water, 3020A - U345	SW-846 3020A	1	193111404702	11/07/2019 14:15	JoElla L Rice	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	193050571301	11/01/2019 07:30	Annamaria Kuhns	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **BDA-17WT MSD Filtered Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/30/2019 11:22
Collection Date/Time: 10/29/2019 11:48
SDG#: BMS81-17MSD

ARCADIS U.S., Inc.
ELLE Sample #: GW 1187635
ELLE Group #: 2071744
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
Metals Dissolved	**SW-846 6010D Rev.4, July 2014**		**mg/l**	**mg/l**	**mg/l**	
07044	Antimony	7440-36-0	0.109	0.0500	0.0160	1
07035	Arsenic	7440-38-2	0.0667	0.0300	0.0160	1
07046	Barium	7440-39-3	0.207	0.0050	0.0010	1
07047	Beryllium	7440-41-7	0.0099	0.0050	0.0010	1
07049	Cadmium	7440-43-9	0.0093	0.0050	0.0010	1
01750	Calcium	7440-70-2	156	0.200	0.0960	1
07051	Chromium	7440-47-3	0.0328	0.0150	0.0016	1
07052	Cobalt	7440-48-4	0.0135	0.0050	0.0015	1
07053	Copper	7440-50-8	0.0399	0.0200	0.0120	1
01754	Iron	7439-89-6	1.14	0.200	0.0400	1
07055	Lead	7439-92-1	0.0286	0.0150	0.0071	1
01757	Magnesium	7439-95-4	119	0.100	0.0400	1
07058	Manganese	7439-96-5	1.49	0.0100	0.0030	1
07061	Nickel	7440-02-0	2.02	0.0100	0.0021	1
01762	Potassium	7440-09-7	10.7	0.500	0.204	1
07036	Selenium	7782-49-2	0.0915	0.0500	0.0160	1
07066	Silver	7440-22-4	0.0196	0.0100	0.0050	1
01767	Sodium	7440-23-5	174	1.00	0.239	1
07022	Thallium[1]	7440-28-0	0.0608	0.0300	0.0081	1
	SW-846 6010D Rev.4, July 2014		**ug/l**	**ug/l**	**ug/l**	
07071	Vanadium	7440-62-2	20.2	10.0	1.9	1
07072	Zinc	7440-66-6	437	20.0	3.7	1
	SW-846 6020B Rev.2, July 2014		**ug/l**	**ug/l**	**ug/l**	
06023	Aluminum	7429-90-5	604	25.0	19.7	1
	SW-846 7470A		**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	0.00084	0.00020	0.000050	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals.

[1] = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **BDA-17WT MSD Filtered Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/30/2019 11:22
Collection Date/Time: 10/29/2019 11:48
SDG#: BMS81-17MSD

ARCADIS U.S., Inc.
ELLE Sample #: GW 1187635
ELLE Group #: 2071744
Matrix: Groundwater

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07044	Antimony	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:17	Patrick J Engle	1
07035	Arsenic	SW-846 6010D Rev.4, July 2014	1	193041404402	11/05/2019 17:07	Patrick J Engle	1
07046	Barium	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:17	Patrick J Engle	1
07047	Beryllium	SW-846 6010D Rev.4, July 2014	1	193041404402	11/05/2019 23:34	Elaine F Stoltzfus	1
07049	Cadmium	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:17	Patrick J Engle	1
01750	Calcium	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:17	Patrick J Engle	1
07051	Chromium	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:17	Patrick J Engle	1
07052	Cobalt	SW-846 6010D Rev.4, July 2014	1	193041404402	11/05/2019 08:34	Patrick J Engle	1
07053	Copper	SW-846 6010D Rev.4, July 2014	1	193041404402	11/05/2019 17:07	Patrick J Engle	1
01754	Iron	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:17	Patrick J Engle	1
07055	Lead	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:17	Patrick J Engle	1
01757	Magnesium	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:17	Patrick J Engle	1
07058	Manganese	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:17	Patrick J Engle	1
07061	Nickel	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:17	Patrick J Engle	1
01762	Potassium	SW-846 6010D Rev.4, July 2014	1	193041404402	11/05/2019 08:34	Patrick J Engle	1
07036	Selenium	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:17	Patrick J Engle	1
07066	Silver	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:17	Patrick J Engle	1
01767	Sodium	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:17	Patrick J Engle	1
07022	Thallium	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:17	Patrick J Engle	1
07071	Vanadium	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:17	Patrick J Engle	1
07072	Zinc	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:17	Patrick J Engle	1
06023	Aluminum	SW-846 6020B Rev.2, July 2014	1	193111404702A	11/08/2019 09:18	Choon Y Tian	1
00259	Mercury	SW-846 7470A	1	193050571301	11/02/2019 08:04	Damary Valentin	1
14044	ICP-WW, 3005A (tot rec) - U345	SW-846 3005A	1	193041404402	10/31/2019 11:21	James L Mertz	1
14047	ICPMS - Water, 3020A - U345	SW-846 3020A	1	193111404702	11/07/2019 14:15	JoElla L Rice	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	193050571301	11/01/2019 07:30	Annamaria Kuhns	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **BDA-17WT DUP Filtered Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/30/2019 11:22
Collection Date/Time: 10/29/2019 11:48
SDG#: BMS81-17DUP

ARCADIS U.S., Inc.
ELLE Sample #: GW 1187636
ELLE Group #: 2071744
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
Metals Dissolved	**SW-846 6010D Rev.4, July 2014**		**mg/l**	**mg/l**	**mg/l**	
07044	Antimony	7440-36-0	N.D.	0.0500	0.0160	1
07035	Arsenic	7440-38-2	0.0195 J	0.0300	0.0160	1
07046	Barium	7440-39-3	0.196	0.0050	0.0010	1
07047	Beryllium	7440-41-7	N.D.	0.0050	0.0010	1
07049	Cadmium	7440-43-9	N.D.	0.0050	0.0010	1
01750	Calcium	7440-70-2	159	0.200	0.0960	1
07051	Chromium	7440-47-3	0.0034 J	0.0150	0.0016	1
07052	Cobalt	7440-48-4	0.0045 J	0.0050	0.0015	1
07053	Copper	7440-50-8	N.D.	0.0200	0.0120	1
01754	Iron	7439-89-6	1.07	0.200	0.0400	1
07055	Lead	7439-92-1	N.D.	0.0150	0.0071	1
01757	Magnesium	7439-95-4	121	0.100	0.0400	1
07058	Manganese	7439-96-5	1.44	0.0100	0.0030	1
07061	Nickel	7440-02-0	0.0231	0.0100	0.0021	1
01762	Potassium	7440-09-7	5.72	0.500	0.204	1
07036	Selenium	7782-49-2	N.D.	0.0500	0.0160	1
07066	Silver	7440-22-4	N.D.	0.0100	0.0050	1
01767	Sodium	7440-23-5	175	1.00	0.239	1
07022	Thallium[1]	7440-28-0	0.0085 J	0.0300	0.0081	1
	SW-846 6010D Rev.4, July 2014		**ug/l**	**ug/l**	**ug/l**	
07071	Vanadium	7440-62-2	N.D.	10.0	1.9	1
07072	Zinc	7440-66-6	5.2 J	20.0	3.7	1
	SW-846 6020B Rev.2, July 2014		**ug/l**	**ug/l**	**ug/l**	
06023	Aluminum	7429-90-5	799	25.0	19.7	1
	SW-846 7470A		**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	N.D.	0.00020	0.000050	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals.

[1] = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **BDA-17WT DUP Filtered Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/30/2019 11:22
Collection Date/Time: 10/29/2019 11:48
SDG#: BMS81-17DUP

ARCADIS U.S., Inc.
ELLE Sample #: GW 1187636
ELLE Group #: 2071744
Matrix: Groundwater

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07044	Antimony	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:10	Patrick J Engle	1
07035	Arsenic	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:10	Patrick J Engle	1
07046	Barium	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:10	Patrick J Engle	1
07047	Beryllium	SW-846 6010D Rev.4, July 2014	1	193041404402	11/05/2019 23:28	Elaine F Stoltzfus	1
07049	Cadmium	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:10	Patrick J Engle	1
01750	Calcium	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:10	Patrick J Engle	1
07051	Chromium	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:10	Patrick J Engle	1
07052	Cobalt	SW-846 6010D Rev.4, July 2014	1	193041404402	11/05/2019 08:28	Patrick J Engle	1
07053	Copper	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:10	Patrick J Engle	1
01754	Iron	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:10	Patrick J Engle	1
07055	Lead	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:10	Patrick J Engle	1
01757	Magnesium	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:10	Patrick J Engle	1
07058	Manganese	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:10	Patrick J Engle	1
07061	Nickel	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:10	Patrick J Engle	1
01762	Potassium	SW-846 6010D Rev.4, July 2014	1	193041404402	11/05/2019 08:28	Patrick J Engle	1
07036	Selenium	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:10	Patrick J Engle	1
07066	Silver	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:10	Patrick J Engle	1
01767	Sodium	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:10	Patrick J Engle	1
07022	Thallium	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:10	Patrick J Engle	1
07071	Vanadium	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:10	Patrick J Engle	1
07072	Zinc	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:10	Patrick J Engle	1
06023	Aluminum	SW-846 6020B Rev.2, July 2014	1	193111404702A	11/08/2019 09:14	Choon Y Tian	1
00259	Mercury	SW-846 7470A	1	193050571301	11/02/2019 08:00	Damary Valentin	1
14044	ICP-WW, 3005A (tot rec) - U345	SW-846 3005A	1	193041404402	10/31/2019 11:21	James L Mertz	1
14047	ICPMS - Water, 3020A - U345	SW-846 3020A	1	193111404702	11/07/2019 14:15	JoElla L Rice	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	193050571301	11/01/2019 07:30	Annamaria Kuhns	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **BDA-17WR Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/30/2019 11:22
Collection Date/Time: 10/29/2019 15:40
SDG#: BMS81-18

ARCADIS U.S., Inc.
ELLE Sample #: GW 1187637
ELLE Group #: 2071744
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	4 J	20	0.7	1
11997	Acetonitrile	75-05-8	N.D.	100	16	1
11997	Benzene	71-43-2	N.D.	1	0.2	1
11997	Bromochloromethane	74-97-5	N.D.	5	0.2	1
11997	Bromodichloromethane	75-27-4	N.D.	1	0.2	1
11997	Bromoform	75-25-2	N.D.	4	1	1
11997	Bromomethane	74-83-9	N.D.	1	0.3	1
11997	n-Butanol	71-36-3	N.D.	250	61	1
11997	2-Butanone	78-93-3	0.7 J	10	0.3	1
11997	t-Butyl alcohol	75-65-0	N.D.	50	12	1
11997	n-Butylbenzene	104-51-8	N.D.	5	0.2	1
11997	sec-Butylbenzene	135-98-8	N.D.	5	0.2	1
11997	tert-Butylbenzene	98-06-6	N.D.	5	0.3	1
11997	Carbon Disulfide	75-15-0	N.D.	5	0.2	1
11997	Carbon Tetrachloride	56-23-5	N.D.	1	0.2	1
11997	Chlorobenzene	108-90-7	N.D.	1	0.2	1
11997	Chlorodifluoromethane[1]	75-45-6	N.D.	5	2	1
11997	Chloroethane	75-00-3	N.D.	1	0.2	1
11997	Chloroform	67-66-3	0.3 J	1	0.2	1
11997	Chloromethane	74-87-3	N.D.	1	0.2	1
11997	Cyclohexane	110-82-7	N.D.	5	1	1
11997	Cyclohexanone[1]	108-94-1	N.D.	100	25	1
11997	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	5	0.3	1
11997	Dibromochloromethane	124-48-1	N.D.	1	0.2	1
11997	1,2-Dibromoethane	106-93-4	N.D.	1	0.2	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	5	0.2	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	5	0.2	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	5	0.2	1
11997	Dichlorodifluoromethane	75-71-8	N.D.	1	0.2	1
11997	1,1-Dichloroethane	75-34-3	N.D.	1	0.2	1
11997	1,2-Dichloroethane	107-06-2	N.D.	1	0.3	1
11997	1,1-Dichloroethene	75-35-4	N.D.	1	0.2	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	1	0.2	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	1	0.2	1
11997	1,2-Dichloropropane	78-87-5	N.D.	1	0.2	1
11997	cis-1,3-Dichloropropene	10061-01-5	N.D.	1	0.2	1
11997	trans-1,3-Dichloropropene	10061-02-6	N.D.	1	0.2	1
11997	1,4-Dioxane	123-91-1	N.D.	250	29	1
11997	Ethyl Acetate	141-78-6	N.D.	5	0.7	1
11997	Ethyl ether	60-29-7	N.D.	5	0.2	1
11997	Ethylbenzene	100-41-4	N.D.	1	0.4	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **BDA-17WR Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/30/2019 11:22
Collection Date/Time: 10/29/2019 15:40
SDG#: BMS81-18

ARCADIS U.S., Inc.
ELLE Sample #: GW 1187637
ELLE Group #: 2071744
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Freon 113	76-13-1	N.D.	10	0.2	1
11997	n-Heptane[1]	142-82-5	N.D.	5	2	1
11997	n-Hexane[1]	110-54-3	N.D.	5	2	1
11997	2-Hexanone	591-78-6	N.D.	10	0.3	1
11997	Isobutyl Alcohol	78-83-1	N.D.	250	36	1
11997	Isopropylbenzene	98-82-8	N.D.	5	0.2	1
11997	p-Isopropyltoluene	99-87-6	N.D.	5	0.2	1
11997	Methyl Acetate	79-20-9	N.D.	5	0.2	1
11997	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	1	0.2	1
11997	4-Methyl-2-pentanone	108-10-1	N.D.	10	0.5	1
11997	Methylcyclohexane	108-87-2	N.D.	5	0.5	1
11997	Methylene Chloride	75-09-2	N.D.	1	0.3	1
11997	Naphthalene	91-20-3	N.D.	5	1	1
11997	2-Nitropropane	79-46-9	N.D.	10	0.8	1
11997	Styrene	100-42-5	N.D.	5	0.2	1
11997	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	1	0.2	1
11997	Tetrachloroethene	127-18-4	N.D.	1	0.2	1
11997	Tetrahydrofuran	109-99-9	N.D.	10	0.7	1
11997	Toluene	108-88-3	N.D.	1	0.2	1
11997	1,2,3-Trichlorobenzene	87-61-6	N.D.	5	0.4	1
11997	1,2,4-Trichlorobenzene	120-82-1	N.D.	5	0.3	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	1	0.3	1
11997	1,1,2-Trichloroethane	79-00-5	N.D.	1	0.2	1
11997	Trichloroethene	79-01-6	N.D.	1	0.2	1
11997	Trichlorofluoromethane	75-69-4	N.D.	1	0.2	1
11997	1,2,4-Trimethylbenzene	95-63-6	N.D.	5	1	1
11997	1,3,5-Trimethylbenzene	108-67-8	N.D.	5	0.3	1
11997	Vinyl Chloride	75-01-4	N.D.	1	0.2	1
11997	m+p-Xylene	179601-23-1	N.D.	5	1	1
11997	o-Xylene	95-47-6	N.D.	1	0.4	1
11997	Xylene (Total)	1330-20-7	N.D.	6	1	1

Project defined calibration criteria are not met. The calibration is compliant with the method defined criteria.

A Report Limit Verification (RLV) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The RLV standard shows adequate sensitivity at or below the reporting limit.

00882 VOA Interp. Library Search-10

The results from the volatile library search are listed on the attached FORM 1 - VOA-TIC. The qualifiers appearing in the "Q" column are defined at the end of the report.

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **BDA-17WR Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/30/2019 11:22
Collection Date/Time: 10/29/2019 15:40
SDG#: BMS81-18

ARCADIS U.S., Inc.
ELLE Sample #: GW 1187637
ELLE Group #: 2071744
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	Acenaphthene	83-32-9	N.D.	0.50	0.10	1
14241	Acenaphthylene	208-96-8	N.D.	0.50	0.10	1
14241	Acetophenone	98-86-2	N.D.	10	4.0	1
14241	Aniline	62-53-3	N.D.	10	3.0	1
14241	Anthracene	120-12-7	N.D.	0.50	0.10	1
14241	Atrazine	1912-24-9	N.D.	5.0	2.0	1
14241	Benzaldehyde	100-52-7	N.D.	10	3.0	1
14241	Benzo(a)anthracene	56-55-3	N.D.	0.50	0.10	1
14241	Benzo(a)pyrene	50-32-8	N.D.	0.50	0.10	1
14241	Benzo(b)fluoranthene	205-99-2	N.D.	0.50	0.10	1
14241	Benzo(g,h,i)perylene	191-24-2	N.D.	0.50	0.10	1
14241	Benzo(k)fluoranthene	207-08-9	N.D.	0.50	0.10	1
14241	Benzyl alcohol	100-51-6	N.D.	30	10	1
14241	1,1'-Biphenyl	92-52-4	N.D.	10	3.0	1
14241	4-Bromophenyl-phenylether	101-55-3	N.D.	2.0	0.50	1
14241	Butylbenzylphthalate	85-68-7	N.D.	5.0	2.0	1
14241	Di-n-butylphthalate	84-74-2	N.D.	5.0	2.0	1
14241	Caprolactam	105-60-2	N.D.	11	5.0	1
14241	Carbazole	86-74-8	N.D.	2.0	0.50	1
14241	4-Chloro-3-methylphenol	59-50-7	N.D.	2.0	0.50	1
14241	4-Chloroaniline	106-47-8	N.D.	10	4.0	1
14241	bis(2-Chloroethoxy)methane	111-91-1	N.D.	2.0	0.50	1
14241	bis(2-Chloroethyl)ether	111-44-4	N.D.	2.0	0.50	1
14241	bis(2-Chloroisopropyl)ether[1]	39638-32-9	N.D.	2.0	0.50	1
	Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.					
14241	2-Chloronaphthalene	91-58-7	N.D.	1.0	0.40	1
14241	2-Chlorophenol	95-57-8	N.D.	2.0	0.50	1
14241	4-Chlorophenyl-phenylether	7005-72-3	N.D.	2.0	0.50	1
14241	Chrysene	218-01-9	N.D.	0.50	0.10	1
14241	Dibenz(a,h)anthracene	53-70-3	N.D.	0.50	0.10	1
14241	Dibenzofuran	132-64-9	N.D.	2.0	0.50	1
14241	3,3'-Dichlorobenzidine	91-94-1	N.D.	10	3.0	1
14241	2,4-Dichlorophenol	120-83-2	N.D.	2.0	0.50	1
14241	Dicyclohexylamine[1]	101-83-7	N.D.	10	10	1
14241	Diethylphthalate	84-66-2	N.D.	5.0	2.0	1
14241	N,N-Dimethylaniline[1]	121-69-7	N.D.	1.0	0.50	1
14241	2,4-Dimethylphenol	105-67-9	N.D.	10	3.0	1
14241	Dimethylphthalate	131-11-3	N.D.	5.0	2.0	1
14241	4,6-Dinitro-2-methylphenol	534-52-1	N.D.	21	8.0	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **BDA-17WR Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/30/2019 11:22
Collection Date/Time: 10/29/2019 15:40
SDG#: BMS81-18

ARCADIS U.S., Inc.
ELLE Sample #: GW 1187637
ELLE Group #: 2071744
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	2,4-Dinitrophenol	51-28-5	N.D.	30	14	1
14241	2,4-Dinitrotoluene	121-14-2	N.D.	5.0	1.0	1
14241	2,6-Dinitrotoluene	606-20-2	N.D.	2.0	0.50	1
14241	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	11	5.0	1
14241	Fluoranthene	206-44-0	N.D.	0.50	0.10	1
14241	Fluorene	86-73-7	N.D.	0.50	0.10	1
14241	Hexachlorobenzene	118-74-1	N.D.	0.50	0.10	1
14241	Hexachlorobutadiene	87-68-3	N.D.	2.0	0.50	1
14241	Hexachlorocyclopentadiene	77-47-4	N.D.	11	5.0	1
14241	Hexachloroethane	67-72-1	N.D.	5.0	1.0	1
14241	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.50	0.10	1
14241	Isophorone	78-59-1	N.D.	2.0	0.50	1
14241	2-Methylnaphthalene	91-57-6	N.D.	0.50	0.10	1
14241	2-Methylphenol	95-48-7	N.D.	2.0	0.50	1
14241	4-Methylphenol	65794-96-9	N.D.	2.0	0.50	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
14241	Naphthalene	91-20-3	N.D.	0.50	0.10	1
14241	2-Nitroaniline	88-74-4	N.D.	7.0	2.0	1
14241	3-Nitroaniline	99-09-2	N.D.	7.0	3.0	1
14241	4-Nitroaniline	100-01-6	N.D.	3.0	0.90	1
14241	Nitrobenzene	98-95-3	N.D.	2.0	0.50	1
14241	2-Nitrophenol	88-75-5	N.D.	10	3.0	1
14241	4-Nitrophenol	100-02-7	N.D.	30	10	1
14241	N-Nitroso-di-n-propylamine	621-64-7	N.D.	3.0	0.70	1
14241	N-Nitrosodiphenylamine	86-30-6	N.D.	3.0	0.70	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.					
14241	Di-n-octylphthalate	117-84-0	N.D.	11	5.0	1
14241	Pentachlorophenol	87-86-5	N.D.	5.0	1.0	1
14241	Phenanthrene	85-01-8	N.D.	0.50	0.10	1
14241	Phenol	108-95-2	N.D.	2.0	0.50	1
14241	Pyrene	129-00-0	N.D.	0.50	0.10	1
14241	Pyridine	110-86-1	N.D.	5.0	2.0	1
14241	1,2,4,5-Tetrachlorobenzene	95-94-3	N.D.	2.0	0.50	1
14241	2,3,4,6-Tetrachlorophenol	58-90-2	N.D.	10	4.0	1
14241	2,4,5-Trichlorophenol	95-95-4	N.D.	2.0	0.50	1
14241	2,4,6-Trichlorophenol	88-06-2	N.D.	2.0	0.50	1
14241	Triethylamine[1]	121-44-8	N.D.	10	10	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **BDA-17WR Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/30/2019 11:22
Collection Date/Time: 10/29/2019 15:40
SDG#: BMS81-18

ARCADIS U.S., Inc.
ELLE Sample #: GW 1187637
ELLE Group #: 2071744
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D SIM**		**ug/l**	**ug/l**	**ug/l**	
14244	1,4-Dioxane	123-91-1	N.D.	0.3	0.1	1
00886	**SVOA TIC Interpretive(25)**					
	The results from the semivolatile library search are listed on the attached FORM 1 - SV-TIC. The qualifiers appearing in the "Q" column are defined at the end of the report.					
Aldehydes & Ketones	**SW-846 8315A**		**ug/l**	**ug/l**	**ug/l**	
13022	Acetaldehyde[1]	75-07-0	N.D.	60	35	1
13022	Formaldehyde	50-00-0	N.D.	50	20	1
	The response for a target analyte(s) in the initial calibration verification standard is outside the QC acceptance limits.					
GC Miscellaneous	**SW-846 8015D Rev.4, June 2003**		**ug/l**	**ug/l**	**ug/l**	
10603	Ethanol	64-17-5	N.D. D2	1,000	150	1
12926	Ethylene glycol[1]	107-21-1	N.D.	10,000	5,000	1
10603	Isopropanol[1]	67-63-0	N.D. D2	1,000	110	1
10603	Methanol	67-56-1	N.D. D2	1,000	220	1
12926	Propylene glycol[1]	57-55-6	N.D.	10,000	2,000	1
	The response for a target analyte(s) in the continuing calibration verification standard is outside the QC acceptance limits low. The following action was taken: The analysis was repeated and the continuing calibration verification standard bracketing the sample on the second trial is also outside the acceptance limits. This effect is attributed to the sample matrix and the data is reported.					
LC/MS/MS Miscellaneous	**EPA 537 mod QSM 5.1 table B-15**		**ng/l**	**ng/l**	**ng/l**	
14434	6:2-Fluorotelomersulfonic acid[1]	27619-97-2	N.D.	4.4	1.8	1
14434	8:2-Fluorotelomersulfonic acid[1]	39108-34-4	N.D.	2.7	0.89	1
14434	NEtFOSAA[1]	2991-50-6	N.D.	2.7	0.44	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.					
14434	NMeFOSAA[1]	2355-31-9	N.D.	1.8	0.53	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.					
14434	Perfluorobutanesulfonic acid[1]	375-73-5	N.D.	1.8	0.44	1
14434	Perfluorobutanoic acid[1]	375-22-4	6.3	4.4	1.8	1
14434	Perfluorodecanesulfonic acid[1]	335-77-3	N.D.	1.8	0.44	1
14434	Perfluorodecanoic acid[1]	335-76-2	N.D.	1.8	0.44	1
14434	Perfluorododecanoic acid[1]	307-55-1	N.D.	1.8	0.44	1
14434	Perfluoroheptanesulfonic acid[1]	375-92-8	N.D.	1.8	0.44	1
14434	Perfluoroheptanoic acid[1]	375-85-9	N.D.	1.8	0.44	1
14434	Perfluorohexanesulfonic acid[1]	355-46-4	N.D.	1.8	0.44	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **BDA-17WR Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/30/2019 11:22
Collection Date/Time: 10/29/2019 15:40
SDG#: BMS81-18

ARCADIS U.S., Inc.
ELLE Sample #: GW 1187637
ELLE Group #: 2071744
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
LC/MS/MS Miscellaneous	**EPA 537 mod QSM 5.1 table B-15**		**ng/l**	**ng/l**	**ng/l**	
14434	Perfluorohexanoic acid[1]	307-24-4	N.D.	1.8	0.44	1
14434	Perfluorononanoic acid[1]	375-95-1	N.D.	1.8	0.44	1
14434	Perfluorooctanesulfonamide[1]	754-91-6	N.D.	1.8	0.44	1
14434	Perfluorooctanesulfonic acid[1]	1763-23-1	N.D.	1.8	0.44	1
14434	Perfluorooctanoic acid[1]	335-67-1	N.D.	1.8	0.44	1
14434	Perfluoropentanoic acid[1]	2706-90-3	N.D.	1.8	0.44	1
14434	Perfluorotetradecanoic acid[1]	376-06-7	N.D.	1.8	0.44	1
14434	Perfluorotridecanoic acid[1]	72629-94-8	N.D.	1.8	0.44	1
14434	Perfluoroundecanoic acid[1]	2058-94-8	N.D.	1.8	0.44	1

The recovery for the sample extraction standard(s) is outside the QC acceptance limits as noted on the QC Summary. The following action was taken: This sample was re-extracted within the method holding time and the recovery for the sample extraction standard(s) is again outside the QC acceptance limits. The data is reported from the initial trial of the sample and both sets of data are included in the data package.

Metals	**SW-846 6010D Rev.4, July 2014**		**mg/l**	**mg/l**	**mg/l**	
07044	Antimony	7440-36-0	N.D.	0.0500	0.0160	1
07035	Arsenic	7440-38-2	N.D.	0.0300	0.0160	1
07046	Barium	7440-39-3	0.0686	0.0050	0.0010	1
07047	Beryllium	7440-41-7	N.D.	0.0050	0.0010	1
07049	Cadmium	7440-43-9	N.D.	0.0050	0.0010	1
01750	Calcium	7440-70-2	830	1.00	0.480	5
07051	Chromium	7440-47-3	0.0032 J	0.0150	0.0016	1
07052	Cobalt	7440-48-4	N.D.	0.0050	0.0015	1
07053	Copper	7440-50-8	N.D.	0.100	0.0600	5
01754	Iron	7439-89-6	0.480	0.200	0.0400	1
07055	Lead	7439-92-1	N.D.	0.0150	0.0071	1
01757	Magnesium	7439-95-4	46.4	0.100	0.0400	1
07058	Manganese	7439-96-5	0.0345	0.0100	0.0030	1
07061	Nickel	7440-02-0	N.D.	0.0100	0.0021	1
01762	Potassium	7440-09-7	195	0.500	0.204	1
07036	Selenium	7782-49-2	N.D.	0.0500	0.0160	1
07066	Silver	7440-22-4	N.D.	0.0100	0.0050	1
01767	Sodium	7440-23-5	1,890	5.00	1.20	5
07022	Thallium[1]	7440-28-0	N.D.	0.0300	0.0081	1
	SW-846 6010D Rev.4, July 2014		**ug/l**	**ug/l**	**ug/l**	
07071	Vanadium	7440-62-2	N.D.	10.0	1.9	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **BDA-17WR Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/30/2019 11:22
Collection Date/Time: 10/29/2019 15:40
SDG#: BMS81-18

ARCADIS U.S., Inc.
ELLE Sample #: GW 1187637
ELLE Group #: 2071744
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
Metals	**SW-846 6010D Rev.4, July 2014**		**ug/l**	**ug/l**	**ug/l**	
07072	Zinc	7440-66-6	4.4 J	20.0	3.7	1
Metals	**SW-846 6020B Rev.2, July 2014**		**ug/l**	**ug/l**	**ug/l**	
06023	Aluminum	7429-90-5	1,400	25.0	19.7	1
	SW-846 7470A		**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	N.D.	0.00020	0.000050	1
Wet Chemistry	**EPA 300.0**		**ug/l**	**ug/l**	**ug/l**	
00224	Chloride	16887-00-6	4,290,000	800,000	400,000	2000
01504	Fluoride	16984-48-8	N.D.	500	250	5
00228	Sulfate	14808-79-8	3,040,000	500,000	150,000	500
	EPA 350.1		**ug/l**	**ug/l**	**ug/l**	
12892	Ammonia Nitrogen	7664-41-7	14,900	2,000	1,000	20
	EPA 353.2		**mg/l**	**mg/l**	**mg/l**	
00220	Nitrate Nitrogen	14797-55-8	N.D.	0.10	0.040	1
00219	Nitrite Nitrogen	14797-65-0	N.D.	0.050	0.015	1
	SM 4500-P F-2011		**ug/l**	**ug/l**	**ug/l**	
00227	Total Phosphorus as P (water)	7723-14-0	N.D.	100	50	1
	SM 5310 C-2011		**ug/l**	**ug/l**	**ug/l**	
00273	Total Organic Carbon	n.a.	1,600	1,000	500	1
	EPA 410.4		**ug/l**	**ug/l**	**ug/l**	
04001	Chemical Oxygen Demand	n.a.	35,500 J	50,000	12,800	1
	SM 2320 B-2011		**mg/l as CaCO3**	**mg/l as CaCO3**	**mg/l as CaCO3**	
12150	Total Alkalinity to pH 4.5	n.a.	74.8	8.0	2.6	1
	SM 5210 B-2011		**ug/l**	**ug/l**	**ug/l**	
14108	Biochemical Oxygen Demand-BOD	n.a.	N.D.	2,000	2,000	1

Sample Comments

State of New York Certification No. 10670

[1] = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **BDA-17WR Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/30/2019 11:22
Collection Date/Time: 10/29/2019 15:40
SDG#: BMS81-18

ARCADIS U.S., Inc.
ELLE Sample #: GW 1187637
ELLE Group #: 2071744
Matrix: Groundwater

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	Y193091AA	11/05/2019 19:22	Corie Mellinger	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	Y193091AA	11/05/2019 19:21	Corie Mellinger	1
14241	Semi-annual Groundwater BMS	SW-846 8270D	1	19303WAN026	11/06/2019 14:29	Kira N Beck	1
14244	SIM SVOAs 8270D MINI	SW-846 8270D SIM	1	19303WAP026	10/31/2019 23:51	Ashley R Transue	1
10466	BNA Water Extraction SIM	SW-846 3510C	1	19303WAP026	10/31/2019 09:30	Joshua S Ruth	1
11010	8270D BNA Extraction	SW-846 3510C	1	19303WAN026	10/31/2019 09:30	Joshua S Ruth	1
13022	Short List Aldehydes- W 8315A	SW-846 8315A	1	193030019A	10/31/2019 19:51	Jessica L Miller	1
01013	Formaldehyde Extraction	SW-846 8315A	1	193030019A	10/31/2019 09:23	Alison Moll	1
10603	Alcohols in Water	SW-846 8015D Rev.4, June 2003	1	193080007A	11/04/2019 15:15	Johanna C Kennedy	1
12926	Glycols in Water by 8015C/D	SW-846 8015D Rev.4, June 2003	1	193040002A	11/01/2019 12:21	Donald Brown	1
14434	PFAS in Water by LC/MS/MS-DoD	EPA 537 mod QSM 5.1 table B-15	1	19304003	11/01/2019 16:42	Devon M Whooley	1
14465	PFAS Water Prep - DoD	EPA 537 mod QSM 5.1 table B-15	1	19304003	10/31/2019 07:00	Toby Barnhart	1
07044	Antimony	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 16:12	Patrick J Engle	1
07035	Arsenic	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 16:12	Patrick J Engle	1
07046	Barium	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 16:12	Patrick J Engle	1
07047	Beryllium	SW-846 6010D Rev.4, July 2014	1	193041404403	11/05/2019 20:07	Cindy M Gehman	1
07049	Cadmium	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 16:12	Patrick J Engle	1
01750	Calcium	SW-846 6010D Rev.4, July 2014	1	193041404403	11/05/2019 10:26	Patrick J Engle	5
07051	Chromium	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 16:12	Patrick J Engle	1
07052	Cobalt	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 16:12	Patrick J Engle	1
07053	Copper	SW-846 6010D Rev.4, July 2014	1	193041404403	11/05/2019 14:25	Patrick J Engle	5
01754	Iron	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 16:12	Patrick J Engle	1
07055	Lead	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 16:12	Patrick J Engle	1
01757	Magnesium	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 16:12	Patrick J Engle	1
07058	Manganese	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 16:12	Patrick J Engle	1
07061	Nickel	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 16:12	Patrick J Engle	1
01762	Potassium	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 16:12	Patrick J Engle	1
07036	Selenium	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 16:12	Patrick J Engle	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **BDA-17WR Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/30/2019 11:22
Collection Date/Time: 10/29/2019 15:40
SDG#: BMS81-18

ARCADIS U.S., Inc.
ELLE Sample #: GW 1187637
ELLE Group #: 2071744
Matrix: Groundwater

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07066	Silver	SW-846 6010D Rev.4, July 2014	1	193041404403	11/05/2019 20:07	Cindy M Gehman	1
01767	Sodium	SW-846 6010D Rev.4, July 2014	1	193041404403	11/05/2019 14:25	Patrick J Engle	5
07022	Thallium	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 16:12	Patrick J Engle	1
07071	Vanadium	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 16:12	Patrick J Engle	1
07072	Zinc	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 16:12	Patrick J Engle	1
06023	Aluminum	SW-846 6020B Rev.2, July 2014	1	193111404701A	11/08/2019 11:30	Janeyah Rivers-Hamilton	1
00259	Mercury	SW-846 7470A	1	193050571301	11/02/2019 08:08	Damary Valentin	1
14044	ICP-WW, 3005A (tot rec) - U345	SW-846 3005A	1	193041404403	10/31/2019 11:21	James L Mertz	1
14047	ICPMS - Water, 3020A - U345	SW-846 3020A	1	193111404701	11/07/2019 14:15	JoElla L Rice	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	193050571301	11/01/2019 07:30	Annamaria Kuhns	1
00224	Chloride	EPA 300.0	1	19304135213A	11/05/2019 10:32	Samantha Faverio	2000
01504	Fluoride	EPA 300.0	1	19304135213A	10/31/2019 21:33	Kevin Litwa	5
00228	Sulfate	EPA 300.0	1	19304135213A	10/31/2019 21:48	Kevin Litwa	500
12892	Ammonia Nitrogen	EPA 350.1	1	19307107103A	11/03/2019 09:55	Ashlynn M Cornelius	20
00220	Nitrate Nitrogen	EPA 353.2	1	19308106102A	11/04/2019 12:07	Ashlynn M Cornelius	1
00219	Nitrite Nitrogen	EPA 353.2	1	19304105102B	10/31/2019 14:09	Bethany Sandone	1
00227	Total Phosphorus as P (water)	SM 4500-P F-2011	1	19305109101B	11/04/2019 14:27	Jonathan Saul	1
00273	Total Organic Carbon	SM 5310 C-2011	1	19309304504A	11/05/2019 20:47	Bethany Sandone	1
08263	Total Phos as P Prep (water)	SM 4500-P B(5)-2011	1	19305109101B	11/01/2019 20:00	Barbara A Washington	1
04001	Chemical Oxygen Demand	EPA 410.4	1	19304400101A	10/31/2019 09:15	Susan A Engle	1
12150	Total Alkalinity to pH 4.5	SM 2320 B-2011	1	19304007203A	11/01/2019 02:16	Jeremy L Bolf	1
14108	Biochemical Oxygen Demand-BOD	SM 5210 B-2011	1	19304141081A	10/31/2019 10:50	Benjamin M Morrison	1

*=This limit was used in the evaluation of the final result

REVISED

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
S8118

Lab Name: Lancaster Laboratories Contract:_____
Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____
Matrix: (soil/water) WATER Lab Sample ID: 1187637
Sample wt/vol: 5.0 (g/mL)mL Lab File ID:HP09355.i/19nov05a.b/yn05s14.d
Level: (low/med) LOW Date Received: 10/30/19
% Moisture: not dec. Date Analyzed: 11/05/19
Column: (pack/cap) CAP Dilution Factor: 1.0
CONCENTRATION UNITS:
Number TICs found: 1 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		Unknown	13.26	15	J
2.					
3.	VOCTIC	Total VOC TICs		15	J
4.					
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page 1 of 1

FORM I VOA-TIC

REVISED

1F

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

S8118

Lab Name: Lancaster Laboratories Contract:
Lab Code: LANCAS Case No.: SAS No.: SDG No.:
Matrix: (soil/water) WATER Lab Sample ID: 1187637
Sample wt/vol: 249 (g/mL) mL Lab File ID: lk0180.d
Level: (low/med) LOW Date Received: 10/30/19
% Moisture: Decanted: (Y/N) Date Extracted: 10/31/19
Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/06/19
Injection Volume: 1 (uL) Dilution Factor: 1
GPC Cleanup: N pH: Extraction: Sepf
CONCENTRATION UNITS:
Number TICs found: 1 (ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Unknown	7.123	19	J
2.				
3. SVOCTIC	Total SVOC TICs		19	J
4.				
5.				
6.				
7.				
8.				
9.				
10.				
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page 1 of 1

FORM I SV-1

REVISED

Sample Description: **BDA-17WR Filtered Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/30/2019 11:22
Collection Date/Time: 10/29/2019 15:40
SDG#: BMS81-19

ARCADIS U.S., Inc.
ELLE Sample #: GW 1187638
ELLE Group #: 2071744
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
Metals Dissolved	**SW-846 6010D Rev.4, July 2014**		**mg/l**	**mg/l**	**mg/l**	
07044	Antimony	7440-36-0	N.D.	0.0500	0.0160	1
07035	Arsenic	7440-38-2	N.D.	0.0300	0.0160	1
07046	Barium	7440-39-3	0.0605	0.0050	0.0010	1
07047	Beryllium	7440-41-7	N.D.	0.0050	0.0010	1
07049	Cadmium	7440-43-9	N.D.	0.0050	0.0010	1
01750	Calcium	7440-70-2	847	1.00	0.480	5
07051	Chromium	7440-47-3	0.0023 J	0.0150	0.0016	1
07052	Cobalt	7440-48-4	N.D.	0.0050	0.0015	1
07053	Copper	7440-50-8	N.D.	0.100	0.0600	5
01754	Iron	7439-89-6	N.D.	0.200	0.0400	1
07055	Lead	7439-92-1	N.D.	0.0150	0.0071	1
01757	Magnesium	7439-95-4	58.7	0.100	0.0400	1
07058	Manganese	7439-96-5	0.0152	0.0100	0.0030	1
07061	Nickel	7440-02-0	N.D.	0.0100	0.0021	1
01762	Potassium	7440-09-7	199	0.500	0.204	1
07036	Selenium	7782-49-2	N.D.	0.0500	0.0160	1
07066	Silver	7440-22-4	N.D.	0.0100	0.0050	1
01767	Sodium	7440-23-5	1,850	5.00	1.20	5
07022	Thallium[1]	7440-28-0	N.D.	0.0300	0.0081	1
	SW-846 6010D Rev.4, July 2014		**ug/l**	**ug/l**	**ug/l**	
07071	Vanadium	7440-62-2	N.D.	10.0	1.9	1
07072	Zinc	7440-66-6	N.D.	20.0	3.7	1
	SW-846 6020B Rev.2, July 2014		**ug/l**	**ug/l**	**ug/l**	
06023	Aluminum	7429-90-5	N.D.	25.0	19.7	1
	SW-846 7470A		**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	N.D.	0.00020	0.000050	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals.

[1] = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **BDA-17WR Filtered Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/30/2019 11:22
Collection Date/Time: 10/29/2019 15:40
SDG#: BMS81-19

ARCADIS U.S., Inc.
ELLE Sample #: GW 1187638
ELLE Group #: 2071744
Matrix: Groundwater

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07044	Antimony	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:44	Patrick J Engle	1
07035	Arsenic	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:44	Patrick J Engle	1
07046	Barium	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:44	Patrick J Engle	1
07047	Beryllium	SW-846 6010D Rev.4, July 2014	1	193041404402	11/06/2019 00:00	Elaine F Stoltzfus	1
07049	Cadmium	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:44	Patrick J Engle	1
01750	Calcium	SW-846 6010D Rev.4, July 2014	1	193041404402	11/05/2019 09:23	Patrick J Engle	5
07051	Chromium	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:44	Patrick J Engle	1
07052	Cobalt	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:44	Patrick J Engle	1
07053	Copper	SW-846 6010D Rev.4, July 2014	1	193041404402	11/05/2019 17:50	Patrick J Engle	5
01754	Iron	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:44	Patrick J Engle	1
07055	Lead	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:44	Patrick J Engle	1
01757	Magnesium	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:44	Patrick J Engle	1
07058	Manganese	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:44	Patrick J Engle	1
07061	Nickel	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:44	Patrick J Engle	1
01762	Potassium	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:44	Patrick J Engle	1
07036	Selenium	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:44	Patrick J Engle	1
07066	Silver	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:44	Patrick J Engle	1
01767	Sodium	SW-846 6010D Rev.4, July 2014	1	193041404402	11/05/2019 09:23	Patrick J Engle	5
07022	Thallium	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:44	Patrick J Engle	1
07071	Vanadium	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:44	Patrick J Engle	1
07072	Zinc	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:44	Patrick J Engle	1
06023	Aluminum	SW-846 6020B Rev.2, July 2014	1	193111404701A	11/08/2019 11:32	Janeyah Rivers-Hamilton	1
00259	Mercury	SW-846 7470A	1	193040571302	11/01/2019 08:05	Damary Valentin	1
14044	ICP-WW, 3005A (tot rec) - U345	SW-846 3005A	1	193041404402	10/31/2019 11:21	James L Mertz	1
14047	ICPMS - Water, 3020A - U345	SW-846 3020A	1	193111404701	11/07/2019 14:15	JoElla L Rice	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	193040571302	10/31/2019 15:15	JoElla L Rice	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **DUP-102919 Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/30/2019 11:22
Collection Date/Time: 10/29/2019
SDG#: BMS81-20FD

ARCADIS U.S., Inc.
ELLE Sample #: GW 1187639
ELLE Group #: 2071744
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	20	0.7	1
11997	Acetonitrile	75-05-8	N.D.	100	16	1
11997	Benzene	71-43-2	N.D.	1	0.2	1
11997	Bromochloromethane	74-97-5	N.D.	5	0.2	1
11997	Bromodichloromethane	75-27-4	3	1	0.2	1
11997	Bromoform	75-25-2	N.D.	4	1	1
11997	Bromomethane	74-83-9	N.D.	1	0.3	1
11997	n-Butanol	71-36-3	N.D.	250	61	1
11997	2-Butanone	78-93-3	N.D.	10	0.3	1
11997	t-Butyl alcohol	75-65-0	N.D.	50	12	1
11997	n-Butylbenzene	104-51-8	N.D.	5	0.2	1
11997	sec-Butylbenzene	135-98-8	N.D.	5	0.2	1
11997	tert-Butylbenzene	98-06-6	N.D.	5	0.3	1
11997	Carbon Disulfide	75-15-0	N.D.	5	0.2	1
11997	Carbon Tetrachloride	56-23-5	N.D.	1	0.2	1
11997	Chlorobenzene	108-90-7	N.D.	1	0.2	1
11997	Chlorodifluoromethane[1]	75-45-6	N.D.	5	2	1
11997	Chloroethane	75-00-3	N.D.	1	0.2	1
11997	Chloroform	67-66-3	14	1	0.2	1
11997	Chloromethane	74-87-3	N.D.	1	0.2	1
11997	Cyclohexane	110-82-7	N.D.	5	1	1
11997	Cyclohexanone[1]	108-94-1	N.D.	100	25	1
11997	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	5	0.3	1
11997	Dibromochloromethane	124-48-1	0.5 J	1	0.2	1
11997	1,2-Dibromoethane	106-93-4	N.D.	1	0.2	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	5	0.2	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	5	0.2	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	5	0.2	1
11997	Dichlorodifluoromethane	75-71-8	N.D.	1	0.2	1
11997	1,1-Dichloroethane	75-34-3	N.D.	1	0.2	1
11997	1,2-Dichloroethane	107-06-2	N.D.	1	0.3	1
11997	1,1-Dichloroethene	75-35-4	N.D.	1	0.2	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	1	0.2	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	1	0.2	1
11997	1,2-Dichloropropane	78-87-5	N.D.	1	0.2	1
11997	cis-1,3-Dichloropropene	10061-01-5	N.D.	1	0.2	1
11997	trans-1,3-Dichloropropene	10061-02-6	N.D.	1	0.2	1
11997	1,4-Dioxane	123-91-1	N.D.	250	29	1
11997	Ethyl Acetate	141-78-6	N.D.	5	0.7	1
11997	Ethyl ether	60-29-7	N.D.	5	0.2	1
11997	Ethylbenzene	100-41-4	N.D.	1	0.4	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **DUP-102919 Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/30/2019 11:22
Collection Date/Time: 10/29/2019
SDG#: BMS81-20FD

ARCADIS U.S., Inc.
ELLE Sample #: GW 1187639
ELLE Group #: 2071744
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Freon 113	76-13-1	N.D.	10	0.2	1
11997	n-Heptane[1]	142-82-5	N.D.	5	2	1
11997	n-Hexane[1]	110-54-3	N.D.	5	2	1
11997	2-Hexanone	591-78-6	N.D.	10	0.3	1
11997	Isobutyl Alcohol	78-83-1	N.D.	250	36	1
11997	Isopropylbenzene	98-82-8	N.D.	5	0.2	1
11997	p-Isopropyltoluene	99-87-6	N.D.	5	0.2	1
11997	Methyl Acetate	79-20-9	N.D.	5	0.2	1
11997	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	1	0.2	1
11997	4-Methyl-2-pentanone	108-10-1	N.D.	10	0.5	1
11997	Methylcyclohexane	108-87-2	N.D.	5	0.5	1
11997	Methylene Chloride	75-09-2	N.D.	1	0.3	1
11997	Naphthalene	91-20-3	N.D.	5	1	1
11997	2-Nitropropane	79-46-9	N.D.	10	0.8	1
11997	Styrene	100-42-5	N.D.	5	0.2	1
11997	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	1	0.2	1
11997	Tetrachloroethene	127-18-4	N.D.	1	0.2	1
11997	Tetrahydrofuran	109-99-9	N.D.	10	0.7	1
11997	Toluene	108-88-3	N.D.	1	0.2	1
11997	1,2,3-Trichlorobenzene	87-61-6	N.D.	5	0.4	1
11997	1,2,4-Trichlorobenzene	120-82-1	N.D.	5	0.3	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	1	0.3	1
11997	1,1,2-Trichloroethane	79-00-5	N.D.	1	0.2	1
11997	Trichloroethene	79-01-6	N.D.	1	0.2	1
11997	Trichlorofluoromethane	75-69-4	N.D.	1	0.2	1
11997	1,2,4-Trimethylbenzene	95-63-6	N.D.	5	1	1
11997	1,3,5-Trimethylbenzene	108-67-8	N.D.	5	0.3	1
11997	Vinyl Chloride	75-01-4	N.D.	1	0.2	1
11997	m+p-Xylene	179601-23-1	N.D.	5	1	1
11997	o-Xylene	95-47-6	N.D.	1	0.4	1
11997	Xylene (Total)	1330-20-7	N.D.	6	1	1

Project defined calibration criteria are not met. The calibration is compliant with the method defined criteria.

A Report Limit Verification (RLV) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The RLV standard shows adequate sensitivity at or below the reporting limit.

00882 VOA Interp. Library Search-10

The results from the volatile library search are listed on the attached FORM 1 - VOA-TIC. The qualifiers appearing in the "Q" column are defined at the end of the report.

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **DUP-102919 Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/30/2019 11:22
Collection Date/Time: 10/29/2019
SDG#: BMS81-20FD

ARCADIS U.S., Inc.
ELLE Sample #: GW 1187639
ELLE Group #: 2071744
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
Aldehydes & Ketones	**SW-846 8315A**		**ug/l**	**ug/l**	**ug/l**	
13022	Acetaldehyde[1]	75-07-0	N.D.	60	35	1
13022	Formaldehyde	50-00-0	29 J	50	20	1
	The response for a target analyte(s) in the initial calibration verification standard is outside the QC acceptance limits.					
GC Miscellaneous	**SW-846 8015D Rev.4, June 2003**		**ug/l**	**ug/l**	**ug/l**	
10603	Ethanol	64-17-5	N.D. D2	1,000	150	1
12926	Ethylene glycol[1]	107-21-1	N.D.	10,000	5,000	1
10603	Isopropanol[1]	67-63-0	N.D. D2	1,000	110	1
10603	Methanol	67-56-1	N.D. D2	1,000	220	1
12926	Propylene glycol[1]	57-55-6	N.D.	10,000	2,000	1
	The response for a target analyte(s) in the continuing calibration verification standard is outside the QC acceptance limits low. The following action was taken: The analysis was repeated and the continuing calibration verification standard bracketing the sample on the second trial is also outside the acceptance limits. This effect is attributed to the sample matrix and the data is reported.					
LC/MS/MS Miscellaneous	**EPA 537 mod QSM 5.1 table B-15**		**ng/l**	**ng/l**	**ng/l**	
14434	6:2-Fluorotelomersulfonic acid[1]	27619-97-2	34	4.5	1.8	1
14434	8:2-Fluorotelomersulfonic acid[1]	39108-34-4	N.D.	2.7	0.90	1
14434	NEtFOSAA[1]	2991-50-6	N.D.	2.7	0.45	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.					
14434	NMeFOSAA[1]	2355-31-9	N.D.	1.8	0.54	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.					
14434	Perfluorobutanesulfonic acid[1]	375-73-5	N.D.	1.8	0.45	1
14434	Perfluorobutanoic acid[1]	375-22-4	2.0 J	4.5	1.8	1
14434	Perfluorodecanesulfonic acid[1]	335-77-3	N.D.	1.8	0.45	1
14434	Perfluorodecanoic acid[1]	335-76-2	N.D.	1.8	0.45	1
14434	Perfluorododecanoic acid[1]	307-55-1	N.D.	1.8	0.45	1
14434	Perfluoroheptanesulfonic acid[1]	375-92-8	N.D.	1.8	0.45	1
14434	Perfluoroheptanoic acid[1]	375-85-9	0.55 J	1.8	0.45	1
14434	Perfluorohexanesulfonic acid[1]	355-46-4	N.D.	1.8	0.45	1
14434	Perfluorohexanoic acid[1]	307-24-4	1.6 J	1.8	0.45	1
14434	Perfluorononanoic acid[1]	375-95-1	N.D.	1.8	0.45	1
14434	Perfluorooctanesulfonamide[1]	754-91-6	N.D.	1.8	0.45	1
14434	Perfluorooctanesulfonic acid[1]	1763-23-1	N.D.	1.8	0.45	1
14434	Perfluorooctanoic acid[1]	335-67-1	0.49 J	1.8	0.45	1
14434	Perfluoropentanoic acid[1]	2706-90-3	0.60 J	1.8	0.45	1
14434	Perfluorotetradecanoic acid[1]	376-06-7	N.D.	1.8	0.45	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **DUP-102919 Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/30/2019 11:22
Collection Date/Time: 10/29/2019
SDG#: BMS81-20FD

ARCADIS U.S., Inc.
ELLE Sample #: GW 1187639
ELLE Group #: 2071744
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
LC/MS/MS Miscellaneous	**EPA 537 mod QSM 5.1 table B-15**		**ng/l**	**ng/l**	**ng/l**	
14434	Perfluorotridecanoic acid[1]	72629-94-8	N.D.	1.8	0.45	1
14434	Perfluoroundecanoic acid[1]	2058-94-8	N.D.	1.8	0.45	1
Metals	**SW-846 6010D Rev.4, July 2014**		**mg/l**	**mg/l**	**mg/l**	
07044	Antimony	7440-36-0	N.D.	0.0500	0.0160	1
07035	Arsenic	7440-38-2	N.D.	0.0300	0.0160	1
07046	Barium	7440-39-3	0.0538	0.0050	0.0010	1
07047	Beryllium	7440-41-7	N.D.	0.0050	0.0010	1
07049	Cadmium	7440-43-9	N.D.	0.0050	0.0010	1
01750	Calcium	7440-70-2	482	1.00	0.480	5
07051	Chromium	7440-47-3	0.0051 J	0.0150	0.0016	1
07052	Cobalt	7440-48-4	0.0030 J	0.0050	0.0015	1
07053	Copper	7440-50-8	N.D.	0.100	0.0600	5
01754	Iron	7439-89-6	2.35	0.200	0.0400	1
07055	Lead	7439-92-1	N.D.	0.0150	0.0071	1
01757	Magnesium	7439-95-4	89.2	0.100	0.0400	1
07058	Manganese	7439-96-5	0.372	0.0100	0.0030	1
07061	Nickel	7440-02-0	0.0538	0.0100	0.0021	1
01762	Potassium	7440-09-7	10.1	0.500	0.204	1
07036	Selenium	7782-49-2	N.D.	0.0500	0.0160	1
07066	Silver	7440-22-4	N.D.	0.0100	0.0050	1
01767	Sodium	7440-23-5	193	1.00	0.239	1
07022	Thallium[1]	7440-28-0	N.D.	0.0300	0.0081	1
	SW-846 6010D Rev.4, July 2014		**ug/l**	**ug/l**	**ug/l**	
07071	Vanadium	7440-62-2	N.D.	10.0	1.9	1
07072	Zinc	7440-66-6	11.5 J	20.0	3.7	1
	SW-846 6020B Rev.2, July 2014		**ug/l**	**ug/l**	**ug/l**	
06023	Aluminum	7429-90-5	8,760	25.0	19.7	1
	SW-846 7470A		**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	N.D.	0.00020	0.000050	1
Wet Chemistry	**EPA 300.0**		**ug/l**	**ug/l**	**ug/l**	
00224	Chloride	16887-00-6	91,400	20,000	10,000	50
01504	Fluoride	16984-48-8	520	500	250	5
00228	Sulfate	14808-79-8	675,000	50,000	15,000	50

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **DUP-102919 Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/30/2019 11:22
Collection Date/Time: 10/29/2019
SDG#: BMS81-20FD

ARCADIS U.S., Inc.
ELLE Sample #: GW 1187639
ELLE Group #: 2071744
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
Wet Chemistry	**EPA 353.2**		**mg/l**	**mg/l**	**mg/l**	
00220	Nitrate Nitrogen	14797-55-8	0.44	0.10	0.040	1
00219	Nitrite Nitrogen	14797-65-0	N.D.	0.050	0.015	1
	The holding time was not met.					
	SM 4500-P F-2011		**ug/l**	**ug/l**	**ug/l**	
00227	Total Phosphorus as P (water)	7723-14-0	160	100	50	1
	SM 5310 C-2011		**ug/l**	**ug/l**	**ug/l**	
00273	Total Organic Carbon	n.a.	1,600	1,000	500	1
	EPA 410.4		**ug/l**	**ug/l**	**ug/l**	
04001	Chemical Oxygen Demand	n.a.	145,000	50,000	12,800	1
	SM 2320 B-2011		**mg/l as CaCO3**	**mg/l as CaCO3**	**mg/l as CaCO3**	
12150	Total Alkalinity to pH 4.5	n.a.	111	8.0	2.6	1
	SM 5210 B-2011		**ug/l**	**ug/l**	**ug/l**	
14108	Biochemical Oxygen Demand-BOD	n.a.	2,200	2,000	2,000	1

Sample Comments

State of New York Certification No. 10670

[1] = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	Y193091AA	11/05/2019 19:45	Corie Mellinger	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	Y193091AA	11/05/2019 19:44	Corie Mellinger	1
13022	Short List Aldehydes- W 8315A	SW-846 8315A	1	193030019A	10/31/2019 20:01	Jessica L Miller	1
01013	Formaldehyde Extraction	SW-846 8315A	1	193030019A	10/31/2019 09:23	Alison Moll	1
10603	Alcohols in Water	SW-846 8015D Rev.4, June 2003	1	193080007A	11/04/2019 15:31	Johanna C Kennedy	1
12926	Glycols in Water by 8015C/D	SW-846 8015D Rev.4, June 2003	1	193040002A	11/01/2019 12:34	Donald Brown	1
14434	PFAS in Water by LC/MS/MS-DoD	EPA 537 mod QSM 5.1 table B-15	1	19308018	11/05/2019 16:55	Mark Collare	1
14465	PFAS Water Prep - DoD	EPA 537 mod QSM 5.1 table B-15	2	19308018	11/04/2019 16:00	Anthony C Polaski	1
07044	Antimony	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 16:15	Patrick J Engle	1
07035	Arsenic	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 16:15	Patrick J Engle	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **DUP-102919 Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/30/2019 11:22
Collection Date/Time: 10/29/2019
SDG#: BMS81-20FD

ARCADIS U.S., Inc.
ELLE Sample #: GW 1187639
ELLE Group #: 2071744
Matrix: Groundwater

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07046	Barium	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 16:15	Patrick J Engle	1
07047	Beryllium	SW-846 6010D Rev.4, July 2014	1	193041404403	11/05/2019 20:10	Cindy M Gehman	1
07049	Cadmium	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 16:15	Patrick J Engle	1
01750	Calcium	SW-846 6010D Rev.4, July 2014	1	193041404403	11/05/2019 10:33	Patrick J Engle	5
07051	Chromium	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 16:15	Patrick J Engle	1
07052	Cobalt	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 16:15	Patrick J Engle	1
07053	Copper	SW-846 6010D Rev.4, July 2014	1	193041404403	11/05/2019 14:32	Patrick J Engle	5
01754	Iron	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 16:15	Patrick J Engle	1
07055	Lead	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 16:15	Patrick J Engle	1
01757	Magnesium	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 16:15	Patrick J Engle	1
07058	Manganese	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 16:15	Patrick J Engle	1
07061	Nickel	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 16:15	Patrick J Engle	1
01762	Potassium	SW-846 6010D Rev.4, July 2014	1	193041404403	11/05/2019 10:29	Patrick J Engle	1
07036	Selenium	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 16:15	Patrick J Engle	1
07066	Silver	SW-846 6010D Rev.4, July 2014	1	193041404403	11/05/2019 20:10	Cindy M Gehman	1
01767	Sodium	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 16:15	Patrick J Engle	1
07022	Thallium	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 16:15	Patrick J Engle	1
07071	Vanadium	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 16:15	Patrick J Engle	1
07072	Zinc	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 16:15	Patrick J Engle	1
06023	Aluminum	SW-846 6020B Rev.2, July 2014	1	193111404701A	11/08/2019 11:34	Janeyah Rivers-Hamilton	1
00259	Mercury	SW-846 7470A	1	193040571302	11/01/2019 08:03	Damary Valentin	1
14044	ICP-WW, 3005A (tot rec) - U345	SW-846 3005A	1	193041404403	10/31/2019 11:21	James L Mertz	1
14047	ICPMS - Water, 3020A - U345	SW-846 3020A	1	193111404701	11/07/2019 14:15	JoElla L Rice	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	193040571302	10/31/2019 15:15	JoElla L Rice	1
00224	Chloride	EPA 300.0	1	19308135115A	11/04/2019 12:46	Kevin Litwa	50
01504	Fluoride	EPA 300.0	1	19308135115A	11/04/2019 12:33	Kevin Litwa	5
00228	Sulfate	EPA 300.0	1	19308135115A	11/04/2019 12:46	Kevin Litwa	50
00220	Nitrate Nitrogen	EPA 353.2	1	19308106102A	11/04/2019 12:09	Ashlynn M Cornelius	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **DUP-102919 Grab Groundwater BMS Syracuse**

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/30/2019 11:22
Collection Date/Time: 10/29/2019
SDG#: BMS81-20FD

ARCADIS U.S., Inc.
ELLE Sample #: GW 1187639
ELLE Group #: 2071744
Matrix: Groundwater

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
00219	Nitrite Nitrogen	EPA 353.2	1	19304105102B	10/31/2019 13:00	Bethany Sandone	1
00227	Total Phosphorus as P (water)	SM 4500-P F-2011	1	19305109101B	11/04/2019 14:27	Jonathan Saul	1
00273	Total Organic Carbon	SM 5310 C-2011	1	19309304504B	11/05/2019 21:02	Bethany Sandone	1
08263	Total Phos as P Prep (water)	SM 4500-P B(5)-2011	1	19305109101B	11/01/2019 20:00	Barbara A Washington	1
04001	Chemical Oxygen Demand	EPA 410.4	1	19304400101A	10/31/2019 09:15	Susan A Engle	1
12150	Total Alkalinity to pH 4.5	SM 2320 B-2011	1	19304007203A	11/01/2019 02:36	Jeremy L Bolf	1
14108	Biochemical Oxygen Demand-BOD	SM 5210 B-2011	1	19303141082A	10/30/2019 17:33	Benjamin M Morrison	1

*=This limit was used in the evaluation of the final result

REVISED

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
S8120

Lab Name: Lancaster Laboratories Contract:_____
Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____
Matrix: (soil/water) WATER Lab Sample ID: 1187639
Sample wt/vol: 5.0 (g/mL)mL Lab File ID:HP09355.i/19nov05a.b/yn05s15.d
Level: (low/med) LOW Date Received: 10/30/19
% Moisture: not dec. Date Analyzed: 11/05/19
Column: (pack/cap) CAP Dilution Factor: 1.0
CONCENTRATION UNITS:
Number TICs found: 0 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	VOCTIC	Total VOC TICs		0	U
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page 1 of 1

FORM I VOA-TIC

REVISED

Sample Description: **DUP-102919 Filtered Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/30/2019 11:22
Collection Date/Time: 10/29/2019
SDG#: BMS81-21FD

ARCADIS U.S., Inc.
ELLE Sample #: GW 1187640
ELLE Group #: 2071744
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
Metals Dissolved	**SW-846 6010D Rev.4, July 2014**		**mg/l**	**mg/l**	**mg/l**	
07044	Antimony	7440-36-0	N.D.	0.0500	0.0160	1
07035	Arsenic	7440-38-2	N.D.	0.0300	0.0160	1
07046	Barium	7440-39-3	0.0538	0.0050	0.0010	1
07047	Beryllium	7440-41-7	N.D.	0.0050	0.0010	1
07049	Cadmium	7440-43-9	N.D.	0.0050	0.0010	1
01750	Calcium	7440-70-2	474	1.00	0.480	5
07051	Chromium	7440-47-3	0.0034 J	0.0150	0.0016	1
07052	Cobalt	7440-48-4	0.0031 J	0.0050	0.0015	1
07053	Copper	7440-50-8	N.D.	0.100	0.0600	5
01754	Iron	7439-89-6	0.318	0.200	0.0400	1
07055	Lead	7439-92-1	N.D.	0.0150	0.0071	1
01757	Magnesium	7439-95-4	80.8	0.100	0.0400	1
07058	Manganese	7439-96-5	0.264	0.0100	0.0030	1
07061	Nickel	7440-02-0	0.0337	0.0100	0.0021	1
01762	Potassium	7440-09-7	9.78	0.500	0.204	1
07036	Selenium	7782-49-2	N.D.	0.0500	0.0160	1
07066	Silver	7440-22-4	N.D.	0.0100	0.0050	1
01767	Sodium	7440-23-5	205	1.00	0.239	1
07022	Thallium[1]	7440-28-0	N.D.	0.0300	0.0081	1
	SW-846 6010D Rev.4, July 2014		**ug/l**	**ug/l**	**ug/l**	
07071	Vanadium	7440-62-2	N.D.	10.0	1.9	1
07072	Zinc	7440-66-6	4.9 J	20.0	3.7	1
	SW-846 6020B Rev.2, July 2014		**ug/l**	**ug/l**	**ug/l**	
06023	Aluminum	7429-90-5	466	25.0	19.7	1
	SW-846 7470A		**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	N.D.	0.00020	0.000050	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals.

[1] = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **DUP-102919 Filtered Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/30/2019 11:22
Collection Date/Time: 10/29/2019
SDG#: BMS81-21FD

ARCADIS U.S., Inc.
ELLE Sample #: GW 1187640
ELLE Group #: 2071744
Matrix: Groundwater

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07044	Antimony	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:40	Patrick J Engle	1
07035	Arsenic	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:40	Patrick J Engle	1
07046	Barium	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:40	Patrick J Engle	1
07047	Beryllium	SW-846 6010D Rev.4, July 2014	1	193041404402	11/05/2019 23:57	Elaine F Stoltzfus	1
07049	Cadmium	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:40	Patrick J Engle	1
01750	Calcium	SW-846 6010D Rev.4, July 2014	1	193041404402	11/05/2019 09:16	Patrick J Engle	5
07051	Chromium	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:40	Patrick J Engle	1
07052	Cobalt	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:40	Patrick J Engle	1
07053	Copper	SW-846 6010D Rev.4, July 2014	1	193041404402	11/05/2019 17:44	Patrick J Engle	5
01754	Iron	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:40	Patrick J Engle	1
07055	Lead	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:40	Patrick J Engle	1
01757	Magnesium	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:40	Patrick J Engle	1
07058	Manganese	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:40	Patrick J Engle	1
07061	Nickel	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:40	Patrick J Engle	1
01762	Potassium	SW-846 6010D Rev.4, July 2014	1	193041404402	11/05/2019 09:12	Patrick J Engle	1
07036	Selenium	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:40	Patrick J Engle	1
07066	Silver	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:40	Patrick J Engle	1
01767	Sodium	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:40	Patrick J Engle	1
07022	Thallium	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:40	Patrick J Engle	1
07071	Vanadium	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:40	Patrick J Engle	1
07072	Zinc	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:40	Patrick J Engle	1
06023	Aluminum	SW-846 6020B Rev.2, July 2014	1	193111404701A	11/08/2019 11:36	Janeyah Rivers-Hamilton	1
00259	Mercury	SW-846 7470A	1	193050571301	11/02/2019 08:10	Damary Valentin	1
14044	ICP-WW, 3005A (tot rec) - U345	SW-846 3005A	1	193041404402	10/31/2019 11:21	James L Mertz	1
14047	ICPMS - Water, 3020A - U345	SW-846 3020A	1	193111404701	11/07/2019 14:15	JoElla L Rice	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	193050571301	11/01/2019 07:30	Annamaria Kuhns	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **Trip Blank Water**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/30/2019 11:22
Collection Date/Time: 10/29/2019
SDG#: BMS81-22TB

ARCADIS U.S., Inc.
ELLE Sample #: GW 1187641
ELLE Group #: 2071744
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	20	0.7	1
11997	Acetonitrile	75-05-8	N.D.	100	16	1
11997	Benzene	71-43-2	N.D.	1	0.2	1
11997	Bromochloromethane	74-97-5	N.D.	5	0.2	1
11997	Bromodichloromethane	75-27-4	N.D.	1	0.2	1
11997	Bromoform	75-25-2	N.D.	4	1	1
11997	Bromomethane	74-83-9	N.D.	1	0.3	1
11997	n-Butanol	71-36-3	N.D.	250	61	1
11997	2-Butanone	78-93-3	N.D.	10	0.3	1
11997	t-Butyl alcohol	75-65-0	N.D.	50	12	1
11997	n-Butylbenzene	104-51-8	N.D.	5	0.2	1
11997	sec-Butylbenzene	135-98-8	N.D.	5	0.2	1
11997	tert-Butylbenzene	98-06-6	N.D.	5	0.3	1
11997	Carbon Disulfide	75-15-0	N.D.	5	0.2	1
11997	Carbon Tetrachloride	56-23-5	N.D.	1	0.2	1
11997	Chlorobenzene	108-90-7	N.D.	1	0.2	1
11997	Chlorodifluoromethane[1]	75-45-6	N.D.	5	2	1
11997	Chloroethane	75-00-3	N.D.	1	0.2	1
11997	Chloroform	67-66-3	N.D.	1	0.2	1
11997	Chloromethane	74-87-3	N.D.	1	0.2	1
11997	Cyclohexane	110-82-7	N.D.	5	1	1
11997	Cyclohexanone[1]	108-94-1	N.D.	100	25	1
11997	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	5	0.3	1
11997	Dibromochloromethane	124-48-1	N.D.	1	0.2	1
11997	1,2-Dibromoethane	106-93-4	N.D.	1	0.2	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	5	0.2	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	5	0.2	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	5	0.2	1
11997	Dichlorodifluoromethane	75-71-8	N.D.	1	0.2	1
11997	1,1-Dichloroethane	75-34-3	N.D.	1	0.2	1
11997	1,2-Dichloroethane	107-06-2	N.D.	1	0.3	1
11997	1,1-Dichloroethene	75-35-4	N.D.	1	0.2	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	1	0.2	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	1	0.2	1
11997	1,2-Dichloropropane	78-87-5	N.D.	1	0.2	1
11997	cis-1,3-Dichloropropene	10061-01-5	N.D.	1	0.2	1
11997	trans-1,3-Dichloropropene	10061-02-6	N.D.	1	0.2	1
11997	1,4-Dioxane	123-91-1	N.D.	250	29	1
11997	Ethyl Acetate	141-78-6	N.D.	5	0.7	1
11997	Ethyl ether	60-29-7	N.D.	5	0.2	1
11997	Ethylbenzene	100-41-4	N.D.	1	0.4	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **Trip Blank Water**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/30/2019 11:22
Collection Date/Time: 10/29/2019
SDG#: BMS81-22TB

ARCADIS U.S., Inc.
ELLE Sample #: GW 1187641
ELLE Group #: 2071744
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Freon 113	76-13-1	N.D.	10	0.2	1
11997	n-Heptane[1]	142-82-5	N.D.	5	2	1
11997	n-Hexane[1]	110-54-3	N.D.	5	2	1
11997	2-Hexanone	591-78-6	N.D.	10	0.3	1
11997	Isobutyl Alcohol	78-83-1	N.D.	250	36	1
11997	Isopropylbenzene	98-82-8	N.D.	5	0.2	1
11997	p-Isopropyltoluene	99-87-6	N.D.	5	0.2	1
11997	Methyl Acetate	79-20-9	N.D.	5	0.2	1
11997	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	1	0.2	1
11997	4-Methyl-2-pentanone	108-10-1	N.D.	10	0.5	1
11997	Methylcyclohexane	108-87-2	N.D.	5	0.5	1
11997	Methylene Chloride	75-09-2	N.D.	1	0.3	1
11997	Naphthalene	91-20-3	N.D.	5	1	1
11997	2-Nitropropane	79-46-9	N.D.	10	0.8	1
11997	Styrene	100-42-5	N.D.	5	0.2	1
11997	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	1	0.2	1
11997	Tetrachloroethene	127-18-4	N.D.	1	0.2	1
11997	Tetrahydrofuran	109-99-9	N.D.	10	0.7	1
11997	Toluene	108-88-3	N.D.	1	0.2	1
11997	1,2,3-Trichlorobenzene	87-61-6	N.D.	5	0.4	1
11997	1,2,4-Trichlorobenzene	120-82-1	N.D.	5	0.3	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	1	0.3	1
11997	1,1,2-Trichloroethane	79-00-5	N.D.	1	0.2	1
11997	Trichloroethene	79-01-6	N.D.	1	0.2	1
11997	Trichlorofluoromethane	75-69-4	N.D.	1	0.2	1
11997	1,2,4-Trimethylbenzene	95-63-6	N.D.	5	1	1
11997	1,3,5-Trimethylbenzene	108-67-8	N.D.	5	0.3	1
11997	Vinyl Chloride	75-01-4	N.D.	1	0.2	1
11997	m+p-Xylene	179601-23-1	N.D.	5	1	1
11997	o-Xylene	95-47-6	N.D.	1	0.4	1
11997	Xylene (Total)	1330-20-7	N.D.	6	1	1

Project defined calibration criteria are not met. The calibration is compliant with the method defined criteria.

A Report Limit Verification (RLV) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The RLV standard shows adequate sensitivity at or below the reporting limit.

00882 VOA Interp. Library Search-10

The results from the volatile library search are listed on the attached FORM 1 - VOA-TIC. The qualifiers appearing in the "Q" column are defined at the end of the report.

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **Trip Blank Water**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/30/2019 11:22
Collection Date/Time: 10/29/2019
SDG#: BMS81-22TB

ARCADIS U.S., Inc.
ELLE Sample #: GW 1187641
ELLE Group #: 2071744
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC Miscellaneous	**SW-846 8015D Rev.4, June 2003**		**ug/l**	**ug/l**	**ug/l**	
10603	Ethanol	64-17-5	N.D. D2	1,000	150	1
12926	Ethylene glycol[1]	107-21-1	N.D.	10,000	5,000	1
10603	Isopropanol[1]	67-63-0	N.D. D2	1,000	110	1
10603	Methanol	67-56-1	N.D. D2	1,000	220	1
12926	Propylene glycol[1]	57-55-6	N.D.	10,000	2,000	1

The response for a target analyte(s) in the continuing calibration verification standard is outside the QC acceptance limits low. The following action was taken:
The analysis was repeated and the continuing calibration verification standard bracketing the sample on the second trial is also outside the acceptance limits. This effect is attributed to the sample matrix and the data is reported.

Sample Comments

State of New York Certification No. 10670

[1] = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	Y193091AA	11/05/2019 15:20	Corie Mellinger	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	Y193091AA	11/05/2019 15:19	Corie Mellinger	1
10603	Alcohols in Water	SW-846 8015D Rev.4, June 2003	1	193080007A	11/04/2019 16:04	Johanna C Kennedy	1
12926	Glycols in Water by 8015C/D	SW-846 8015D Rev.4, June 2003	1	193040002A	11/01/2019 12:46	Donald Brown	1

*=This limit was used in the evaluation of the final result

REVISED

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VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
S8122

Lab Name: Lancaster Laboratories Contract:_____
Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____
Matrix: (soil/water) WATER Lab Sample ID: 1187641
Sample wt/vol: 5.0 (g/mL)mL Lab File ID:HP09355.i/19nov05a.b/yn05s03.d
Level: (low/med) LOW Date Received: 10/30/19
% Moisture: not dec. Date Analyzed: 11/05/19
Column: (pack/cap) CAP Dilution Factor: 1.0
CONCENTRATION UNITS:
Number TICs found: 0 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	VOCTIC	Total VOC TICs		0	U
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page 1 of 1

FORM I VOA-TIC

REVISED

Sample Description: **DUP-102919-02 Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/30/2019 11:22
Collection Date/Time: 10/29/2019
SDG#: BMS81-23FD

ARCADIS U.S., Inc.
ELLE Sample #: GW 1187642
ELLE Group #: 2071744
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	Acenaphthene	83-32-9	N.D.	0.55	0.11	1
14241	Acenaphthylene	208-96-8	N.D.	0.55	0.11	1
14241	Acetophenone	98-86-2	N.D.	11	4.4	1
14241	Aniline	62-53-3	N.D.	11	3.3	1
14241	Anthracene	120-12-7	N.D.	0.55	0.11	1
14241	Atrazine	1912-24-9	N.D.	5.5	2.2	1
14241	Benzaldehyde	100-52-7	N.D.	11	3.3	1
14241	Benzo(a)anthracene	56-55-3	N.D.	0.55	0.11	1
14241	Benzo(a)pyrene	50-32-8	N.D.	0.55	0.11	1
14241	Benzo(b)fluoranthene	205-99-2	N.D.	0.55	0.11	1
14241	Benzo(g,h,i)perylene	191-24-2	N.D.	0.55	0.11	1
14241	Benzo(k)fluoranthene	207-08-9	N.D.	0.55	0.11	1
14241	Benzyl alcohol	100-51-6	N.D.	33	11	1
14241	1,1'-Biphenyl	92-52-4	N.D.	11	3.3	1
14241	4-Bromophenyl-phenylether	101-55-3	N.D.	2.2	0.55	1
14241	Butylbenzylphthalate	85-68-7	N.D.	5.5	2.2	1
14241	Di-n-butylphthalate	84-74-2	N.D.	5.5	2.2	1
14241	Caprolactam	105-60-2	N.D.	12	5.5	1
14241	Carbazole	86-74-8	N.D.	2.2	0.55	1
14241	4-Chloro-3-methylphenol	59-50-7	N.D.	2.2	0.55	1
14241	4-Chloroaniline	106-47-8	N.D.	11	4.4	1
14241	bis(2-Chloroethoxy)methane	111-91-1	N.D.	2.2	0.55	1
14241	bis(2-Chloroethyl)ether	111-44-4	N.D.	2.2	0.55	1
14241	bis(2-Chloroisopropyl)ether[1]	39638-32-9	N.D.	2.2	0.55	1
	Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.					
14241	2-Chloronaphthalene	91-58-7	N.D.	1.1	0.44	1
14241	2-Chlorophenol	95-57-8	N.D.	2.2	0.55	1
14241	4-Chlorophenyl-phenylether	7005-72-3	N.D.	2.2	0.55	1
14241	Chrysene	218-01-9	N.D.	0.55	0.11	1
14241	Dibenz(a,h)anthracene	53-70-3	N.D.	0.55	0.11	1
14241	Dibenzofuran	132-64-9	N.D.	2.2	0.55	1
14241	3,3'-Dichlorobenzidine	91-94-1	N.D.	11	3.3	1
14241	2,4-Dichlorophenol	120-83-2	N.D.	2.2	0.55	1
14241	Dicyclohexylamine[1]	101-83-7	N.D.	11	11	1
14241	Diethylphthalate	84-66-2	N.D.	5.5	2.2	1
14241	N,N-Dimethylaniline[1]	121-69-7	N.D.	1.1	0.55	1
14241	2,4-Dimethylphenol	105-67-9	N.D.	11	3.3	1
14241	Dimethylphthalate	131-11-3	N.D.	5.5	2.2	1
14241	4,6-Dinitro-2-methylphenol	534-52-1	N.D.	23	8.8	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **DUP-102919-02 Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/30/2019 11:22
Collection Date/Time: 10/29/2019
SDG#: BMS81-23FD

ARCADIS U.S., Inc.
ELLE Sample #: GW 1187642
ELLE Group #: 2071744
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	2,4-Dinitrophenol	51-28-5	N.D.	33	15	1
14241	2,4-Dinitrotoluene	121-14-2	N.D.	5.5	1.1	1
14241	2,6-Dinitrotoluene	606-20-2	N.D.	2.2	0.55	1
14241	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	12	5.5	1
14241	Fluoranthene	206-44-0	N.D.	0.55	0.11	1
14241	Fluorene	86-73-7	N.D.	0.55	0.11	1
14241	Hexachlorobenzene	118-74-1	N.D.	0.55	0.11	1
14241	Hexachlorobutadiene	87-68-3	N.D.	2.2	0.55	1
14241	Hexachlorocyclopentadiene	77-47-4	N.D.	12	5.5	1
14241	Hexachloroethane	67-72-1	N.D.	5.5	1.1	1
14241	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.55	0.11	1
14241	Isophorone	78-59-1	N.D.	2.2	0.55	1
14241	2-Methylnaphthalene	91-57-6	N.D.	0.55	0.11	1
14241	2-Methylphenol	95-48-7	N.D.	2.2	0.55	1
14241	4-Methylphenol	65794-96-9	N.D.	2.2	0.55	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
14241	Naphthalene	91-20-3	N.D.	0.55	0.11	1
14241	2-Nitroaniline	88-74-4	N.D.	7.7	2.2	1
14241	3-Nitroaniline	99-09-2	N.D.	7.7	3.3	1
14241	4-Nitroaniline	100-01-6	N.D.	3.3	0.99	1
14241	Nitrobenzene	98-95-3	N.D.	2.2	0.55	1
14241	2-Nitrophenol	88-75-5	N.D.	11	3.3	1
14241	4-Nitrophenol	100-02-7	N.D.	33	11	1
14241	N-Nitroso-di-n-propylamine	621-64-7	N.D.	3.3	0.77	1
14241	N-Nitrosodiphenylamine	86-30-6	N.D.	3.3	0.77	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.					
14241	Di-n-octylphthalate	117-84-0	N.D.	12	5.5	1
14241	Pentachlorophenol	87-86-5	N.D.	5.5	1.1	1
14241	Phenanthrene	85-01-8	N.D.	0.55	0.11	1
14241	Phenol	108-95-2	N.D.	2.2	0.55	1
14241	Pyrene	129-00-0	N.D.	0.55	0.11	1
14241	Pyridine	110-86-1	N.D.	5.5	2.2	1
14241	1,2,4,5-Tetrachlorobenzene	95-94-3	N.D.	2.2	0.55	1
14241	2,3,4,6-Tetrachlorophenol	58-90-2	N.D.	11	4.4	1
14241	2,4,5-Trichlorophenol	95-95-4	N.D.	2.2	0.55	1
14241	2,4,6-Trichlorophenol	88-06-2	N.D.	2.2	0.55	1
14241	Triethylamine[1]	121-44-8	N.D.	11	11	1

*=This limit was used in the evaluation of the final result

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Analysis Report

REVISED

Sample Description: **DUP-102919-02 Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/30/2019 11:22
Collection Date/Time: 10/29/2019
SDG#: BMS81-23FD

ARCADIS U.S., Inc.
ELLE Sample #: GW 1187642
ELLE Group #: 2071744
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D SIM**		**ug/l**	**ug/l**	**ug/l**	
14244	1,4-Dioxane	123-91-1	N.D.	0.3	0.1	1
00886	**SVOA TIC Interpretive(25)**					
	The results from the semivolatile library search are listed on the attached FORM 1 - SV-TIC. The qualifiers appearing in the "Q" column are defined at the end of the report.					
Wet Chemistry	**EPA 350.1**		**ug/l**	**ug/l**	**ug/l**	
12892	Ammonia Nitrogen	7664-41-7	11,500	2,000	1,000	20

Sample Comments

State of New York Certification No. 10670

[1] = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14241	Semi-annual Groundwater BMS	SW-846 8270D	1	19303WAN026	11/06/2019 14:00	Kira N Beck	1
14244	SIM SVOAs 8270D MINI	SW-846 8270D SIM	1	19303WAP026	11/01/2019 00:22	Ashley R Transue	1
10466	BNA Water Extraction SIM	SW-846 3510C	1	19303WAP026	10/31/2019 09:30	Joshua S Ruth	1
11010	8270D BNA Extraction	SW-846 3510C	1	19303WAN026	10/31/2019 09:30	Joshua S Ruth	1
12892	Ammonia Nitrogen	EPA 350.1	1	19307107103A	11/03/2019 09:57	Ashlynn M Cornelius	20

*=This limit was used in the evaluation of the final result

REVISED

1F

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

S8123

Lab Name: Lancaster Laboratories Contract:
Lab Code: LANCAS Case No.: SAS No.: SDG No.:
Matrix: (soil/water) WATER Lab Sample ID: 1187642
Sample wt/vol: 227 (g/mL) mL Lab File ID: lk0179.d
Level: (low/med) LOW Date Received: 10/30/19
% Moisture: Decanted: (Y/N) Date Extracted: 10/31/19
Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/06/19
Injection Volume: 1 (uL) Dilution Factor: 1
GPC Cleanup: N pH: Extraction: Sepf
CONCENTRATION UNITS:
Number TICs found: 1 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		Unknown	7.117	19	J
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3.	SVOCTIC	Total SVOC TICs		19	J
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page 1 of 1

FORM I SV-1

REVISED

Sample Description: **FB-102919 Grab Water**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/30/2019 11:22
Collection Date/Time: 10/29/2019 16:20
SDG#: BMS81-24FB

ARCADIS U.S., Inc.
ELLE Sample #: GW 1187643
ELLE Group #: 2071744
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
LC/MS/MS Miscellaneous	**EPA 537 mod QSM 5.1 table B-15**		**ng/l**	**ng/l**	**ng/l**	
14434	6:2-Fluorotelomersulfonic acid[1]	27619-97-2	N.D.	4.4	1.7	1
14434	8:2-Fluorotelomersulfonic acid[1]	39108-34-4	N.D.	2.6	0.87	1
14434	NEtFOSAA[1]	2991-50-6	N.D.	2.6	0.44	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.					
14434	NMeFOSAA[1]	2355-31-9	N.D.	1.7	0.52	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.					
14434	Perfluorobutanesulfonic acid[1]	375-73-5	N.D.	1.7	0.44	1
14434	Perfluorobutanoic acid[1]	375-22-4	N.D.	4.4	1.7	1
14434	Perfluorodecanesulfonic acid[1]	335-77-3	N.D.	1.7	0.44	1
14434	Perfluorodecanoic acid[1]	335-76-2	N.D.	1.7	0.44	1
14434	Perfluorododecanoic acid[1]	307-55-1	N.D.	1.7	0.44	1
14434	Perfluoroheptanesulfonic acid[1]	375-92-8	N.D.	1.7	0.44	1
14434	Perfluoroheptanoic acid[1]	375-85-9	N.D.	1.7	0.44	1
14434	Perfluorohexanesulfonic acid[1]	355-46-4	N.D.	1.7	0.44	1
14434	Perfluorohexanoic acid[1]	307-24-4	N.D.	1.7	0.44	1
14434	Perfluorononanoic acid[1]	375-95-1	N.D.	1.7	0.44	1
14434	Perfluorooctanesulfonamide[1]	754-91-6	N.D.	1.7	0.44	1
14434	Perfluorooctanesulfonic acid[1]	1763-23-1	N.D.	1.7	0.44	1
14434	Perfluorooctanoic acid[1]	335-67-1	N.D.	1.7	0.44	1
14434	Perfluoropentanoic acid[1]	2706-90-3	N.D.	1.7	0.44	1
14434	Perfluorotetradecanoic acid[1]	376-06-7	N.D.	1.7	0.44	1
14434	Perfluorotridecanoic acid[1]	72629-94-8	N.D.	1.7	0.44	1
14434	Perfluoroundecanoic acid[1]	2058-94-8	N.D.	1.7	0.44	1

Sample Comments

State of New York Certification No. 10670

[1] = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14434	PFAS in Water by LC/MS/MS-DoD	EPA 537 mod QSM 5.1 table B-15	1	19304003	11/01/2019 17:09	Devon M Whooley	1
14465	PFAS Water Prep - DoD	EPA 537 mod QSM 5.1 table B-15	1	19304003	10/31/2019 07:00	Toby Barnhart	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **EB-102919 Grab Water**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/30/2019 11:22
Collection Date/Time: 10/29/2019 16:30
SDG#: BMS81-25EB

ARCADIS U.S., Inc.
ELLE Sample #: GW 1187644
ELLE Group #: 2071744
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
LC/MS/MS Miscellaneous	**EPA 537 mod QSM 5.1 table B-15**		**ng/l**	**ng/l**	**ng/l**	
14434	6:2-Fluorotelomersulfonic acid[1]	27619-97-2	N.D.	5.1	2.0	1
14434	8:2-Fluorotelomersulfonic acid[1]	39108-34-4	N.D.	3.1	1.0	1
14434	NEtFOSAA[1]	2991-50-6	N.D.	3.1	0.51	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.					
14434	NMeFOSAA[1]	2355-31-9	N.D.	2.0	0.61	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.					
14434	Perfluorobutanesulfonic acid[1]	375-73-5	N.D.	2.0	0.51	1
14434	Perfluorobutanoic acid[1]	375-22-4	N.D.	5.1	2.0	1
14434	Perfluorodecanesulfonic acid[1]	335-77-3	N.D.	2.0	0.51	1
14434	Perfluorodecanoic acid[1]	335-76-2	N.D.	2.0	0.51	1
14434	Perfluorododecanoic acid[1]	307-55-1	N.D.	2.0	0.51	1
14434	Perfluoroheptanesulfonic acid[1]	375-92-8	N.D.	2.0	0.51	1
14434	Perfluoroheptanoic acid[1]	375-85-9	N.D.	2.0	0.51	1
14434	Perfluorohexanesulfonic acid[1]	355-46-4	N.D.	2.0	0.51	1
14434	Perfluorohexanoic acid[1]	307-24-4	N.D.	2.0	0.51	1
14434	Perfluorononanoic acid[1]	375-95-1	N.D.	2.0	0.51	1
14434	Perfluorooctanesulfonamide[1]	754-91-6	N.D.	2.0	0.51	1
14434	Perfluorooctanesulfonic acid[1]	1763-23-1	N.D.	2.0	0.51	1
14434	Perfluorooctanoic acid[1]	335-67-1	N.D.	2.0	0.51	1
14434	Perfluoropentanoic acid[1]	2706-90-3	N.D.	2.0	0.51	1
14434	Perfluorotetradecanoic acid[1]	376-06-7	N.D.	2.0	0.51	1
14434	Perfluorotridecanoic acid[1]	72629-94-8	N.D.	2.0	0.51	1
14434	Perfluoroundecanoic acid[1]	2058-94-8	N.D.	2.0	0.51	1

Sample Comments

State of New York Certification No. 10670

[1] = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14434	PFAS in Water by LC/MS/MS-DoD	EPA 537 mod QSM 5.1 table B-15	1	19308018	11/05/2019 17:04	Mark Collare	1
14465	PFAS Water Prep - DoD	EPA 537 mod QSM 5.1 table B-15	2	19308018	11/04/2019 16:00	Anthony C Polaski	1

*=This limit was used in the evaluation of the final result

REVISED

Quality Control Summary

Client Name: ARCADIS U.S., Inc. Group Number: 2071744
Reported: 01/27/2020 17:04

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	LOQ**	MDL
	ug/l	ug/l	ug/l
Batch number: Y193091AA	Sample number(s): 1187623,1187625,1187627,1187629-1187631,1187637,1187639,1187641		
Acetone	N.D.	20	0.7
Acetonitrile	N.D.	100	16
Benzene	N.D.	1	0.2
Bromochloromethane	N.D.	5	0.2
Bromodichloromethane	N.D.	1	0.2
Bromoform	N.D.	4	1
Bromomethane	N.D.	1	0.3
n-Butanol	N.D.	250	61
2-Butanone	N.D.	10	0.3
t-Butyl alcohol	N.D.	50	12
n-Butylbenzene	N.D.	5	0.2
sec-Butylbenzene	N.D.	5	0.2
tert-Butylbenzene	N.D.	5	0.3
Carbon Disulfide	N.D.	5	0.2
Carbon Tetrachloride	N.D.	1	0.2
Chlorobenzene	N.D.	1	0.2
Chlorodifluoromethane	N.D.	5	2
Chloroethane	N.D.	1	0.2
Chloroform	N.D.	1	0.2
Chloromethane	N.D.	1	0.2
Cyclohexane	N.D.	5	1
Cyclohexanone	N.D.	100	25
1,2-Dibromo-3-chloropropane	N.D.	5	0.3
Dibromochloromethane	N.D.	1	0.2
1,2-Dibromoethane	N.D.	1	0.2
1,2-Dichlorobenzene	N.D.	5	0.2
1,3-Dichlorobenzene	N.D.	5	0.2
1,4-Dichlorobenzene	N.D.	5	0.2
Dichlorodifluoromethane	N.D.	1	0.2
1,1-Dichloroethane	N.D.	1	0.2
1,2-Dichloroethane	N.D.	1	0.3
1,1-Dichloroethene	N.D.	1	0.2
cis-1,2-Dichloroethene	N.D.	1	0.2
trans-1,2-Dichloroethene	N.D.	1	0.2
1,2-Dichloropropane	N.D.	1	0.2
cis-1,3-Dichloropropene	N.D.	1	0.2
trans-1,3-Dichloropropene	N.D.	1	0.2
1,4-Dioxane	N.D.	250	29
Ethyl Acetate	N.D.	5	0.7

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REVISED

Quality Control Summary

Client Name: ARCADIS U.S., Inc.
Reported: 01/27/2020 17:04

Group Number: 2071744

Method Blank (continued)

Analysis Name	Result	LOQ**	MDL
	ug/l	ug/l	ug/l
Ethyl ether	N.D.	5	0.2
Ethylbenzene	N.D.	1	0.4
Freon 113	N.D.	10	0.2
n-Heptane	N.D.	5	2
n-Hexane	N.D.	5	2
2-Hexanone	N.D.	10	0.3
Isobutyl Alcohol	N.D.	250	36
Isopropylbenzene	N.D.	5	0.2
p-Isopropyltoluene	N.D.	5	0.2
Methyl Acetate	N.D.	5	0.2
Methyl Tertiary Butyl Ether	N.D.	1	0.2
4-Methyl-2-pentanone	N.D.	10	0.5
Methylcyclohexane	N.D.	5	0.5
Methylene Chloride	N.D.	1	0.3
Naphthalene	N.D.	5	1
2-Nitropropane	N.D.	10	0.8
Styrene	N.D.	5	0.2
1,1,2,2-Tetrachloroethane	N.D.	1	0.2
Tetrachloroethene	N.D.	1	0.2
Tetrahydrofuran	N.D.	10	0.7
Toluene	N.D.	1	0.2
1,2,3-Trichlorobenzene	N.D.	5	0.4
1,2,4-Trichlorobenzene	N.D.	5	0.3
1,1,1-Trichloroethane	N.D.	1	0.3
1,1,2-Trichloroethane	N.D.	1	0.2
Trichloroethene	N.D.	1	0.2
Trichlorofluoromethane	N.D.	1	0.2
1,2,4-Trimethylbenzene	N.D.	5	1
1,3,5-Trimethylbenzene	N.D.	5	0.3
Vinyl Chloride	N.D.	1	0.2
m+p-Xylene	N.D.	5	1
o-Xylene	N.D.	1	0.4
Xylene (Total)	N.D.	6	1
Batch number: 19303WAN026	Sample number(s): 1187625,1187627,1187629-1187631,1187637,1187642		
Acenaphthene	N.D.	0.50	0.10
Acenaphthylene	N.D.	0.50	0.10
Acetophenone	N.D.	10	4.0
Aniline	N.D.	10	3.0
Anthracene	N.D.	0.50	0.10
Atrazine	N.D.	5.0	2.0
Benzaldehyde	N.D.	10	3.0
Benzo(a)anthracene	N.D.	0.50	0.10
Benzo(a)pyrene	N.D.	0.50	0.10
Benzo(b)fluoranthene	N.D.	0.50	0.10

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REVISED

Quality Control Summary

Client Name: ARCADIS U.S., Inc.
Reported: 01/27/2020 17:04

Group Number: 2071744

Method Blank (continued)

Analysis Name	Result	LOQ**	MDL
	ug/l	ug/l	ug/l
Benzo(g,h,i)perylene	N.D.	0.50	0.10
Benzo(k)fluoranthene	N.D.	0.50	0.10
Benzyl alcohol	N.D.	30	10
1,1'-Biphenyl	N.D.	10	3.0
4-Bromophenyl-phenylether	N.D.	2.0	0.50
Butylbenzylphthalate	N.D.	5.0	2.0
Di-n-butylphthalate	N.D.	5.0	2.0
Caprolactam	N.D.	11	5.0
Carbazole	N.D.	2.0	0.50
4-Chloro-3-methylphenol	N.D.	2.0	0.50
4-Chloroaniline	N.D.	10	4.0
bis(2-Chloroethoxy)methane	N.D.	2.0	0.50
bis(2-Chloroethyl)ether	N.D.	2.0	0.50
bis(2-Chloroisopropyl)ether	N.D.	2.0	0.50
2-Chloronaphthalene	N.D.	1.0	0.40
2-Chlorophenol	N.D.	2.0	0.50
4-Chlorophenyl-phenylether	N.D.	2.0	0.50
Chrysene	N.D.	0.50	0.10
Dibenz(a,h)anthracene	N.D.	0.50	0.10
Dibenzofuran	N.D.	2.0	0.50
3,3'-Dichlorobenzidine	N.D.	10	3.0
2,4-Dichlorophenol	N.D.	2.0	0.50
Dicyclohexylamine	N.D.	10	10
Diethylphthalate	N.D.	5.0	2.0
N,N-Dimethylaniline	N.D.	1.0	0.50
2,4-Dimethylphenol	N.D.	10	3.0
Dimethylphthalate	N.D.	5.0	2.0
4,6-Dinitro-2-methylphenol	N.D.	21	8.0
2,4-Dinitrophenol	N.D.	30	14
2,4-Dinitrotoluene	N.D.	5.0	1.0
2,6-Dinitrotoluene	N.D.	2.0	0.50
bis(2-Ethylhexyl)phthalate	N.D.	11	5.0
Fluoranthene	N.D.	0.50	0.10
Fluorene	N.D.	0.50	0.10
Hexachlorobenzene	N.D.	0.50	0.10
Hexachlorobutadiene	N.D.	2.0	0.50
Hexachlorocyclopentadiene	N.D.	11	5.0
Hexachloroethane	N.D.	5.0	1.0
Indeno(1,2,3-cd)pyrene	N.D.	0.50	0.10
Isophorone	N.D.	2.0	0.50
2-Methylnaphthalene	N.D.	0.50	0.10
2-Methylphenol	N.D.	2.0	0.50
4-Methylphenol	N.D.	2.0	0.50
Naphthalene	N.D.	0.50	0.10
2-Nitroaniline	N.D.	7.0	2.0

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REVISED

Quality Control Summary

Client Name: ARCADIS U.S., Inc. Group Number: 2071744
Reported: 01/27/2020 17:04

Method Blank (continued)

Analysis Name	Result	LOQ**	MDL
	ug/l	ug/l	ug/l
3-Nitroaniline	N.D.	7.0	3.0
4-Nitroaniline	N.D.	3.0	0.90
Nitrobenzene	N.D.	2.0	0.50
2-Nitrophenol	N.D.	10	3.0
4-Nitrophenol	N.D.	30	10
N-Nitroso-di-n-propylamine	N.D.	3.0	0.70
N-Nitrosodiphenylamine	N.D.	3.0	0.70
Di-n-octylphthalate	N.D.	11	5.0
Pentachlorophenol	N.D.	5.0	1.0
Phenanthrene	N.D.	0.50	0.10
Phenol	N.D.	2.0	0.50
Pyrene	N.D.	0.50	0.10
Pyridine	N.D.	5.0	2.0
1,2,4,5-Tetrachlorobenzene	N.D.	2.0	0.50
2,3,4,6-Tetrachlorophenol	N.D.	10	4.0
2,4,5-Trichlorophenol	N.D.	2.0	0.50
2,4,6-Trichlorophenol	N.D.	2.0	0.50
Triethylamine	N.D.	10	10
Batch number: 19303WAP026	Sample number(s): 1187623,1187625,1187627,1187637,1187642		
1,4-Dioxane	0.1 J	0.3	0.1
Batch number: 19308WAC026	Sample number(s): 1187629-1187631		
1,4-Dioxane	N.D.	0.3	0.1
Batch number: 19311WAK026	Sample number(s): 1187623		
Acenaphthene	N.D.	0.50	0.10
Acenaphthylene	N.D.	0.50	0.10
Acetophenone	N.D.	10	4.0
Aniline	N.D.	10	3.0
Anthracene	N.D.	0.50	0.10
Atrazine	N.D.	5.0	2.0
Benzaldehyde	N.D.	10	3.0
Benzo(a)anthracene	N.D.	0.50	0.10
Benzo(a)pyrene	N.D.	0.50	0.10
Benzo(b)fluoranthene	N.D.	0.50	0.10
Benzo(g,h,i)perylene	N.D.	0.50	0.10
Benzo(k)fluoranthene	N.D.	0.50	0.10
Benzyl alcohol	N.D.	30	10
1,1'-Biphenyl	N.D.	10	3.0
4-Bromophenyl-phenylether	N.D.	2.0	0.50
Butylbenzylphthalate	N.D.	5.0	2.0
Di-n-butylphthalate	N.D.	5.0	2.0
Caprolactam	N.D.	11	5.0
Carbazole	N.D.	2.0	0.50
4-Chloro-3-methylphenol	N.D.	2.0	0.50

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REVISED

Quality Control Summary

Client Name: ARCADIS U.S., Inc.
Reported: 01/27/2020 17:04

Group Number: 2071744

Method Blank (continued)

Analysis Name	Result	LOQ**	MDL
	ug/l	ug/l	ug/l
4-Chloroaniline	N.D.	10	4.0
bis(2-Chloroethoxy)methane	N.D.	2.0	0.50
bis(2-Chloroethyl)ether	N.D.	2.0	0.50
bis(2-Chloroisopropyl)ether	N.D.	2.0	0.50
2-Chloronaphthalene	N.D.	1.0	0.40
2-Chlorophenol	N.D.	2.0	0.50
4-Chlorophenyl-phenylether	N.D.	2.0	0.50
Chrysene	N.D.	0.50	0.10
Dibenz(a,h)anthracene	N.D.	0.50	0.10
Dibenzofuran	N.D.	2.0	0.50
3,3'-Dichlorobenzidine	N.D.	10	3.0
2,4-Dichlorophenol	N.D.	2.0	0.50
Dicyclohexylamine	N.D.	10	10
Diethylphthalate	N.D.	5.0	2.0
N,N-Dimethylaniline	N.D.	1.0	0.50
2,4-Dimethylphenol	N.D.	10	3.0
Dimethylphthalate	N.D.	5.0	2.0
4,6-Dinitro-2-methylphenol	N.D.	21	8.0
2,4-Dinitrophenol	N.D.	30	14
2,4-Dinitrotoluene	N.D.	5.0	1.0
2,6-Dinitrotoluene	N.D.	2.0	0.50
bis(2-Ethylhexyl)phthalate	N.D.	11	5.0
Fluoranthene	N.D.	0.50	0.10
Fluorene	N.D.	0.50	0.10
Hexachlorobenzene	N.D.	0.50	0.10
Hexachlorobutadiene	N.D.	2.0	0.50
Hexachlorocyclopentadiene	N.D.	11	5.0
Hexachloroethane	N.D.	5.0	1.0
Indeno(1,2,3-cd)pyrene	N.D.	0.50	0.10
Isophorone	N.D.	2.0	0.50
2-Methylnaphthalene	N.D.	0.50	0.10
2-Methylphenol	N.D.	2.0	0.50
4-Methylphenol	N.D.	2.0	0.50
Naphthalene	N.D.	0.50	0.10
2-Nitroaniline	N.D.	7.0	2.0
3-Nitroaniline	N.D.	7.0	3.0
4-Nitroaniline	N.D.	3.0	0.90
Nitrobenzene	N.D.	2.0	0.50
2-Nitrophenol	N.D.	10	3.0
4-Nitrophenol	N.D.	30	10
N-Nitroso-di-n-propylamine	N.D.	3.0	0.70
N-Nitrosodiphenylamine	N.D.	3.0	0.70
Di-n-octylphthalate	N.D.	11	5.0
Pentachlorophenol	N.D.	5.0	1.0
Phenanthrene	N.D.	0.50	0.10

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REVISED

Quality Control Summary

Client Name: ARCADIS U.S., Inc. Group Number: 2071744
Reported: 01/27/2020 17:04

Method Blank (continued)

Analysis Name	Result	LOQ**	MDL
	ug/l	ug/l	ug/l
Phenol	N.D.	2.0	0.50
Pyrene	N.D.	0.50	0.10
Pyridine	N.D.	5.0	2.0
1,2,4,5-Tetrachlorobenzene	N.D.	2.0	0.50
2,3,4,6-Tetrachlorophenol	N.D.	10	4.0
2,4,5-Trichlorophenol	N.D.	2.0	0.50
2,4,6-Trichlorophenol	N.D.	2.0	0.50
Triethylamine	N.D.	10	10
Batch number: 193030019A	Sample number(s): 1187623,1187625,1187627,1187629-1187631,1187637,1187639		
Acetaldehyde	N.D.	60	35
Formaldehyde	N.D.	50	20
Batch number: 193040002A	Sample number(s): 1187623,1187625,1187627,1187629-1187631,1187637,1187639,1187641		
Ethylene glycol	N.D.	10,000	5,000
Propylene glycol	N.D.	10,000	5,000
Batch number: 193080007A	Sample number(s): 1187623,1187625,1187627,1187629-1187631,1187637,1187639,1187641		
Ethanol	N.D.	1,000	150
Isopropanol	N.D.	1,000	110
Methanol	N.D.	1,000	220
	ng/l	ng/l	ng/l
Batch number: 19304003	Sample number(s): 1187623,1187625,1187627,1187629-1187631,1187637,1187643		
6:2-Fluorotelomersulfonic acid	N.D.	5.0	2.0
8:2-Fluorotelomersulfonic acid	N.D.	3.0	1.0
NEtFOSAA	N.D.	3.0	0.50
NMeFOSAA	N.D.	2.0	0.60
Perfluorobutanesulfonic acid	N.D.	2.0	0.50
Perfluorobutanoic acid	N.D.	5.0	2.0
Perfluorodecanesulfonic acid	N.D.	2.0	0.50
Perfluorodecanoic acid	N.D.	2.0	0.50
Perfluorododecanoic acid	N.D.	2.0	0.50
Perfluoroheptanesulfonic acid	N.D.	2.0	0.50
Perfluoroheptanoic acid	N.D.	2.0	0.50
Perfluorohexanesulfonic acid	N.D.	2.0	0.50
Perfluorohexanoic acid	N.D.	2.0	0.50
Perfluorononanoic acid	N.D.	2.0	0.50
Perfluorooctanesulfonamide	N.D.	2.0	0.50
Perfluorooctanesulfonic acid	N.D.	2.0	0.50
Perfluorooctanoic acid	N.D.	2.0	0.50
Perfluoropentanoic acid	N.D.	2.0	0.50
Perfluorotetradecanoic acid	N.D.	2.0	0.50
Perfluorotridecanoic acid	N.D.	2.0	0.50
Perfluoroundecanoic acid	N.D.	2.0	0.50
Batch number: 19308018	Sample number(s): 1187639,1187644		

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REVISED

Quality Control Summary

Client Name: ARCADIS U.S., Inc.
Reported: 01/27/2020 17:04

Group Number: 2071744

Method Blank (continued)

Analysis Name	Result	LOQ**	MDL
	ng/l	ng/l	ng/l
6:2-Fluorotelomersulfonic acid	N.D.	5.0	2.0
8:2-Fluorotelomersulfonic acid	N.D.	3.0	1.0
NEtFOSAA	N.D.	3.0	0.50
NMeFOSAA	N.D.	2.0	0.60
Perfluorobutanesulfonic acid	N.D.	2.0	0.50
Perfluorobutanoic acid	N.D.	5.0	2.0
Perfluorodecanesulfonic acid	N.D.	2.0	0.50
Perfluorodecanoic acid	N.D.	2.0	0.50
Perfluorododecanoic acid	N.D.	2.0	0.50
Perfluoroheptanesulfonic acid	N.D.	2.0	0.50
Perfluoroheptanoic acid	N.D.	2.0	0.50
Perfluorohexanesulfonic acid	N.D.	2.0	0.50
Perfluorohexanoic acid	N.D.	2.0	0.50
Perfluorononanoic acid	N.D.	2.0	0.50
Perfluorooctanesulfonamide	N.D.	2.0	0.50
Perfluorooctanesulfonic acid	N.D.	2.0	0.50
Perfluorooctanoic acid	N.D.	2.0	0.50
Perfluoropentanoic acid	N.D.	2.0	0.50
Perfluorotetradecanoic acid	N.D.	2.0	0.50
Perfluorotridecanoic acid	N.D.	2.0	0.50
Perfluoroundecanoic acid	N.D.	2.0	0.50
	mg/l	mg/l	mg/l
Batch number: 193040571302	Sample number(s): 1187623-1187627,1187629-1187632,1187638-1187639		
Mercury	N.D.	0.00020	0.000050
Batch number: 193041404402	Sample number(s): 1187624,1187626,1187628,1187633-1187636,1187638,1187640		
Antimony	N.D.	0.0500	0.0160
Arsenic	N.D.	0.0300	0.0160
Barium	N.D.	0.0050	0.0010
Beryllium	N.D.	0.0050	0.0010
Cadmium	N.D.	0.0050	0.0010
Calcium	N.D.	0.200	0.0960
Chromium	N.D.	0.0150	0.0016
Cobalt	N.D.	0.0050	0.0015
Copper	N.D.	0.0200	0.0120
Iron	N.D.	0.200	0.0400
Lead	N.D.	0.0150	0.0071
Magnesium	N.D.	0.100	0.0400
Manganese	N.D.	0.0100	0.0030
Nickel	N.D.	0.0100	0.0021
Potassium	N.D.	0.500	0.204
Selenium	N.D.	0.0500	0.0160
Silver	N.D.	0.0100	0.0050
Sodium	N.D.	1.00	0.239
Thallium	N.D.	0.0300	0.0081

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REVISED

Quality Control Summary

Client Name: ARCADIS U.S., Inc.
Reported: 01/27/2020 17:04

Group Number: 2071744

Method Blank (continued)

Analysis Name	Result	LOQ**	MDL
	mg/l	mg/l	mg/l
Batch number: 193041404403	Sample number(s): 1187623,1187625,1187627,1187629-1187632,1187637,1187639		
Antimony	N.D.	0.0500	0.0160
Arsenic	N.D.	0.0300	0.0160
Barium	N.D.	0.0050	0.0010
Beryllium	N.D.	0.0050	0.0010
Cadmium	N.D.	0.0050	0.0010
Calcium	N.D.	0.200	0.0960
Chromium	N.D.	0.0150	0.0016
Cobalt	N.D.	0.0050	0.0015
Copper	N.D.	0.0200	0.0120
Iron	N.D.	0.200	0.0400
Lead	N.D.	0.0150	0.0071
Magnesium	N.D.	0.100	0.0400
Manganese	0.0032 J	0.0100	0.0030
Nickel	N.D.	0.0100	0.0021
Potassium	N.D.	0.500	0.204
Selenium	N.D.	0.0500	0.0160
Silver	N.D.	0.0100	0.0050
Sodium	N.D.	1.00	0.239
Thallium	N.D.	0.0300	0.0081
Batch number: 193050571301	Sample number(s): 1187628,1187633-1187637,1187640		
Mercury	N.D.	0.00020	0.000050
	ug/l	ug/l	ug/l
Batch number: 193041404402	Sample number(s): 1187624,1187626,1187628,1187633-1187636,1187638,1187640		
Vanadium	N.D.	10.0	1.9
Zinc	N.D.	20.0	3.7
Batch number: 193041404403	Sample number(s): 1187623,1187625,1187627,1187629-1187632,1187637,1187639		
Vanadium	N.D.	10.0	1.9
Zinc	N.D.	20.0	3.7
Batch number: 193111404701A	Sample number(s): 1187623-1187632,1187637-1187640		
Aluminum	N.D.	25.0	19.7
Batch number: 193111404702A	Sample number(s): 1187633-1187636		
Aluminum	N.D.	25.0	19.7
	mg/l	mg/l	mg/l
Batch number: 19304105102A	Sample number(s): 1187623,1187625,1187627,1187629-1187630,1187632		
Nitrite Nitrogen	N.D.	0.050	0.015
Batch number: 19304105102B	Sample number(s): 1187637,1187639		
Nitrite Nitrogen	N.D.	0.050	0.015
Batch number: 19308106102A	Sample number(s): 1187623,1187625,1187627,1187629-1187630,1187632,1187637,1187639		
Nitrate Nitrogen	N.D.	0.10	0.040

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Quality Control Summary

Client Name: ARCADIS U.S., Inc. Group Number: 2071744
Reported: 01/27/2020 17:04

Method Blank (continued)

Analysis Name	Result	LOQ**	MDL
	mg/l	mg/l	mg/l
	ug/l	ug/l	ug/l
Batch number: 19304135213A	Sample number(s): 1187623,1187625,1187627,1187637		
Chloride	N.D.	400	200
Fluoride	N.D.	100	50
Sulfate	N.D.	1,000	300
Batch number: 19304135213B	Sample number(s): 1187629-1187630,1187632		
Chloride	N.D.	400	200
Fluoride	N.D.	100	50
Sulfate	N.D.	1,000	300
Batch number: 19305109101B	Sample number(s): 1187623,1187625,1187627,1187637,1187639		
Total Phosphorus as P (water)	N.D.	100	50
Batch number: 19307107103A	Sample number(s): 1187623,1187625,1187627,1187637,1187642		
Ammonia Nitrogen	N.D.	100	50
Batch number: 19308135115A	Sample number(s): 1187639		
Chloride	N.D.	400	200
Fluoride	N.D.	100	50
Sulfate	N.D.	1,000	300
Batch number: 19309304504A	Sample number(s): 1187623,1187625,1187627,1187629-1187630,1187632,1187637		
Total Organic Carbon	N.D.	1,000	500
Batch number: 19309304504B	Sample number(s): 1187639		
Total Organic Carbon	N.D.	1,000	500
	mg/l as CaCO3	mg/l as CaCO3	mg/l as CaCO3
Batch number: 19304002103A	Sample number(s): 1187627,1187629-1187630,1187632		
Total Alkalinity to pH 4.5	N.D.	8.0	2.6
Batch number: 19304007203A	Sample number(s): 1187623,1187625,1187637,1187639		
Total Alkalinity to pH 4.5	N.D.	8.0	2.6
	ug/l	ug/l	ug/l
Batch number: 19304400101A	Sample number(s): 1187623,1187625,1187627,1187637,1187639		
Chemical Oxygen Demand	N.D.	50,000	12,800

LCS/LCSD

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max

*- Outside of specification
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(1) The result for one or both determinations was less than five times the LOQ.
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REVISED

Quality Control Summary

Client Name: ARCADIS U.S., Inc.
Reported: 01/27/2020 17:04

Group Number: 2071744

LCS/LCSD

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: Y193091AA	Sample number(s): 1187623,1187625,1187627,1187629-1187631,1187637,1187639,1187641								
Acetone	150	183.12			122		54-157		
Acetonitrile	150	180.61			120		66-149		
Benzene	20	21.44			107		80-120		
Bromochloromethane	20	19.57			98		80-120		
Bromodichloromethane	20	21.13			106		71-120		
Bromoform	20	21.48			107		51-120		
Bromomethane	20	13.96			70		53-128		
n-Butanol	1000	1134.36			113		57-130		
2-Butanone	150	161.09			107		59-135		
t-Butyl alcohol	200	222.22			111		60-130		
n-Butylbenzene	20	19.74			99		76-120		
sec-Butylbenzene	20	19.96			100		77-120		
tert-Butylbenzene	20	19.22			96		78-120		
Carbon Disulfide	20	18.37			92		65-128		
Carbon Tetrachloride	20	20.09			100		64-134		
Chlorobenzene	20	21.1			105		80-120		
Chlorodifluoromethane	20	15.85			79		45-149		
Chloroethane	20	15			75		55-123		
Chloroform	20	21.26			106		80-120		
Chloromethane	20	15.97			80		56-121		
Cyclohexane	20	16.83			84		68-126		
Cyclohexanone	500	508.09			102		27-141		
1,2-Dibromo-3-chloropropane	20	18.49			92		47-131		
Dibromochloromethane	20	21.41			107		71-120		
1,2-Dibromoethane	20	21.29			106		77-120		
1,2-Dichlorobenzene	20	21.36			107		80-120		
1,3-Dichlorobenzene	20	21.49			107		80-120		
1,4-Dichlorobenzene	20	21.99			110		80-120		
Dichlorodifluoromethane	20	12.72			64		41-127		
1,1-Dichloroethane	20	20.93			105		80-120		
1,2-Dichloroethane	20	20.4			102		73-124		
1,1-Dichloroethene	20	21.38			107		80-131		
cis-1,2-Dichloroethene	20	21.99			110		80-125		
trans-1,2-Dichloroethene	20	21.31			107		80-126		
1,2-Dichloropropane	20	22.2			111		80-120		
cis-1,3-Dichloropropene	20	20.61			103		75-120		
trans-1,3-Dichloropropene	20	19.65			98		67-120		
1,4-Dioxane	500	701.78			140		63-146		
Ethyl Acetate	20	20.99			105		67-131		
Ethyl ether	20	18.66			93		59-141		
Ethylbenzene	20	20.74			104		80-120		
Freon 113	20	18.33			92		73-139		
n-Heptane	20	18.2			91		56-133		

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REVISED

Quality Control Summary

Client Name: ARCADIS U.S., Inc.
Reported: 01/27/2020 17:04

Group Number: 2071744

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
n-Hexane	20	17.85			89		61-138		
2-Hexanone	100	104.2			104		56-135		
Isobutyl Alcohol	500	620.16			124		61-136		
Isopropylbenzene	20	20.05			100		80-120		
p-Isopropyltoluene	20	20.31			102		76-120		
Methyl Acetate	20	21.43			107		54-136		
Methyl Tertiary Butyl Ether	20	17.49			87		69-122		
4-Methyl-2-pentanone	100	103.14			103		62-133		
Methylcyclohexane	20	16.35			82		67-121		
Methylene Chloride	20	21.94			110		80-120		
Naphthalene	20	18.83			94		53-124		
2-Nitropropane	20	18.44			92		19-144		
Styrene	20	21.04			105		80-120		
1,1,2,2-Tetrachloroethane	20	20.32			102		72-120		
Tetrachloroethene	20	21.41			107		80-120		
Tetrahydrofuran	100	113.51			114		54-144		
Toluene	20	20.75			104		80-120		
1,2,3-Trichlorobenzene	20	19.85			99		66-120		
1,2,4-Trichlorobenzene	20	19.35			97		63-120		
1,1,1-Trichloroethane	20	20.32			102		67-126		
1,1,2-Trichloroethane	20	21.58			108		80-120		
Trichloroethene	20	20.96			105		80-120		
Trichlorofluoromethane	20	15.33			77		55-135		
1,2,4-Trimethylbenzene	20	19.88			99		75-120		
1,3,5-Trimethylbenzene	20	20.1			100		75-120		
Vinyl Chloride	20	15.46			77		56-120		
m+p-Xylene	40	42.09			105		80-120		
o-Xylene	20	19.81			99		80-120		
Xylene (Total)	60	61.89			103		80-120		
	ug/l	**ug/l**	**ug/l**	**ug/l**					
Batch number: 19303WAN026	Sample number(s): 1187625,1187627,1187629-1187631,1187637,1187642								
Acenaphthene	50	41.36			83		52-114		
Acenaphthylene	50	43.28			87		57-121		
Acetophenone	50	40.23			80		61-114		
Aniline	50	33.42			67		35-84		
Anthracene	50	46.18			92		62-116		
Atrazine	50	47.57			95		71-133		
Benzaldehyde	50	41.43			83		48-118		
Benzo(a)anthracene	50	47.88			96		70-118		
Benzo(a)pyrene	50	46.39			93		71-117		
Benzo(b)fluoranthene	50	47.81			96		71-115		
Benzo(g,h,i)perylene	50	48.71			97		60-119		
Benzo(k)fluoranthene	50	45.38			91		71-116		

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REVISED

Quality Control Summary

Client Name: ARCADIS U.S., Inc.
Reported: 01/27/2020 17:04

Group Number: 2071744

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Benzyl alcohol	50	46.53			93		58-121		
1,1'-Biphenyl	50	41.57			83		51-112		
4-Bromophenyl-phenylether	50	46.08			92		53-117		
Butylbenzylphthalate	50	31.18			62		44-124		
Di-n-butylphthalate	50	39.65			79		62-118		
Caprolactam	50	13.54			27		10-57		
Carbazole	50	46.2			92		64-127		
4-Chloro-3-methylphenol	50	43.66			87		60-118		
4-Chloroaniline	50	38.14			76		35-108		
bis(2-Chloroethoxy)methane	50	42.81			86		53-119		
bis(2-Chloroethyl)ether	50	40.36			81		49-110		
bis(2-Chloroisopropyl)ether	50	37.4			75		33-119		
2-Chloronaphthalene	50	39.97			80		42-111		
2-Chlorophenol	50	40.44			81		52-109		
4-Chlorophenyl-phenylether	50	43.11			86		46-113		
Chrysene	50	43.98			88		69-116		
Dibenz(a,h)anthracene	50	50.6			101		68-121		
Dibenzofuran	50	43.14			86		53-114		
3,3'-Dichlorobenzidine	50	34.19			68		42-107		
2,4-Dichlorophenol	50	43.06			86		58-114		
Dicyclohexylamine	50	30.73	50	32.5	61	65	22-75	6	30
Diethylphthalate	50	34.69			69		48-113		
N,N-Dimethylaniline	25	19.5	25	20.88	78	84	59-114	7	30
2,4-Dimethylphenol	50	32.09			64		48-91		
Dimethylphthalate	50	19.95			40		14-123		
4,6-Dinitro-2-methylphenol	50	48.11			96		63-129		
2,4-Dinitrophenol	100	72.12			72		44-134		
2,4-Dinitrotoluene	50	45.53			91		69-117		
2,6-Dinitrotoluene	50	45.94			92		63-122		
bis(2-Ethylhexyl)phthalate	50	44.41			89		68-120		
Fluoranthene	50	45.12			90		63-122		
Fluorene	50	43.2			86		56-115		
Hexachlorobenzene	50	45.65			91		60-117		
Hexachlorobutadiene	50	38.88			78		20-108		
Hexachlorocyclopentadiene	100	52.33			52		10-91		
Hexachloroethane	50	33.06			66		23-95		
Indeno(1,2,3-cd)pyrene	50	48.59			97		63-114		
Isophorone	50	42.67			85		56-120		
2-Methylnaphthalene	50	41.62			83		44-111		
2-Methylphenol	50	40.21			80		53-107		
4-Methylphenol	50	39.92			80		49-108		
Naphthalene	50	40.96			82		45-105		
2-Nitroaniline	50	45.48			91		66-126		
3-Nitroaniline	50	41.85			84		47-119		

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REVISED

Quality Control Summary

Client Name: ARCADIS U.S., Inc.
Reported: 01/27/2020 17:04

Group Number: 2071744

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
4-Nitroaniline	50	40.54			81		45-107		
Nitrobenzene	50	40.74			81		49-113		
2-Nitrophenol	50	43.68			87		57-116		
4-Nitrophenol	50	27.02			54		23-89		
N-Nitroso-di-n-propylamine	50	41.88			84		51-122		
N-Nitrosodiphenylamine	50	43			86		63-119		
Di-n-octylphthalate	50	45.36			91		67-120		
Pentachlorophenol	50	39.17			78		54-131		
Phenanthrene	50	45.17			90		65-113		
Phenol	50	24.92			50		19-79		
Pyrene	50	43.78			88		65-115		
Pyridine	50	22.86			46		13-83		
1,2,4,5-Tetrachlorobenzene	50	40.21			80		33-105		
2,3,4,6-Tetrachlorophenol	50	46.14			92		68-118		
2,4,5-Trichlorophenol	50	47.55			95		66-118		
2,4,6-Trichlorophenol	50	45.67			91		69-122		
Triethylamine	50	8.16	50	11.7	16	23	10-88	36*	30
Batch number: 19303WAP026	Sample number(s): 1187623,1187625,1187627,1187637,1187642								
1,4-Dioxane	1.00	0.766	1.00	0.624	77	62	18-91	20	30
Batch number: 19308WAC026	Sample number(s): 1187629-1187631								
1,4-Dioxane	1.00	N.D.			0*		18-91		
Batch number: 19311WAK026	Sample number(s): 1187623								
Acenaphthene	50	40.68			81		52-114		
Acenaphthylene	50	41.46			83		57-121		
Acetophenone	50	38.76			78		61-114		
Aniline	50	30.62			61		35-84		
Anthracene	50	48.68			97		62-116		
Atrazine	50	48.01			96		71-133		
Benzaldehyde	50	40.5			81		48-118		
Benzo(a)anthracene	50	49.94			100		70-118		
Benzo(a)pyrene	50	47.62			95		71-117		
Benzo(b)fluoranthene	50	47.26			95		71-115		
Benzo(g,h,i)perylene	50	51.51			103		60-119		
Benzo(k)fluoranthene	50	47.64			95		71-116		
Benzyl alcohol	50	41.74			83		58-121		
1,1'-Biphenyl	50	39.33			79		51-112		
4-Bromophenyl-phenylether	50	45.62			91		53-117		
Butylbenzylphthalate	50	36.85			74		44-124		
Di-n-butylphthalate	50	41.52			83		62-118		
Caprolactam	50	11.96			24		10-57		
Carbazole	50	45.67			91		64-127		
4-Chloro-3-methylphenol	50	44.2			88		60-118		

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REVISED

Quality Control Summary

Client Name: ARCADIS U.S., Inc. Group Number: 2071744
Reported: 01/27/2020 17:04

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
4-Chloroaniline	50	35.35			71		35-108		
bis(2-Chloroethoxy)methane	50	41.73			83		53-119		
bis(2-Chloroethyl)ether	50	37.81			76		49-110		
bis(2-Chloroisopropyl)ether	50	38.3			77		33-119		
2-Chloronaphthalene	50	38.69			77		42-111		
2-Chlorophenol	50	39.76			80		52-109		
4-Chlorophenyl-phenylether	50	42.78			86		46-113		
Chrysene	50	46.09			92		69-116		
Dibenz(a,h)anthracene	50	51.75			103		68-121		
Dibenzofuran	50	42.3			85		53-114		
3,3'-Dichlorobenzidine	50	31.66			63		42-107		
2,4-Dichlorophenol	50	43.74			87		58-114		
Dicyclohexylamine	50	38.73	50	33.52	77*	67	22-75	14	30
Diethylphthalate	50	34.81			70		48-113		
N,N-Dimethylaniline	25	20.82	25	18.58	83	74	59-114	11	30
2,4-Dimethylphenol	50	34.33			69		48-91		
Dimethylphthalate	50	22.68			45		14-123		
4,6-Dinitro-2-methylphenol	50	63.51			127		63-129		
2,4-Dinitrophenol	100	106.44			106		44-134		
2,4-Dinitrotoluene	50	45.26			91		69-117		
2,6-Dinitrotoluene	50	44.84			90		63-122		
bis(2-Ethylhexyl)phthalate	50	46.86			94		68-120		
Fluoranthene	50	46.82			94		63-122		
Fluorene	50	42.84			86		56-115		
Hexachlorobenzene	50	49.18			98		60-117		
Hexachlorobutadiene	50	31.71			63		20-108		
Hexachlorocyclopentadiene	100	45.23			45		10-91		
Hexachloroethane	50	27.99			56		23-95		
Indeno(1,2,3-cd)pyrene	50	49.52			99		63-114		
Isophorone	50	40.91			82		56-120		
2-Methylnaphthalene	50	39.48			79		44-111		
2-Methylphenol	50	39.13			78		53-107		
4-Methylphenol	50	38.45			77		49-108		
Naphthalene	50	39.35			79		45-105		
2-Nitroaniline	50	44.96			90		66-126		
3-Nitroaniline	50	39.9			80		47-119		
4-Nitroaniline	50	38.05			76		45-107		
Nitrobenzene	50	40.65			81		49-113		
2-Nitrophenol	50	46.86			94		57-116		
4-Nitrophenol	50	26.27			53		23-89		
N-Nitroso-di-n-propylamine	50	39.79			80		51-122		
N-Nitrosodiphenylamine	50	43.47			87		63-119		
Di-n-octylphthalate	50	45.89			92		67-120		
Pentachlorophenol	50	55.12			110		54-131		

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REVISED

Quality Control Summary

Client Name: ARCADIS U.S., Inc. Group Number: 2071744
Reported: 01/27/2020 17:04

LCS/LCSD (continued)

Analysis Name	LCS Spike Added	LCS Conc	LCSD Spike Added	LCSD Conc	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
	ug/l	ug/l	ug/l	ug/l					
Phenanthrene	50	48.13			96		65-113		
Phenol	50	23.36			47		19-79		
Pyrene	50	44.94			90		65-115		
Pyridine	50	20.24			40		13-83		
1,2,4,5-Tetrachlorobenzene	50	36.03			72		33-105		
2,3,4,6-Tetrachlorophenol	50	51.81			104		68-118		
2,4,5-Trichlorophenol	50	47.22			94		66-118		
2,4,6-Trichlorophenol	50	46.96			94		69-122		
Triethylamine	50	17.47	50	12.94	35	26	10-88	30	30
	ug/l	ug/l	ug/l	ug/l					
Batch number: 193030019A	Sample number(s): 1187623,1187625,1187627,1187629-1187631,1187637,1187639								
Acetaldehyde	500	416.43			83		76-119		
Formaldehyde	500	508.38			102		77-122		
	ug/l	ug/l	ug/l	ug/l					
Batch number: 193040002A	Sample number(s): 1187623,1187625,1187627,1187629-1187631,1187637,1187639,1187641								
Ethylene glycol	102783.4	108864.6			106		69-118		
Propylene glycol	98902.99	104097.6			105		60-121		
Batch number: 193080007A	Sample number(s): 1187623,1187625,1187627,1187629-1187631,1187637,1187639,1187641								
Ethanol	2501	2256.23			90		80-115		
Isopropanol	2505	2463.38			98		85-115		
Methanol	2503	2349.23			94		79-120		
	ng/l	ng/l	ng/l	ng/l					
Batch number: 19304003	Sample number(s): 1187623,1187625,1187627,1187629-1187631,1187637,1187643								
6:2-Fluorotelomersulfonic acid	24.28	24			99		51-155		
8:2-Fluorotelomersulfonic acid	24.52	22.59			92		62-133		
NEtFOSAA	25.6	24.23			95		59-145		
NMeFOSAA	25.6	25.92			101		53-136		
Perfluorobutanesulfonic acid	22.64	21.09			93		81-133		
Perfluorobutanoic acid	25.6	26.39			103		84-135		
Perfluorodecanesulfonic acid	24.64	23.99			97		69-124		
Perfluorodecanoic acid	25.6	24.21			95		78-137		
Perfluorododecanoic acid	25.6	23.58			92		75-139		
Perfluoroheptanesulfonic acid	24.36	22.82			94		80-129		
Perfluoroheptanoic acid	25.6	26.58			104		80-140		
Perfluorohexanesulfonic acid	24.2	21.33			88		71-131		
Perfluorohexanoic acid	25.6	24.05			94		80-137		
Perfluorononanoic acid	25.6	23.49			92		73-140		
Perfluorooctanesulfonamide	25.6	22.74			89		73-121		
Perfluorooctanesulfonic acid	24.48	20.55			84		54-139		
Perfluorooctanoic acid	25.6	22.9			89		83-138		

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REVISED

Quality Control Summary

Client Name: ARCADIS U.S., Inc. Group Number: 2071744
Reported: 01/27/2020 17:04

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ng/l	LCS Conc ng/l	LCSD Spike Added ng/l	LCSD Conc ng/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Perfluoropentanoic acid	25.6	27.76			108		75-138		
Perfluorotetradecanoic acid	25.6	24.27			95		79-134		
Perfluorotridecanoic acid	25.6	21.58			84		67-144		
Perfluoroundecanoic acid	25.6	25.93			101		70-134		
Batch number: 19308018	Sample number(s): 1187639,1187644								
6:2-Fluorotelomersulfonic acid	24.28	23.51	24.28	22.54	97	93	51-155	4	30
8:2-Fluorotelomersulfonic acid	24.52	24.19	24.52	26.29	99	107	62-133	8	30
NEtFOSAA	25.6	23.18	25.6	27.25	91	106	59-145	16	30
NMeFOSAA	25.6	26.31	25.6	26.66	103	104	53-136	1	30
Perfluorobutanesulfonic acid	22.64	20.95	22.64	20.64	93	91	81-133	2	30
Perfluorobutanoic acid	25.6	24.49	25.6	23.64	96	92	84-135	4	30
Perfluorodecanesulfonic acid	24.64	19.37	24.64	19.7	79	80	69-124	2	30
Perfluorodecanoic acid	25.6	22.15	25.6	19.89	87	78	78-137	11	30
Perfluorododecanoic acid	25.6	25.43	25.6	22.8	99	89	75-139	11	30
Perfluoroheptanesulfonic acid	24.36	23.38	24.36	22.6	96	93	80-129	3	30
Perfluoroheptanoic acid	25.6	25.3	25.6	25.1	99	98	80-140	1	30
Perfluorohexanesulfonic acid	24.2	21.24	24.2	20.92	88	86	71-131	2	30
Perfluorohexanoic acid	25.6	24.39	25.6	22.56	95	88	80-137	8	30
Perfluorononanoic acid	25.6	23.56	25.6	24.19	92	94	73-140	3	30
Perfluorooctanesulfonamide	25.6	24.29	25.6	24.7	95	96	73-121	2	30
Perfluorooctanesulfonic acid	24.48	20.38	24.48	19.88	83	81	54-139	2	30
Perfluorooctanoic acid	25.6	23.92	25.6	22.75	93	89	83-138	5	30
Perfluoropentanoic acid	25.6	26.85	25.6	26.77	105	105	75-138	0	30
Perfluorotetradecanoic acid	25.6	24.58	25.6	24.23	96	95	79-134	1	30
Perfluorotridecanoic acid	25.6	22.31	25.6	21.76	87	85	67-144	3	30
Perfluoroundecanoic acid	25.6	23.13	25.6	21.28	90	83	70-134	8	30
	mg/l	**mg/l**	**mg/l**	**mg/l**					
Batch number: 193040571302	Sample number(s): 1187623-1187627,1187629-1187632,1187638-1187639								
Mercury	0.00100	0.000863			86		80-110		
Batch number: 193041404402	Sample number(s): 1187624,1187626,1187628,1187633-1187636,1187638,1187640								
Antimony	0.100	0.110			110		80-120		
Arsenic	0.0600	0.0683			114		80-120		
Barium	0.0100	0.00964			96		80-120		
Beryllium	0.0100	0.00977			98		80-120		
Cadmium	0.0100	0.0102			102		80-120		
Calcium	0.400	0.405			101		80-120		
Chromium	0.0300	0.0309			103		80-120		
Cobalt	0.0100	0.0105			105		80-120		
Copper	0.0400	0.0385			96		80-120		
Iron	0.400	0.407			102		80-120		
Lead	0.0300	0.0342			114		80-120		
Magnesium	0.200	0.203			101		80-120		

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REVISED

Quality Control Summary

Client Name: ARCADIS U.S., Inc. Group Number: 2071744
Reported: 01/27/2020 17:04

LCS/LCSD (continued)

Analysis Name	LCS Spike Added mg/l	LCS Conc mg/l	LCSD Spike Added mg/l	LCSD Conc mg/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Manganese	0.0200	0.0207			104		80-120		
Nickel	2.02	2.12			105		80-120		
Potassium	5.60	5.66			101		80-120		
Selenium	0.100	0.101			101		80-120		
Silver	0.0200	0.0193			96		80-120		
Sodium	2.00	1.99			99		80-120		
Thallium	0.0600	0.0636			106		80-120		
Batch number: 193041404403	Sample number(s): 1187623,1187625,1187627,1187629-1187632,1187637,1187639								
Antimony	0.100	0.108			108		80-120		
Arsenic	0.0600	0.0648			108		80-120		
Barium	0.0100	0.00930			93		80-120		
Beryllium	0.0100	0.00972			97		80-120		
Cadmium	0.0100	0.00987			99		80-120		
Calcium	0.400	0.403			101		80-120		
Chromium	0.0300	0.0308			103		80-120		
Cobalt	0.0100	0.0107			107		80-120		
Copper	0.0400	0.0358			89		80-120		
Iron	0.400	0.410			103		80-120		
Lead	0.0300	0.0302			101		80-120		
Magnesium	0.200	0.194			97		80-120		
Manganese	0.0200	0.0200			100		80-120		
Nickel	2.02	2.08			103		80-120		
Potassium	5.60	5.45			97		80-120		
Selenium	0.100	0.0981			98		80-120		
Silver	0.0200	0.0200			100		80-120		
Sodium	2.00	1.94			97		80-120		
Thallium	0.0600	0.0656			109		80-120		
Batch number: 193050571301	Sample number(s): 1187628,1187633-1187637,1187640								
Mercury	0.00100	0.000905			90		80-110		
	ug/l	**ug/l**	**ug/l**	**ug/l**					
Batch number: 193041404402	Sample number(s): 1187624,1187626,1187628,1187633-1187636,1187638,1187640								
Vanadium	20	20.65			103		80-120		
Zinc	440	439.15			100		80-120		
Batch number: 193041404403	Sample number(s): 1187623,1187625,1187627,1187629-1187632,1187637,1187639								
Vanadium	20	20.03			100		80-120		
Zinc	440	433.33			98		80-120		
Batch number: 193111404701A	Sample number(s): 1187623-1187632,1187637-1187640								
Aluminum	200	218.67			109		88-114		
Batch number: 193111404702A	Sample number(s): 1187633-1187636								
Aluminum	200	205.57			103		88-114		

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REVISED

Quality Control Summary

Client Name: ARCADIS U.S., Inc.
Reported: 01/27/2020 17:04

Group Number: 2071744

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
	mg/l	mg/l	mg/l	mg/l					
Batch number: 19304105102A	Sample number(s): 1187623,1187625,1187627,1187629-1187630,1187632								
Nitrite Nitrogen	0.700	0.745			106		90-110		
Batch number: 19304105102B	Sample number(s): 1187637,1187639								
Nitrite Nitrogen	0.700	0.745			106		90-110		
Batch number: 19308106102A	Sample number(s): 1187623,1187625,1187627,1187629-1187630,1187632,1187637,1187639								
Nitrate Nitrogen	2.50	2.69			108		90-110		
	ug/l	ug/l	ug/l	ug/l					
Batch number: 19304135213A	Sample number(s): 1187623,1187625,1187627,1187637								
Chloride	3000	2821.59			94		90-110		
Fluoride	750	706.16			94		90-110		
Sulfate	7500	7378.99			98		90-110		
Batch number: 19304135213B	Sample number(s): 1187629-1187630,1187632								
Chloride	3000	2821.59			94		90-110		
Fluoride	750	706.16			94		90-110		
Sulfate	7500	7378.99			98		90-110		
Batch number: 19305109101B	Sample number(s): 1187623,1187625,1187627,1187637,1187639								
Total Phosphorus as P (water)	4550	4412.14			97		90-110		
Batch number: 19307107103A	Sample number(s): 1187623,1187625,1187627,1187637,1187642								
Ammonia Nitrogen	1500	1406.2	1500	1475.8	94	98	90-110	5	15
Batch number: 19308135115A	Sample number(s): 1187639								
Chloride	3000	2758.27			92		90-110		
Fluoride	750	671.41			90		90-110		
Sulfate	7500	6933.38			92		90-110		
Batch number: 19309304504A	Sample number(s): 1187623,1187625,1187627,1187629-1187630,1187632,1187637								
Total Organic Carbon	25000	26045			104		91-113		
Batch number: 19309304504B	Sample number(s): 1187639								
Total Organic Carbon	25000	26045			104		91-113		
	mg/l as CaCO3	mg/l as CaCO3	mg/l as CaCO3	mg/l as CaCO3					
Batch number: 19304002103A	Sample number(s): 1187627,1187629-1187630,1187632								
Total Alkalinity to pH 4.5	188	197.37			105		82-106		
Batch number: 19304007203A	Sample number(s): 1187623,1187625,1187637,1187639								
Total Alkalinity to pH 4.5	188	186.73			99		82-106		

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REVISED

Quality Control Summary

Client Name: ARCADIS U.S., Inc.
Reported: 01/27/2020 17:04

Group Number: 2071744

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 19303141082A	Sample number(s): 1187639								
Biochemical Oxygen Demand-BOD	198000	207600			105		85-115		
Batch number: 19304141081A	Sample number(s): 1187623,1187625,1187627,1187629,1187632,1187637								
Biochemical Oxygen Demand-BOD	198000	218600			110		85-115		
Batch number: 19304400101A	Sample number(s): 1187623,1187625,1187627,1187637,1187639								
Chemical Oxygen Demand	500000	493900			99		94-110		

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: Y193091AA	Sample number(s): 1187623,1187625,1187627,1187629-1187631,1187637,1187639,1187641 UNSPK: 1187629									
Acetone	1.73	150	180.4	150	167.85	119	111	54-157	7	30
Acetonitrile	N.D.	150	159.19	150	160.85	106	107	66-149	1	30
Benzene	N.D.	20	22.1	20	22.14	110	111	80-120	0	30
Bromochloromethane	N.D.	20	20.14	20	19.03	101	95	80-120	6	30
Bromodichloromethane	N.D.	20	21.12	20	21.17	106	106	71-120	0	30
Bromoform	N.D.	20	19.96	20	19.92	100	100	51-120	0	30
Bromomethane	N.D.	20	13.89	20	15.06	69	75	53-128	8	30
n-Butanol	N.D.	1000	1099.54	1000	1103.33	110	110	57-130	0	30
2-Butanone	N.D.	150	152.58	150	150.57	102	100	59-135	1	30
t-Butyl alcohol	N.D.	200	199.93	200	212.21	100	106	60-130	6	30
n-Butylbenzene	N.D.	20	20.35	20	20.07	102	100	76-120	1	30
sec-Butylbenzene	N.D.	20	20.84	20	20.9	104	105	77-120	0	30
tert-Butylbenzene	N.D.	20	19.65	20	19.73	98	99	78-120	0	30
Carbon Disulfide	N.D.	20	19.53	20	19.78	98	99	65-128	1	30
Carbon Tetrachloride	N.D.	20	22.3	20	22.31	111	112	64-134	0	30
Chlorobenzene	N.D.	20	21.42	20	21.15	107	106	80-120	1	30
Chlorodifluoromethane	N.D.	20	18.92	20	17.62	95	88	45-149	7	30
Chloroethane	N.D.	20	14.81	20	16.16	74	81	55-123	9	30
Chloroform	0.444	20	22.22	20	22.01	109	108	80-120	1	30
Chloromethane	N.D.	20	14.98	20	16.9	75	85	56-121	12	30
Cyclohexane	N.D.	20	19.53	20	19.82	98	99	68-126	1	30
Cyclohexanone	N.D.	500	546.28	500	502.24	109	100	27-141	8	30
1,2-Dibromo-3-chloropropane	N.D.	20	17.59	20	17.34	88	87	47-131	1	30
Dibromochloromethane	N.D.	20	20.53	20	20.45	103	102	71-120	0	30
1,2-Dibromoethane	N.D.	20	20.82	20	20.76	104	104	77-120	0	30

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REVISED

Quality Control Summary

Client Name: ARCADIS U.S., Inc.
Reported: 01/27/2020 17:04

Group Number: 2071744

MS/MSD (continued)

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
1,2-Dichlorobenzene	N.D.	20	21.09	20	20.97	105	105	80-120	1	30
1,3-Dichlorobenzene	N.D.	20	21.57	20	21.34	108	107	80-120	1	30
1,4-Dichlorobenzene	N.D.	20	22.04	20	21.62	110	108	80-120	2	30
Dichlorodifluoromethane	N.D.	20	13.48	20	15	67	75	41-127	11	30
1,1-Dichloroethane	N.D.	20	21.36	20	21.43	107	107	80-120	0	30
1,2-Dichloroethane	N.D.	20	20.98	20	20.83	105	104	73-124	1	30
1,1-Dichloroethene	N.D.	20	23.23	20	23.04	116	115	80-131	1	30
cis-1,2-Dichloroethene	N.D.	20	22.65	20	22.5	113	113	80-120	1	30
trans-1,2-Dichloroethene	N.D.	20	22.44	20	22.22	112	111	80-120	1	30
1,2-Dichloropropane	N.D.	20	22.52	20	22.38	113	112	80-120	1	30
cis-1,3-Dichloropropene	N.D.	20	19.39	20	19.65	97	98	75-120	1	30
trans-1,3-Dichloropropene	N.D.	20	18.66	20	18.93	93	95	67-120	1	30
1,4-Dioxane	N.D.	500	652.67	500	649.43	131	130	63-146	0	30
Ethyl Acetate	N.D.	20	21.88	20	22.09	109	110	67-131	1	30
Ethyl ether	N.D.	20	19.84	20	19.41	99	97	59-141	2	30
Ethylbenzene	N.D.	20	21.17	20	21.38	106	107	80-120	1	30
Freon 113	N.D.	20	21.52	20	21.5	108	108	73-139	0	30
n-Heptane	N.D.	20	21.15	20	20.35	106	102	56-133	4	30
n-Hexane	N.D.	20	21.02	20	20.84	105	104	61-138	1	30
2-Hexanone	N.D.	100	102.49	100	102.95	102	103	56-135	0	30
Isobutyl Alcohol	N.D.	500	613.16	500	604.16	123	121	61-136	1	30
Isopropylbenzene	N.D.	20	20.54	20	20.77	103	104	80-120	1	30
p-Isopropyltoluene	N.D.	20	20.83	20	20.85	104	104	76-120	0	30
Methyl Acetate	N.D.	20	21.67	20	19.84	108	99	54-136	9	30
Methyl Tertiary Butyl Ether	N.D.	20	16.96	20	17.35	85	87	69-122	2	30
4-Methyl-2-pentanone	N.D.	100	101.71	100	100.88	102	101	62-133	1	30
Methylcyclohexane	N.D.	20	19.98	20	18.93	100	95	67-121	5	30
Methylene Chloride	N.D.	20	22.01	20	22.23	110	111	80-120	1	30
Naphthalene	N.D.	20	18.26	20	18.37	91	92	53-124	1	30
2-Nitropropane	N.D.	20	17.83	20	18.12	89	91	19-144	2	30
Styrene	N.D.	20	21.14	20	21.2	106	106	80-120	0	30
1,1,2,2-Tetrachloroethane	N.D.	20	19.72	20	19.72	99	99	72-120	0	30
Tetrachloroethene	N.D.	20	22.32	20	22.22	112	111	80-120	0	30
Tetrahydrofuran	N.D.	100	101.82	100	104.58	102	105	54-144	3	30
Toluene	N.D.	20	21.19	20	21.31	106	107	80-120	1	30
1,2,3-Trichlorobenzene	N.D.	20	19.29	20	19.36	96	97	66-120	0	30
1,2,4-Trichlorobenzene	N.D.	20	18.81	20	18.59	94	93	63-120	1	30
1,1,1-Trichloroethane	N.D.	20	21.77	20	21.91	109	110	67-126	1	30
1,1,2-Trichloroethane	N.D.	20	21.59	20	21.51	108	108	80-120	0	30
Trichloroethene	N.D.	20	22	20	21.86	110	109	80-120	1	30
Trichlorofluoromethane	N.D.	20	16.68	20	18.33	83	92	55-135	9	30
1,2,4-Trimethylbenzene	N.D.	20	19.96	20	20.14	100	101	75-120	1	30
1,3,5-Trimethylbenzene	N.D.	20	20.38	20	20.43	102	102	75-120	0	30

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REVISED

Quality Control Summary

Client Name: ARCADIS U.S., Inc.
Reported: 01/27/2020 17:04

Group Number: 2071744

MS/MSD (continued)

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Vinyl Chloride	N.D.	20	15.56	20	17.17	78	86	56-120	10	30
m+p-Xylene	N.D.	40	43	40	42.9	107	107	80-120	0	30
o-Xylene	N.D.	20	20.11	20	20.18	101	101	80-120	0	30
Xylene (Total)	N.D.	60	63.1	60	63.09	105	105	80-120	0	30
	ug/l	ug/l	ug/l	ug/l	ug/l					
Batch number: 19303WAN026	Sample number(s): 1187625,1187627,1187629-1187631,1187637,1187642 UNSPK: 1187629									
Acenaphthene	N.D.	56.56	46.48	54.35	46.87	82	86	52-114	1	30
Acenaphthylene	N.D.	56.56	47.99	54.35	47.74	85	88	57-121	1	30
Acetophenone	N.D.	56.56	43.96	54.35	42.51	78	78	61-114	3	30
Aniline	N.D.	56.56	31	54.35	35.28	55	65	35-84	13	30
Anthracene	N.D.	56.56	51.98	54.35	50.41	92	93	62-116	3	30
Atrazine	N.D.	56.56	52.09	54.35	50.02	92	92	71-133	4	30
Benzaldehyde	N.D.	56.56	46.23	54.35	45.86	82	84	48-118	1	30
Benzo(a)anthracene	N.D.	56.56	45.7	54.35	49.92	81	92	70-118	9	30
Benzo(a)pyrene	N.D.	56.56	38.58	54.35	45.25	68*	83	71-117	16	30
Benzo(b)fluoranthene	N.D.	56.56	39.78	54.35	46.06	70*	85	71-115	15	30
Benzo(g,h,i)perylene	N.D.	56.56	37.37	54.35	46.41	66	85	60-119	22	30
Benzo(k)fluoranthene	N.D.	56.56	39.39	54.35	45.51	70*	84	71-116	14	30
Benzyl alcohol	N.D.	56.56	45.94	54.35	42.84	81	79	58-121	7	30
1,1'-Biphenyl	N.D.	56.56	46.11	54.35	45.12	82	83	51-112	2	30
4-Bromophenyl-phenylether	N.D.	56.56	51.06	54.35	53.12	90	98	53-117	4	30
Butylbenzylphthalate	N.D.	56.56	40.15	54.35	47.87	71	88	44-124	18	30
Di-n-butylphthalate	N.D.	56.56	44.95	54.35	47.72	79	88	62-118	6	30
Caprolactam	N.D.	56.56	17.27	54.35	14.87	31	27	10-57	15	30
Carbazole	N.D.	56.56	52.3	54.35	51.87	92	95	64-127	1	30
4-Chloro-3-methylphenol	N.D.	56.56	33.21	54.35	38.24	59*	70	60-118	14	30
4-Chloroaniline	N.D.	56.56	41.03	54.35	44.34	73	82	35-108	8	30
bis(2-Chloroethoxy)methane	N.D.	56.56	48.67	54.35	46.76	86	86	53-119	4	30
bis(2-Chloroethyl)ether	N.D.	56.56	42.45	54.35	41.09	75	76	49-110	3	30
bis(2-Chloroisopropyl)ether	N.D.	56.56	41.05	54.35	39.26	73	72	33-119	4	30
2-Chloronaphthalene	N.D.	56.56	44.93	54.35	44.06	79	81	42-111	2	30
2-Chlorophenol	N.D.	56.56	29.7	54.35	22.67	53	42*	52-109	27	30
4-Chlorophenyl-phenylether	N.D.	56.56	48.67	54.35	51.67	86	95	46-113	6	30
Chrysene	N.D.	56.56	43.38	54.35	47.83	77	88	69-116	10	30
Dibenz(a,h)anthracene	N.D.	56.56	39.94	54.35	47.93	71	88	68-121	18	30
Dibenzofuran	N.D.	56.56	49.65	54.35	49.23	88	91	53-114	1	30
3,3'-Dichlorobenzidine	N.D.	56.56	34.43	54.35	39.2	61	72	42-107	13	30
2,4-Dichlorophenol	N.D.	56.56	35.61	54.35	25.85	63	48*	58-114	32*	30
Diethylphthalate	N.D.	56.56	43.95	54.35	47.89	78	88	48-113	9	30
2,4-Dimethylphenol	N.D.	56.56	28.04	54.35	36.5	50	67	48-91	26	30
Dimethylphthalate	N.D.	56.56	36.07	54.35	49.78	64	92	14-123	32*	30
4,6-Dinitro-2-methylphenol	N.D.	56.56	49.11	54.35	52.82	87	97	63-129	7	30

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

REVISED

Quality Control Summary

Client Name: ARCADIS U.S., Inc.
Reported: 01/27/2020 17:04

Group Number: 2071744

MS/MSD (continued)

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
2,4-Dinitrophenol	N.D.	113.12	82.64	108.7	83.49	73	77	44-134	1	30
2,4-Dinitrotoluene	N.D.	56.56	53	54.35	50.37	94	93	69-117	5	30
2,6-Dinitrotoluene	N.D.	56.56	55.12	54.35	50.92	97	94	63-122	8	30
bis(2-Ethylhexyl)phthalate	N.D.	56.56	40.71	54.35	45.81	72	84	68-120	12	30
Fluoranthene	N.D.	56.56	47.47	54.35	51.15	84	94	63-122	7	30
Fluorene	N.D.	56.56	49.22	54.35	49.57	87	91	56-115	1	30
Hexachlorobenzene	N.D.	56.56	48.05	54.35	51.04	85	94	60-117	6	30
Hexachlorobutadiene	N.D.	56.56	42.03	54.35	39.6	74	73	20-108	6	30
Hexachlorocyclopentadiene	N.D.	113.12	46.87	108.7	60.02	41	55	10-91	25	30
Hexachloroethane	N.D.	56.56	37.17	54.35	34.5	66	63	23-95	7	30
Indeno(1,2,3-cd)pyrene	N.D.	56.56	37.24	54.35	47.41	66	87	63-114	24	30
Isophorone	N.D.	56.56	48.31	54.35	46.02	85	85	56-120	5	30
2-Methylnaphthalene	N.D.	56.56	46.02	54.35	44.03	81	81	44-111	4	30
2-Methylphenol	N.D.	56.56	28.78	54.35	36.52	51*	67	53-107	24	30
4-Methylphenol	N.D.	56.56	25.88	54.35	32.85	46*	60	49-108	24	30
Naphthalene	N.D.	56.56	45.47	54.35	42.17	80	78	45-105	8	30
2-Nitroaniline	N.D.	56.56	53.61	54.35	51.93	95	96	66-126	3	30
3-Nitroaniline	N.D.	56.56	46.81	54.35	50.55	83	93	47-119	8	30
4-Nitroaniline	N.D.	56.56	46.41	54.35	45.65	82	84	45-107	2	30
Nitrobenzene	N.D.	56.56	47.54	54.35	44.68	84	82	49-113	6	30
2-Nitrophenol	N.D.	56.56	49.8	54.35	44.08	88	81	57-116	12	30
4-Nitrophenol	N.D.	56.56	28.81	54.35	24.81	51	46	23-89	15	30
N-Nitroso-di-n-propylamine	N.D.	56.56	45.53	54.35	44.48	80	82	51-122	2	30
N-Nitrosodiphenylamine	N.D.	56.56	48.29	54.35	48.83	85	90	63-119	1	30
Di-n-octylphthalate	N.D.	56.56	38.05	54.35	44.39	67	82	67-120	15	30
Pentachlorophenol	N.D.	56.56	40.54	54.35	37.01	72	68	54-131	9	30
Phenanthrene	N.D.	56.56	50.15	54.35	51.04	89	94	65-113	2	30
Phenol	N.D.	56.56	17.57	54.35	17.42	31	32	19-79	1	30
Pyrene	N.D.	56.56	46.16	54.35	47.49	82	87	65-115	3	30
Pyridine	N.D.	56.56	22.56	54.35	21.71	40	40	13-83	4	30
1,2,4,5-Tetrachlorobenzene	N.D.	56.56	43.13	54.35	43.95	76	81	33-105	2	30
2,3,4,6-Tetrachlorophenol	N.D.	56.56	44.75	54.35	36.04	79	66*	68-118	22	30
2,4,5-Trichlorophenol	N.D.	56.56	40.79	54.35	31.23	72	57*	66-118	27	30
2,4,6-Trichlorophenol	N.D.	56.56	42.11	54.35	32.71	74	60*	69-122	25	30
Batch number: 19303WAP026	Sample number(s): 1187623,1187625,1187627,1187637,1187642 UNSPK: 1187629									
1,4-Dioxane	N.D.	1.02	0.651	1.01	0.621	64	61	18-91	5	30
Batch number: 19308WAC026	Sample number(s): 1187629-1187631 UNSPK: 1187629									
1,4-Dioxane	N.D.	1.02	0.559	1.00	0.621	55	62	18-91	11	30
Batch number: 19311WAK026	Sample number(s): 1187623 UNSPK: 1187629									
Acenaphthene	N.D.	51.87	42.83	55.8	43.77	83	78	52-114	2	30
Acenaphthylene	N.D.	51.87	44.62	55.8	45.65	86	82	57-121	2	30

*- Outside of specification
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(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

REVISED

Quality Control Summary

Client Name: ARCADIS U.S., Inc.
Reported: 01/27/2020 17:04

Group Number: 2071744

MS/MSD (continued)

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Acetophenone	N.D.	51.87	40.09	55.8	41.39	77	74	61-114	3	30
Aniline	N.D.	51.87	24.6	55.8	26.03	47	47	35-84	6	30
Anthracene	N.D.	51.87	48.31	55.8	51.43	93	92	62-116	6	30
Atrazine	N.D.	51.87	46.46	55.8	46.26	90	83	71-133	0	30
Benzaldehyde	N.D.	51.87	47.21	55.8	45.1	91	81	48-118	5	30
Benzo(a)anthracene	N.D.	51.87	50.28	55.8	52.55	97	94	70-118	4	30
Benzo(a)pyrene	N.D.	51.87	45.83	55.8	48.77	88	87	71-117	6	30
Benzo(b)fluoranthene	N.D.	51.87	45.14	55.8	49.18	87	88	71-115	9	30
Benzo(g,h,i)perylene	N.D.	51.87	47.12	55.8	51.78	91	93	60-119	9	30
Benzo(k)fluoranthene	N.D.	51.87	43.8	55.8	47.29	84	85	71-116	8	30
Benzyl alcohol	N.D.	51.87	39.76	55.8	42.86	77	77	58-121	8	30
1,1'-Biphenyl	N.D.	51.87	42.03	55.8	43.61	81	78	51-112	4	30
4-Bromophenyl-phenylether	N.D.	51.87	47.93	55.8	53.13	92	95	53-117	10	30
Butylbenzylphthalate	N.D.	51.87	47.35	55.8	50.35	91	90	44-124	6	30
Di-n-butylphthalate	N.D.	51.87	43.27	55.8	47.11	83	84	62-118	9	30
Caprolactam	N.D.	51.87	14.41	55.8	15.53	28	28	10-57	7	30
Carbazole	N.D.	51.87	46.08	55.8	49.69	89	89	64-127	8	30
4-Chloro-3-methylphenol	N.D.	51.87	40.64	55.8	42.51	78	76	60-118	4	30
4-Chloroaniline	N.D.	51.87	31.6	55.8	31.8	61	57	35-108	1	30
bis(2-Chloroethoxy)methane	N.D.	51.87	43.83	55.8	45.51	85	82	53-119	4	30
bis(2-Chloroethyl)ether	N.D.	51.87	40.16	55.8	41.06	77	74	49-110	2	30
bis(2-Chloroisopropyl)ether	N.D.	51.87	39.26	55.8	40.1	76	72	33-119	2	30
2-Chloronaphthalene	N.D.	51.87	40.79	55.8	42.44	79	76	42-111	4	30
2-Chlorophenol	N.D.	51.87	15.8	55.8	21.91	30*	39*	52-109	32*	30
4-Chlorophenyl-phenylether	N.D.	51.87	46.41	55.8	48.99	89	88	46-113	5	30
Chrysene	N.D.	51.87	46.57	55.8	49.39	90	89	69-116	6	30
Dibenz(a,h)anthracene	N.D.	51.87	47.18	55.8	52.27	91	94	68-121	10	30
Dibenzofuran	N.D.	51.87	44.64	55.8	46.95	86	84	53-114	5	30
3,3'-Dichlorobenzidine	N.D.	51.87	29	55.8	32.59	56	58	42-107	12	30
2,4-Dichlorophenol	N.D.	51.87	16.9	55.8	22.07	33*	40*	58-114	27	30
Diethylphthalate	N.D.	51.87	43.67	55.8	47.16	84	85	48-113	8	30
2,4-Dimethylphenol	N.D.	51.87	35.43	55.8	36.71	68	66	48-91	4	30
Dimethylphthalate	N.D.	51.87	47.75	55.8	48.65	92	87	14-123	2	30
4,6-Dinitro-2-methylphenol	N.D.	51.87	59.86	55.8	68.58	115	123	63-129	14	30
2,4-Dinitrophenol	N.D.	103.73	95.72	111.61	125.74	92	113	44-134	27	30
2,4-Dinitrotoluene	N.D.	51.87	48.26	55.8	53.67	93	96	69-117	11	30
2,6-Dinitrotoluene	N.D.	51.87	51.06	55.8	52.02	98	93	63-122	2	30
bis(2-Ethylhexyl)phthalate	N.D.	51.87	46.34	55.8	48.25	89	86	68-120	4	30
Fluoranthene	N.D.	51.87	45.68	55.8	49.86	88	89	63-122	9	30
Fluorene	N.D.	51.87	44.83	55.8	47.34	86	85	56-115	5	30
Hexachlorobenzene	N.D.	51.87	47.58	55.8	53.07	92	95	60-117	11	30
Hexachlorobutadiene	N.D.	51.87	31.88	55.8	32.93	61	59	20-108	3	30
Hexachlorocyclopentadiene	N.D.	103.73	53.53	111.61	54.83	52	49	10-91	2	30

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(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

REVISED

Quality Control Summary

Client Name: ARCADIS U.S., Inc. Group Number: 2071744
Reported: 01/27/2020 17:04

MS/MSD (continued)

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Hexachloroethane	N.D.	51.87	29.78	55.8	29.13	57	52	23-95	2	30
Indeno(1,2,3-cd)pyrene	N.D.	51.87	45.7	55.8	51.4	88	92	63-114	12	30
Isophorone	N.D.	51.87	43.64	55.8	45.29	84	81	56-120	4	30
2-Methylnaphthalene	N.D.	51.87	40.68	55.8	42.99	78	77	44-111	6	30
2-Methylphenol	N.D.	51.87	36.92	55.8	36.84	71	66	53-107	0	30
4-Methylphenol	N.D.	51.87	33.22	55.8	34.74	64	62	49-108	4	30
Naphthalene	N.D.	51.87	40.52	55.8	41.57	78	74	45-105	3	30
2-Nitroaniline	N.D.	51.87	50.39	55.8	51.29	97	92	66-126	2	30
3-Nitroaniline	N.D.	51.87	41.11	55.8	41.8	79	75	47-119	2	30
4-Nitroaniline	N.D.	51.87	39.25	55.8	37.94	76	68	45-107	3	30
Nitrobenzene	N.D.	51.87	43.23	55.8	44.18	83	79	49-113	2	30
2-Nitrophenol	N.D.	51.87	43.47	55.8	64.68	84	116	57-116	39*	30
4-Nitrophenol	N.D.	51.87	23.66	55.8	32.28	46	58	23-89	31*	30
N-Nitroso-di-n-propylamine	N.D.	51.87	41.86	55.8	42.78	81	77	51-122	2	30
N-Nitrosodiphenylamine	N.D.	51.87	45.98	55.8	47.93	89	86	63-119	4	30
Di-n-octylphthalate	N.D.	51.87	41.98	55.8	46.67	81	84	67-120	11	30
Pentachlorophenol	N.D.	51.87	39.46	55.8	36.57	76	66	54-131	8	30
Phenanthrene	N.D.	51.87	48.12	55.8	51.56	93	92	65-113	7	30
Phenol	N.D.	51.87	15.87	55.8	18.98	31	34	19-79	18	30
Pyrene	N.D.	51.87	46.11	55.8	47.73	89	86	65-115	3	30
Pyridine	N.D.	51.87	22.64	55.8	24.27	44	43	13-83	7	30
1,2,4,5-Tetrachlorobenzene	N.D.	51.87	38.46	55.8	40.08	74	72	33-105	4	30
2,3,4,6-Tetrachlorophenol	N.D.	51.87	25.51	55.8	30.78	49*	55*	68-118	19	30
2,4,5-Trichlorophenol	N.D.	51.87	21.27	55.8	25.38	41*	45*	66-118	18	30
2,4,6-Trichlorophenol	N.D.	51.87	19.12	55.8	25.19	37*	45*	69-122	27	30
	ug/l	**ug/l**	**ug/l**	**ug/l**	**ug/l**					
Batch number: 193030019A	Sample number(s): 1187623,1187625,1187627,1187629-1187631,1187637,1187639 UNSPK: 1187629									
Acetaldehyde	N.D.	500	435.91	500	419.32	87	84	76-119	4	30
Formaldehyde	41.64	500	526.92	500	514.36	97	95	77-122	2	30
	ug/l	**ug/l**	**ug/l**	**ug/l**	**ug/l**					
Batch number: 193040002A	Sample number(s): 1187623,1187625,1187627,1187629-1187631,1187637,1187639,1187641 UNSPK: 1187629									
Ethylene glycol	N.D.	102783.4	58523.27	102783.4	83902.8	57*	82	69-118	36*	20
Propylene glycol	N.D.	98902.99	57820.02	98902.99	75251.7	58*	76	60-121	26*	20
Batch number: 193080007A	Sample number(s): 1187623,1187625,1187627,1187629-1187631,1187637,1187639,1187641 UNSPK: 1187629									
Ethanol	N.D.	2501	2246.04	2501	2270.41	90	91	80-115	1	30
Isopropanol	N.D.	2505	2489.94	2505	2523.69	99	101	85-115	1	30
Methanol	N.D.	2503	2352.68	2503	2369.61	94	95	79-120	1	30
	ng/l	**ng/l**	**ng/l**	**ng/l**	**ng/l**					

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(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

REVISED

Quality Control Summary

Client Name: ARCADIS U.S., Inc. Group Number: 2071744
Reported: 01/27/2020 17:04

MS/MSD (continued)

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ng/l	MS Spike Added ng/l	MS Conc ng/l	MSD Spike Added ng/l	MSD Conc ng/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: 19304003	Sample number(s): 1187623,1187625,1187627,1187629-1187631,1187637,1187643 UNSPK: 1187629									
6:2-Fluorotelomersulfonic acid	N.D.	20.48	20.16	20.78	23.98	98	115	51-155	17	30
8:2-Fluorotelomersulfonic acid	N.D.	20.68	18.89	20.99	23.37	91	111	62-133	21	30
NEtFOSAA	N.D.	21.59	20.39	21.91	20.97	94	96	59-145	3	30
NMeFOSAA	N.D.	21.59	21.91	21.91	21.66	101	99	53-136	1	30
Perfluorobutanesulfonic acid	N.D.	19.09	18.05	19.38	18.44	95	95	81-133	2	30
Perfluorobutanoic acid	9.47	21.59	30.7	21.91	33.95	98	112	84-135	10	30
Perfluorodecanesulfonic acid	N.D.	20.78	22.65	21.09	19.71	109	93	69-124	14	30
Perfluorodecanoic acid	N.D.	21.59	19.32	21.91	21.26	89	97	78-137	10	30
Perfluorododecanoic acid	N.D.	21.59	20.79	21.91	22.42	96	102	75-139	8	30
Perfluoroheptanesulfonic acid	N.D.	20.55	19.55	20.85	19.82	95	95	80-129	1	30
Perfluoroheptanoic acid	0.568	21.59	21.42	21.91	21.89	97	97	80-140	2	30
Perfluorohexanesulfonic acid	N.D.	20.41	17.82	20.71	18.25	87	88	71-131	2	30
Perfluorohexanoic acid	1.45	21.59	22.86	21.91	24.89	99	107	80-137	9	30
Perfluorononanoic acid	N.D.	21.59	19.82	21.91	20.98	92	96	73-140	6	30
Perfluorooctanesulfonamide	N.D.	21.59	19.99	21.91	20.11	93	92	73-121	1	30
Perfluorooctanesulfonic acid	N.D.	20.65	17.6	20.95	17.78	85	85	54-139	1	30
Perfluorooctanoic acid	N.D.	21.59	20.99	21.91	22.61	97	103	83-138	7	30
Perfluoropentanoic acid	2.29	21.59	25.19	21.91	27.64	106	116	75-138	9	30
Perfluorotetradecanoic acid	N.D.	21.59	18.65	21.91	20.61	86	94	79-134	10	30
Perfluorotridecanoic acid	N.D.	21.59	20.98	21.91	19.26	97	88	67-144	9	30
Perfluoroundecanoic acid	N.D.	21.59	20.88	21.91	19.05	97	87	70-134	9	30
	mg/l	**mg/l**	**mg/l**	**mg/l**	**mg/l**					
Batch number: 193040571302	Sample number(s): 1187623-1187627,1187629-1187632,1187638-1187639 UNSPK: 1187629									
Mercury	N.D.	0.00100	0.000864	0.00100	0.000791	86	79*	80-120	9	20
Batch number: 193041404402	Sample number(s): 1187624,1187626,1187628,1187633-1187636,1187638,1187640 UNSPK: 1187633									
Antimony	N.D.	0.100	0.109	0.100	0.109	109	109	75-125	0	20
Arsenic	N.D.	0.0600	0.0751	0.0600	0.0667	125	111	75-125	12	20
Barium	0.198	0.0100	0.194	0.0100	0.207	-36 (2)	93 (2)	75-125	6	20
Beryllium	N.D.	0.0100	0.0101	0.0100	0.00989	101	99	75-125	2	20
Cadmium	N.D.	0.0100	0.00940	0.0100	0.00928	94	93	75-125	1	20
Calcium	158.22	0.400	172.31	0.400	155.53	3524 (2)	-671 (2)	75-125	10	20
Chromium	0.00316	0.0300	0.0355	0.0300	0.0328	108	99	75-125	8	20
Cobalt	0.00436	0.0100	0.0131	0.0100	0.0135	88	92	75-125	3	20
Copper	N.D.	0.0400	0.0474	0.0400	0.0399	119	100	75-125	17	20
Iron	1.07	0.400	3.83	0.400	1.14	689*	17*	75-125	108*	20
Lead	N.D.	0.0300	0.0307	0.0300	0.0286	102	95	75-125	7	20
Magnesium	121.94	0.200	121.58	0.200	118.64	-181 (2)	-1652 (2)	75-125	2	20
Manganese	1.45	0.0200	1.50	0.0200	1.49	250 (2)	236 (2)	75-125	0	20
Nickel	0.0227	2.02	2.03	2.02	2.02	100	99	75-125	1	20
Potassium	5.74	5.60	11.82	5.60	10.67	109	88	75-125	10	20

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REVISED

Quality Control Summary

Client Name: ARCADIS U.S., Inc.
Reported: 01/27/2020 17:04

Group Number: 2071744

MS/MSD (continued)

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc mg/l	MS Spike Added mg/l	MS Conc mg/l	MSD Spike Added mg/l	MSD Conc mg/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Selenium	N.D.	0.100	0.0973	0.100	0.0915	97	92	75-125	6	20
Silver	N.D.	0.0200	0.0212	0.0200	0.0196	106	98	75-125	7	20
Sodium	175.91	2.00	174.08	2.00	173.57	-91 (2)	-117 (2)	75-125	0	20
Thallium	N.D.	0.0600	0.0609	0.0600	0.0608	102	101	75-125	0	20
Batch number: 193041404403	Sample number(s): 1187623,1187625,1187627,1187629-1187632,1187637,1187639 UNSPK: 1187629									
Antimony	N.D.	0.100	0.108	0.100	0.111	108	111	75-125	3	20
Arsenic	N.D.	0.0600	0.0709	0.0600	0.0761	118	127*	75-125	7	20
Barium	0.245	0.0100	0.237	0.0100	0.238	-80 (2)	-70 (2)	75-125	0	20
Beryllium	N.D.	0.0100	0.0101	0.0100	0.0101	101	101	75-125	0	20
Cadmium	N.D.	0.0100	0.00909	0.0100	0.00893	91	89	75-125	2	20
Calcium	280.33	0.400	169.94	0.400	170.92	-27598 (2)	-27354 (2)	75-125	1	20
Chromium	0.0258	0.0300	0.0409	0.0300	0.0365	50*	36*	75-125	11	20
Cobalt	0.0159	0.0100	0.0177	0.0100	0.0165	19*	6*	75-125	8	20
Copper	0.0513	0.0400	0.0428	0.0400	0.0437	-21*	-19*	75-125	2	20
Iron	9.06	0.400	1.71	0.400	1.92	-1837 (2)	-1786 (2)	75-125	11	20
Lead	0.0126	0.0300	0.0348	0.0300	0.0328	74*	67*	75-125	6	20
Magnesium	158.49	0.200	123.66	0.200	122.74	-17417 (2)	-17874 (2)	75-125	1	20
Manganese	2.76	0.0200	1.80	0.0200	1.85	-4773 (2)	-4547 (2)	75-125	2	20
Nickel	0.0526	2.02	2.00	2.02	1.99	97	96	75-125	1	20
Potassium	6.09	5.60	10.58	5.60	10.57	80	80	75-125	0	20
Selenium	N.D.	0.100	0.0952	0.100	0.101	95	101	75-125	6	20
Silver	N.D.	0.0200	0.0202	0.0200	0.0204	101	102	75-125	1	20
Sodium	175.36	2.00	179.29	2.00	178.75	196 (2)	169 (2)	75-125	0	20
Thallium	N.D.	0.0600	0.0618	0.0600	0.0592	103	99	75-125	4	20
Batch number: 193050571301	Sample number(s): 1187628,1187633-1187637,1187640 UNSPK: 1187633									
Mercury	N.D.	0.00100	0.000885	0.00100	0.000839	89	84	80-120	5	20
	ug/l	ug/l	ug/l	ug/l	ug/l					
Batch number: 193041404402	Sample number(s): 1187624,1187626,1187628,1187633-1187636,1187638,1187640 UNSPK: 1187633									
Vanadium	N.D.	20	22.11	20	20.24	111	101	75-125	9	20
Zinc	5.44	440	446.27	440	437.11	100	98	75-125	2	20
Batch number: 193041404403	Sample number(s): 1187623,1187625,1187627,1187629-1187632,1187637,1187639 UNSPK: 1187629									
Vanadium	9.53	20	21.71	20	22.05	61*	63*	75-125	2	20
Zinc	35.49	440	438.69	440	435.47	92	91	75-125	1	20
Batch number: 193111404701A	Sample number(s): 1187623-1187632,1187637-1187640 UNSPK: 1187629									
Aluminum	52324.32	200	8274.41	200	12589.52	-22025 (2)	-19867 (2)	75-125	41*	20

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REVISED

Quality Control Summary

Client Name: ARCADIS U.S., Inc.
Reported: 01/27/2020 17:04

Group Number: 2071744

MS/MSD (continued)

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc	MS Spike Added	MS Conc	MSD Spike Added	MSD Conc	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
	ug/l	ug/l	ug/l	ug/l	ug/l					
Batch number: 193111404702A	Sample number(s): 1187633-1187636 UNSPK: 1187633									
Aluminum	905.99	200	11785.43	200	603.77	5440 (2)	-151 (2)	75-125	181*	20
	mg/l	**mg/l**	**mg/l**	**mg/l**	**mg/l**					
Batch number: 19304105102A	Sample number(s): 1187623,1187625,1187627,1187629-1187630,1187632 UNSPK: 1187629									
Nitrite Nitrogen	0.0380	0.200	0.252			107		90-110		
Batch number: 19308106102A	Sample number(s): 1187623,1187625,1187627,1187629-1187630,1187632,1187637,1187639 UNSPK: 1187629									
Nitrate Nitrogen	N.D.	1.00	1.11			111*		90-110		
	ug/l	**ug/l**	**ug/l**	**ug/l**	**ug/l**					
Batch number: 19304135213B	Sample number(s): 1187629-1187630,1187632 UNSPK: 1187629									
Chloride	555644.88	400000	898804.28			86*		90-110		
Fluoride	N.D.	2500	3039.04			122*		90-110		
Sulfate	243329.8	1000000	1187967.3			94		90-110		
Batch number: 19305109101B	Sample number(s): 1187623,1187625,1187627,1187637,1187639 UNSPK: 1187627									
Total Phosphorus as P (water)	124.57	2000	2067.96			97		90-110		
Batch number: 19309304504A	Sample number(s): 1187623,1187625,1187627,1187629-1187630,1187632,1187637 UNSPK: 1187629									
Total Organic Carbon	14992.5	10000	26184			112		91-113		
	mg/l as CaCO3	**mg/l as CaCO3**	**mg/l as CaCO3**	**mg/l as CaCO3**	**mg/l as CaCO3**					
Batch number: 19304002103A	Sample number(s): 1187627,1187629-1187630,1187632 UNSPK: 1187629									
Total Alkalinity to pH 4.5	296.5	188	348.68			28*		82-106		

Laboratory Duplicate

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc	DUP Conc	DUP RPD	DUP RPD Max
	mg/l	mg/l		
Batch number: 193040571302	Sample number(s): 1187623-1187627,1187629-1187632,1187638-1187639 BKG: 1187629			
Mercury	N.D.	N.D.	0 (1)	20
Batch number: 193041404402	Sample number(s): 1187624,1187626,1187628,1187633-1187636,1187638,1187640 BKG: 1187633			
Antimony	N.D.	N.D.	0 (1)	20
Arsenic	N.D.	0.0195	200* (1)	20

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REVISED

Quality Control Summary

Client Name: ARCADIS U.S., Inc. Group Number: 2071744
Reported: 01/27/2020 17:04

Laboratory Duplicate (continued)

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc	DUP Conc	DUP RPD	DUP RPD Max
	mg/l	mg/l		
Barium	0.198	0.196	1	20
Beryllium	N.D.	N.D.	0 (1)	20
Cadmium	N.D.	N.D.	0 (1)	20
Calcium	158.22	158.67	0	20
Chromium	0.00316	0.00336	6 (1)	20
Cobalt	0.00436	0.00448	3 (1)	20
Copper	N.D.	N.D.	0 (1)	20
Iron	1.07	1.07	0	20
Lead	N.D.	N.D.	0 (1)	20
Magnesium	121.94	121.2	1	20
Manganese	1.45	1.44	0	20
Nickel	0.0227	0.0231	2 (1)	20
Potassium	5.74	5.72	0	20
Selenium	N.D.	N.D.	0 (1)	20
Silver	N.D.	N.D.	0 (1)	20
Sodium	175.91	174.54	1	20
Thallium	N.D.	0.00845	200* (1)	20
Batch number: 193041404403	Sample number(s): 1187623,1187625,1187627,1187629-1187632,1187637,1187639 BKG: 1187629			
Antimony	N.D.	N.D.	0 (1)	20
Arsenic	N.D.	N.D.	0 (1)	20
Barium	0.245	0.247	1	20
Beryllium	N.D.	N.D.	0 (1)	20
Cadmium	N.D.	N.D.	0 (1)	20
Calcium	280.33	278.36	1	20
Chromium	0.0258	0.0271	5 (1)	20
Cobalt	0.0159	0.0156	2 (1)	20
Copper	0.0513	0.0523	2 (1)	20
Iron	9.06	9.94	9	20
Lead	0.0126	0.0109	15 (1)	20
Magnesium	158.49	157.94	0	20
Manganese	2.76	2.74	1	20
Nickel	0.0526	0.0545	4	20
Potassium	6.09	6.17	1	20
Selenium	N.D.	N.D.	0 (1)	20
Silver	N.D.	N.D.	0 (1)	20
Sodium	175.36	174.12	1	20
Thallium	N.D.	N.D.	0 (1)	20
Batch number: 193050571301	Sample number(s): 1187628,1187633-1187637,1187640 BKG: 1187633			
Mercury	N.D.	N.D.	0 (1)	20
	ug/l	ug/l		
Batch number: 193041404402	Sample number(s): 1187624,1187626,1187628,1187633-1187636,1187638,1187640 BKG: 1187633			

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REVISED

Quality Control Summary

Client Name: ARCADIS U.S., Inc. Group Number: 2071744
Reported: 01/27/2020 17:04

Laboratory Duplicate (continued)

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc	DUP Conc	DUP RPD	DUP RPD Max
	ug/l	ug/l		
Vanadium	N.D.	N.D.	0 (1)	20
Zinc	5.44	5.22	4 (1)	20
Batch number: 193041404403	Sample number(s): 1187623,1187625,1187627,1187629-1187632,1187637,1187639 BKG: 1187629			
Vanadium	9.53	10.81	13 (1)	20
Zinc	35.49	38.56	8 (1)	20
Batch number: 193111404701A	Sample number(s): 1187623-1187632,1187637-1187640 BKG: 1187629			
Aluminum	52324.32	51656.24	1	20
Batch number: 193111404702A	Sample number(s): 1187633-1187636 BKG: 1187633			
Aluminum	905.99	799.04	13	20
	mg/l	mg/l		
Batch number: 19304105102A	Sample number(s): 1187623,1187625,1187627,1187629-1187630,1187632 BKG: 1187629			
Nitrite Nitrogen	0.0380	0.0370	3 (1)	20
Batch number: 19308106102A	Sample number(s): 1187623,1187625,1187627,1187629-1187630,1187632,1187637,1187639 BKG: 1187629			
Nitrate Nitrogen	N.D.	N.D.	0 (1)	10
	ug/l	ug/l		
Batch number: 19304135213B	Sample number(s): 1187629-1187630,1187632 BKG: 1187629			
Chloride	555644.88	516693.04	7	15
Fluoride	N.D.	N.D.	0 (1)	15
Sulfate	243329.8	228563.21	6 (1)	15
Batch number: 19305109101B	Sample number(s): 1187623,1187625,1187627,1187637,1187639 BKG: 1187627			
Total Phosphorus as P (water)	124.57	125.16	0 (1)	4
Batch number: 19309304504A	Sample number(s): 1187623,1187625,1187627,1187629-1187630,1187632,1187637 BKG: 1187629			
Total Organic Carbon	14992.5	16556.5	10*	9
	mg/l as CaCO3	mg/l as CaCO3		
Batch number: 19304002103A	Sample number(s): 1187627,1187629-1187630,1187632 BKG: 1187629			
Total Alkalinity to pH 4.5	296.5	299.52	1	5
	ug/l	ug/l		
Batch number: 19304141081A	Sample number(s): 1187623,1187625,1187627,1187629,1187632,1187637 BKG: 1187629			
Biochemical Oxygen Demand-BOD	6210	11740	62* (1)	22

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REVISED

Quality Control Summary

Client Name: ARCADIS U.S., Inc.
Reported: 01/27/2020 17:04

Group Number: 2071744

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs- 5ml Water by 8260C/D
Batch number: Y193091AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
1187623	97	100	93	90
1187625	99	99	92	89
1187627	99	99	92	89
1187629	98	100	92	89
1187630	96	97	94	95
1187631	96	98	94	95
1187637	98	99	92	90
1187639	100	100	92	89
1187641	96	98	93	90
Blank	97	100	93	90
LCS	95	98	94	95
MS	96	97	94	95
MSD	96	98	94	95
Limits:	80-120	80-120	80-120	80-120

Analysis Name: Semi-annual Groundwater BMS
Batch number: 19303WAN026

	Phenol-d6	2-Fluorophenol	2,4,6-Tribromophenol	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14
1187625	35	49	88	73	77	83
1187627	38	52	78	75	77	89
1187629	2*	2*	14*	75	76	75
1187630	25	32	76	80	79	57
1187631	25	21	67	76	80	63
1187637	37	48	68	71	71	81
1187642	38	48	54	76	77	84
Blank	37	54	84	66	67	85
LCS	43	60	93	78	79	87
LCSD	39	56	89	82	79	96
MS	25	32	76	80	79	57
MSD	25	21	67	76	80	63
Limits:	10-67	10-84	23-135	33-113	44-102	39-125

Analysis Name: SIM SVOAs 8270D MINI
Batch number: 19303WAP026

	Fluoranthene-d10	Benzo(a)pyrene-d12	1-Methylnaphthalene-d10
1187623	76	25	54
1187625	74	44	53
1187627	67	44	50
1187637	64	45	51
1187642	73	35	53

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REVISED

Quality Control Summary

Client Name: ARCADIS U.S., Inc.
Reported: 01/27/2020 17:04

Group Number: 2071744

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: SIM SVOAs 8270D MINI
Batch number: 19303WAP026

	Fluoranthene-d10	Benzo(a)pyrene-d12	1-Methylnaphthalene-d10
Blank	68	57	52
LCS	84	72	62
LCSD	77	66	56
MS	83	29	61
MSD	84	20	63
Limits:	48-128	18-129	30-114

Analysis Name: SIM SVOAs 8270D MINI
Batch number: 19308WAC026

	Fluoranthene-d10	Benzo(a)pyrene-d12	1-Methylnaphthalene-d10
1187629	60	19	48
1187630	71	22	52
1187631	67	47	58
Blank	70	66	37
LCS	62	60	40
MS	71	22	52
MSD	67	47	58
Limits:	48-128	18-129	30-114

Analysis Name: Semi-annual Groundwater BMS
Batch number: 19311WAK026

	Phenol-d6	2-Fluorophenol	2,4,6-Tribromophenol	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14
1187623	22	23	64	81	79	78
Blank	34	51	95	82	83	93
LCS	41	57	96	79	79	90
LCSD	44	59	87	75	71	84
MS	28	12	42	82	84	66
MSD	30	19	30	78	78	69
Limits:	10-67	10-84	23-135	33-113	44-102	39-125

Analysis Name: Short List Aldehydes- W 8315A
Batch number: 193030019A

	Butyraldehyde
1187623	107
1187625	106
1187627	105
1187629	104
1187630	108
1187631	106

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REVISED

Quality Control Summary

Client Name: ARCADIS U.S., Inc.
Reported: 01/27/2020 17:04

Group Number: 2071744

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: Short List Aldehydes- W 8315A
Batch number: 193030019A

	Butyraldehyde
1187637	106
1187639	109
Blank	109
LCS	108
MS	108
MSD	106
Limits:	39-153

Analysis Name: Glycols in Water by 8015C/D
Batch number: 193040002A

	Tetramethylene glycol
1187623	22
1187625	9*
1187627	1*
1187629	0*
1187630	26
1187631	45
1187637	14*
1187639	8*
1187641	9*
Blank	61
LCS	104
MS	26
MSD	45
Limits:	22-129

Analysis Name: Alcohols in Water
Batch number: 193080007A

	Acetone-D1	Acetone-D2
1187623	97	96
1187625	95	98
1187627	96	96
1187629	113	98
1187630	97	99
1187631	93	95
1187637	95	96
1187639	95	96
1187641	96	97
Blank	102	99
LCS	101	96

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Quality Control Summary

Client Name: ARCADIS U.S., Inc. Group Number: 2071744
Reported: 01/27/2020 17:04

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: Alcohols in Water
Batch number: 193080007A

	Acetone-D1	Acetone-D2
MS	97	99
MSD	93	95
Limits:	58-149	58-149

Analysis Name: PFAS in Water by LC/MS/MS-DoD
Batch number: 19304003

	13C4-PFBA	13C5-PFPeA	13C3-PFBS	13C5-PFHxA	13C3-PFHxS	13C4-PFHpA
1187623	90	83	89	96	95	93
1187625	95	105	112	100	100	105
1187627	91	106	111	90	95	96
1187629	61	73	78	86	81	81
1187630	68	81	86	93	95	96
1187631	101	121	139	99	104	110
1187637	7*	87	101	91	91	129
1187643	91	93	90	91	93	90
Blank	95	91	96	99	100	96
LCS	98	95	98	99	101	96
MS	68	81	86	93	95	96
MSD	101	121	139	99	104	110
Limits:	50-150	50-150	50-150	50-150	50-150	50-150

	13C2-6:2-FTS	13C8-PFOA	13C8-PFOS	13C9-PFNA	13C6-PFDA	13C2-8:2-FTS
1187623	92	93	94	95	87	86
1187625	100	95	89	99	86	93
1187627	107	91	89	98	86	120
1187629	86	77	83	87	75	86
1187630	107	90	85	95	85	94
1187631	104	95	90	94	87	84
1187637	148	93	91	124	83	102
1187643	88	92	94	90	96	108
Blank	102	94	96	95	98	102
LCS	99	101	97	98	101	110
MS	107	90	85	95	85	94
MSD	104	95	90	94	87	84
Limits:	50-150	50-150	50-150	50-150	50-150	50-150

	d3-NMeFOSAA	13C7-PFUnDA	d5-NEtFOSAA	13C2-PFDoDA	13C2-PFTeDA	13C8-PFOSA
1187623	103	120	144	95	112	91
1187625	96	90	94	80	63	44*

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Quality Control Summary

Client Name: ARCADIS U.S., Inc. Group Number: 2071744
Reported: 01/27/2020 17:04

Labeled Isotope Quality Control (continued)

Labeled isotope recoveries which are outside of the QC window are confirmed unless otherwise noted on the analysis report.

Analysis Name: PFAS in Water by LC/MS/MS-DoD
Batch number: 19304003

	d3-NMeFOSAA	13C7-PFUnDA	d5-NEtFOSAA	13C2-PFDoDA	13C2-PFTeDA	13C8-PFOSA
1187627	100	112	174*	95	91	85
1187629	96	83	101	79	75	80
1187630	96	90	99	89	88	79
1187631	91	97	81	79	52	73
1187637	97	91	101	90	89	72
1187643	101	94	111	94	88	93
Blank	105	116	119	101	89	102
LCS	108	100	108	105	86	102
MS	96	90	99	89	88	79
MSD	91	97	81	79	52	73
Limits:	50-150	50-150	50-150	50-150	50-150	50-150

Analysis Name: PFAS in Water by LC/MS/MS-DoD
Batch number: 19308018

	13C4-PFBA	13C5-PFPeA	13C3-PFBS	13C5-PFHxA	13C3-PFHxS	13C4-PFHpA
1187639	85	103	111	87	83	85
1187644	95	98	94	99	95	93
Blank	89	87	90	86	88	85
LCS	89	90	89	83	86	86
LCSD	94	96	92	93	92	93
Limits:	50-150	50-150	50-150	50-150	50-150	50-150

	13C2-6:2-FTS	13C8-PFOA	13C8-PFOS	13C9-PFNA	13C6-PFDA	13C2-8:2-FTS
1187639	91	79	80	82	81	84
1187644	91	92	89	89	96	94
Blank	82	84	84	91	81	80
LCS	84	81	81	87	82	81
LCSD	92	90	89	95	93	82
Limits:	50-150	50-150	50-150	50-150	50-150	50-150

	d3-NMeFOSAA	13C7-PFUnDA	d5-NEtFOSAA	13C2-PFDoDA	13C2-PFTeDA	13C8-PFOSA
1187639	70	99	109	77	71	77
1187644	80	94	85	81	64	80
Blank	67	84	75	73	58	67
LCS	76	87	74	72	51	82
LCSD	75	95	73	83	61	76
Limits:	50-150	50-150	50-150	50-150	50-150	50-150

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

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Quality Control Summary

Client Name: ARCADIS U.S., Inc. Group Number: 2071744
Reported: 01/27/2020 17:04

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Environmental Analysis Request/Chain of Custody

eurofins | Lancaster Laboratories Environmental

Acct. # 3074 Group # 2071744 Sample # 1187623-44

Client: Arcadis			
Project Name/#: BMS Syracuse	Site ID #:		
Project Manager: Bill McCune	P.O. #: 30033396		
Sampler: Austin George, Josh Miller, Evan Green	PWSID #:		
Phone #: 315 671 6712	Quote #:		
State where samples were collected: NY	For Compliance: Yes ☐ No ☐		

Sample Identification	Collection Date	Collection Time	Grab	Composite	Matrix: Soil ☐ Sediment ☐ Tissue ☐	Water: Potable ☐ Ground ☑ NPDES ☐ Surface ☐	Other:	Total # of Containers	VOCs 8260C	SVOCs 8270D	Glycols 8015C	Alcohols	Aldehydes 8315A			Remarks
									Preservation and Filtration Codes: H			H				
BOA-14RX	10/29/19	1105	X			GW		28	X	X	X	X	X			
BOA-17RX	10/29/19	1445	X			GW		28	X	X	X	X	X			
BOA-17T	10/29/19	1110	X			GW		28	X	X	X	X	X			
BOA-17WT	10/29/19	1148	X			GW		26	X	X	X	X	X			
BOA-17WT MS	10/29/19	1148	X			GW		26	X	X	X	X	X			
BOA-17WT MSD	10/29/19	1148	X			GW		26	X	X	X	X	X			
BOA-17WIR	10/29/19	1540	X			GW		28	X	X	X	X	X			
DUP-102919	10/29/19	/	X			GW		23	X		X	X	X			
Trip blank	10/23/19		X			W		25	X		X	X				
DUP-102919-02	10/29/19	/	X			GW		5		X						

For Lab Use Only

SF #: _____

SCR #: _____

Preservation Codes

H = HCl | T = Thiosulfate | N = HNO_3 | B = NaOH | S = H_2SO_4 | P = H_3PO_4 | F = Field Filtered | O = Other

Turnaround Time Requested (TAT) (please check): Standard ☑ Rush ☒

(Rush TAT is subject to laboratory approval and surcharges.)

Date results are needed: 5-day TAT (or ASAP)

Rush results requested by (please check): E-Mail ☒ Phone ☐

E-mail Address: William.McCune@arcadis.com

Phone: 315 671 6712

Data Package Options (please check if required)

Type I (Validation/non-CLP) ☐ MA MCP ☐

Type III (Reduced non-CLP) ☐ CT RCP ☐

Type VI (Raw Data Only) ☐ TX TRRP-13 ☐

NJ DKQP ☐ NYSDEC Category ☐ A or ☐ B

EDD Required? Yes ☑ No ☐ If yes, format:

Relinquished by:	Date	Time		Date	Time
Josh Sinay	10/29/19	1730	Relinquished	10.29.19	17:30
Relinquished by:	Date	Time		Date	Time
Relinquished	10-29-19	19:00			
Relinquished by:	Date	Time		Date	Time
Relinquished by:	Date	Time		Date	Time
Relinquished by:	Date	Time	CH Wells	Date 10/30/19	Time 11:22

Relinquished by Commercial Carrier:

UPS _____ FedEx X Other _____

Syracuse #225

Environmental Analysis Request/Chain of Custody

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Acct. # 3074 Group # 2071744 Sample # 1187623-44

Client: Arcadis			
Project Name/#: BMS Syracuse	Site ID #:		
Project Manager: Bill McCune	P.O. #: 30033396		
Sampler: Austin George, Josh Miller, Evan Green	PWSID #:		
Phone #: 315 671 6712	Quote #:		
State where samples were collected: NY	For Compliance: Yes ☐ No ☐		

Sample Identification	Collection Date	Collection Time	Grab	Composite	Matrix: Soil ☐ Sediment ☐ Tissue ☐	Water: Potable ☐ Ground ☑ Surface ☐ NPDES ☐	Other:	Total # of Containers	1,4-Dioxane	PFAS	Nitrogen as Ammonia (S)	Nitrate & Nitrite, Chloride, Fluoride, Sulfate (N, F)	TAL Metals Total / TAL Metals Dissolved	Total Alkalinity	Total Organic Carbon (P)	Total Phosphorus / Chemical Oxygen Demand (S)	Biological Oxygen Demand	Remarks
BOA-14RX	10/29/19	1105	X			GW		28	X	X	X	X	X	X	X	X	X	
BOA-17RX	10/29/19	1445	X			GW		28	X	X	X	X	X	X	X	X	X	
BOA-17T	10/29/19	1110	X			GW		28	X	X	X	X	X	X	X	X	X	
BOA-17WT	10/29/19	1148	X			GW		26	X	X		X	X	X	X		X	
BOA-17WT MS	10/29/19	1148	X			GW		26	X	X		X	X	X	X		X	
BOA-17WT MSD	10/29/19	1148	X			GW		26	X	X		X	X	X	X		X	
BOA-17WR	10/29/19	1540	X			GW		28	X	X	X	X	X	X	X	X	X	
DUP-102919	10/29/19	/	X			GW		23		X		X	X	X	X	X	X	
DUP-102919-02	10/29/19	/	X			GW		5	X		X							
FB-102919	10/29/19	1620	X			W		2		X								

For Lab Use Only

SF #: _____

SCR #: _____

Preservation Codes

H = HCl; T = Thiosulfate; N = HNO_3; B = NaOH; S = H_2SO_4; P = H_3PO_4; F = Field Filtered; O = Other

Turnaround Time Requested (TAT) (please check): Standard ☑ Rush ☒

(Rush TAT is subject to laboratory approval and surcharges.)

Date results are needed: 5-day TAT (or ASAP)

Rush results requested by (please check): E-Mail ☐ Phone ☐

E-mail Address: William.McCune@arcadis.com

Phone: 315 671 6712

Data Package Options (please check if required)

Type I (Validation/non-CLP) ☐ MA MCP ☐

Type III (Reduced non-CLP) ☐ CT RCP ☐

Type VI (Raw Data Only) ☐ TX TRRP-13 ☐

NJ DKQP ☐ NYSDEC Category ☐ A or ☐ B

EDD Required? Yes ☑ No ☐ If yes, format:

Relinquished by:	Date	Time	Received by:	Date	Time
Josh Sinay	10/29/19	1730	[illegible]	10.29.19	17:30
[illegible]	10-29-19	19:00			
			CH Wells	10/30/19	11:22

Relinquished by Commercial Carrier:

UPS _____ FedEx X Other _____

Syracuse #225

Environmental Analysis Request/Chain of Custody

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Acct. # 3074 Group # 2071744 Sample # 1187623-44

Client: Arcadis			
Project Name/#: BMS Syracuse	Site ID #:		
Project Manager: Bill McCune	P.O. #: 30033396		
Sampler: Austin George, Josh Miller, Evan Green	PWSID #:		
Phone #: 315 671 6712	Quote #:		
State where samples were collected: NY	For Compliance: Yes ☐ No ☐		

Sample Identification	Collection Date	Collection Time	Grab	Composite	Matrix: Soil ☐ Sediment ☐ Tissue ☐	Water ☑ Potable ☐ Ground ☐ Surface ☐ NPDES ☐	Other:	Total # of Containers	1,4-Dioxane	PFAS	Nitrogen as Ammonia (S)	Nitrate & Nitrite, Chloride, Fluoride, Sulfate	TAL Metals Total / TAL Metals Dissolved (N, F)	Total Alkalinity	Total Organic Carbon (P)	Total Phosphorus / Chemical Oxygen Demand (S)	Biological Oxygen Demand	Remarks
EB-102919	10/29/19	1630	X			W		2		X								
Metals QC	10/29/19	1445	X			GW		2					X					

Analyses Requested — Preservation and Filtration Codes

For Lab Use Only
SF #: _____
SCR #: _____

Preservation Codes
H = HCl; T = Thiosulfate; N = HNO_3; B = NaOH; S = H_2SO_4; P = H_3PO_4; F = Field Filtered; O = Other

Turnaround Time Requested (TAT) (please check): Standard ☑ Rush ☑
(Rush TAT is subject to laboratory approval and surcharges.)

Date results are needed: 5-day TAT (or ASAP)

Rush results requested by (please check): E-Mail ☐ Phone ☐

E-mail Address: William.McCune@arcadis.com

Phone: 315 671 6712

Data Package Options (please check if required)

Type I (Validation/non-CLP)	☐	MA MCP	☐
Type III (Reduced non-CLP)	☐	CT RCP	☐
Type VI (Raw Data Only)	☐	TX TRRP-13	☐
NJ DKQP	☐	NYSDEC Category ☐ A or ☐ B	

EDD Required? Yes ☑ No ☐ If yes, format:

Relinquished by:	Date	Time	Received by:	Date	Time
Josh Shaw	10.29.19	17:30	R Englund	10.29.19	17:30
R Englund	10.29.19	19:00			
			Cal Wells	10/30/19	11:22

Relinquished by Commercial Carrier:
UPS _____ FedEx X Other _____

Syracuse
#225

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Sample Administration Receipt Documentation Log

Doc Log ID: 264571

Group Number(s): 2071744

Client: Arcadis

BMS Syracuse

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Date:	10/30/2019
Number of Packages:	5	Number of Projects:	1
State/Province of Origin:	NY		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	Total Trip Blank Qty:	6
Samples Chilled:	Yes	Trip Blank Type:	See Below
Paperwork Enclosed:	Yes	Air Quality Samples Present:	No
Samples Intact:	Yes		
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	Yes		

Trip Blank Type(s): 4 HCl, 2 Unpreserved

Unpacked by Nicole Reiff

Samples Chilled Details: BMS Syracuse

Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	192050133	0.8	IR	Wet	Y	Loose	N
2	192050133	3.2	IR	Wet	Y	Loose	N
3	192050133	1.9	IR	Wet	Y	Loose	N
4	DT42-03	5.2	DT	Wet	Y	Loose	N
5	DT42-03	0.5	DT	Wet	Y	Loose	N

Container Quantity Discrepancy Details: BMS Syracuse

Sample ID on COC	Container Qty. Received	Container Qty. on COC	Comments
BDA-14RX	26	28	
BDA-17T	26	28	
BDA-17WT	24	26	
BDA-17WTMS	24	26	
BDA-17WTMSD	24	26	
BDA-17WR	27	28	
DUP-102919	18	23	

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F | 717-656-2681
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Client: Arcadis

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Lancaster, PA 17605-2425

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F | 717-656-2681
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Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mL**	milliliter(s)
C	degrees Celsius	**MPN**	Most Probable Number
cfu	colony forming units	**N.D.**	non-detect
CP Units	cobalt-chloroplatinate units	**ng**	nanogram(s)
F	degrees Fahrenheit	**NTU**	nephelometric turbidity units
g	gram(s)	**pg/L**	picogram/liter
IU	International Units	**RL**	Reporting Limit
kg	kilogram(s)	**TNTC**	Too Numerous To Count
L	liter(s)	**µg**	microgram(s)
lb.	pound(s)	**µL**	microliter(s)
m3	cubic meter(s)	**umhos/cm**	micromhos/cm
meq	milliequivalents	**MCL**	Maximum Contamination Limit
mg	milligram(s)		

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

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Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
P^	Concentration difference between the primary and confirmation column > 40%. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

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ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

ARCADIS U.S., Inc.
630 Plaza Drive
Suite 600
Highlands Ranch CO 80129

Report Date: January 27, 2020 16:56

Project: Bristol-Myers Squibb

Account #: 03074
Group Number: 2071978
SDG: BMS82
PO Number: 30033396
State of Sample Origin: NY

Electronic Copy To	Arcadis	Attn: William McCune
Electronic Copy To	Arcadis	Attn: Lawrence Carey Healy

Respectfully Submitted,

Megan A. Moeller
Senior Specialist

(717) 556-7261

A previous version of this report was generated on 11/20/2019 14:29.

To view our laboratory's current scopes of accreditation please go to https://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/certifications-and-accreditations-eurofins-lancaster-laboratories-environmental/ . Historical copies may be requested through your project manager.



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SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
PW-2T Grab Groundwater	10/30/2019 10:00	1188912
BDA-1WT Grab Groundwater	10/30/2019 11:35	1188913
BDA-1WT MS Grab Groundwater	10/30/2019 11:35	1188914
BDA-1WT MSD Grab Groundwater	10/30/2019 11:35	1188915
BDA-1F Grab Groundwater	10/30/2019 14:35	1188916
PW-6F Grab Groundwater	10/30/2019 10:30	1188917
PW-4T Grab Groundwater	10/30/2019 11:50	1188918
BDA-6WT Grab Groundwater	10/30/2019 14:05	1188919
BDA-6T Grab Groundwater	10/30/2019 15:15	1188920
Trip Blank Water	10/23/2019	1188921
BDA15RX Grab Groundwater	10/30/2019 11:37	1188922
PW-5T Grab Groundwater	10/30/2019 14:07	1188923
PW-5RX Grab Groundwater	10/30/2019 15:41	1188924
DUP-103019 Grab Groundwater	10/30/2019	1188925

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

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Project Name: Bristol-Myers Squibb
ELLE Group #: 2071978

General Comments:

Through our technical processes and second person review of data, we have established that our data/deliverables are in compliance with the methods and project requirements unless otherwise noted or previously resolved with the client. The compliance signature is located on the cover page of the Analysis Reports.

See the Laboratory Sample Analysis Record section of the Analysis Report for the method references.

All QC met criteria unless otherwise noted in an Analysis Specific Comment below.

Refer to the QC Summary for specific values and acceptance criteria.

Project specific QC samples are included in this data set.

Matrix QC may not be reported if site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

Surrogate recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in an Analysis Specific Comment below.

The samples were received at the appropriate temperature and in accordance with the chain of custody unless otherwise noted.

Analysis Specific Comments:

SW-846 8260C, GC/MS Volatiles

Sample #s: 1188914, 1188915

Project defined calibration criteria are not met. The calibration is compliant with the method defined criteria.

Sample #s: 1188912, 1188913, 1188916, 1188918, 1188919, 1188920, 1188921, 1188922

Project defined calibration criteria are not met. The calibration is compliant with the method defined criteria.

A Report Limit Verification (RLV) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The RLV standard shows adequate sensitivity at or below the reporting limit.

Sample #s: 1188917

Project defined calibration criteria are not met. The calibration is compliant with the method defined criteria.

A Report Limit Verification (RLV) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The RLV standard shows adequate sensitivity at or below the reporting limit.

Reporting limits were raised due to sample foaming.

Sample #s: 1188924, 1188925

Project defined calibration criteria are not met. The calibration is compliant with the method defined criteria.

A Report Limit Verification (RLV) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The RLV standard shows adequate sensitivity at or below the reporting limit.

The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the TNI/DoD Standards. The following analytes are accepted based on this allowance: chloromethane, bromomethane and chloroethane.

Sample #s: 1188923

Project defined calibration criteria are not met. The calibration is compliant with the method defined criteria.

A Report Limit Verification (RLV) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The RLV standard shows adequate sensitivity at or below the reporting limit.

The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the TNI/DoD Standards. The following analytes are accepted based on this allowance: chloromethane, bromomethane and chloroethane.

A targeted library search was performed yielding the following results: hexachloroethane is non-detect.

Preservation requirements were not met. The sample was received at pH < 2 which is not the preservation specified for acrolein or acrylonitrile under the referenced method. The preservation criteria is pH of 4-5.

Batch #: Y193121AA (Sample number(s): 1188912-1188920, 1188922 UNSPK: 1188913)

The recovery(ies) for the following analyte(s) in the MS and/or MSD exceeded the acceptance window indicating a positive bias: Isobutyl Alcohol, 1,4-Dioxane

The relative percent difference(s) for the following analyte(s) in the MS/MSD were outside acceptance windows: Ethyl ether, Trichlorofluoromethane

Batch #: Y193131AA (Sample number(s): 1188923-1188925)

The recovery(ies) for the following analyte(s) in the LCS and/or LCSD were below the acceptance window: Chloromethane, Bromomethane, Chloroethane

SW-846 8270D, GC/MS Semivolatiles

Sample #s: 1188912

The holding time was not met.

The first extraction for this sample was preformed within the method required holding time however the recovery for the sample surrogate(s) is outside the QC acceptance limits. The sample was re-extracted outside the method required holding time and the sample surrogates are compliant. Per client request, the data is reported from the second extraction.

Due to laboratory error, target analytes were not added to the Laboratory Control Spike Duplicate in the second extraction. All recoveries for target analytes in the Laboratory Control Spikes in the first extraction are compliant. Per client request, the data is reported from the second extraction.

The recovery for Dicyclohexylamine in the Laboratory Control Spikes is outside the QC acceptance limits as noted on the QC Summary. Since the recovery is high and the target analyte is not detected in the sample, the data is reported.

Sample #s: 1188919

The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the TNI/DoD Standards. The following analytes are accepted based on this allowance: Dicyclohexylamine

Sample #s: 1188913, 1188916, 1188918, 1188920, 1188922, 1188923, 1188924, 1188925

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. Since the recovery is high and the target analyte(s) was not detected in the sample, the data is reported.

Batch #: 19309WAJ026 (Sample number(s): 1188913-1188920, 1188922-1188925 UNSPK: 1188913)

The recovery(ies) for the following analyte(s) in the LCS and/or LCSD exceeded the acceptance window indicating a positive bias: Dicyclohexylamine

Batch #: 19316WAO026 (Sample number(s): 1188912)

The recovery(ies) for the following analyte(s) in the LCS and/or LCSD exceeded the acceptance window indicating a positive bias: Dicyclohexylamine

The recovery(ies) for the following analyte(s) in the LCS and/or LCSD were below the acceptance window: 1,1'-Biphenyl, 2,3,4,6-Tetrachlorophenol, Aniline, Acetophenone, 1,2,4,5-Tetrachlorobenzene, 4-Methylphenol, 4-Chloroaniline, Dibenzofuran, 2-Methylnaphthalene, 2-Nitroaniline, 3-Nitroaniline, 4-Nitroaniline, Pyridine, 2,4,5-Trichlorophenol, 2-Chlorophenol, Phenol, 2-Nitrophenol, 2,4-Dimethylphenol, 2,4-Dichlorophenol, 4-Chloro-3-methylphenol, 2,4,6-Trichlorophenol, 2,4-Dinitrophenol, 4-Nitrophenol, 4,6-Dinitro-2-methylphenol, Pentachlorophenol, bis(2-Chloroethyl)ether, bis(2-Chloroisopropyl)ether, Hexachloroethane, N-Nitroso-di-n-propylamine, Nitrobenzene, Isophorone, bis(2-Chloroethoxy)methane, Naphthalene, Hexachlorobutadiene, Hexachlorocyclopentadiene, 2-Chloronaphthalene, Acenaphthylene, Dimethylphthalate, 2,6-Dinitrotoluene, Acenaphthene, 2,4-Dinitrotoluene, Fluorene, 4-Chlorophenyl-phenylether, Diethylphthalate, N-Nitrosodiphenylamine, 4-Bromophenyl-phenylether, Hexachlorobenzene, Phenanthrene, Anthracene, Di-n-butylphthalate, Fluoranthene, Pyrene, Butylbenzylphthalate, Benzo(a)anthracene, Chrysene, 3,3'-Dichlorobenzidine, bis(2-Ethylhexyl)phthalate, Di-n-octylphthalate, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Indeno(1,2,3-cd)pyrene, Dibenz(a,h)anthracene, Benzo(g,h,i)perylene, 2-Methylphenol, Carbazole, Benzyl alcohol, Atrazine, Caprolactam, Benzaldehyde

The relative percent difference(s) for the following analyte(s) in the LCS/LCSD were outside acceptance windows: 1,1'-Biphenyl, 2,3,4,6-Tetrachlorophenol, Aniline, Acetophenone, 1,2,4,5-Tetrachlorobenzene, 4-Methylphenol, 4-Chloroaniline, Dibenzofuran, 2-Methylnaphthalene, 2-Nitroaniline, 3-Nitroaniline, 4-Nitroaniline, Pyridine, 2,4,5-Trichlorophenol, 2-Chlorophenol, Phenol, 2-Nitrophenol, 2,4-Dimethylphenol, 2,4-Dichlorophenol, 4-Chloro-3-methylphenol, 2,4,6-Trichlorophenol, 2,4-Dinitrophenol, 4-Nitrophenol, 4,6-Dinitro-2-methylphenol, Pentachlorophenol, bis(2-Chloroethyl)ether, bis(2-Chloroisopropyl)ether, Hexachloroethane, N-Nitroso-di-n-propylamine, Nitrobenzene, Isophorone, bis(2-Chloroethoxy)methane, Naphthalene, Hexachlorobutadiene, Hexachlorocyclopentadiene, 2-Chloronaphthalene, Acenaphthylene, Dimethylphthalate, 2,6-Dinitrotoluene, Acenaphthene, 2,4-Dinitrotoluene, Fluorene, 4-Chlorophenyl-phenylether, Diethylphthalate, N-Nitrosodiphenylamine, 4-Bromophenyl-phenylether, Hexachlorobenzene, Phenanthrene, Anthracene, Di-n-butylphthalate, Fluoranthene, Pyrene, Butylbenzylphthalate, Benzo(a)anthracene, Chrysene, 3,3'-Dichlorobenzidine,

bis(2-Ethylhexyl)phthalate, Di-n-octylphthalate, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Indeno(1,2,3-cd)pyrene, Dibenz(a,h)anthracene, Benzo(g,h,i)perylene, 2-Methylphenol, Carbazole, Benzyl alcohol, Atrazine, Caprolactam, Benzaldehyde

The recovery(ies) for one or more surrogates were below the acceptance window for sample(s) LCSD

SW-846 8315A, Aldehydes & Ketones

Sample #s: 1188912, 1188913, 1188914, 1188915, 1188916, 1188917, 1188918, 1188919, 1188920, 1188923, 1188924, 1188925

The response for a target analyte(s) in the initial calibration verification standard is outside the QC acceptance limits. The client was contacted and the data reported.
The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary.

Batch #: 193040018A (Sample number(s): 1188912-1188920, 1188923-1188925 UNSPK: 1188913)

The recovery(ies) for the following analyte(s) in the LCS were below the acceptance window:
Acetaldehyde

The recovery(ies) for the following analyte(s) in the MS and/or MSD were below the acceptance window:
Acetaldehyde

SW-846 8015D Rev.4, June 2003, GC Miscellaneous

Sample #s: 1188913

The response for surrogate Tetramethylene glycol in the continuing calibration verification standard is outside the QC acceptance limits low. The following action was taken:
The analysis was repeated and the continuing calibration verification standard bracketing the sample on the second trial is also outside the acceptance limits low for Tetramethylene glycol.
The response for ethylene and propylene glycol in the continuing calibration verification standard is outside the QC acceptance limits low in the second trial. Data is reported from the second trial per client request.

Sample #s: 1188912, 1188914, 1188915, 1188916, 1188918, 1188919

The response for surrogate Tetramethylene glycol in the continuing calibration verification standard is outside the QC acceptance limits low. The following action was taken:
The analysis was repeated and the continuing calibration verification standard bracketing the sample on the second trial is also outside the acceptance limits. This effect is attributed to the sample matrix and the data is reported.

Sample #s: 1188917

The response for surrogate Tetramethylene glycol in the continuing calibration verification standard is outside the QC acceptance limits low. The following action was taken:
The analysis was repeated and the continuing calibration verification standard bracketing the sample on the second trial is also outside the acceptance limits. This effect is attributed to the sample matrix and the data is reported.

The recovery for the sample surrogate(s) is outside the QC acceptance limits as noted on the QC Summary.

Sample #s: 1188920, 1188921, 1188923, 1188924, 1188925

The response for tetramethylene glycol in the continuing calibration verification standard is outside the QC acceptance limits low. The following action was taken:
The analysis was repeated and the continuing calibration verification standard bracketing the sample on the second trial is also outside the acceptance limits. This effect is attributed to the sample matrix and the data is reported.

Batch #: 193080027A (Sample number(s): 1188912, 1188914-1188919 UNSPK: 1188913)

The recovery(ies) for one or more surrogates were below the acceptance window for sample(s) 1188912, 1188917, 1188918, 1188919

Batch #: 193080028A (Sample number(s): 1188920-1188921, 1188923-1188925 UNSPK: 1188920)

The recovery(ies) for one or more surrogates were below the acceptance window for sample(s) 1188923, 1188924, 1188925

Batch #: 193100033A (Sample number(s): 1188913 UNSPK: 1188913)

The recovery(ies) for the following analyte(s) in the MS and/or MSD were below the acceptance window:
Ethylene glycol

The recovery(ies) for one or more surrogates were below the acceptance window for sample(s) 1188913

REVISED

Sample Description: **PW-2T Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/31/2019 11:30
Collection Date/Time: 10/30/2019 10:00
SDG#: BMS82-01

ARCADIS U.S., Inc.
ELLE Sample #: GW 1188912
ELLE Group #: 2071978
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	20	0.7	1
11997	Acetonitrile	75-05-8	N.D.	100	16	1
11997	Benzene	71-43-2	N.D.	1	0.2	1
11997	Bromochloromethane	74-97-5	N.D.	5	0.2	1
11997	Bromodichloromethane	75-27-4	N.D.	1	0.2	1
11997	Bromoform	75-25-2	N.D.	4	1	1
11997	Bromomethane	74-83-9	N.D.	1	0.3	1
11997	n-Butanol	71-36-3	N.D.	250	61	1
11997	2-Butanone	78-93-3	N.D.	10	0.3	1
11997	t-Butyl alcohol	75-65-0	N.D.	50	12	1
11997	n-Butylbenzene	104-51-8	N.D.	5	0.2	1
11997	sec-Butylbenzene	135-98-8	N.D.	5	0.2	1
11997	tert-Butylbenzene	98-06-6	N.D.	5	0.3	1
11997	Carbon Disulfide	75-15-0	N.D.	5	0.2	1
11997	Carbon Tetrachloride	56-23-5	N.D.	1	0.2	1
11997	Chlorobenzene	108-90-7	0.3 J	1	0.2	1
11997	Chlorodifluoromethane[1]	75-45-6	N.D.	5	2	1
11997	Chloroethane	75-00-3	N.D.	1	0.2	1
11997	Chloroform	67-66-3	N.D.	1	0.2	1
11997	Chloromethane	74-87-3	N.D.	1	0.2	1
11997	Cyclohexane	110-82-7	N.D.	5	1	1
11997	Cyclohexanone[1]	108-94-1	N.D.	100	25	1
11997	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	5	0.3	1
11997	Dibromochloromethane	124-48-1	N.D.	1	0.2	1
11997	1,2-Dibromoethane	106-93-4	N.D.	1	0.2	1
11997	1,2-Dichlorobenzene	95-50-1	9	5	0.2	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	5	0.2	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	5	0.2	1
11997	Dichlorodifluoromethane	75-71-8	N.D.	1	0.2	1
11997	1,1-Dichloroethane	75-34-3	0.5 J	1	0.2	1
11997	1,2-Dichloroethane	107-06-2	N.D.	1	0.3	1
11997	1,1-Dichloroethene	75-35-4	N.D.	1	0.2	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	1	0.2	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	1	0.2	1
11997	1,2-Dichloropropane	78-87-5	N.D.	1	0.2	1
11997	cis-1,3-Dichloropropene	10061-01-5	N.D.	1	0.2	1
11997	trans-1,3-Dichloropropene	10061-02-6	N.D.	1	0.2	1
11997	1,4-Dioxane	123-91-1	N.D.	250	29	1
11997	Ethyl Acetate	141-78-6	N.D.	5	0.7	1
11997	Ethyl ether	60-29-7	N.D.	5	0.2	1
11997	Ethylbenzene	100-41-4	N.D.	1	0.4	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **PW-2T Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/31/2019 11:30
Collection Date/Time: 10/30/2019 10:00
SDG#: BMS82-01

ARCADIS U.S., Inc.
ELLE Sample #: GW 1188912
ELLE Group #: 2071978
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Freon 113	76-13-1	N.D.	10	0.2	1
11997	n-Heptane[1]	142-82-5	N.D.	5	2	1
11997	n-Hexane[1]	110-54-3	N.D.	5	2	1
11997	2-Hexanone	591-78-6	N.D.	10	0.3	1
11997	Isobutyl Alcohol	78-83-1	N.D.	250	36	1
11997	Isopropylbenzene	98-82-8	N.D.	5	0.2	1
11997	p-Isopropyltoluene	99-87-6	N.D.	5	0.2	1
11997	Methyl Acetate	79-20-9	N.D.	5	0.2	1
11997	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	1	0.2	1
11997	4-Methyl-2-pentanone	108-10-1	N.D.	10	0.5	1
11997	Methylcyclohexane	108-87-2	N.D.	5	0.5	1
11997	Methylene Chloride	75-09-2	N.D.	1	0.3	1
11997	Naphthalene	91-20-3	N.D.	5	1	1
11997	2-Nitropropane	79-46-9	N.D.	10	0.8	1
11997	Styrene	100-42-5	N.D.	5	0.2	1
11997	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	1	0.2	1
11997	Tetrachloroethene	127-18-4	N.D.	1	0.2	1
11997	Tetrahydrofuran	109-99-9	N.D.	10	0.7	1
11997	Toluene	108-88-3	N.D.	1	0.2	1
11997	1,2,3-Trichlorobenzene	87-61-6	N.D.	5	0.4	1
11997	1,2,4-Trichlorobenzene	120-82-1	N.D.	5	0.3	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	1	0.3	1
11997	1,1,2-Trichloroethane	79-00-5	N.D.	1	0.2	1
11997	Trichloroethene	79-01-6	N.D.	1	0.2	1
11997	Trichlorofluoromethane	75-69-4	N.D.	1	0.2	1
11997	1,2,4-Trimethylbenzene	95-63-6	N.D.	5	1	1
11997	1,3,5-Trimethylbenzene	108-67-8	N.D.	5	0.3	1
11997	Vinyl Chloride	75-01-4	N.D.	1	0.2	1
11997	m+p-Xylene	179601-23-1	N.D.	5	1	1
11997	o-Xylene	95-47-6	N.D.	1	0.4	1
11997	Xylene (Total)	1330-20-7	N.D.	6	1	1

Project defined calibration criteria are not met. The calibration is compliant with the method defined criteria.

A Report Limit Verification (RLV) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The RLV standard shows adequate sensitivity at or below the reporting limit.

00882 VOA Interp. Library Search-10

The results from the volatile library search are listed on the attached FORM 1 - VOA-TIC. The qualifiers appearing in the "Q" column are defined at the end of the report.

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **PW-2T Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/31/2019 11:30
Collection Date/Time: 10/30/2019 10:00
SDG#: BMS82-01

ARCADIS U.S., Inc.
ELLE Sample #: GW 1188912
ELLE Group #: 2071978
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	Acenaphthene	83-32-9	N.D.	0.51	0.10	1
14241	Acenaphthylene	208-96-8	N.D.	0.51	0.10	1
14241	Acetophenone	98-86-2	N.D.	10	4.0	1
14241	Aniline	62-53-3	N.D.	10	3.0	1
14241	Anthracene	120-12-7	N.D.	0.51	0.10	1
14241	Atrazine	1912-24-9	N.D.	5.1	2.0	1
14241	Benzaldehyde	100-52-7	N.D.	10	3.0	1
14241	Benzo(a)anthracene	56-55-3	N.D.	0.51	0.10	1
14241	Benzo(a)pyrene	50-32-8	N.D.	0.51	0.10	1
14241	Benzo(b)fluoranthene	205-99-2	N.D.	0.51	0.10	1
14241	Benzo(g,h,i)perylene	191-24-2	N.D.	0.51	0.10	1
14241	Benzo(k)fluoranthene	207-08-9	N.D.	0.51	0.10	1
14241	Benzyl alcohol	100-51-6	N.D.	30	10	1
14241	1,1'-Biphenyl	92-52-4	N.D.	10	3.0	1
14241	4-Bromophenyl-phenylether	101-55-3	N.D.	2.0	0.51	1
14241	Butylbenzylphthalate	85-68-7	N.D.	5.1	2.0	1
14241	Di-n-butylphthalate	84-74-2	N.D.	5.1	2.0	1
14241	Caprolactam	105-60-2	N.D.	11	5.1	1
14241	Carbazole	86-74-8	N.D.	2.0	0.51	1
14241	4-Chloro-3-methylphenol	59-50-7	N.D.	2.0	0.51	1
14241	4-Chloroaniline	106-47-8	N.D.	10	4.0	1
14241	bis(2-Chloroethoxy)methane	111-91-1	N.D.	2.0	0.51	1
14241	bis(2-Chloroethyl)ether	111-44-4	N.D.	2.0	0.51	1
14241	bis(2-Chloroisopropyl)ether[1]	39638-32-9	N.D.	2.0	0.51	1
	Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.					
14241	2-Chloronaphthalene	91-58-7	N.D.	1.0	0.40	1
14241	2-Chlorophenol	95-57-8	N.D.	2.0	0.51	1
14241	4-Chlorophenyl-phenylether	7005-72-3	N.D.	2.0	0.51	1
14241	Chrysene	218-01-9	N.D.	0.51	0.10	1
14241	Dibenz(a,h)anthracene	53-70-3	N.D.	0.51	0.10	1
14241	Dibenzofuran	132-64-9	N.D.	2.0	0.51	1
14241	3,3'-Dichlorobenzidine	91-94-1	N.D.	10	3.0	1
14241	2,4-Dichlorophenol	120-83-2	N.D.	2.0	0.51	1
14241	Dicyclohexylamine[1]	101-83-7	N.D.	10	10	1
14241	Diethylphthalate	84-66-2	N.D.	5.1	2.0	1
14241	N,N-Dimethylaniline[1]	121-69-7	N.D.	1.0	0.51	1
14241	2,4-Dimethylphenol	105-67-9	N.D.	10	3.0	1
14241	Dimethylphthalate	131-11-3	N.D.	5.1	2.0	1
14241	4,6-Dinitro-2-methylphenol	534-52-1	N.D.	21	8.1	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **PW-2T Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/31/2019 11:30
Collection Date/Time: 10/30/2019 10:00
SDG#: BMS82-01

ARCADIS U.S., Inc.
ELLE Sample #: GW 1188912
ELLE Group #: 2071978
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	2,4-Dinitrophenol	51-28-5	N.D.	30	14	1
14241	2,4-Dinitrotoluene	121-14-2	N.D.	5.1	1.0	1
14241	2,6-Dinitrotoluene	606-20-2	N.D.	2.0	0.51	1
14241	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	11	5.1	1
14241	Fluoranthene	206-44-0	N.D.	0.51	0.10	1
14241	Fluorene	86-73-7	N.D.	0.51	0.10	1
14241	Hexachlorobenzene	118-74-1	N.D.	0.51	0.10	1
14241	Hexachlorobutadiene	87-68-3	N.D.	2.0	0.51	1
14241	Hexachlorocyclopentadiene	77-47-4	N.D.	11	5.1	1
14241	Hexachloroethane	67-72-1	N.D.	5.1	1.0	1
14241	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.51	0.10	1
14241	Isophorone	78-59-1	N.D.	2.0	0.51	1
14241	2-Methylnaphthalene	91-57-6	N.D.	0.51	0.10	1
14241	2-Methylphenol	95-48-7	N.D.	2.0	0.51	1
14241	4-Methylphenol	65794-96-9	N.D.	2.0	0.51	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
14241	Naphthalene	91-20-3	N.D.	0.51	0.10	1
14241	2-Nitroaniline	88-74-4	N.D.	7.1	2.0	1
14241	3-Nitroaniline	99-09-2	N.D.	7.1	3.0	1
14241	4-Nitroaniline	100-01-6	N.D.	3.0	0.91	1
14241	Nitrobenzene	98-95-3	N.D.	2.0	0.51	1
14241	2-Nitrophenol	88-75-5	N.D.	10	3.0	1
14241	4-Nitrophenol	100-02-7	N.D.	30	10	1
14241	N-Nitroso-di-n-propylamine	621-64-7	N.D.	3.0	0.71	1
14241	N-Nitrosodiphenylamine	86-30-6	N.D.	3.0	0.71	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.					
14241	Di-n-octylphthalate	117-84-0	N.D.	11	5.1	1
14241	Pentachlorophenol	87-86-5	N.D.	5.1	1.0	1
14241	Phenanthrene	85-01-8	N.D.	0.51	0.10	1
14241	Phenol	108-95-2	N.D.	2.0	0.51	1
14241	Pyrene	129-00-0	N.D.	0.51	0.10	1
14241	Pyridine	110-86-1	N.D.	5.1	2.0	1
14241	1,2,4,5-Tetrachlorobenzene	95-94-3	N.D.	2.0	0.51	1
14241	2,3,4,6-Tetrachlorophenol	58-90-2	N.D.	10	4.0	1
14241	2,4,5-Trichlorophenol	95-95-4	N.D.	2.0	0.51	1
14241	2,4,6-Trichlorophenol	88-06-2	N.D.	2.0	0.51	1
14241	Triethylamine[1]	121-44-8	N.D.	10	10	1

[1] The holding time was not met.

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **PW-2T Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/31/2019 11:30
Collection Date/Time: 10/30/2019 10:00
SDG#: BMS82-01

ARCADIS U.S., Inc.
ELLE Sample #: GW 1188912
ELLE Group #: 2071978
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor

The first extraction for this sample was preformed within the method required holding time however the recovery for the sample surrogate(s) is outside the QC acceptance limits. The sample was re-extracted outside the method required holding time and the sample surrogates are compliant. Per client request, the data is reported from the second extraction.

Due to laboratory error, target analytes were not added to the Laboratory Control Spike Duplicate in the second extraction. All recoveries for target analytes in the Laboratory Control Spikes in the first extraction are compliant. Per client request, the data is reported from the second extraction.

The recovery for Dicyclohexylamine in the Laboratory Control Spikes is outside the QC acceptance limits as noted on the QC Summary. Since the recovery is high and the target analyte is not detected in the sample, the data is reported.

00886 SVOA TIC Interpretive(25)

The results from the semivolatile library search are listed on the attached FORM 1 - SV-TIC. The qualifiers appearing in the "Q" column are defined at the end of the report.

Aldehydes & Ketones	**SW-846 8315A**		**ug/l**	**ug/l**	**ug/l**	
13022	Acetaldehyde[1]	75-07-0	N.D.	60	35	1
13022	Formaldehyde	50-00-0	N.D.	50	20	1

The response for a target analyte(s) in the initial calibration verification standard is outside the QC acceptance limits. The client was contacted and the data reported.
The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary.

GC Miscellaneous	**SW-846 8015D Rev.4, June 2003**		**ug/l**	**ug/l**	**ug/l**	
10603	Ethanol	64-17-5	N.D. D2	1,000	150	1
12926	Ethylene glycol[1]	107-21-1	N.D.	10,000	5,000	1
10603	Isopropanol[1]	67-63-0	N.D. D2	1,000	110	1
10603	Methanol	67-56-1	N.D. D2	1,000	220	1
12926	Propylene glycol[1]	57-55-6	N.D.	10,000	2,000	1

The response for surrogate Tetramethylene glycol in the continuing calibration verification standard is outside the QC acceptance limits low. The following action was taken:
The analysis was repeated and the continuing calibration verification standard bracketing the sample on the second trial is also outside the acceptance limits. This effect is attributed to the sample matrix and the data is reported.

Sample Comments

State of New York Certification No. 10670

[1] = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **PW-2T Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/31/2019 11:30
Collection Date/Time: 10/30/2019 10:00
SDG#: BMS82-01

ARCADIS U.S., Inc.
ELLE Sample #: GW 1188912
ELLE Group #: 2071978
Matrix: Groundwater

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	Y193121AA	11/08/2019 15:22	Corie Mellinger	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	Y193121AA	11/08/2019 15:21	Corie Mellinger	1
14241	Semi-annual Groundwater BMS	SW-846 8270D	1	19316WAO026	11/18/2019 04:36	Ashley R Transue	1
11010	8270D BNA Extraction	SW-846 3510C	2	19316WAO026	11/13/2019 09:00	Joshua S Ruth	1
13022	Short List Aldehydes- W 8315A	SW-846 8315A	1	193040018A	11/01/2019 17:48	Jessica L Miller	1
01013	Formaldehyde Extraction	SW-846 8315A	1	193040018A	11/01/2019 08:38	Alison Moll	1
10603	Alcohols in Water	SW-846 8015D Rev.4, June 2003	1	193080007A	11/04/2019 20:13	Johanna C Kennedy	1
12926	Glycols in Water by 8015C/D	SW-846 8015D Rev.4, June 2003	1	193080027A	11/05/2019 23:54	Donald Brown	1

*=This limit was used in the evaluation of the final result

REVISED

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
S8201

Lab Name: Lancaster Laboratories Contract:_____
Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____
Matrix: (soil/water) WATER Lab Sample ID: 1188912
Sample wt/vol: 5.0 (g/mL)mL Lab File ID:HP09355.i/19nov08a.b/yn08s10.d
Level: (low/med) LOW Date Received: 10/31/19
% Moisture: not dec. Date Analyzed: 11/08/19
Column: (pack/cap) CAP Dilution Factor: 1.0
CONCENTRATION UNITS:
Number TICs found: 0 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	VOCTIC	Total VOC TICs		0	U
2.					
3.					
4.					
5.					
6.					
7.					
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page 1 of 1

FORM I VOA-TIC

REVISED

1F

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

S8201

Lab Name: Lancaster Laboratories Contract:
Lab Code: LANCAS Case No.: SAS No.: SDG No.:
Matrix: (soil/water) WATER Lab Sample ID: 1188912
Sample wt/vol: 247 (g/mL) mL Lab File ID: lk0935.d
Level: (low/med) LOW Date Received: 10/31/19
% Moisture: Decanted: (Y/N) Date Extracted: 11/13/19
Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/18/19
Injection Volume: 1 (uL) Dilution Factor: 1
GPC Cleanup: N pH: Extraction: Sepf

CONCENTRATION UNITS:
Number TICs found: 3 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		Unknown	5.736	16	J
2.		Unknown	6.586	54	J
3.	120-80-9	Catechol	8.859	5	J
4.					
5.	SVOCTIC	Total SVOC TICs		75	J
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					
16.					
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page 1 of 1

FORM I SV-1

REVISED

Sample Description: **BDA-1WT Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/31/2019 11:30
Collection Date/Time: 10/30/2019 11:35
SDG#: BMS82-02BKG

ARCADIS U.S., Inc.
ELLE Sample #: GW 1188913
ELLE Group #: 2071978
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	20	0.7	1
11997	Acetonitrile	75-05-8	N.D.	100	16	1
11997	Benzene	71-43-2	N.D.	1	0.2	1
11997	Bromochloromethane	74-97-5	N.D.	5	0.2	1
11997	Bromodichloromethane	75-27-4	N.D.	1	0.2	1
11997	Bromoform	75-25-2	N.D.	4	1	1
11997	Bromomethane	74-83-9	N.D.	1	0.3	1
11997	n-Butanol	71-36-3	N.D.	250	61	1
11997	2-Butanone	78-93-3	N.D.	10	0.3	1
11997	t-Butyl alcohol	75-65-0	N.D.	50	12	1
11997	n-Butylbenzene	104-51-8	N.D.	5	0.2	1
11997	sec-Butylbenzene	135-98-8	N.D.	5	0.2	1
11997	tert-Butylbenzene	98-06-6	N.D.	5	0.3	1
11997	Carbon Disulfide	75-15-0	N.D.	5	0.2	1
11997	Carbon Tetrachloride	56-23-5	N.D.	1	0.2	1
11997	Chlorobenzene	108-90-7	N.D.	1	0.2	1
11997	Chlorodifluoromethane[1]	75-45-6	N.D.	5	2	1
11997	Chloroethane	75-00-3	N.D.	1	0.2	1
11997	Chloroform	67-66-3	N.D.	1	0.2	1
11997	Chloromethane	74-87-3	N.D.	1	0.2	1
11997	Cyclohexane	110-82-7	N.D.	5	1	1
11997	Cyclohexanone[1]	108-94-1	N.D.	100	25	1
11997	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	5	0.3	1
11997	Dibromochloromethane	124-48-1	N.D.	1	0.2	1
11997	1,2-Dibromoethane	106-93-4	N.D.	1	0.2	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	5	0.2	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	5	0.2	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	5	0.2	1
11997	Dichlorodifluoromethane	75-71-8	N.D.	1	0.2	1
11997	1,1-Dichloroethane	75-34-3	N.D.	1	0.2	1
11997	1,2-Dichloroethane	107-06-2	N.D.	1	0.3	1
11997	1,1-Dichloroethene	75-35-4	N.D.	1	0.2	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	1	0.2	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	1	0.2	1
11997	1,2-Dichloropropane	78-87-5	N.D.	1	0.2	1
11997	cis-1,3-Dichloropropene	10061-01-5	N.D.	1	0.2	1
11997	trans-1,3-Dichloropropene	10061-02-6	N.D.	1	0.2	1
11997	1,4-Dioxane	123-91-1	N.D.	250	29	1
11997	Ethyl Acetate	141-78-6	N.D.	5	0.7	1
11997	Ethyl ether	60-29-7	N.D.	5	0.2	1
11997	Ethylbenzene	100-41-4	N.D.	1	0.4	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **BDA-1WT Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/31/2019 11:30
Collection Date/Time: 10/30/2019 11:35
SDG#: BMS82-02BKG

ARCADIS U.S., Inc.
ELLE Sample #: GW 1188913
ELLE Group #: 2071978
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Freon 113	76-13-1	N.D.	10	0.2	1
11997	n-Heptane[1]	142-82-5	N.D.	5	2	1
11997	n-Hexane[1]	110-54-3	N.D.	5	2	1
11997	2-Hexanone	591-78-6	N.D.	10	0.3	1
11997	Isobutyl Alcohol	78-83-1	N.D.	250	36	1
11997	Isopropylbenzene	98-82-8	N.D.	5	0.2	1
11997	p-Isopropyltoluene	99-87-6	N.D.	5	0.2	1
11997	Methyl Acetate	79-20-9	N.D.	5	0.2	1
11997	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	1	0.2	1
11997	4-Methyl-2-pentanone	108-10-1	N.D.	10	0.5	1
11997	Methylcyclohexane	108-87-2	N.D.	5	0.5	1
11997	Methylene Chloride	75-09-2	N.D.	1	0.3	1
11997	Naphthalene	91-20-3	N.D.	5	1	1
11997	2-Nitropropane	79-46-9	N.D.	10	0.8	1
11997	Styrene	100-42-5	N.D.	5	0.2	1
11997	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	1	0.2	1
11997	Tetrachloroethene	127-18-4	N.D.	1	0.2	1
11997	Tetrahydrofuran	109-99-9	N.D.	10	0.7	1
11997	Toluene	108-88-3	N.D.	1	0.2	1
11997	1,2,3-Trichlorobenzene	87-61-6	N.D.	5	0.4	1
11997	1,2,4-Trichlorobenzene	120-82-1	N.D.	5	0.3	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	1	0.3	1
11997	1,1,2-Trichloroethane	79-00-5	N.D.	1	0.2	1
11997	Trichloroethene	79-01-6	N.D.	1	0.2	1
11997	Trichlorofluoromethane	75-69-4	N.D.	1	0.2	1
11997	1,2,4-Trimethylbenzene	95-63-6	N.D.	5	1	1
11997	1,3,5-Trimethylbenzene	108-67-8	N.D.	5	0.3	1
11997	Vinyl Chloride	75-01-4	N.D.	1	0.2	1
11997	m+p-Xylene	179601-23-1	N.D.	5	1	1
11997	o-Xylene	95-47-6	N.D.	1	0.4	1
11997	Xylene (Total)	1330-20-7	N.D.	6	1	1

Project defined calibration criteria are not met. The calibration is compliant with the method defined criteria.

A Report Limit Verification (RLV) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The RLV standard shows adequate sensitivity at or below the reporting limit.

00882 VOA Interp. Library Search-10

The results from the volatile library search are listed on the attached FORM 1 - VOA-TIC. The qualifiers appearing in the "Q" column are defined at the end of the report.

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **BDA-1WT Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/31/2019 11:30
Collection Date/Time: 10/30/2019 11:35
SDG#: BMS82-02BKG

ARCADIS U.S., Inc.
ELLE Sample #: GW 1188913
ELLE Group #: 2071978
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	Acenaphthene	83-32-9	N.D.	0.51	0.10	1
14241	Acenaphthylene	208-96-8	N.D.	0.51	0.10	1
14241	Acetophenone	98-86-2	N.D.	10	4.1	1
14241	Aniline	62-53-3	N.D.	10	3.1	1
14241	Anthracene	120-12-7	N.D.	0.51	0.10	1
14241	Atrazine	1912-24-9	N.D.	5.1	2.0	1
14241	Benzaldehyde	100-52-7	N.D.	10	3.1	1
14241	Benzo(a)anthracene	56-55-3	N.D.	0.51	0.10	1
14241	Benzo(a)pyrene	50-32-8	N.D.	0.51	0.10	1
14241	Benzo(b)fluoranthene	205-99-2	N.D.	0.51	0.10	1
14241	Benzo(g,h,i)perylene	191-24-2	N.D.	0.51	0.10	1
14241	Benzo(k)fluoranthene	207-08-9	N.D.	0.51	0.10	1
14241	Benzyl alcohol	100-51-6	N.D.	31	10	1
14241	1,1'-Biphenyl	92-52-4	N.D.	10	3.1	1
14241	4-Bromophenyl-phenylether	101-55-3	N.D.	2.0	0.51	1
14241	Butylbenzylphthalate	85-68-7	N.D.	5.1	2.0	1
14241	Di-n-butylphthalate	84-74-2	N.D.	5.1	2.0	1
14241	Caprolactam	105-60-2	N.D.	11	5.1	1
14241	Carbazole	86-74-8	N.D.	2.0	0.51	1
14241	4-Chloro-3-methylphenol	59-50-7	N.D.	2.0	0.51	1
14241	4-Chloroaniline	106-47-8	N.D.	10	4.1	1
14241	bis(2-Chloroethoxy)methane	111-91-1	N.D.	2.0	0.51	1
14241	bis(2-Chloroethyl)ether	111-44-4	N.D.	2.0	0.51	1
14241	bis(2-Chloroisopropyl)ether[1]	39638-32-9	N.D.	2.0	0.51	1
	Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.					
14241	2-Chloronaphthalene	91-58-7	N.D.	1.0	0.41	1
14241	2-Chlorophenol	95-57-8	N.D.	2.0	0.51	1
14241	4-Chlorophenyl-phenylether	7005-72-3	N.D.	2.0	0.51	1
14241	Chrysene	218-01-9	N.D.	0.51	0.10	1
14241	Dibenz(a,h)anthracene	53-70-3	N.D.	0.51	0.10	1
14241	Dibenzofuran	132-64-9	N.D.	2.0	0.51	1
14241	3,3'-Dichlorobenzidine	91-94-1	N.D.	10	3.1	1
14241	2,4-Dichlorophenol	120-83-2	N.D.	2.0	0.51	1
14241	Dicyclohexylamine[1]	101-83-7	N.D.	10	10	1
14241	Diethylphthalate	84-66-2	N.D.	5.1	2.0	1
14241	N,N-Dimethylaniline[1]	121-69-7	N.D.	1.0	0.51	1
14241	2,4-Dimethylphenol	105-67-9	N.D.	10	3.1	1
14241	Dimethylphthalate	131-11-3	N.D.	5.1	2.0	1
14241	4,6-Dinitro-2-methylphenol	534-52-1	N.D.	21	8.2	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **BDA-1WT Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/31/2019 11:30
Collection Date/Time: 10/30/2019 11:35
SDG#: BMS82-02BKG

ARCADIS U.S., Inc.
ELLE Sample #: GW 1188913
ELLE Group #: 2071978
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	2,4-Dinitrophenol	51-28-5	N.D.	31	14	1
14241	2,4-Dinitrotoluene	121-14-2	N.D.	5.1	1.0	1
14241	2,6-Dinitrotoluene	606-20-2	N.D.	2.0	0.51	1
14241	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	11	5.1	1
14241	Fluoranthene	206-44-0	N.D.	0.51	0.10	1
14241	Fluorene	86-73-7	N.D.	0.51	0.10	1
14241	Hexachlorobenzene	118-74-1	N.D.	0.51	0.10	1
14241	Hexachlorobutadiene	87-68-3	N.D.	2.0	0.51	1
14241	Hexachlorocyclopentadiene	77-47-4	N.D.	11	5.1	1
14241	Hexachloroethane	67-72-1	N.D.	5.1	1.0	1
14241	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.51	0.10	1
14241	Isophorone	78-59-1	N.D.	2.0	0.51	1
14241	2-Methylnaphthalene	91-57-6	N.D.	0.51	0.10	1
14241	2-Methylphenol	95-48-7	N.D.	2.0	0.51	1
14241	4-Methylphenol	65794-96-9	N.D.	2.0	0.51	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
14241	Naphthalene	91-20-3	N.D.	0.51	0.10	1
14241	2-Nitroaniline	88-74-4	N.D.	7.1	2.0	1
14241	3-Nitroaniline	99-09-2	N.D.	7.1	3.1	1
14241	4-Nitroaniline	100-01-6	N.D.	3.1	0.92	1
14241	Nitrobenzene	98-95-3	N.D.	2.0	0.51	1
14241	2-Nitrophenol	88-75-5	N.D.	10	3.1	1
14241	4-Nitrophenol	100-02-7	N.D.	31	10	1
14241	N-Nitroso-di-n-propylamine	621-64-7	N.D.	3.1	0.71	1
14241	N-Nitrosodiphenylamine	86-30-6	N.D.	3.1	0.71	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.					
14241	Di-n-octylphthalate	117-84-0	N.D.	11	5.1	1
14241	Pentachlorophenol	87-86-5	N.D.	5.1	1.0	1
14241	Phenanthrene	85-01-8	N.D.	0.51	0.10	1
14241	Phenol	108-95-2	N.D.	2.0	0.51	1
14241	Pyrene	129-00-0	N.D.	0.51	0.10	1
14241	Pyridine	110-86-1	N.D.	5.1	2.0	1
14241	1,2,4,5-Tetrachlorobenzene	95-94-3	N.D.	2.0	0.51	1
14241	2,3,4,6-Tetrachlorophenol	58-90-2	N.D.	10	4.1	1
14241	2,4,5-Trichlorophenol	95-95-4	N.D.	2.0	0.51	1
14241	2,4,6-Trichlorophenol	88-06-2	N.D.	2.0	0.51	1
14241	Triethylamine[1]	121-44-8	N.D.	10	10	1

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **BDA-1WT Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/31/2019 11:30
Collection Date/Time: 10/30/2019 11:35
SDG#: BMS82-02BKG

ARCADIS U.S., Inc.
ELLE Sample #: GW 1188913
ELLE Group #: 2071978
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor

Summary. Since the recovery is high and the target analyte(s) was not detected in the sample, the data is reported.

00886 SVOA TIC Interpretive(25)

The results from the semivolatile library search are listed on the attached FORM 1 - SV-TIC. The qualifiers appearing in the "Q" column are defined at the end of the report.

Aldehydes & Ketones	SW-846 8315A		ug/l	ug/l	ug/l	
13022	Acetaldehyde[1]	75-07-0	N.D.	60	35	1
13022	Formaldehyde	50-00-0	N.D.	50	20	1

The response for a target analyte(s) in the initial calibration verification standard is outside the QC acceptance limits. The client was contacted and the data reported.
The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary.

GC Miscellaneous	SW-846 8015D Rev.4, June 2003		ug/l	ug/l	ug/l	
10603	Ethanol	64-17-5	N.D. D2	1,000	150	1
12926	Ethylene glycol[1]	107-21-1	N.D.	10,000	5,000	1
10603	Isopropanol[1]	67-63-0	N.D. D2	1,000	110	1
10603	Methanol	67-56-1	N.D. D2	1,000	220	1
12926	Propylene glycol[1]	57-55-6	N.D.	10,000	2,000	1

The response for surrogate Tetramethylene glycol in the continuing calibration verification standard is outside the QC acceptance limits low. The following action was taken:
The analysis was repeated and the continuing calibration verification standard bracketing the sample on the second trial is also outside the acceptance limits low for Tetramethylene glycol.
The response for ethylene and propylene glycol in the continuing calibration verification standard is outside the QC acceptance limits low in the second trial. Data is reported from the second trial per client request.

Sample Comments

State of New York Certification No. 10670

[1] = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	Y193121AA	11/08/2019 13:32	Corie Mellinger	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	Y193121AA	11/08/2019 13:31	Corie Mellinger	1
14241	Semi-annual Groundwater BMS	SW-846 8270D	1	19309WAJ026	11/09/2019 14:39	Holly B Ziegler	1
11010	8270D BNA Extraction	SW-846 3510C	1	19309WAJ026	11/06/2019 02:00	Mathias Okpo	1
13022	Short List Aldehydes- W 8315A	SW-846 8315A	1	193040018A	11/01/2019 17:59	Jessica L Miller	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **BDA-1WT Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/31/2019 11:30
Collection Date/Time: 10/30/2019 11:35
SDG#: BMS82-02BKG

ARCADIS U.S., Inc.
ELLE Sample #: GW 1188913
ELLE Group #: 2071978
Matrix: Groundwater

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01013	Formaldehyde Extraction	SW-846 8315A	1	193040018A	11/01/2019 08:38	Alison Moll	1
10603	Alcohols in Water	SW-846 8015D Rev.4, June 2003	1	193080008A	11/05/2019 00:22	Johanna C Kennedy	1
12926	Glycols in Water by 8015C/D	SW-846 8015D Rev.4, June 2003	1	193100033A	11/06/2019 22:05	Donald Brown	1

*=This limit was used in the evaluation of the final result

REVISED

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
S8202

Lab Name: Lancaster Laboratories Contract:_____
Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____
Matrix: (soil/water) WATER Lab Sample ID: 1188913
Sample wt/vol: 5.0 (g/mL)mL Lab File ID:HP09355.i/19nov08a.b/yn08s05.d
Level: (low/med) LOW Date Received: 10/31/19
% Moisture: not dec. Date Analyzed: 11/08/19
Column: (pack/cap) CAP Dilution Factor: 1.0
CONCENTRATION UNITS:
Number TICs found: 0 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	VOCTIC	Total VOC TICs		0	U
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page 1 of 1

FORM I VOA-TIC

REVISED

1F

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

S8202

Lab Name: Lancaster Laboratories Contract: _____
Lab Code: LANCAS Case No.: _____ SAS No.: _____ SDG No.: _____
Matrix: (soil/water) WATER Lab Sample ID: 1188913
Sample wt/vol: 245 (g/mL) mL Lab File ID: lk0436.d
Level: (low/med) LOW Date Received: 10/31/19
% Moisture: Decanted: (Y/N) Date Extracted: 11/06/19
Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/09/19
Injection Volume: 1 (uL) Dilution Factor: 1
GPC Cleanup: N pH: Extraction: Sepf
CONCENTRATION UNITS:
Number TICs found: 0 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	SVOCTIC	Total SVOC TICs		0	U
2.					
3.					
4.					
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page 1 of 1

FORM I SV-1

REVISED

Sample Description: **BDA-1WT MS Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/31/2019 11:30
Collection Date/Time: 10/30/2019 11:35
SDG#: BMS82-02MS

ARCADIS U.S., Inc.
ELLE Sample #: GW 1188914
ELLE Group #: 2071978
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	190	20	0.7	1
11997	Acetonitrile	75-05-8	180	100	16	1
11997	Benzene	71-43-2	23	1	0.2	1
11997	Bromochloromethane	74-97-5	21	5	0.2	1
11997	Bromodichloromethane	75-27-4	22	1	0.2	1
11997	Bromoform	75-25-2	21	4	1	1
11997	Bromomethane	74-83-9	14	1	0.3	1
11997	n-Butanol	71-36-3	1,200	250	61	1
11997	2-Butanone	78-93-3	160	10	0.3	1
11997	t-Butyl alcohol	75-65-0	230	50	12	1
11997	n-Butylbenzene	104-51-8	21	5	0.2	1
11997	sec-Butylbenzene	135-98-8	22	5	0.2	1
11997	tert-Butylbenzene	98-06-6	21	5	0.3	1
11997	Carbon Disulfide	75-15-0	19	5	0.2	1
11997	Carbon Tetrachloride	56-23-5	23	1	0.2	1
11997	Chlorobenzene	108-90-7	22	1	0.2	1
11997	Chlorodifluoromethane[1]	75-45-6	16	5	2	1
11997	Chloroethane	75-00-3	14	1	0.2	1
11997	Chloroform	67-66-3	23	1	0.2	1
11997	Chloromethane	74-87-3	13	1	0.2	1
11997	Cyclohexane	110-82-7	19	5	1	1
11997	Cyclohexanone[1]	108-94-1	560	100	25	1
11997	1,2-Dibromo-3-chloropropane	96-12-8	19	5	0.3	1
11997	Dibromochloromethane	124-48-1	21	1	0.2	1
11997	1,2-Dibromoethane	106-93-4	21	1	0.2	1
11997	1,2-Dichlorobenzene	95-50-1	22	5	0.2	1
11997	1,3-Dichlorobenzene	541-73-1	23	5	0.2	1
11997	1,4-Dichlorobenzene	106-46-7	23	5	0.2	1
11997	Dichlorodifluoromethane	75-71-8	14	1	0.2	1
11997	1,1-Dichloroethane	75-34-3	22	1	0.2	1
11997	1,2-Dichloroethane	107-06-2	22	1	0.3	1
11997	1,1-Dichloroethene	75-35-4	23	1	0.2	1
11997	cis-1,2-Dichloroethene	156-59-2	24	1	0.2	1
11997	trans-1,2-Dichloroethene	156-60-5	23	1	0.2	1
11997	1,2-Dichloropropane	78-87-5	23	1	0.2	1
11997	cis-1,3-Dichloropropene	10061-01-5	20	1	0.2	1
11997	trans-1,3-Dichloropropene	10061-02-6	20	1	0.2	1
11997	1,4-Dioxane	123-91-1	760	250	29	1
11997	Ethyl Acetate	141-78-6	22	5	0.7	1
11997	Ethyl ether	60-29-7	22	5	0.2	1
11997	Ethylbenzene	100-41-4	22	1	0.4	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **BDA-1WT MS Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/31/2019 11:30
Collection Date/Time: 10/30/2019 11:35
SDG#: BMS82-02MS

ARCADIS U.S., Inc.
ELLE Sample #: GW 1188914
ELLE Group #: 2071978
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Freon 113	76-13-1	22	10	0.2	1
11997	n-Heptane[1]	142-82-5	22	5	2	1
11997	n-Hexane[1]	110-54-3	21	5	2	1
11997	2-Hexanone	591-78-6	100	10	0.3	1
11997	Isobutyl Alcohol	78-83-1	690	250	36	1
11997	Isopropylbenzene	98-82-8	21	5	0.2	1
11997	p-Isopropyltoluene	99-87-6	22	5	0.2	1
11997	Methyl Acetate	79-20-9	22	5	0.2	1
11997	Methyl Tertiary Butyl Ether	1634-04-4	18	1	0.2	1
11997	4-Methyl-2-pentanone	108-10-1	100	10	0.5	1
11997	Methylcyclohexane	108-87-2	20	5	0.5	1
11997	Methylene Chloride	75-09-2	22	1	0.3	1
11997	Naphthalene	91-20-3	20	5	1	1
11997	2-Nitropropane	79-46-9	18	10	0.8	1
11997	Styrene	100-42-5	22	5	0.2	1
11997	1,1,2,2-Tetrachloroethane	79-34-5	20	1	0.2	1
11997	Tetrachloroethene	127-18-4	23	1	0.2	1
11997	Tetrahydrofuran	109-99-9	120	10	0.7	1
11997	Toluene	108-88-3	22	1	0.2	1
11997	1,2,3-Trichlorobenzene	87-61-6	21	5	0.4	1
11997	1,2,4-Trichlorobenzene	120-82-1	20	5	0.3	1
11997	1,1,1-Trichloroethane	71-55-6	23	1	0.3	1
11997	1,1,2-Trichloroethane	79-00-5	22	1	0.2	1
11997	Trichloroethene	79-01-6	23	1	0.2	1
11997	Trichlorofluoromethane	75-69-4	18	1	0.2	1
11997	1,2,4-Trimethylbenzene	95-63-6	21	5	1	1
11997	1,3,5-Trimethylbenzene	108-67-8	21	5	0.3	1
11997	Vinyl Chloride	75-01-4	14	1	0.2	1
11997	m+p-Xylene	179601-23-1	44	5	1	1
11997	o-Xylene	95-47-6	21	1	0.4	1
11997	Xylene (Total)	1330-20-7	65	6	1	1

Project defined calibration criteria are not met. The calibration is compliant with the method defined criteria.

GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	Acenaphthene	83-32-9	42	0.51	0.10	1
14241	Acenaphthylene	208-96-8	44	0.51	0.10	1
14241	Acetophenone	98-86-2	41	10	4.1	1
14241	Aniline	62-53-3	28	10	3.1	1
14241	Anthracene	120-12-7	46	0.51	0.10	1
14241	Atrazine	1912-24-9	45	5.1	2.0	1
14241	Benzaldehyde	100-52-7	46	10	3.1	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **BDA-1WT MS Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/31/2019 11:30
Collection Date/Time: 10/30/2019 11:35
SDG#: BMS82-02MS

ARCADIS U.S., Inc.
ELLE Sample #: GW 1188914
ELLE Group #: 2071978
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	Benzo(a)anthracene	56-55-3	53	0.51	0.10	1
14241	Benzo(a)pyrene	50-32-8	45	0.51	0.10	1
14241	Benzo(b)fluoranthene	205-99-2	47	0.51	0.10	1
14241	Benzo(g,h,i)perylene	191-24-2	48	0.51	0.10	1
14241	Benzo(k)fluoranthene	207-08-9	47	0.51	0.10	1
14241	Benzyl alcohol	100-51-6	39	31	10	1
14241	1,1'-Biphenyl	92-52-4	40	10	3.1	1
14241	4-Bromophenyl-phenylether	101-55-3	45	2.0	0.51	1
14241	Butylbenzylphthalate	85-68-7	48	5.1	2.0	1
14241	Di-n-butylphthalate	84-74-2	42	5.1	2.0	1
14241	Caprolactam	105-60-2	14	11	5.1	1
14241	Carbazole	86-74-8	46	2.0	0.51	1
14241	4-Chloro-3-methylphenol	59-50-7	42	2.0	0.51	1
14241	4-Chloroaniline	106-47-8	37	10	4.1	1
14241	bis(2-Chloroethoxy)methane	111-91-1	44	2.0	0.51	1
14241	bis(2-Chloroethyl)ether	111-44-4	40	2.0	0.51	1
14241	bis(2-Chloroisopropyl)ether[1]	39638-32-9	38	2.0	0.51	1
	Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.					
14241	2-Chloronaphthalene	91-58-7	39	1.0	0.41	1
14241	2-Chlorophenol	95-57-8	34	2.0	0.51	1
14241	4-Chlorophenyl-phenylether	7005-72-3	43	2.0	0.51	1
14241	Chrysene	218-01-9	50	0.51	0.10	1
14241	Dibenz(a,h)anthracene	53-70-3	50	0.51	0.10	1
14241	Dibenzofuran	132-64-9	44	2.0	0.51	1
14241	3,3'-Dichlorobenzidine	91-94-1	37	10	3.1	1
14241	2,4-Dichlorophenol	120-83-2	41	2.0	0.51	1
14241	Dicyclohexylamine[1]	101-83-7	N.D.	10	10	1
14241	Diethylphthalate	84-66-2	42	5.1	2.0	1
14241	N,N-Dimethylaniline[1]	121-69-7	N.D.	1.0	0.51	1
14241	2,4-Dimethylphenol	105-67-9	34	10	3.1	1
14241	Dimethylphthalate	131-11-3	44	5.1	2.0	1
14241	4,6-Dinitro-2-methylphenol	534-52-1	55	22	8.2	1
14241	2,4-Dinitrophenol	51-28-5	110	31	14	1
14241	2,4-Dinitrotoluene	121-14-2	51	5.1	1.0	1
14241	2,6-Dinitrotoluene	606-20-2	49	2.0	0.51	1
14241	bis(2-Ethylhexyl)phthalate	117-81-7	48	11	5.1	1
14241	Fluoranthene	206-44-0	46	0.51	0.10	1
14241	Fluorene	86-73-7	43	0.51	0.10	1
14241	Hexachlorobenzene	118-74-1	45	0.51	0.10	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **BDA-1WT MS Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/31/2019 11:30
Collection Date/Time: 10/30/2019 11:35
SDG#: BMS82-02MS

ARCADIS U.S., Inc.
ELLE Sample #: GW 1188914
ELLE Group #: 2071978
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result		Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**		**ug/l**	**ug/l**	
14241	Hexachlorobutadiene	87-68-3	28		2.0	0.51	1
14241	Hexachlorocyclopentadiene	77-47-4	43		11	5.1	1
14241	Hexachloroethane	67-72-1	25		5.1	1.0	1
14241	Indeno(1,2,3-cd)pyrene	193-39-5	47		0.51	0.10	1
14241	Isophorone	78-59-1	44		2.0	0.51	1
14241	2-Methylnaphthalene	91-57-6	38		0.51	0.10	1
14241	2-Methylphenol	95-48-7	38		2.0	0.51	1
14241	4-Methylphenol	65794-96-9	37		2.0	0.51	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.						
14241	Naphthalene	91-20-3	38		0.51	0.10	1
14241	2-Nitroaniline	88-74-4	51		7.2	2.0	1
14241	3-Nitroaniline	99-09-2	42		7.2	3.1	1
14241	4-Nitroaniline	100-01-6	40		3.1	0.92	1
14241	Nitrobenzene	98-95-3	42		2.0	0.51	1
14241	2-Nitrophenol	88-75-5	47		10	3.1	1
14241	4-Nitrophenol	100-02-7	23	J	31	10	1
14241	N-Nitroso-di-n-propylamine	621-64-7	42		3.1	0.72	1
14241	N-Nitrosodiphenylamine	86-30-6	43		3.1	0.72	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.						
14241	Di-n-octylphthalate	117-84-0	43		11	5.1	1
14241	Pentachlorophenol	87-86-5	47		5.1	1.0	1
14241	Phenanthrene	85-01-8	46		0.51	0.10	1
14241	Phenol	108-95-2	24		2.0	0.51	1
14241	Pyrene	129-00-0	46		0.51	0.10	1
14241	Pyridine	110-86-1	18		5.1	2.0	1
14241	1,2,4,5-Tetrachlorobenzene	95-94-3	34		2.0	0.51	1
14241	2,3,4,6-Tetrachlorophenol	58-90-2	48		10	4.1	1
14241	2,4,5-Trichlorophenol	95-95-4	46		2.0	0.51	1
14241	2,4,6-Trichlorophenol	88-06-2	45		2.0	0.51	1
14241	Triethylamine[1]	121-44-8	N.D.		10	10	1
Aldehydes & Ketones	**SW-846 8315A**		**ug/l**		**ug/l**	**ug/l**	
13022	Acetaldehyde[1]	75-07-0	370		60	35	1
13022	Formaldehyde	50-00-0	440		50	20	1

The response for a target analyte(s) in the initial calibration verification standard is outside the QC acceptance limits. The client was contacted and the data reported.
The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary.

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **BDA-1WT MS Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/31/2019 11:30
Collection Date/Time: 10/30/2019 11:35
SDG#: BMS82-02MS

ARCADIS U.S., Inc.
ELLE Sample #: GW 1188914
ELLE Group #: 2071978
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC Miscellaneous	**SW-846 8015D Rev.4, June 2003**		**ug/l**	**ug/l**	**ug/l**	
10603	Ethanol	64-17-5	2,200 D2	1,000	150	1
12926	Ethylene glycol[1]	107-21-1	77,000	10,000	5,000	1
10603	Isopropanol[1]	67-63-0	2,400 D2	1,000	110	1
10603	Methanol	67-56-1	2,300 D2	1,000	220	1
12926	Propylene glycol[1]	57-55-6	82,000	10,000	2,000	1

The response for surrogate Tetramethylene glycol in the continuing calibration verification standard is outside the QC acceptance limits low. The following action was taken:
The analysis was repeated and the continuing calibration verification standard bracketing the sample on the second trial is also outside the acceptance limits. This effect is attributed to the sample matrix and the data is reported.

Sample Comments

State of New York Certification No. 10670

[1] = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	Y193121AA	11/08/2019 13:54	Corie Mellinger	1
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	Y193121AA	11/08/2019 14:39	Corie Mellinger	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	Y193121AA	11/08/2019 13:53	Corie Mellinger	1
01163	GC/MS VOA Water Prep	SW-846 5030C	2	Y193121AA	11/08/2019 14:38	Corie Mellinger	1
14241	Semi-annual Groundwater BMS	SW-846 8270D	1	19309WAJ026	11/09/2019 15:08	Holly B Ziegler	1
11010	8270D BNA Extraction	SW-846 3510C	1	19309WAJ026	11/06/2019 02:00	Mathias Okpo	1
13022	Short List Aldehydes- W 8315A	SW-846 8315A	1	193040018A	11/01/2019 18:09	Jessica L Miller	1
01013	Formaldehyde Extraction	SW-846 8315A	1	193040018A	11/01/2019 08:38	Alison Moll	1
10603	Alcohols in Water	SW-846 8015D Rev.4, June 2003	1	193080008A	11/05/2019 00:39	Johanna C Kennedy	1
12926	Glycols in Water by 8015C/D	SW-846 8015D Rev.4, June 2003	1	193080027A	11/06/2019 00:20	Donald Brown	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **BDA-1WT MSD Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/31/2019 11:30
Collection Date/Time: 10/30/2019 11:35
SDG#: BMS82-02MSD

ARCADIS U.S., Inc.
ELLE Sample #: GW 1188915
ELLE Group #: 2071978
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	170	20	0.7	1
11997	Acetonitrile	75-05-8	170	100	16	1
11997	Benzene	71-43-2	22	1	0.2	1
11997	Bromochloromethane	74-97-5	20	5	0.2	1
11997	Bromodichloromethane	75-27-4	22	1	0.2	1
11997	Bromoform	75-25-2	21	4	1	1
11997	Bromomethane	74-83-9	13	1	0.3	1
11997	n-Butanol	71-36-3	1,200	250	61	1
11997	2-Butanone	78-93-3	160	10	0.3	1
11997	t-Butyl alcohol	75-65-0	220	50	12	1
11997	n-Butylbenzene	104-51-8	22	5	0.2	1
11997	sec-Butylbenzene	135-98-8	22	5	0.2	1
11997	tert-Butylbenzene	98-06-6	21	5	0.3	1
11997	Carbon Disulfide	75-15-0	19	5	0.2	1
11997	Carbon Tetrachloride	56-23-5	23	1	0.2	1
11997	Chlorobenzene	108-90-7	22	1	0.2	1
11997	Chlorodifluoromethane[1]	75-45-6	14	5	2	1
11997	Chloroethane	75-00-3	13	1	0.2	1
11997	Chloroform	67-66-3	23	1	0.2	1
11997	Chloromethane	74-87-3	13	1	0.2	1
11997	Cyclohexane	110-82-7	19	5	1	1
11997	Cyclohexanone[1]	108-94-1	510	100	25	1
11997	1,2-Dibromo-3-chloropropane	96-12-8	20	5	0.3	1
11997	Dibromochloromethane	124-48-1	22	1	0.2	1
11997	1,2-Dibromoethane	106-93-4	22	1	0.2	1
11997	1,2-Dichlorobenzene	95-50-1	22	5	0.2	1
11997	1,3-Dichlorobenzene	541-73-1	23	5	0.2	1
11997	1,4-Dichlorobenzene	106-46-7	23	5	0.2	1
11997	Dichlorodifluoromethane	75-71-8	15	1	0.2	1
11997	1,1-Dichloroethane	75-34-3	22	1	0.2	1
11997	1,2-Dichloroethane	107-06-2	22	1	0.3	1
11997	1,1-Dichloroethene	75-35-4	23	1	0.2	1
11997	cis-1,2-Dichloroethene	156-59-2	23	1	0.2	1
11997	trans-1,2-Dichloroethene	156-60-5	22	1	0.2	1
11997	1,2-Dichloropropane	78-87-5	23	1	0.2	1
11997	cis-1,3-Dichloropropene	10061-01-5	20	1	0.2	1
11997	trans-1,3-Dichloropropene	10061-02-6	20	1	0.2	1
11997	1,4-Dioxane	123-91-1	710	250	29	1
11997	Ethyl Acetate	141-78-6	22	5	0.7	1
11997	Ethyl ether	60-29-7	14	5	0.2	1
11997	Ethylbenzene	100-41-4	22	1	0.4	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **BDA-1WT MSD Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/31/2019 11:30
Collection Date/Time: 10/30/2019 11:35
SDG#: BMS82-02MSD

ARCADIS U.S., Inc.
ELLE Sample #: GW 1188915
ELLE Group #: 2071978
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Freon 113	76-13-1	22	10	0.2	1
11997	n-Heptane[1]	142-82-5	21	5	2	1
11997	n-Hexane[1]	110-54-3	21	5	2	1
11997	2-Hexanone	591-78-6	110	10	0.3	1
11997	Isobutyl Alcohol	78-83-1	630	250	36	1
11997	Isopropylbenzene	98-82-8	22	5	0.2	1
11997	p-Isopropyltoluene	99-87-6	22	5	0.2	1
11997	Methyl Acetate	79-20-9	23	5	0.2	1
11997	Methyl Tertiary Butyl Ether	1634-04-4	18	1	0.2	1
11997	4-Methyl-2-pentanone	108-10-1	100	10	0.5	1
11997	Methylcyclohexane	108-87-2	20	5	0.5	1
11997	Methylene Chloride	75-09-2	22	1	0.3	1
11997	Naphthalene	91-20-3	20	5	1	1
11997	2-Nitropropane	79-46-9	19	10	0.8	1
11997	Styrene	100-42-5	22	5	0.2	1
11997	1,1,2,2-Tetrachloroethane	79-34-5	21	1	0.2	1
11997	Tetrachloroethene	127-18-4	23	1	0.2	1
11997	Tetrahydrofuran	109-99-9	110	10	0.7	1
11997	Toluene	108-88-3	22	1	0.2	1
11997	1,2,3-Trichlorobenzene	87-61-6	21	5	0.4	1
11997	1,2,4-Trichlorobenzene	120-82-1	21	5	0.3	1
11997	1,1,1-Trichloroethane	71-55-6	23	1	0.3	1
11997	1,1,2-Trichloroethane	79-00-5	22	1	0.2	1
11997	Trichloroethene	79-01-6	23	1	0.2	1
11997	Trichlorofluoromethane	75-69-4	13	1	0.2	1
11997	1,2,4-Trimethylbenzene	95-63-6	21	5	1	1
11997	1,3,5-Trimethylbenzene	108-67-8	21	5	0.3	1
11997	Vinyl Chloride	75-01-4	13	1	0.2	1
11997	m+p-Xylene	179601-23-1	44	5	1	1
11997	o-Xylene	95-47-6	21	1	0.4	1
11997	Xylene (Total)	1330-20-7	65	6	1	1

Project defined calibration criteria are not met. The calibration is compliant with the method defined criteria.

GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	Acenaphthene	83-32-9	37	0.50	0.10	1
14241	Acenaphthylene	208-96-8	39	0.50	0.10	1
14241	Acetophenone	98-86-2	36	10	4.0	1
14241	Aniline	62-53-3	26	10	3.0	1
14241	Anthracene	120-12-7	43	0.50	0.10	1
14241	Atrazine	1912-24-9	46	5.0	2.0	1
14241	Benzaldehyde	100-52-7	44	10	3.0	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **BDA-1WT MSD Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/31/2019 11:30
Collection Date/Time: 10/30/2019 11:35
SDG#: BMS82-02MSD

ARCADIS U.S., Inc.
ELLE Sample #: GW 1188915
ELLE Group #: 2071978
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	Benzo(a)anthracene	56-55-3	49	0.50	0.10	1
14241	Benzo(a)pyrene	50-32-8	44	0.50	0.10	1
14241	Benzo(b)fluoranthene	205-99-2	45	0.50	0.10	1
14241	Benzo(g,h,i)perylene	191-24-2	44	0.50	0.10	1
14241	Benzo(k)fluoranthene	207-08-9	44	0.50	0.10	1
14241	Benzyl alcohol	100-51-6	35	30	10	1
14241	1,1'-Biphenyl	92-52-4	35	10	3.0	1
14241	4-Bromophenyl-phenylether	101-55-3	41	2.0	0.50	1
14241	Butylbenzylphthalate	85-68-7	43	5.0	2.0	1
14241	Di-n-butylphthalate	84-74-2	39	5.0	2.0	1
14241	Caprolactam	105-60-2	13	11	5.0	1
14241	Carbazole	86-74-8	43	2.0	0.50	1
14241	4-Chloro-3-methylphenol	59-50-7	37	2.0	0.50	1
14241	4-Chloroaniline	106-47-8	35	10	4.0	1
14241	bis(2-Chloroethoxy)methane	111-91-1	40	2.0	0.50	1
14241	bis(2-Chloroethyl)ether	111-44-4	36	2.0	0.50	1
14241	bis(2-Chloroisopropyl)ether[1]	39638-32-9	34	2.0	0.50	1
	Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.					
14241	2-Chloronaphthalene	91-58-7	34	1.0	0.40	1
14241	2-Chlorophenol	95-57-8	30	2.0	0.50	1
14241	4-Chlorophenyl-phenylether	7005-72-3	39	2.0	0.50	1
14241	Chrysene	218-01-9	46	0.50	0.10	1
14241	Dibenz(a,h)anthracene	53-70-3	47	0.50	0.10	1
14241	Dibenzofuran	132-64-9	38	2.0	0.50	1
14241	3,3'-Dichlorobenzidine	91-94-1	35	10	3.0	1
14241	2,4-Dichlorophenol	120-83-2	36	2.0	0.50	1
14241	Dicyclohexylamine[1]	101-83-7	N.D.	10	10	1
14241	Diethylphthalate	84-66-2	38	5.0	2.0	1
14241	N,N-Dimethylaniline[1]	121-69-7	N.D.	1.0	0.50	1
14241	2,4-Dimethylphenol	105-67-9	30	10	3.0	1
14241	Dimethylphthalate	131-11-3	37	5.0	2.0	1
14241	4,6-Dinitro-2-methylphenol	534-52-1	53	21	8.1	1
14241	2,4-Dinitrophenol	51-28-5	100	30	14	1
14241	2,4-Dinitrotoluene	121-14-2	45	5.0	1.0	1
14241	2,6-Dinitrotoluene	606-20-2	44	2.0	0.50	1
14241	bis(2-Ethylhexyl)phthalate	117-81-7	43	11	5.0	1
14241	Fluoranthene	206-44-0	42	0.50	0.10	1
14241	Fluorene	86-73-7	39	0.50	0.10	1
14241	Hexachlorobenzene	118-74-1	41	0.50	0.10	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **BDA-1WT MSD Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/31/2019 11:30
Collection Date/Time: 10/30/2019 11:35
SDG#: BMS82-02MSD

ARCADIS U.S., Inc.
ELLE Sample #: GW 1188915
ELLE Group #: 2071978
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result		Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**		**ug/l**	**ug/l**	
14241	Hexachlorobutadiene	87-68-3	25		2.0	0.50	1
14241	Hexachlorocyclopentadiene	77-47-4	42		11	5.0	1
14241	Hexachloroethane	67-72-1	23		5.0	1.0	1
14241	Indeno(1,2,3-cd)pyrene	193-39-5	45		0.50	0.10	1
14241	Isophorone	78-59-1	39		2.0	0.50	1
14241	2-Methylnaphthalene	91-57-6	34		0.50	0.10	1
14241	2-Methylphenol	95-48-7	33		2.0	0.50	1
14241	4-Methylphenol	65794-96-9	32		2.0	0.50	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.						
14241	Naphthalene	91-20-3	34		0.50	0.10	1
14241	2-Nitroaniline	88-74-4	45		7.1	2.0	1
14241	3-Nitroaniline	99-09-2	39		7.1	3.0	1
14241	4-Nitroaniline	100-01-6	37		3.0	0.91	1
14241	Nitrobenzene	98-95-3	38		2.0	0.50	1
14241	2-Nitrophenol	88-75-5	41		10	3.0	1
14241	4-Nitrophenol	100-02-7	20	J	30	10	1
14241	N-Nitroso-di-n-propylamine	621-64-7	37		3.0	0.71	1
14241	N-Nitrosodiphenylamine	86-30-6	41		3.0	0.71	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.						
14241	Di-n-octylphthalate	117-84-0	41		11	5.0	1
14241	Pentachlorophenol	87-86-5	43		5.0	1.0	1
14241	Phenanthrene	85-01-8	42		0.50	0.10	1
14241	Phenol	108-95-2	20		2.0	0.50	1
14241	Pyrene	129-00-0	43		0.50	0.10	1
14241	Pyridine	110-86-1	15		5.0	2.0	1
14241	1,2,4,5-Tetrachlorobenzene	95-94-3	28		2.0	0.50	1
14241	2,3,4,6-Tetrachlorophenol	58-90-2	45		10	4.0	1
14241	2,4,5-Trichlorophenol	95-95-4	40		2.0	0.50	1
14241	2,4,6-Trichlorophenol	88-06-2	39		2.0	0.50	1
14241	Triethylamine[1]	121-44-8	N.D.		10	10	1
Aldehydes & Ketones	**SW-846 8315A**		**ug/l**		**ug/l**	**ug/l**	
13022	Acetaldehyde[1]	75-07-0	370		60	35	1
13022	Formaldehyde	50-00-0	450		50	20	1

The response for a target analyte(s) in the initial calibration verification standard is outside the QC acceptance limits. The client was contacted and the data reported.
The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary.

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **BDA-1WT MSD Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/31/2019 11:30
Collection Date/Time: 10/30/2019 11:35
SDG#: BMS82-02MSD

ARCADIS U.S., Inc.
ELLE Sample #: GW 1188915
ELLE Group #: 2071978
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC Miscellaneous	**SW-846 8015D Rev.4, June 2003**		**ug/l**	**ug/l**	**ug/l**	
10603	Ethanol	64-17-5	2,200 D2	1,000	150	1
12926	Ethylene glycol[1]	107-21-1	94,000	10,000	5,000	1
10603	Isopropanol[1]	67-63-0	2,300 D2	1,000	110	1
10603	Methanol	67-56-1	2,300 D2	1,000	220	1
12926	Propylene glycol[1]	57-55-6	87,000	10,000	2,000	1

The response for surrogate Tetramethylene glycol in the continuing calibration verification standard is outside the QC acceptance limits low. The following action was taken:
The analysis was repeated and the continuing calibration verification standard bracketing the sample on the second trial is also outside the acceptance limits. This effect is attributed to the sample matrix and the data is reported.

Sample Comments

State of New York Certification No. 10670

[1] = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	Y193121AA	11/08/2019 14:16	Corie Mellinger	1
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	Y193121AA	11/08/2019 15:00	Corie Mellinger	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	Y193121AA	11/08/2019 14:15	Corie Mellinger	1
01163	GC/MS VOA Water Prep	SW-846 5030C	2	Y193121AA	11/08/2019 14:59	Corie Mellinger	1
14241	Semi-annual Groundwater BMS	SW-846 8270D	1	19309WAJ026	11/09/2019 15:37	Holly B Ziegler	1
11010	8270D BNA Extraction	SW-846 3510C	1	19309WAJ026	11/06/2019 02:00	Mathias Okpo	1
13022	Short List Aldehydes- W 8315A	SW-846 8315A	1	193040018A	11/01/2019 18:19	Jessica L Miller	1
01013	Formaldehyde Extraction	SW-846 8315A	1	193040018A	11/01/2019 08:38	Alison Moll	1
10603	Alcohols in Water	SW-846 8015D Rev.4, June 2003	1	193080008A	11/05/2019 00:55	Johanna C Kennedy	1
12926	Glycols in Water by 8015C/D	SW-846 8015D Rev.4, June 2003	1	193080027A	11/06/2019 00:33	Donald Brown	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **BDA-1F Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/31/2019 11:30
Collection Date/Time: 10/30/2019 14:35
SDG#: BMS82-03

ARCADIS U.S., Inc.
ELLE Sample #: GW 1188916
ELLE Group #: 2071978
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	20	0.7	1
11997	Acetonitrile	75-05-8	N.D.	100	16	1
11997	Benzene	71-43-2	N.D.	1	0.2	1
11997	Bromochloromethane	74-97-5	N.D.	5	0.2	1
11997	Bromodichloromethane	75-27-4	N.D.	1	0.2	1
11997	Bromoform	75-25-2	N.D.	4	1	1
11997	Bromomethane	74-83-9	N.D.	1	0.3	1
11997	n-Butanol	71-36-3	N.D.	250	61	1
11997	2-Butanone	78-93-3	N.D.	10	0.3	1
11997	t-Butyl alcohol	75-65-0	N.D.	50	12	1
11997	n-Butylbenzene	104-51-8	N.D.	5	0.2	1
11997	sec-Butylbenzene	135-98-8	N.D.	5	0.2	1
11997	tert-Butylbenzene	98-06-6	N.D.	5	0.3	1
11997	Carbon Disulfide	75-15-0	N.D.	5	0.2	1
11997	Carbon Tetrachloride	56-23-5	N.D.	1	0.2	1
11997	Chlorobenzene	108-90-7	N.D.	1	0.2	1
11997	Chlorodifluoromethane[1]	75-45-6	N.D.	5	2	1
11997	Chloroethane	75-00-3	N.D.	1	0.2	1
11997	Chloroform	67-66-3	0.2 J	1	0.2	1
11997	Chloromethane	74-87-3	N.D.	1	0.2	1
11997	Cyclohexane	110-82-7	N.D.	5	1	1
11997	Cyclohexanone[1]	108-94-1	N.D.	100	25	1
11997	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	5	0.3	1
11997	Dibromochloromethane	124-48-1	N.D.	1	0.2	1
11997	1,2-Dibromoethane	106-93-4	N.D.	1	0.2	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	5	0.2	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	5	0.2	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	5	0.2	1
11997	Dichlorodifluoromethane	75-71-8	N.D.	1	0.2	1
11997	1,1-Dichloroethane	75-34-3	N.D.	1	0.2	1
11997	1,2-Dichloroethane	107-06-2	N.D.	1	0.3	1
11997	1,1-Dichloroethene	75-35-4	N.D.	1	0.2	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	1	0.2	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	1	0.2	1
11997	1,2-Dichloropropane	78-87-5	N.D.	1	0.2	1
11997	cis-1,3-Dichloropropene	10061-01-5	N.D.	1	0.2	1
11997	trans-1,3-Dichloropropene	10061-02-6	N.D.	1	0.2	1
11997	1,4-Dioxane	123-91-1	N.D.	250	29	1
11997	Ethyl Acetate	141-78-6	N.D.	5	0.7	1
11997	Ethyl ether	60-29-7	N.D.	5	0.2	1
11997	Ethylbenzene	100-41-4	N.D.	1	0.4	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **BDA-1F Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/31/2019 11:30
Collection Date/Time: 10/30/2019 14:35
SDG#: BMS82-03

ARCADIS U.S., Inc.
ELLE Sample #: GW 1188916
ELLE Group #: 2071978
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Freon 113	76-13-1	N.D.	10	0.2	1
11997	n-Heptane[1]	142-82-5	N.D.	5	2	1
11997	n-Hexane[1]	110-54-3	N.D.	5	2	1
11997	2-Hexanone	591-78-6	N.D.	10	0.3	1
11997	Isobutyl Alcohol	78-83-1	N.D.	250	36	1
11997	Isopropylbenzene	98-82-8	N.D.	5	0.2	1
11997	p-Isopropyltoluene	99-87-6	N.D.	5	0.2	1
11997	Methyl Acetate	79-20-9	N.D.	5	0.2	1
11997	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	1	0.2	1
11997	4-Methyl-2-pentanone	108-10-1	N.D.	10	0.5	1
11997	Methylcyclohexane	108-87-2	N.D.	5	0.5	1
11997	Methylene Chloride	75-09-2	0.7 J	1	0.3	1
11997	Naphthalene	91-20-3	N.D.	5	1	1
11997	2-Nitropropane	79-46-9	N.D.	10	0.8	1
11997	Styrene	100-42-5	N.D.	5	0.2	1
11997	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	1	0.2	1
11997	Tetrachloroethene	127-18-4	N.D.	1	0.2	1
11997	Tetrahydrofuran	109-99-9	N.D.	10	0.7	1
11997	Toluene	108-88-3	N.D.	1	0.2	1
11997	1,2,3-Trichlorobenzene	87-61-6	N.D.	5	0.4	1
11997	1,2,4-Trichlorobenzene	120-82-1	N.D.	5	0.3	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	1	0.3	1
11997	1,1,2-Trichloroethane	79-00-5	N.D.	1	0.2	1
11997	Trichloroethene	79-01-6	2	1	0.2	1
11997	Trichlorofluoromethane	75-69-4	N.D.	1	0.2	1
11997	1,2,4-Trimethylbenzene	95-63-6	N.D.	5	1	1
11997	1,3,5-Trimethylbenzene	108-67-8	N.D.	5	0.3	1
11997	Vinyl Chloride	75-01-4	N.D.	1	0.2	1
11997	m+p-Xylene	179601-23-1	N.D.	5	1	1
11997	o-Xylene	95-47-6	N.D.	1	0.4	1
11997	Xylene (Total)	1330-20-7	N.D.	6	1	1

Project defined calibration criteria are not met. The calibration is compliant with the method defined criteria.

A Report Limit Verification (RLV) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The RLV standard shows adequate sensitivity at or below the reporting limit.

00882 VOA Interp. Library Search-10

The results from the volatile library search are listed on the attached FORM 1 - VOA-TIC. The qualifiers appearing in the "Q" column are defined at the end of the report.

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **BDA-1F Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/31/2019 11:30
Collection Date/Time: 10/30/2019 14:35
SDG#: BMS82-03

ARCADIS U.S., Inc.
ELLE Sample #: GW 1188916
ELLE Group #: 2071978
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	Acenaphthene	83-32-9	N.D.	0.51	0.10	1
14241	Acenaphthylene	208-96-8	N.D.	0.51	0.10	1
14241	Acetophenone	98-86-2	N.D.	10	4.0	1
14241	Aniline	62-53-3	N.D.	10	3.0	1
14241	Anthracene	120-12-7	N.D.	0.51	0.10	1
14241	Atrazine	1912-24-9	N.D.	5.1	2.0	1
14241	Benzaldehyde	100-52-7	N.D.	10	3.0	1
14241	Benzo(a)anthracene	56-55-3	N.D.	0.51	0.10	1
14241	Benzo(a)pyrene	50-32-8	N.D.	0.51	0.10	1
14241	Benzo(b)fluoranthene	205-99-2	N.D.	0.51	0.10	1
14241	Benzo(g,h,i)perylene	191-24-2	N.D.	0.51	0.10	1
14241	Benzo(k)fluoranthene	207-08-9	N.D.	0.51	0.10	1
14241	Benzyl alcohol	100-51-6	N.D.	30	10	1
14241	1,1'-Biphenyl	92-52-4	N.D.	10	3.0	1
14241	4-Bromophenyl-phenylether	101-55-3	N.D.	2.0	0.51	1
14241	Butylbenzylphthalate	85-68-7	N.D.	5.1	2.0	1
14241	Di-n-butylphthalate	84-74-2	N.D.	5.1	2.0	1
14241	Caprolactam	105-60-2	N.D.	11	5.1	1
14241	Carbazole	86-74-8	N.D.	2.0	0.51	1
14241	4-Chloro-3-methylphenol	59-50-7	N.D.	2.0	0.51	1
14241	4-Chloroaniline	106-47-8	N.D.	10	4.0	1
14241	bis(2-Chloroethoxy)methane	111-91-1	N.D.	2.0	0.51	1
14241	bis(2-Chloroethyl)ether	111-44-4	N.D.	2.0	0.51	1
14241	bis(2-Chloroisopropyl)ether[1]	39638-32-9	N.D.	2.0	0.51	1
	Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.					
14241	2-Chloronaphthalene	91-58-7	N.D.	1.0	0.40	1
14241	2-Chlorophenol	95-57-8	N.D.	2.0	0.51	1
14241	4-Chlorophenyl-phenylether	7005-72-3	N.D.	2.0	0.51	1
14241	Chrysene	218-01-9	N.D.	0.51	0.10	1
14241	Dibenz(a,h)anthracene	53-70-3	N.D.	0.51	0.10	1
14241	Dibenzofuran	132-64-9	N.D.	2.0	0.51	1
14241	3,3'-Dichlorobenzidine	91-94-1	N.D.	10	3.0	1
14241	2,4-Dichlorophenol	120-83-2	N.D.	2.0	0.51	1
14241	Dicyclohexylamine[1]	101-83-7	N.D.	10	10	1
14241	Diethylphthalate	84-66-2	N.D.	5.1	2.0	1
14241	N,N-Dimethylaniline[1]	121-69-7	N.D.	1.0	0.51	1
14241	2,4-Dimethylphenol	105-67-9	N.D.	10	3.0	1
14241	Dimethylphthalate	131-11-3	N.D.	5.1	2.0	1
14241	4,6-Dinitro-2-methylphenol	534-52-1	N.D.	21	8.1	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **BDA-1F Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/31/2019 11:30
Collection Date/Time: 10/30/2019 14:35
SDG#: BMS82-03

ARCADIS U.S., Inc.
ELLE Sample #: GW 1188916
ELLE Group #: 2071978
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	2,4-Dinitrophenol	51-28-5	N.D.	30	14	1
14241	2,4-Dinitrotoluene	121-14-2	N.D.	5.1	1.0	1
14241	2,6-Dinitrotoluene	606-20-2	N.D.	2.0	0.51	1
14241	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	11	5.1	1
14241	Fluoranthene	206-44-0	N.D.	0.51	0.10	1
14241	Fluorene	86-73-7	N.D.	0.51	0.10	1
14241	Hexachlorobenzene	118-74-1	N.D.	0.51	0.10	1
14241	Hexachlorobutadiene	87-68-3	N.D.	2.0	0.51	1
14241	Hexachlorocyclopentadiene	77-47-4	N.D.	11	5.1	1
14241	Hexachloroethane	67-72-1	N.D.	5.1	1.0	1
14241	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.51	0.10	1
14241	Isophorone	78-59-1	N.D.	2.0	0.51	1
14241	2-Methylnaphthalene	91-57-6	N.D.	0.51	0.10	1
14241	2-Methylphenol	95-48-7	N.D.	2.0	0.51	1
14241	4-Methylphenol	65794-96-9	N.D.	2.0	0.51	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
14241	Naphthalene	91-20-3	N.D.	0.51	0.10	1
14241	2-Nitroaniline	88-74-4	N.D.	7.1	2.0	1
14241	3-Nitroaniline	99-09-2	N.D.	7.1	3.0	1
14241	4-Nitroaniline	100-01-6	N.D.	3.0	0.91	1
14241	Nitrobenzene	98-95-3	N.D.	2.0	0.51	1
14241	2-Nitrophenol	88-75-5	N.D.	10	3.0	1
14241	4-Nitrophenol	100-02-7	N.D.	30	10	1
14241	N-Nitroso-di-n-propylamine	621-64-7	N.D.	3.0	0.71	1
14241	N-Nitrosodiphenylamine	86-30-6	N.D.	3.0	0.71	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.					
14241	Di-n-octylphthalate	117-84-0	N.D.	11	5.1	1
14241	Pentachlorophenol	87-86-5	N.D.	5.1	1.0	1
14241	Phenanthrene	85-01-8	N.D.	0.51	0.10	1
14241	Phenol	108-95-2	N.D.	2.0	0.51	1
14241	Pyrene	129-00-0	N.D.	0.51	0.10	1
14241	Pyridine	110-86-1	N.D.	5.1	2.0	1
14241	1,2,4,5-Tetrachlorobenzene	95-94-3	N.D.	2.0	0.51	1
14241	2,3,4,6-Tetrachlorophenol	58-90-2	N.D.	10	4.0	1
14241	2,4,5-Trichlorophenol	95-95-4	N.D.	2.0	0.51	1
14241	2,4,6-Trichlorophenol	88-06-2	N.D.	2.0	0.51	1
14241	Triethylamine[1]	121-44-8	N.D.	10	10	1

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **BDA-1F Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/31/2019 11:30
Collection Date/Time: 10/30/2019 14:35
SDG#: BMS82-03

ARCADIS U.S., Inc.
ELLE Sample #: GW 1188916
ELLE Group #: 2071978
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result		Limit of Quantitation*	Method Detection Limit	Dilution Factor
	Summary. Since the recovery is high and the target analyte(s) was not detected in the sample, the data is reported.						
00886	**SVOA TIC Interpretive(25)**						
	The results from the semivolatile library search are listed on the attached FORM 1 - SV-TIC. The qualifiers appearing in the "Q" column are defined at the end of the report.						
Aldehydes & Ketones	**SW-846 8315A**		**ug/l**		**ug/l**	**ug/l**	
13022	Acetaldehyde[1]	75-07-0	N.D.		60	35	1
13022	Formaldehyde	50-00-0	N.D.		50	20	1
	The response for a target analyte(s) in the initial calibration verification standard is outside the QC acceptance limits. The client was contacted and the data reported. The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary.						
GC Miscellaneous	**SW-846 8015D Rev.4, June 2003**		**ug/l**		**ug/l**	**ug/l**	
10603	Ethanol	64-17-5	N.D.	D2	1,000	150	1
12926	Ethylene glycol[1]	107-21-1	7,400	J	10,000	5,000	1
10603	Isopropanol[1]	67-63-0	N.D.	D2	1,000	110	1
10603	Methanol	67-56-1	N.D.	D2	1,000	220	1
12926	Propylene glycol[1]	57-55-6	N.D.		10,000	2,000	1
	The response for surrogate Tetramethylene glycol in the continuing calibration verification standard is outside the QC acceptance limits low. The following action was taken: The analysis was repeated and the continuing calibration verification standard bracketing the sample on the second trial is also outside the acceptance limits. This effect is attributed to the sample matrix and the data is reported.						

Sample Comments

State of New York Certification No. 10670

[1] = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	Y193121AA	11/08/2019 15:44	Corie Mellinger	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	Y193121AA	11/08/2019 15:43	Corie Mellinger	1
14241	Semi-annual Groundwater BMS	SW-846 8270D	1	19309WAJ026	11/09/2019 16:06	Holly B Ziegler	1
11010	8270D BNA Extraction	SW-846 3510C	1	19309WAJ026	11/06/2019 02:00	Mathias Okpo	1
13022	Short List Aldehydes- W 8315A	SW-846 8315A	1	193040018A	11/01/2019 18:30	Jessica L Miller	1
01013	Formaldehyde Extraction	SW-846 8315A	1	193040018A	11/01/2019 08:38	Alison Moll	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **BDA-1F Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/31/2019 11:30
Collection Date/Time: 10/30/2019 14:35
SDG#: BMS82-03

ARCADIS U.S., Inc.
ELLE Sample #: GW 1188916
ELLE Group #: 2071978
Matrix: Groundwater

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10603	Alcohols in Water	SW-846 8015D Rev.4, June 2003	1	193080008A	11/05/2019 01:12	Johanna C Kennedy	1
12926	Glycols in Water by 8015C/D	SW-846 8015D Rev.4, June 2003	1	193080027A	11/06/2019 00:46	Donald Brown	1

*=This limit was used in the evaluation of the final result

REVISED

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
S8203

Lab Name: Lancaster Laboratories Contract:_____
Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____
Matrix: (soil/water) WATER Lab Sample ID: 1188916
Sample wt/vol: 5.0 (g/mL)mL Lab File ID:HP09355.i/19nov08a.b/yn08s11.d
Level: (low/med) LOW Date Received: 10/31/19
% Moisture: not dec. Date Analyzed: 11/08/19
Column: (pack/cap) CAP Dilution Factor: 1.0
CONCENTRATION UNITS:
Number TICs found: 0 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	VOCTIC	Total VOC TICs		0	U
2.					
3.					
4.					
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29.					
30.					

page 1 of 1

FORM I VOA-TIC

REVISED

1F

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

S8203

Lab Name: Lancaster Laboratories Contract:
Lab Code: LANCAS Case No.: SAS No.: SDG No.:
Matrix: (soil/water) WATER Lab Sample ID: 1188916
Sample wt/vol: 247 (g/mL) mL Lab File ID: lk0439.d
Level: (low/med) LOW Date Received: 10/31/19
% Moisture: Decanted: (Y/N) Date Extracted: 11/06/19
Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/09/19
Injection Volume: 1 (uL) Dilution Factor: 1
GPC Cleanup: N pH: Extraction: Sepf

CONCENTRATION UNITS:
Number TICs found: 0 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	SVOCTIC	Total SVOC TICs		0	U
2.					
3.					
4.					
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page 1 of 1

FORM I SV-1

REVISED

Sample Description: **PW-6F Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/31/2019 11:30
Collection Date/Time: 10/30/2019 10:30
SDG#: BMS82-04

ARCADIS U.S., Inc.
ELLE Sample #: GW 1188917
ELLE Group #: 2071978
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	200	7	10
11997	Acetonitrile	75-05-8	N.D.	1,000	160	10
11997	Benzene	71-43-2	N.D.	10	2	10
11997	Bromochloromethane	74-97-5	N.D.	50	2	10
11997	Bromodichloromethane	75-27-4	N.D.	10	2	10
11997	Bromoform	75-25-2	N.D.	40	10	10
11997	Bromomethane	74-83-9	N.D.	10	3	10
11997	n-Butanol	71-36-3	N.D.	2,500	610	10
11997	2-Butanone	78-93-3	N.D.	100	3	10
11997	t-Butyl alcohol	75-65-0	N.D.	500	120	10
11997	n-Butylbenzene	104-51-8	N.D.	50	2	10
11997	sec-Butylbenzene	135-98-8	N.D.	50	2	10
11997	tert-Butylbenzene	98-06-6	N.D.	50	3	10
11997	Carbon Disulfide	75-15-0	N.D.	50	2	10
11997	Carbon Tetrachloride	56-23-5	N.D.	10	2	10
11997	Chlorobenzene	108-90-7	N.D.	10	2	10
11997	Chlorodifluoromethane[1]	75-45-6	N.D.	50	20	10
11997	Chloroethane	75-00-3	N.D.	10	2	10
11997	Chloroform	67-66-3	N.D.	10	2	10
11997	Chloromethane	74-87-3	N.D.	10	2	10
11997	Cyclohexane	110-82-7	N.D.	50	10	10
11997	Cyclohexanone[1]	108-94-1	N.D.	1,000	250	10
11997	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	50	3	10
11997	Dibromochloromethane	124-48-1	N.D.	10	2	10
11997	1,2-Dibromoethane	106-93-4	N.D.	10	2	10
11997	1,2-Dichlorobenzene	95-50-1	N.D.	50	2	10
11997	1,3-Dichlorobenzene	541-73-1	N.D.	50	2	10
11997	1,4-Dichlorobenzene	106-46-7	N.D.	50	2	10
11997	Dichlorodifluoromethane	75-71-8	N.D.	10	2	10
11997	1,1-Dichloroethane	75-34-3	N.D.	10	2	10
11997	1,2-Dichloroethane	107-06-2	N.D.	10	3	10
11997	1,1-Dichloroethene	75-35-4	N.D.	10	2	10
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	10	2	10
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	10	2	10
11997	1,2-Dichloropropane	78-87-5	N.D.	10	2	10
11997	cis-1,3-Dichloropropene	10061-01-5	N.D.	10	2	10
11997	trans-1,3-Dichloropropene	10061-02-6	N.D.	10	2	10
11997	1,4-Dioxane	123-91-1	N.D.	2,500	290	10
11997	Ethyl Acetate	141-78-6	N.D.	50	7	10
11997	Ethyl ether	60-29-7	N.D.	50	2	10
11997	Ethylbenzene	100-41-4	N.D.	10	4	10

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **PW-6F Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/31/2019 11:30
Collection Date/Time: 10/30/2019 10:30
SDG#: BMS82-04

ARCADIS U.S., Inc.
ELLE Sample #: GW 1188917
ELLE Group #: 2071978
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Freon 113	76-13-1	N.D.	100	2	10
11997	n-Heptane[1]	142-82-5	N.D.	50	20	10
11997	n-Hexane[1]	110-54-3	N.D.	50	20	10
11997	2-Hexanone	591-78-6	N.D.	100	3	10
11997	Isobutyl Alcohol	78-83-1	N.D.	2,500	360	10
11997	Isopropylbenzene	98-82-8	N.D.	50	2	10
11997	p-Isopropyltoluene	99-87-6	N.D.	50	2	10
11997	Methyl Acetate	79-20-9	N.D.	50	2	10
11997	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	10	2	10
11997	4-Methyl-2-pentanone	108-10-1	N.D.	100	5	10
11997	Methylcyclohexane	108-87-2	N.D.	50	5	10
11997	Methylene Chloride	75-09-2	N.D.	10	3	10
11997	Naphthalene	91-20-3	N.D.	50	10	10
11997	2-Nitropropane	79-46-9	N.D.	100	8	10
11997	Styrene	100-42-5	N.D.	50	2	10
11997	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	10	2	10
11997	Tetrachloroethene	127-18-4	N.D.	10	2	10
11997	Tetrahydrofuran	109-99-9	N.D.	100	7	10
11997	Toluene	108-88-3	N.D.	10	2	10
11997	1,2,3-Trichlorobenzene	87-61-6	N.D.	50	4	10
11997	1,2,4-Trichlorobenzene	120-82-1	N.D.	50	3	10
11997	1,1,1-Trichloroethane	71-55-6	N.D.	10	3	10
11997	1,1,2-Trichloroethane	79-00-5	N.D.	10	2	10
11997	Trichloroethene	79-01-6	N.D.	10	2	10
11997	Trichlorofluoromethane	75-69-4	N.D.	10	2	10
11997	1,2,4-Trimethylbenzene	95-63-6	N.D.	50	10	10
11997	1,3,5-Trimethylbenzene	108-67-8	N.D.	50	3	10
11997	Vinyl Chloride	75-01-4	N.D.	10	2	10
11997	m+p-Xylene	179601-23-1	N.D.	50	10	10
11997	o-Xylene	95-47-6	N.D.	10	4	10
11997	Xylene (Total)	1330-20-7	N.D.	60	14	10

Project defined calibration criteria are not met. The calibration is compliant with the method defined criteria.

A Report Limit Verification (RLV) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The RLV standard shows adequate sensitivity at or below the reporting limit.

Reporting limits were raised due to sample foaming.

00882 VOA Interp. Library Search-10

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **PW-6F Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/31/2019 11:30
Collection Date/Time: 10/30/2019 10:30
SDG#: BMS82-04

ARCADIS U.S., Inc.
ELLE Sample #: GW 1188917
ELLE Group #: 2071978
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
	The results from the volatile library search are listed on the attached FORM 1 - VOA-TIC. The qualifiers appearing in the "Q" column are defined at the end of the report.					
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	Acenaphthene	83-32-9	N.D.	0.54	0.11	1
14241	Acenaphthylene	208-96-8	N.D.	0.54	0.11	1
14241	Acetophenone	98-86-2	N.D.	11	4.3	1
14241	Aniline	62-53-3	N.D.	11	3.3	1
14241	Anthracene	120-12-7	N.D.	0.54	0.11	1
14241	Atrazine	1912-24-9	N.D.	5.4	2.2	1
14241	Benzaldehyde	100-52-7	N.D.	11	3.3	1
14241	Benzo(a)anthracene	56-55-3	N.D.	0.54	0.11	1
14241	Benzo(a)pyrene	50-32-8	N.D.	0.54	0.11	1
14241	Benzo(b)fluoranthene	205-99-2	N.D.	0.54	0.11	1
14241	Benzo(g,h,i)perylene	191-24-2	N.D.	0.54	0.11	1
14241	Benzo(k)fluoranthene	207-08-9	N.D.	0.54	0.11	1
14241	Benzyl alcohol	100-51-6	N.D.	33	11	1
14241	1,1'-Biphenyl	92-52-4	N.D.	11	3.3	1
14241	4-Bromophenyl-phenylether	101-55-3	N.D.	2.2	0.54	1
14241	Butylbenzylphthalate	85-68-7	N.D.	5.4	2.2	1
14241	Di-n-butylphthalate	84-74-2	N.D.	5.4	2.2	1
14241	Caprolactam	105-60-2	N.D.	12	5.4	1
14241	Carbazole	86-74-8	N.D.	2.2	0.54	1
14241	4-Chloro-3-methylphenol	59-50-7	N.D.	2.2	0.54	1
14241	4-Chloroaniline	106-47-8	N.D.	11	4.3	1
14241	bis(2-Chloroethoxy)methane	111-91-1	N.D.	2.2	0.54	1
14241	bis(2-Chloroethyl)ether	111-44-4	N.D.	2.2	0.54	1
14241	bis(2-Chloroisopropyl)ether[1]	39638-32-9	N.D.	2.2	0.54	1
	Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.					
14241	2-Chloronaphthalene	91-58-7	N.D.	1.1	0.43	1
14241	2-Chlorophenol	95-57-8	N.D.	2.2	0.54	1
14241	4-Chlorophenyl-phenylether	7005-72-3	N.D.	2.2	0.54	1
14241	Chrysene	218-01-9	N.D.	0.54	0.11	1
14241	Dibenz(a,h)anthracene	53-70-3	N.D.	0.54	0.11	1
14241	Dibenzofuran	132-64-9	N.D.	2.2	0.54	1
14241	3,3'-Dichlorobenzidine	91-94-1	N.D.	11	3.3	1
14241	2,4-Dichlorophenol	120-83-2	N.D.	2.2	0.54	1
14241	Dicyclohexylamine[1]	101-83-7	N.D.	11	11	1
14241	Diethylphthalate	84-66-2	N.D.	5.4	2.2	1
14241	N,N-Dimethylaniline[1]	121-69-7	N.D.	1.1	0.54	1
14241	2,4-Dimethylphenol	105-67-9	N.D.	11	3.3	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **PW-6F Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/31/2019 11:30
Collection Date/Time: 10/30/2019 10:30
SDG#: BMS82-04

ARCADIS U.S., Inc.
ELLE Sample #: GW 1188917
ELLE Group #: 2071978
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	Dimethylphthalate	131-11-3	N.D.	5.4	2.2	1
14241	4,6-Dinitro-2-methylphenol	534-52-1	N.D.	23	8.7	1
14241	2,4-Dinitrophenol	51-28-5	N.D.	33	15	1
14241	2,4-Dinitrotoluene	121-14-2	N.D.	5.4	1.1	1
14241	2,6-Dinitrotoluene	606-20-2	N.D.	2.2	0.54	1
14241	bis(2-Ethylhexyl)phthalate	117-81-7	15	12	5.4	1
14241	Fluoranthene	206-44-0	0.21 J	0.54	0.11	1
14241	Fluorene	86-73-7	N.D.	0.54	0.11	1
14241	Hexachlorobenzene	118-74-1	N.D.	0.54	0.11	1
14241	Hexachlorobutadiene	87-68-3	N.D.	2.2	0.54	1
14241	Hexachlorocyclopentadiene	77-47-4	N.D.	12	5.4	1
14241	Hexachloroethane	67-72-1	N.D.	5.4	1.1	1
14241	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.54	0.11	1
14241	Isophorone	78-59-1	N.D.	2.2	0.54	1
14241	2-Methylnaphthalene	91-57-6	N.D.	0.54	0.11	1
14241	2-Methylphenol	95-48-7	N.D.	2.2	0.54	1
14241	4-Methylphenol	65794-96-9	N.D.	2.2	0.54	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
14241	Naphthalene	91-20-3	N.D.	0.54	0.11	1
14241	2-Nitroaniline	88-74-4	N.D.	7.6	2.2	1
14241	3-Nitroaniline	99-09-2	N.D.	7.6	3.3	1
14241	4-Nitroaniline	100-01-6	N.D.	3.3	0.98	1
14241	Nitrobenzene	98-95-3	N.D.	2.2	0.54	1
14241	2-Nitrophenol	88-75-5	N.D.	11	3.3	1
14241	4-Nitrophenol	100-02-7	N.D.	33	11	1
14241	N-Nitroso-di-n-propylamine	621-64-7	N.D.	3.3	0.76	1
14241	N-Nitrosodiphenylamine	86-30-6	N.D.	3.3	0.76	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.					
14241	Di-n-octylphthalate	117-84-0	N.D.	12	5.4	1
14241	Pentachlorophenol	87-86-5	N.D.	5.4	1.1	1
14241	Phenanthrene	85-01-8	N.D.	0.54	0.11	1
14241	Phenol	108-95-2	N.D.	2.2	0.54	1
14241	Pyrene	129-00-0	0.19 J	0.54	0.11	1
14241	Pyridine	110-86-1	N.D.	5.4	2.2	1
14241	1,2,4,5-Tetrachlorobenzene	95-94-3	N.D.	2.2	0.54	1
14241	2,3,4,6-Tetrachlorophenol	58-90-2	N.D.	11	4.3	1
14241	2,4,5-Trichlorophenol	95-95-4	N.D.	2.2	0.54	1
14241	2,4,6-Trichlorophenol	88-06-2	N.D.	2.2	0.54	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **PW-6F Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/31/2019 11:30
Collection Date/Time: 10/30/2019 10:30
SDG#: BMS82-04

ARCADIS U.S., Inc.
ELLE Sample #: GW 1188917
ELLE Group #: 2071978
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	Triethylamine[1]	121-44-8	N.D.	11	11	1

00886 SVOA TIC Interpretive(25)

The results from the semivolatile library search are listed on the attached FORM 1 - SV-TIC. The qualifiers appearing in the "Q" column are defined at the end of the report.

Aldehydes & Ketones	**SW-846 8315A**		**ug/l**	**ug/l**	**ug/l**	
13022	Acetaldehyde[1]	75-07-0	N.D.	60	35	1
13022	Formaldehyde	50-00-0	51	50	20	1

The response for a target analyte(s) in the initial calibration verification standard is outside the QC acceptance limits. The client was contacted and the data reported.
The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary.

GC Miscellaneous	**SW-846 8015D Rev.4, June 2003**		**ug/l**	**ug/l**	**ug/l**	
10603	Ethanol	64-17-5	N.D. D2	1,000	150	1
12926	Ethylene glycol[1]	107-21-1	N.D.	10,000	5,000	1
10603	Isopropanol[1]	67-63-0	N.D. D2	1,000	110	1
10603	Methanol	67-56-1	N.D. D2	1,000	220	1
12926	Propylene glycol[1]	57-55-6	N.D.	10,000	2,000	1

The response for surrogate Tetramethylene glycol in the continuing calibration verification standard is outside the QC acceptance limits low. The following action was taken:
The analysis was repeated and the continuing calibration verification standard bracketing the sample on the second trial is also outside the acceptance limits. This effect is attributed to the sample matrix and the data is reported.

The recovery for the sample surrogate(s) is outside the QC acceptance limits as noted on the QC Summary.

Sample Comments

State of New York Certification No. 10670

[1] = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	Y193121AA	11/08/2019 18:40	Corie Mellinger	10
01163	GC/MS VOA Water Prep	SW-846 5030C	1	Y193121AA	11/08/2019 18:39	Corie Mellinger	10
14241	Semi-annual Groundwater BMS	SW-846 8270D	1	19309WAJ026	11/09/2019 16:35	Holly B Ziegler	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **PW-6F Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/31/2019 11:30
Collection Date/Time: 10/30/2019 10:30
SDG#: BMS82-04

ARCADIS U.S., Inc.
ELLE Sample #: GW 1188917
ELLE Group #: 2071978
Matrix: Groundwater

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11010	8270D BNA Extraction	SW-846 3510C	1	19309WAJ026	11/06/2019 02:00	Mathias Okpo	1
13022	Short List Aldehydes- W 8315A	SW-846 8315A	1	193040018A	11/01/2019 18:40	Jessica L Miller	1
01013	Formaldehyde Extraction	SW-846 8315A	1	193040018A	11/01/2019 08:38	Alison Moll	1
10603	Alcohols in Water	SW-846 8015D Rev.4, June 2003	1	193080008A	11/05/2019 01:28	Johanna C Kennedy	1
12926	Glycols in Water by 8015C/D	SW-846 8015D Rev.4, June 2003	1	193080027A	11/06/2019 00:59	Donald Brown	1

*=This limit was used in the evaluation of the final result

REVISED

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
S8204

Lab Name: Lancaster Laboratories Contract:_____
Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____
Matrix: (soil/water) WATER Lab Sample ID: 1188917
Sample wt/vol: 5.0 (g/mL)mL Lab File ID:HP09355.i/19nov08a.b/yn08s21.d
Level: (low/med) LOW Date Received: 10/31/19
% Moisture: not dec. Date Analyzed: 11/08/19
Column: (pack/cap) CAP Dilution Factor: 10.0
CONCENTRATION UNITS:
Number TICs found: 0 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	VOCTIC	Total VOC TICs		0	U
2.					
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page 1 of 1

FORM I VOA-TIC

REVISED

1F

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

S8204

Lab Name: Lancaster Laboratories Contract:
Lab Code: LANCAS Case No.: SAS No.: SDG No.:
Matrix: (soil/water) WATER Lab Sample ID: 1188917
Sample wt/vol: 230 (g/mL) mL Lab File ID: lk0440.d
Level: (low/med) LOW Date Received: 10/31/19
% Moisture: Decanted: (Y/N) Date Extracted: 11/06/19
Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/09/19
Injection Volume: 1 (uL) Dilution Factor: 1
GPC Cleanup: N pH: Extraction: Sepf
CONCENTRATION UNITS:
Number TICs found: 2 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		Unknown	14.381	6	J
2.		Unknown	15.557	6	J
3.					
4.	SVOCTIC	Total SVOC TICs		12	J
5.					
6.					
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page 1 of 1

FORM I SV-1

REVISED

Sample Description: **PW-4T Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/31/2019 11:30
Collection Date/Time: 10/30/2019 11:50
SDG#: BMS82-05

ARCADIS U.S., Inc.
ELLE Sample #: GW 1188918
ELLE Group #: 2071978
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	20	0.7	1
11997	Acetonitrile	75-05-8	N.D.	100	16	1
11997	Benzene	71-43-2	N.D.	1	0.2	1
11997	Bromochloromethane	74-97-5	N.D.	5	0.2	1
11997	Bromodichloromethane	75-27-4	N.D.	1	0.2	1
11997	Bromoform	75-25-2	N.D.	4	1	1
11997	Bromomethane	74-83-9	N.D.	1	0.3	1
11997	n-Butanol	71-36-3	N.D.	250	61	1
11997	2-Butanone	78-93-3	N.D.	10	0.3	1
11997	t-Butyl alcohol	75-65-0	N.D.	50	12	1
11997	n-Butylbenzene	104-51-8	N.D.	5	0.2	1
11997	sec-Butylbenzene	135-98-8	N.D.	5	0.2	1
11997	tert-Butylbenzene	98-06-6	N.D.	5	0.3	1
11997	Carbon Disulfide	75-15-0	N.D.	5	0.2	1
11997	Carbon Tetrachloride	56-23-5	N.D.	1	0.2	1
11997	Chlorobenzene	108-90-7	N.D.	1	0.2	1
11997	Chlorodifluoromethane[1]	75-45-6	N.D.	5	2	1
11997	Chloroethane	75-00-3	N.D.	1	0.2	1
11997	Chloroform	67-66-3	N.D.	1	0.2	1
11997	Chloromethane	74-87-3	N.D.	1	0.2	1
11997	Cyclohexane	110-82-7	N.D.	5	1	1
11997	Cyclohexanone[1]	108-94-1	N.D.	100	25	1
11997	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	5	0.3	1
11997	Dibromochloromethane	124-48-1	N.D.	1	0.2	1
11997	1,2-Dibromoethane	106-93-4	N.D.	1	0.2	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	5	0.2	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	5	0.2	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	5	0.2	1
11997	Dichlorodifluoromethane	75-71-8	N.D.	1	0.2	1
11997	1,1-Dichloroethane	75-34-3	N.D.	1	0.2	1
11997	1,2-Dichloroethane	107-06-2	N.D.	1	0.3	1
11997	1,1-Dichloroethene	75-35-4	N.D.	1	0.2	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	1	0.2	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	1	0.2	1
11997	1,2-Dichloropropane	78-87-5	N.D.	1	0.2	1
11997	cis-1,3-Dichloropropene	10061-01-5	N.D.	1	0.2	1
11997	trans-1,3-Dichloropropene	10061-02-6	N.D.	1	0.2	1
11997	1,4-Dioxane	123-91-1	N.D.	250	29	1
11997	Ethyl Acetate	141-78-6	N.D.	5	0.7	1
11997	Ethyl ether	60-29-7	N.D.	5	0.2	1
11997	Ethylbenzene	100-41-4	N.D.	1	0.4	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **PW-4T Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/31/2019 11:30
Collection Date/Time: 10/30/2019 11:50
SDG#: BMS82-05

ARCADIS U.S., Inc.
ELLE Sample #: GW 1188918
ELLE Group #: 2071978
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Freon 113	76-13-1	N.D.	10	0.2	1
11997	n-Heptane[1]	142-82-5	N.D.	5	2	1
11997	n-Hexane[1]	110-54-3	N.D.	5	2	1
11997	2-Hexanone	591-78-6	N.D.	10	0.3	1
11997	Isobutyl Alcohol	78-83-1	N.D.	250	36	1
11997	Isopropylbenzene	98-82-8	N.D.	5	0.2	1
11997	p-Isopropyltoluene	99-87-6	N.D.	5	0.2	1
11997	Methyl Acetate	79-20-9	N.D.	5	0.2	1
11997	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	1	0.2	1
11997	4-Methyl-2-pentanone	108-10-1	N.D.	10	0.5	1
11997	Methylcyclohexane	108-87-2	N.D.	5	0.5	1
11997	Methylene Chloride	75-09-2	N.D.	1	0.3	1
11997	Naphthalene	91-20-3	N.D.	5	1	1
11997	2-Nitropropane	79-46-9	N.D.	10	0.8	1
11997	Styrene	100-42-5	N.D.	5	0.2	1
11997	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	1	0.2	1
11997	Tetrachloroethene	127-18-4	N.D.	1	0.2	1
11997	Tetrahydrofuran	109-99-9	N.D.	10	0.7	1
11997	Toluene	108-88-3	N.D.	1	0.2	1
11997	1,2,3-Trichlorobenzene	87-61-6	N.D.	5	0.4	1
11997	1,2,4-Trichlorobenzene	120-82-1	N.D.	5	0.3	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	1	0.3	1
11997	1,1,2-Trichloroethane	79-00-5	N.D.	1	0.2	1
11997	Trichloroethene	79-01-6	N.D.	1	0.2	1
11997	Trichlorofluoromethane	75-69-4	N.D.	1	0.2	1
11997	1,2,4-Trimethylbenzene	95-63-6	N.D.	5	1	1
11997	1,3,5-Trimethylbenzene	108-67-8	N.D.	5	0.3	1
11997	Vinyl Chloride	75-01-4	N.D.	1	0.2	1
11997	m+p-Xylene	179601-23-1	N.D.	5	1	1
11997	o-Xylene	95-47-6	N.D.	1	0.4	1
11997	Xylene (Total)	1330-20-7	N.D.	6	1	1

Project defined calibration criteria are not met. The calibration is compliant with the method defined criteria.

A Report Limit Verification (RLV) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The RLV standard shows adequate sensitivity at or below the reporting limit.

00882 VOA Interp. Library Search-10

The results from the volatile library search are listed on the attached FORM 1 - VOA-TIC. The qualifiers appearing in the "Q" column are defined at the end of the report.

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **PW-4T Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/31/2019 11:30
Collection Date/Time: 10/30/2019 11:50
SDG#: BMS82-05

ARCADIS U.S., Inc.
ELLE Sample #: GW 1188918
ELLE Group #: 2071978
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	Acenaphthene	83-32-9	N.D.	0.53	0.11	1
14241	Acenaphthylene	208-96-8	N.D.	0.53	0.11	1
14241	Acetophenone	98-86-2	N.D.	11	4.2	1
14241	Aniline	62-53-3	N.D.	11	3.2	1
14241	Anthracene	120-12-7	N.D.	0.53	0.11	1
14241	Atrazine	1912-24-9	N.D.	5.3	2.1	1
14241	Benzaldehyde	100-52-7	N.D.	11	3.2	1
14241	Benzo(a)anthracene	56-55-3	N.D.	0.53	0.11	1
14241	Benzo(a)pyrene	50-32-8	N.D.	0.53	0.11	1
14241	Benzo(b)fluoranthene	205-99-2	N.D.	0.53	0.11	1
14241	Benzo(g,h,i)perylene	191-24-2	N.D.	0.53	0.11	1
14241	Benzo(k)fluoranthene	207-08-9	N.D.	0.53	0.11	1
14241	Benzyl alcohol	100-51-6	N.D.	32	11	1
14241	1,1'-Biphenyl	92-52-4	N.D.	11	3.2	1
14241	4-Bromophenyl-phenylether	101-55-3	N.D.	2.1	0.53	1
14241	Butylbenzylphthalate	85-68-7	N.D.	5.3	2.1	1
14241	Di-n-butylphthalate	84-74-2	N.D.	5.3	2.1	1
14241	Caprolactam	105-60-2	N.D.	12	5.3	1
14241	Carbazole	86-74-8	N.D.	2.1	0.53	1
14241	4-Chloro-3-methylphenol	59-50-7	N.D.	2.1	0.53	1
14241	4-Chloroaniline	106-47-8	N.D.	11	4.2	1
14241	bis(2-Chloroethoxy)methane	111-91-1	N.D.	2.1	0.53	1
14241	bis(2-Chloroethyl)ether	111-44-4	N.D.	2.1	0.53	1
14241	bis(2-Chloroisopropyl)ether[1]	39638-32-9	N.D.	2.1	0.53	1
	Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.					
14241	2-Chloronaphthalene	91-58-7	N.D.	1.1	0.42	1
14241	2-Chlorophenol	95-57-8	N.D.	2.1	0.53	1
14241	4-Chlorophenyl-phenylether	7005-72-3	N.D.	2.1	0.53	1
14241	Chrysene	218-01-9	N.D.	0.53	0.11	1
14241	Dibenz(a,h)anthracene	53-70-3	N.D.	0.53	0.11	1
14241	Dibenzofuran	132-64-9	N.D.	2.1	0.53	1
14241	3,3'-Dichlorobenzidine	91-94-1	N.D.	11	3.2	1
14241	2,4-Dichlorophenol	120-83-2	N.D.	2.1	0.53	1
14241	Dicyclohexylamine[1]	101-83-7	N.D.	11	11	1
14241	Diethylphthalate	84-66-2	N.D.	5.3	2.1	1
14241	N,N-Dimethylaniline[1]	121-69-7	N.D.	1.1	0.53	1
14241	2,4-Dimethylphenol	105-67-9	N.D.	11	3.2	1
14241	Dimethylphthalate	131-11-3	N.D.	5.3	2.1	1
14241	4,6-Dinitro-2-methylphenol	534-52-1	N.D.	22	8.4	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **PW-4T Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/31/2019 11:30
Collection Date/Time: 10/30/2019 11:50
SDG#: BMS82-05

ARCADIS U.S., Inc.
ELLE Sample #: GW 1188918
ELLE Group #: 2071978
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	2,4-Dinitrophenol	51-28-5	N.D.	32	15	1
14241	2,4-Dinitrotoluene	121-14-2	N.D.	5.3	1.1	1
14241	2,6-Dinitrotoluene	606-20-2	N.D.	2.1	0.53	1
14241	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	12	5.3	1
14241	Fluoranthene	206-44-0	N.D.	0.53	0.11	1
14241	Fluorene	86-73-7	N.D.	0.53	0.11	1
14241	Hexachlorobenzene	118-74-1	N.D.	0.53	0.11	1
14241	Hexachlorobutadiene	87-68-3	N.D.	2.1	0.53	1
14241	Hexachlorocyclopentadiene	77-47-4	N.D.	12	5.3	1
14241	Hexachloroethane	67-72-1	N.D.	5.3	1.1	1
14241	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.53	0.11	1
14241	Isophorone	78-59-1	N.D.	2.1	0.53	1
14241	2-Methylnaphthalene	91-57-6	N.D.	0.53	0.11	1
14241	2-Methylphenol	95-48-7	N.D.	2.1	0.53	1
14241	4-Methylphenol	65794-96-9	N.D.	2.1	0.53	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
14241	Naphthalene	91-20-3	N.D.	0.53	0.11	1
14241	2-Nitroaniline	88-74-4	N.D.	7.4	2.1	1
14241	3-Nitroaniline	99-09-2	N.D.	7.4	3.2	1
14241	4-Nitroaniline	100-01-6	N.D.	3.2	0.95	1
14241	Nitrobenzene	98-95-3	N.D.	2.1	0.53	1
14241	2-Nitrophenol	88-75-5	N.D.	11	3.2	1
14241	4-Nitrophenol	100-02-7	N.D.	32	11	1
14241	N-Nitroso-di-n-propylamine	621-64-7	N.D.	3.2	0.74	1
14241	N-Nitrosodiphenylamine	86-30-6	N.D.	3.2	0.74	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.					
14241	Di-n-octylphthalate	117-84-0	N.D.	12	5.3	1
14241	Pentachlorophenol	87-86-5	N.D.	5.3	1.1	1
14241	Phenanthrene	85-01-8	N.D.	0.53	0.11	1
14241	Phenol	108-95-2	N.D.	2.1	0.53	1
14241	Pyrene	129-00-0	N.D.	0.53	0.11	1
14241	Pyridine	110-86-1	N.D.	5.3	2.1	1
14241	1,2,4,5-Tetrachlorobenzene	95-94-3	N.D.	2.1	0.53	1
14241	2,3,4,6-Tetrachlorophenol	58-90-2	N.D.	11	4.2	1
14241	2,4,5-Trichlorophenol	95-95-4	N.D.	2.1	0.53	1
14241	2,4,6-Trichlorophenol	88-06-2	N.D.	2.1	0.53	1
14241	Triethylamine[1]	121-44-8	N.D.	11	11	1

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **PW-4T Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/31/2019 11:30
Collection Date/Time: 10/30/2019 11:50
SDG#: BMS82-05

ARCADIS U.S., Inc.
ELLE Sample #: GW 1188918
ELLE Group #: 2071978
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor

Summary. Since the recovery is high and the target analyte(s) was not detected in the sample, the data is reported.

00886 SVOA TIC Interpretive(25)

The results from the semivolatile library search are listed on the attached FORM 1 - SV-TIC. The qualifiers appearing in the "Q" column are defined at the end of the report.

Aldehydes & Ketones	SW-846 8315A		ug/l	ug/l	ug/l	
13022	Acetaldehyde[1]	75-07-0	N.D.	60	35	1
13022	Formaldehyde	50-00-0	N.D.	50	20	1

The response for a target analyte(s) in the initial calibration verification standard is outside the QC acceptance limits. The client was contacted and the data reported.
The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary.

GC Miscellaneous	SW-846 8015D Rev.4, June 2003		ug/l	ug/l	ug/l	
10603	Ethanol	64-17-5	N.D. D2	1,000	150	1
12926	Ethylene glycol[1]	107-21-1	N.D.	10,000	5,000	1
10603	Isopropanol[1]	67-63-0	N.D. D2	1,000	110	1
10603	Methanol	67-56-1	N.D. D2	1,000	220	1
12926	Propylene glycol[1]	57-55-6	N.D.	10,000	2,000	1

The response for surrogate Tetramethylene glycol in the continuing calibration verification standard is outside the QC acceptance limits low. The following action was taken:
The analysis was repeated and the continuing calibration verification standard bracketing the sample on the second trial is also outside the acceptance limits. This effect is attributed to the sample matrix and the data is reported.

Sample Comments

State of New York Certification No. 10670

[1] = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	Y193121AA	11/08/2019 16:06	Corie Mellinger	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	Y193121AA	11/08/2019 16:05	Corie Mellinger	1
14241	Semi-annual Groundwater BMS	SW-846 8270D	1	19309WAJ026	11/09/2019 17:04	Holly B Ziegler	1
11010	8270D BNA Extraction	SW-846 3510C	1	19309WAJ026	11/06/2019 02:00	Mathias Okpo	1
13022	Short List Aldehydes- W 8315A	SW-846 8315A	1	193040018A	11/01/2019 18:50	Jessica L Miller	1
01013	Formaldehyde Extraction	SW-846 8315A	1	193040018A	11/01/2019 08:38	Alison Moll	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **PW-4T Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/31/2019 11:30
Collection Date/Time: 10/30/2019 11:50
SDG#: BMS82-05

ARCADIS U.S., Inc.
ELLE Sample #: GW 1188918
ELLE Group #: 2071978
Matrix: Groundwater

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10603	Alcohols in Water	SW-846 8015D Rev.4, June 2003	1	193080008A	11/05/2019 01:45	Johanna C Kennedy	1
12926	Glycols in Water by 8015C/D	SW-846 8015D Rev.4, June 2003	1	193080027A	11/06/2019 01:12	Donald Brown	1

*=This limit was used in the evaluation of the final result

REVISED

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
S8205

Lab Name: Lancaster Laboratories Contract:_____
Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____
Matrix: (soil/water) WATER Lab Sample ID: 1188918
Sample wt/vol: 5.0 (g/mL)mL Lab File ID:HP09355.i/19nov08a.b/yn08s12.d
Level: (low/med) LOW Date Received: 10/31/19
% Moisture: not dec. Date Analyzed: 11/08/19
Column: (pack/cap) CAP Dilution Factor: 1.0
CONCENTRATION UNITS:
Number TICs found: 0 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	VOCTIC	Total VOC TICs		0	U
2.					
3.					
4.					
5.					
6.					
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8.					
9.					
10.					
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27.					
28.					
29.					
30.					

page 1 of 1

FORM I VOA-TIC

REVISED

1F

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

S8205

Lab Name: Lancaster Laboratories Contract:

Lab Code: LANCAS Case No.: SAS No.: SDG No.:

Matrix: (soil/water) WATER Lab Sample ID: 1188918

Sample wt/vol: 238 (g/mL) mL Lab File ID: lk0441.d

Level: (low/med) LOW Date Received: 10/31/19

% Moisture: Decanted: (Y/N) Date Extracted: 11/06/19

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/09/19

Injection Volume: 1 (uL) Dilution Factor: 1

GPC Cleanup: N pH: Extraction: Sepf

CONCENTRATION UNITS:

Number TICs found: 0 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	SVOCTIC	Total SVOC TICs		0	U
2.					
3.					
4.					
5.					
6.					
7.					
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page 1 of 1

FORM I SV-1

REVISED

Sample Description: **BDA-6WT Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/31/2019 11:30
Collection Date/Time: 10/30/2019 14:05
SDG#: BMS82-06

ARCADIS U.S., Inc.
ELLE Sample #: GW 1188919
ELLE Group #: 2071978
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	20	0.7	1
11997	Acetonitrile	75-05-8	N.D.	100	16	1
11997	Benzene	71-43-2	N.D.	1	0.2	1
11997	Bromochloromethane	74-97-5	N.D.	5	0.2	1
11997	Bromodichloromethane	75-27-4	N.D.	1	0.2	1
11997	Bromoform	75-25-2	N.D.	4	1	1
11997	Bromomethane	74-83-9	N.D.	1	0.3	1
11997	n-Butanol	71-36-3	N.D.	250	61	1
11997	2-Butanone	78-93-3	N.D.	10	0.3	1
11997	t-Butyl alcohol	75-65-0	N.D.	50	12	1
11997	n-Butylbenzene	104-51-8	N.D.	5	0.2	1
11997	sec-Butylbenzene	135-98-8	N.D.	5	0.2	1
11997	tert-Butylbenzene	98-06-6	N.D.	5	0.3	1
11997	Carbon Disulfide	75-15-0	N.D.	5	0.2	1
11997	Carbon Tetrachloride	56-23-5	N.D.	1	0.2	1
11997	Chlorobenzene	108-90-7	N.D.	1	0.2	1
11997	Chlorodifluoromethane[1]	75-45-6	N.D.	5	2	1
11997	Chloroethane	75-00-3	N.D.	1	0.2	1
11997	Chloroform	67-66-3	N.D.	1	0.2	1
11997	Chloromethane	74-87-3	N.D.	1	0.2	1
11997	Cyclohexane	110-82-7	N.D.	5	1	1
11997	Cyclohexanone[1]	108-94-1	N.D.	100	25	1
11997	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	5	0.3	1
11997	Dibromochloromethane	124-48-1	N.D.	1	0.2	1
11997	1,2-Dibromoethane	106-93-4	N.D.	1	0.2	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	5	0.2	1
11997	1,3-Dichlorobenzene	541-73-1	0.7 J	5	0.2	1
11997	1,4-Dichlorobenzene	106-46-7	1 J	5	0.2	1
11997	Dichlorodifluoromethane	75-71-8	N.D.	1	0.2	1
11997	1,1-Dichloroethane	75-34-3	N.D.	1	0.2	1
11997	1,2-Dichloroethane	107-06-2	N.D.	1	0.3	1
11997	1,1-Dichloroethene	75-35-4	N.D.	1	0.2	1
11997	cis-1,2-Dichloroethene	156-59-2	0.5 J	1	0.2	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	1	0.2	1
11997	1,2-Dichloropropane	78-87-5	N.D.	1	0.2	1
11997	cis-1,3-Dichloropropene	10061-01-5	N.D.	1	0.2	1
11997	trans-1,3-Dichloropropene	10061-02-6	N.D.	1	0.2	1
11997	1,4-Dioxane	123-91-1	N.D.	250	29	1
11997	Ethyl Acetate	141-78-6	N.D.	5	0.7	1
11997	Ethyl ether	60-29-7	N.D.	5	0.2	1
11997	Ethylbenzene	100-41-4	N.D.	1	0.4	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **BDA-6WT Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/31/2019 11:30
Collection Date/Time: 10/30/2019 14:05
SDG#: BMS82-06

ARCADIS U.S., Inc.
ELLE Sample #: GW 1188919
ELLE Group #: 2071978
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Freon 113	76-13-1	N.D.	10	0.2	1
11997	n-Heptane[1]	142-82-5	N.D.	5	2	1
11997	n-Hexane[1]	110-54-3	N.D.	5	2	1
11997	2-Hexanone	591-78-6	N.D.	10	0.3	1
11997	Isobutyl Alcohol	78-83-1	N.D.	250	36	1
11997	Isopropylbenzene	98-82-8	N.D.	5	0.2	1
11997	p-Isopropyltoluene	99-87-6	N.D.	5	0.2	1
11997	Methyl Acetate	79-20-9	N.D.	5	0.2	1
11997	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	1	0.2	1
11997	4-Methyl-2-pentanone	108-10-1	N.D.	10	0.5	1
11997	Methylcyclohexane	108-87-2	N.D.	5	0.5	1
11997	Methylene Chloride	75-09-2	N.D.	1	0.3	1
11997	Naphthalene	91-20-3	N.D.	5	1	1
11997	2-Nitropropane	79-46-9	N.D.	10	0.8	1
11997	Styrene	100-42-5	N.D.	5	0.2	1
11997	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	1	0.2	1
11997	Tetrachloroethene	127-18-4	N.D.	1	0.2	1
11997	Tetrahydrofuran	109-99-9	N.D.	10	0.7	1
11997	Toluene	108-88-3	N.D.	1	0.2	1
11997	1,2,3-Trichlorobenzene	87-61-6	N.D.	5	0.4	1
11997	1,2,4-Trichlorobenzene	120-82-1	N.D.	5	0.3	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	1	0.3	1
11997	1,1,2-Trichloroethane	79-00-5	N.D.	1	0.2	1
11997	Trichloroethene	79-01-6	N.D.	1	0.2	1
11997	Trichlorofluoromethane	75-69-4	N.D.	1	0.2	1
11997	1,2,4-Trimethylbenzene	95-63-6	N.D.	5	1	1
11997	1,3,5-Trimethylbenzene	108-67-8	N.D.	5	0.3	1
11997	Vinyl Chloride	75-01-4	N.D.	1	0.2	1
11997	m+p-Xylene	179601-23-1	N.D.	5	1	1
11997	o-Xylene	95-47-6	N.D.	1	0.4	1
11997	Xylene (Total)	1330-20-7	N.D.	6	1	1

Project defined calibration criteria are not met. The calibration is compliant with the method defined criteria.

A Report Limit Verification (RLV) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The RLV standard shows adequate sensitivity at or below the reporting limit.

00882 VOA Interp. Library Search-10

The results from the volatile library search are listed on the attached FORM 1 - VOA-TIC. The qualifiers appearing in the "Q" column are defined at the end of the report.

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **BDA-6WT Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/31/2019 11:30
Collection Date/Time: 10/30/2019 14:05
SDG#: BMS82-06

ARCADIS U.S., Inc.
ELLE Sample #: GW 1188919
ELLE Group #: 2071978
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	Acenaphthene	83-32-9	N.D.	0.51	0.10	1
14241	Acenaphthylene	208-96-8	N.D.	0.51	0.10	1
14241	Acetophenone	98-86-2	N.D.	10	4.0	1
14241	Aniline	62-53-3	N.D.	10	3.0	1
14241	Anthracene	120-12-7	N.D.	0.51	0.10	1
14241	Atrazine	1912-24-9	N.D.	5.1	2.0	1
14241	Benzaldehyde	100-52-7	N.D.	10	3.0	1
14241	Benzo(a)anthracene	56-55-3	N.D.	0.51	0.10	1
14241	Benzo(a)pyrene	50-32-8	N.D.	0.51	0.10	1
14241	Benzo(b)fluoranthene	205-99-2	N.D.	0.51	0.10	1
14241	Benzo(g,h,i)perylene	191-24-2	N.D.	0.51	0.10	1
14241	Benzo(k)fluoranthene	207-08-9	N.D.	0.51	0.10	1
14241	Benzyl alcohol	100-51-6	N.D.	30	10	1
14241	1,1'-Biphenyl	92-52-4	N.D.	10	3.0	1
14241	4-Bromophenyl-phenylether	101-55-3	N.D.	2.0	0.51	1
14241	Butylbenzylphthalate	85-68-7	N.D.	5.1	2.0	1
14241	Di-n-butylphthalate	84-74-2	N.D.	5.1	2.0	1
14241	Caprolactam	105-60-2	N.D.	11	5.1	1
14241	Carbazole	86-74-8	N.D.	2.0	0.51	1
14241	4-Chloro-3-methylphenol	59-50-7	N.D.	2.0	0.51	1
14241	4-Chloroaniline	106-47-8	N.D.	10	4.0	1
14241	bis(2-Chloroethoxy)methane	111-91-1	N.D.	2.0	0.51	1
14241	bis(2-Chloroethyl)ether	111-44-4	N.D.	2.0	0.51	1
14241	bis(2-Chloroisopropyl)ether[1]	39638-32-9	N.D.	2.0	0.51	1
	Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.					
14241	2-Chloronaphthalene	91-58-7	N.D.	1.0	0.40	1
14241	2-Chlorophenol	95-57-8	N.D.	2.0	0.51	1
14241	4-Chlorophenyl-phenylether	7005-72-3	N.D.	2.0	0.51	1
14241	Chrysene	218-01-9	N.D.	0.51	0.10	1
14241	Dibenz(a,h)anthracene	53-70-3	N.D.	0.51	0.10	1
14241	Dibenzofuran	132-64-9	N.D.	2.0	0.51	1
14241	3,3'-Dichlorobenzidine	91-94-1	N.D.	10	3.0	1
14241	2,4-Dichlorophenol	120-83-2	N.D.	2.0	0.51	1
14241	Dicyclohexylamine[1]	101-83-7	200	51	51	5
14241	Diethylphthalate	84-66-2	N.D.	5.1	2.0	1
14241	N,N-Dimethylaniline[1]	121-69-7	N.D.	1.0	0.51	1
14241	2,4-Dimethylphenol	105-67-9	N.D.	10	3.0	1
14241	Dimethylphthalate	131-11-3	N.D.	5.1	2.0	1
14241	4,6-Dinitro-2-methylphenol	534-52-1	N.D.	21	8.1	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **BDA-6WT Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/31/2019 11:30
Collection Date/Time: 10/30/2019 14:05
SDG#: BMS82-06

ARCADIS U.S., Inc.
ELLE Sample #: GW 1188919
ELLE Group #: 2071978
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	2,4-Dinitrophenol	51-28-5	N.D.	30	14	1
14241	2,4-Dinitrotoluene	121-14-2	N.D.	5.1	1.0	1
14241	2,6-Dinitrotoluene	606-20-2	N.D.	2.0	0.51	1
14241	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	11	5.1	1
14241	Fluoranthene	206-44-0	N.D.	0.51	0.10	1
14241	Fluorene	86-73-7	N.D.	0.51	0.10	1
14241	Hexachlorobenzene	118-74-1	N.D.	0.51	0.10	1
14241	Hexachlorobutadiene	87-68-3	N.D.	2.0	0.51	1
14241	Hexachlorocyclopentadiene	77-47-4	N.D.	11	5.1	1
14241	Hexachloroethane	67-72-1	N.D.	5.1	1.0	1
14241	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.51	0.10	1
14241	Isophorone	78-59-1	N.D.	2.0	0.51	1
14241	2-Methylnaphthalene	91-57-6	N.D.	0.51	0.10	1
14241	2-Methylphenol	95-48-7	N.D.	2.0	0.51	1
14241	4-Methylphenol	65794-96-9	N.D.	2.0	0.51	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
14241	Naphthalene	91-20-3	N.D.	0.51	0.10	1
14241	2-Nitroaniline	88-74-4	N.D.	7.1	2.0	1
14241	3-Nitroaniline	99-09-2	N.D.	7.1	3.0	1
14241	4-Nitroaniline	100-01-6	N.D.	3.0	0.91	1
14241	Nitrobenzene	98-95-3	N.D.	2.0	0.51	1
14241	2-Nitrophenol	88-75-5	N.D.	10	3.0	1
14241	4-Nitrophenol	100-02-7	N.D.	30	10	1
14241	N-Nitroso-di-n-propylamine	621-64-7	N.D.	3.0	0.71	1
14241	N-Nitrosodiphenylamine	86-30-6	N.D.	3.0	0.71	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.					
14241	Di-n-octylphthalate	117-84-0	N.D.	11	5.1	1
14241	Pentachlorophenol	87-86-5	N.D.	5.1	1.0	1
14241	Phenanthrene	85-01-8	N.D.	0.51	0.10	1
14241	Phenol	108-95-2	N.D.	2.0	0.51	1
14241	Pyrene	129-00-0	N.D.	0.51	0.10	1
14241	Pyridine	110-86-1	N.D.	5.1	2.0	1
14241	1,2,4,5-Tetrachlorobenzene	95-94-3	N.D.	2.0	0.51	1
14241	2,3,4,6-Tetrachlorophenol	58-90-2	N.D.	10	4.0	1
14241	2,4,5-Trichlorophenol	95-95-4	N.D.	2.0	0.51	1
14241	2,4,6-Trichlorophenol	88-06-2	N.D.	2.0	0.51	1
14241	Triethylamine[1]	121-44-8	N.D.	10	10	1

The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **BDA-6WT Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/31/2019 11:30
Collection Date/Time: 10/30/2019 14:05
SDG#: BMS82-06

ARCADIS U.S., Inc.
ELLE Sample #: GW 1188919
ELLE Group #: 2071978
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result		Limit of Quantitation*	Method Detection Limit	Dilution Factor
	the TNI/DoD Standards. The following analytes are accepted based on this allowance: Dicyclohexylamine						
00886	**SVOA TIC Interpretive(25)**						
	The results from the semivolatile library search are listed on the attached FORM 1 - SV-TIC. The qualifiers appearing in the "Q" column are defined at the end of the report.						
Aldehydes & Ketones	**SW-846 8315A**		**ug/l**		**ug/l**	**ug/l**	
13022	Acetaldehyde[1]	75-07-0	N.D.		60	35	1
13022	Formaldehyde	50-00-0	26	J	50	20	1
	The response for a target analyte(s) in the initial calibration verification standard is outside the QC acceptance limits. The client was contacted and the data reported. The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary.						
GC Miscellaneous	**SW-846 8015D Rev.4, June 2003**		**ug/l**		**ug/l**	**ug/l**	
10603	Ethanol	64-17-5	N.D.	D2	1,000	150	1
12926	Ethylene glycol[1]	107-21-1	N.D.		10,000	5,000	1
10603	Isopropanol[1]	67-63-0	N.D.	D2	1,000	110	1
10603	Methanol	67-56-1	N.D.	D2	1,000	220	1
12926	Propylene glycol[1]	57-55-6	N.D.		10,000	2,000	1
	The response for surrogate Tetramethylene glycol in the continuing calibration verification standard is outside the QC acceptance limits low. The following action was taken: The analysis was repeated and the continuing calibration verification standard bracketing the sample on the second trial is also outside the acceptance limits. This effect is attributed to the sample matrix and the data is reported.						

Sample Comments

State of New York Certification No. 10670

[1] = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	Y193121AA	11/08/2019 16:28	Corie Mellinger	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	Y193121AA	11/08/2019 16:27	Corie Mellinger	1
14241	Semi-annual Groundwater BMS	SW-846 8270D	1	19309WAJ026	11/09/2019 17:33	Holly B Ziegler	1
14241	Semi-annual Groundwater BMS	SW-846 8270D	1	19309WAJ026	11/09/2019 23:39	Holly B Ziegler	5
11010	8270D BNA Extraction	SW-846 3510C	1	19309WAJ026	11/06/2019 02:00	Mathias Okpo	1
13022	Short List Aldehydes- W 8315A	SW-846 8315A	1	193040018A	11/01/2019 19:01	Jessica L Miller	1
01013	Formaldehyde Extraction	SW-846 8315A	1	193040018A	11/01/2019 08:38	Alison Moll	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **BDA-6WT Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/31/2019 11:30
Collection Date/Time: 10/30/2019 14:05
SDG#: BMS82-06

ARCADIS U.S., Inc.
ELLE Sample #: GW 1188919
ELLE Group #: 2071978
Matrix: Groundwater

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10603	Alcohols in Water	SW-846 8015D Rev.4, June 2003	1	193080008A	11/05/2019 02:02	Johanna C Kennedy	1
12926	Glycols in Water by 8015C/D	SW-846 8015D Rev.4, June 2003	1	193080027A	11/06/2019 01:25	Donald Brown	1

*=This limit was used in the evaluation of the final result

REVISED

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
S8206

Lab Name: Lancaster Laboratories Contract:_____
Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____
Matrix: (soil/water) WATER Lab Sample ID: 1188919
Sample wt/vol: 5.0 (g/mL)mL Lab File ID:HP09355.i/19nov08a.b/yn08s13.d
Level: (low/med) LOW Date Received: 10/31/19
% Moisture: not dec. Date Analyzed: 11/08/19
Column: (pack/cap) CAP Dilution Factor: 1.0
CONCENTRATION UNITS:
Number TICs found: 2 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	420-56-4	Trimethylsilyl fluoride	2.48	15	J
2.	1066-40-6	Silanol, trimethyl-	6.10	150	J
3.					
4.	VOCTIC	Total VOC TICs		160	J
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page 1 of 1

FORM I VOA-TIC

REVISED

1F

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

S8206

Lab Name: Lancaster Laboratories Contract:
Lab Code: LANCAS Case No.: SAS No.: SDG No.:
Matrix: (soil/water) WATER Lab Sample ID: 1188919
Sample wt/vol: 247 (g/mL) mL Lab File ID: lk0442.d
Level: (low/med) LOW Date Received: 10/31/19
% Moisture: Decanted: (Y/N) Date Extracted: 11/06/19
Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/09/19
Injection Volume: 1 (uL) Dilution Factor: 1
GPC Cleanup: N pH: Extraction: Sepf
CONCENTRATION UNITS:
Number TICs found: 15 (ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Unknown	8.727	20	J
2.	Unknown	9.155	26	J
3.	Unknown	9.203	17	J
4.	Unknown	9.262	29	J
5.	Unknown	9.305	30	J
6.	Unknown	9.348	89	J
7.	Unknown	9.407	25	J
8.	Unknown	9.487	28	J
9.	Unknown	9.524	33	J
10.154559-11-2	2,5-Diisopropylpiperazine	9.556	77	J
11.545-90-4	Dimepheptanol	9.701	24	J
12.1000195-05-6	(1-Ethyl-2-methylpropyl)meth	9.733	35	J
13.1000339-95-2	5-Chlorovaleramide, N,N-dime	9.765	44	J
14.15402-82-1	3,5-Dimethoxyamphetamine	14.424	280	J
15.51207-66-0	(S)-(+)-1-(2-Pyrrolidinylmet	15.467	56	J
16.				
17.SVOCTIC	Total SVOC TICs		810	J
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19.				
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page 1 of 1

FORM I SV-1

REVISED

Sample Description: **BDA-6T Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/31/2019 11:30
Collection Date/Time: 10/30/2019 15:15
SDG#: BMS82-07

ARCADIS U.S., Inc.
ELLE Sample #: GW 1188920
ELLE Group #: 2071978
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	20	0.7	1
11997	Acetonitrile	75-05-8	N.D.	100	16	1
11997	Benzene	71-43-2	N.D.	1	0.2	1
11997	Bromochloromethane	74-97-5	N.D.	5	0.2	1
11997	Bromodichloromethane	75-27-4	N.D.	1	0.2	1
11997	Bromoform	75-25-2	N.D.	4	1	1
11997	Bromomethane	74-83-9	N.D.	1	0.3	1
11997	n-Butanol	71-36-3	N.D.	250	61	1
11997	2-Butanone	78-93-3	N.D.	10	0.3	1
11997	t-Butyl alcohol	75-65-0	N.D.	50	12	1
11997	n-Butylbenzene	104-51-8	N.D.	5	0.2	1
11997	sec-Butylbenzene	135-98-8	N.D.	5	0.2	1
11997	tert-Butylbenzene	98-06-6	N.D.	5	0.3	1
11997	Carbon Disulfide	75-15-0	N.D.	5	0.2	1
11997	Carbon Tetrachloride	56-23-5	N.D.	1	0.2	1
11997	Chlorobenzene	108-90-7	N.D.	1	0.2	1
11997	Chlorodifluoromethane[1]	75-45-6	N.D.	5	2	1
11997	Chloroethane	75-00-3	N.D.	1	0.2	1
11997	Chloroform	67-66-3	N.D.	1	0.2	1
11997	Chloromethane	74-87-3	N.D.	1	0.2	1
11997	Cyclohexane	110-82-7	N.D.	5	1	1
11997	Cyclohexanone[1]	108-94-1	N.D.	100	25	1
11997	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	5	0.3	1
11997	Dibromochloromethane	124-48-1	N.D.	1	0.2	1
11997	1,2-Dibromoethane	106-93-4	N.D.	1	0.2	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	5	0.2	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	5	0.2	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	5	0.2	1
11997	Dichlorodifluoromethane	75-71-8	N.D.	1	0.2	1
11997	1,1-Dichloroethane	75-34-3	N.D.	1	0.2	1
11997	1,2-Dichloroethane	107-06-2	N.D.	1	0.3	1
11997	1,1-Dichloroethene	75-35-4	N.D.	1	0.2	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	1	0.2	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	1	0.2	1
11997	1,2-Dichloropropane	78-87-5	N.D.	1	0.2	1
11997	cis-1,3-Dichloropropene	10061-01-5	N.D.	1	0.2	1
11997	trans-1,3-Dichloropropene	10061-02-6	N.D.	1	0.2	1
11997	1,4-Dioxane	123-91-1	N.D.	250	29	1
11997	Ethyl Acetate	141-78-6	N.D.	5	0.7	1
11997	Ethyl ether	60-29-7	N.D.	5	0.2	1
11997	Ethylbenzene	100-41-4	N.D.	1	0.4	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **BDA-6T Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/31/2019 11:30
Collection Date/Time: 10/30/2019 15:15
SDG#: BMS82-07

ARCADIS U.S., Inc.
ELLE Sample #: GW 1188920
ELLE Group #: 2071978
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Freon 113	76-13-1	N.D.	10	0.2	1
11997	n-Heptane[1]	142-82-5	N.D.	5	2	1
11997	n-Hexane[1]	110-54-3	N.D.	5	2	1
11997	2-Hexanone	591-78-6	N.D.	10	0.3	1
11997	Isobutyl Alcohol	78-83-1	N.D.	250	36	1
11997	Isopropylbenzene	98-82-8	N.D.	5	0.2	1
11997	p-Isopropyltoluene	99-87-6	N.D.	5	0.2	1
11997	Methyl Acetate	79-20-9	N.D.	5	0.2	1
11997	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	1	0.2	1
11997	4-Methyl-2-pentanone	108-10-1	N.D.	10	0.5	1
11997	Methylcyclohexane	108-87-2	N.D.	5	0.5	1
11997	Methylene Chloride	75-09-2	N.D.	1	0.3	1
11997	Naphthalene	91-20-3	N.D.	5	1	1
11997	2-Nitropropane	79-46-9	N.D.	10	0.8	1
11997	Styrene	100-42-5	N.D.	5	0.2	1
11997	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	1	0.2	1
11997	Tetrachloroethene	127-18-4	N.D.	1	0.2	1
11997	Tetrahydrofuran	109-99-9	N.D.	10	0.7	1
11997	Toluene	108-88-3	N.D.	1	0.2	1
11997	1,2,3-Trichlorobenzene	87-61-6	N.D.	5	0.4	1
11997	1,2,4-Trichlorobenzene	120-82-1	N.D.	5	0.3	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	1	0.3	1
11997	1,1,2-Trichloroethane	79-00-5	N.D.	1	0.2	1
11997	Trichloroethene	79-01-6	N.D.	1	0.2	1
11997	Trichlorofluoromethane	75-69-4	N.D.	1	0.2	1
11997	1,2,4-Trimethylbenzene	95-63-6	N.D.	5	1	1
11997	1,3,5-Trimethylbenzene	108-67-8	N.D.	5	0.3	1
11997	Vinyl Chloride	75-01-4	N.D.	1	0.2	1
11997	m+p-Xylene	179601-23-1	N.D.	5	1	1
11997	o-Xylene	95-47-6	N.D.	1	0.4	1
11997	Xylene (Total)	1330-20-7	N.D.	6	1	1

Project defined calibration criteria are not met. The calibration is compliant with the method defined criteria.

A Report Limit Verification (RLV) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The RLV standard shows adequate sensitivity at or below the reporting limit.

00882 VOA Interp. Library Search-10

The results from the volatile library search are listed on the attached FORM 1 - VOA-TIC. The qualifiers appearing in the "Q" column are defined at the end of the report.

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **BDA-6T Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/31/2019 11:30
Collection Date/Time: 10/30/2019 15:15
SDG#: BMS82-07

ARCADIS U.S., Inc.
ELLE Sample #: GW 1188920
ELLE Group #: 2071978
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	Acenaphthene	83-32-9	N.D.	0.54	0.11	1
14241	Acenaphthylene	208-96-8	N.D.	0.54	0.11	1
14241	Acetophenone	98-86-2	N.D.	11	4.3	1
14241	Aniline	62-53-3	N.D.	11	3.3	1
14241	Anthracene	120-12-7	N.D.	0.54	0.11	1
14241	Atrazine	1912-24-9	N.D.	5.4	2.2	1
14241	Benzaldehyde	100-52-7	N.D.	11	3.3	1
14241	Benzo(a)anthracene	56-55-3	N.D.	0.54	0.11	1
14241	Benzo(a)pyrene	50-32-8	N.D.	0.54	0.11	1
14241	Benzo(b)fluoranthene	205-99-2	N.D.	0.54	0.11	1
14241	Benzo(g,h,i)perylene	191-24-2	N.D.	0.54	0.11	1
14241	Benzo(k)fluoranthene	207-08-9	N.D.	0.54	0.11	1
14241	Benzyl alcohol	100-51-6	N.D.	33	11	1
14241	1,1'-Biphenyl	92-52-4	N.D.	11	3.3	1
14241	4-Bromophenyl-phenylether	101-55-3	N.D.	2.2	0.54	1
14241	Butylbenzylphthalate	85-68-7	N.D.	5.4	2.2	1
14241	Di-n-butylphthalate	84-74-2	N.D.	5.4	2.2	1
14241	Caprolactam	105-60-2	N.D.	12	5.4	1
14241	Carbazole	86-74-8	N.D.	2.2	0.54	1
14241	4-Chloro-3-methylphenol	59-50-7	N.D.	2.2	0.54	1
14241	4-Chloroaniline	106-47-8	N.D.	11	4.3	1
14241	bis(2-Chloroethoxy)methane	111-91-1	N.D.	2.2	0.54	1
14241	bis(2-Chloroethyl)ether	111-44-4	N.D.	2.2	0.54	1
14241	bis(2-Chloroisopropyl)ether[1]	39638-32-9	N.D.	2.2	0.54	1
	Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.					
14241	2-Chloronaphthalene	91-58-7	N.D.	1.1	0.43	1
14241	2-Chlorophenol	95-57-8	N.D.	2.2	0.54	1
14241	4-Chlorophenyl-phenylether	7005-72-3	N.D.	2.2	0.54	1
14241	Chrysene	218-01-9	N.D.	0.54	0.11	1
14241	Dibenz(a,h)anthracene	53-70-3	N.D.	0.54	0.11	1
14241	Dibenzofuran	132-64-9	N.D.	2.2	0.54	1
14241	3,3'-Dichlorobenzidine	91-94-1	N.D.	11	3.3	1
14241	2,4-Dichlorophenol	120-83-2	N.D.	2.2	0.54	1
14241	Dicyclohexylamine[1]	101-83-7	N.D.	11	11	1
14241	Diethylphthalate	84-66-2	N.D.	5.4	2.2	1
14241	N,N-Dimethylaniline[1]	121-69-7	N.D.	1.1	0.54	1
14241	2,4-Dimethylphenol	105-67-9	N.D.	11	3.3	1
14241	Dimethylphthalate	131-11-3	N.D.	5.4	2.2	1
14241	4,6-Dinitro-2-methylphenol	534-52-1	N.D.	23	8.7	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **BDA-6T Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/31/2019 11:30
Collection Date/Time: 10/30/2019 15:15
SDG#: BMS82-07

ARCADIS U.S., Inc.
ELLE Sample #: GW 1188920
ELLE Group #: 2071978
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	2,4-Dinitrophenol	51-28-5	N.D.	33	15	1
14241	2,4-Dinitrotoluene	121-14-2	N.D.	5.4	1.1	1
14241	2,6-Dinitrotoluene	606-20-2	N.D.	2.2	0.54	1
14241	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	12	5.4	1
14241	Fluoranthene	206-44-0	N.D.	0.54	0.11	1
14241	Fluorene	86-73-7	N.D.	0.54	0.11	1
14241	Hexachlorobenzene	118-74-1	N.D.	0.54	0.11	1
14241	Hexachlorobutadiene	87-68-3	N.D.	2.2	0.54	1
14241	Hexachlorocyclopentadiene	77-47-4	N.D.	12	5.4	1
14241	Hexachloroethane	67-72-1	N.D.	5.4	1.1	1
14241	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.54	0.11	1
14241	Isophorone	78-59-1	N.D.	2.2	0.54	1
14241	2-Methylnaphthalene	91-57-6	N.D.	0.54	0.11	1
14241	2-Methylphenol	95-48-7	N.D.	2.2	0.54	1
14241	4-Methylphenol	65794-96-9	N.D.	2.2	0.54	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
14241	Naphthalene	91-20-3	N.D.	0.54	0.11	1
14241	2-Nitroaniline	88-74-4	N.D.	7.6	2.2	1
14241	3-Nitroaniline	99-09-2	N.D.	7.6	3.3	1
14241	4-Nitroaniline	100-01-6	N.D.	3.3	0.98	1
14241	Nitrobenzene	98-95-3	N.D.	2.2	0.54	1
14241	2-Nitrophenol	88-75-5	N.D.	11	3.3	1
14241	4-Nitrophenol	100-02-7	N.D.	33	11	1
14241	N-Nitroso-di-n-propylamine	621-64-7	N.D.	3.3	0.76	1
14241	N-Nitrosodiphenylamine	86-30-6	N.D.	3.3	0.76	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.					
14241	Di-n-octylphthalate	117-84-0	N.D.	12	5.4	1
14241	Pentachlorophenol	87-86-5	N.D.	5.4	1.1	1
14241	Phenanthrene	85-01-8	N.D.	0.54	0.11	1
14241	Phenol	108-95-2	N.D.	2.2	0.54	1
14241	Pyrene	129-00-0	N.D.	0.54	0.11	1
14241	Pyridine	110-86-1	N.D.	5.4	2.2	1
14241	1,2,4,5-Tetrachlorobenzene	95-94-3	N.D.	2.2	0.54	1
14241	2,3,4,6-Tetrachlorophenol	58-90-2	N.D.	11	4.3	1
14241	2,4,5-Trichlorophenol	95-95-4	N.D.	2.2	0.54	1
14241	2,4,6-Trichlorophenol	88-06-2	N.D.	2.2	0.54	1
14241	Triethylamine[1]	121-44-8	N.D.	11	11	1

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **BDA-6T Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/31/2019 11:30
Collection Date/Time: 10/30/2019 15:15
SDG#: BMS82-07

ARCADIS U.S., Inc.
ELLE Sample #: GW 1188920
ELLE Group #: 2071978
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor

Summary. Since the recovery is high and the target analyte(s) was not detected in the sample, the data is reported.

00886 SVOA TIC Interpretive(25)

The results from the semivolatile library search are listed on the attached FORM 1 - SV-TIC. The qualifiers appearing in the "Q" column are defined at the end of the report.

Aldehydes & Ketones	SW-846 8315A		ug/l	ug/l	ug/l	
13022	Acetaldehyde[1]	75-07-0	N.D.	60	35	1
13022	Formaldehyde	50-00-0	N.D.	50	20	1

The response for a target analyte(s) in the initial calibration verification standard is outside the QC acceptance limits. The client was contacted and the data reported.
The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary.

GC Miscellaneous	SW-846 8015D Rev.4, June 2003		ug/l	ug/l	ug/l	
10603	Ethanol	64-17-5	N.D. D2	1,000	150	1
12926	Ethylene glycol[1]	107-21-1	N.D.	10,000	5,000	1
10603	Isopropanol[1]	67-63-0	N.D. D2	1,000	110	1
10603	Methanol	67-56-1	N.D. D2	1,000	220	1
12926	Propylene glycol[1]	57-55-6	N.D.	10,000	2,000	1

The response for tetramethylene glycol in the continuing calibration verification standard is outside the QC acceptance limits low. The following action was taken:
The analysis was repeated and the continuing calibration verification standard bracketing the sample on the second trial is also outside the acceptance limits. This effect is attributed to the sample matrix and the data is reported.

Sample Comments

State of New York Certification No. 10670

[1] = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	Y193121AA	11/08/2019 16:50	Corie Mellinger	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	Y193121AA	11/08/2019 16:49	Corie Mellinger	1
14241	Semi-annual Groundwater BMS	SW-846 8270D	1	19309WAJ026	11/09/2019 18:02	Holly B Ziegler	1
11010	8270D BNA Extraction	SW-846 3510C	1	19309WAJ026	11/06/2019 02:00	Mathias Okpo	1
13022	Short List Aldehydes- W 8315A	SW-846 8315A	1	193040018A	11/01/2019 19:21	Jessica L Miller	1
01013	Formaldehyde Extraction	SW-846 8315A	1	193040018A	11/01/2019 08:38	Alison Moll	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **BDA-6T Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/31/2019 11:30
Collection Date/Time: 10/30/2019 15:15
SDG#: BMS82-07

ARCADIS U.S., Inc.
ELLE Sample #: GW 1188920
ELLE Group #: 2071978
Matrix: Groundwater

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10603	Alcohols in Water	SW-846 8015D Rev.4, June 2003	1	193080008A	11/05/2019 02:19	Johanna C Kennedy	1
12926	Glycols in Water by 8015C/D	SW-846 8015D Rev.4, June 2003	1	193080028A	11/06/2019 01:25	Donald Brown	1

*=This limit was used in the evaluation of the final result

REVISED

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
S8207

Lab Name: Lancaster Laboratories Contract:_____
Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____
Matrix: (soil/water) WATER Lab Sample ID: 1188920
Sample wt/vol: 5.0 (g/mL)mL Lab File ID:HP09355.i/19nov08a.b/yn08s14.d
Level: (low/med) LOW Date Received: 10/31/19
% Moisture: not dec. Date Analyzed: 11/08/19
Column: (pack/cap) CAP Dilution Factor: 1.0
CONCENTRATION UNITS:
Number TICs found: 0 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	VOCTIC	Total VOC TICs		0	U
2.					
3.					
4.					
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30.					

page 1 of 1

FORM I VOA-TIC

REVISED

1F

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

S8207

Lab Name: Lancaster Laboratories Contract:
Lab Code: LANCAS Case No.: SAS No.: SDG No.:
Matrix: (soil/water) WATER Lab Sample ID: 1188920
Sample wt/vol: 230 (g/mL) mL Lab File ID: lk0443.d
Level: (low/med) LOW Date Received: 10/31/19
% Moisture: Decanted: (Y/N) Date Extracted: 11/06/19
Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/09/19
Injection Volume: 1 (uL) Dilution Factor: 1
GPC Cleanup: N pH: Extraction: Sepf
CONCENTRATION UNITS:
Number TICs found: 0 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	SVOCTIC	Total SVOC TICs		0	U
2.					
3.					
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page 1 of 1

FORM I SV-1

REVISED

Sample Description: **Trip Blank Water**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/31/2019 11:30
Collection Date/Time: 10/23/2019
SDG#: BMS82-08TB

ARCADIS U.S., Inc.
ELLE Sample #: GW 1188921
ELLE Group #: 2071978
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	20	0.7	1
11997	Acetonitrile	75-05-8	N.D.	100	16	1
11997	Benzene	71-43-2	N.D.	1	0.2	1
11997	Bromochloromethane	74-97-5	N.D.	5	0.2	1
11997	Bromodichloromethane	75-27-4	N.D.	1	0.2	1
11997	Bromoform	75-25-2	N.D.	4	1	1
11997	Bromomethane	74-83-9	N.D.	1	0.3	1
11997	n-Butanol	71-36-3	N.D.	250	61	1
11997	2-Butanone	78-93-3	N.D.	10	0.3	1
11997	t-Butyl alcohol	75-65-0	N.D.	50	12	1
11997	n-Butylbenzene	104-51-8	N.D.	5	0.2	1
11997	sec-Butylbenzene	135-98-8	N.D.	5	0.2	1
11997	tert-Butylbenzene	98-06-6	N.D.	5	0.3	1
11997	Carbon Disulfide	75-15-0	N.D.	5	0.2	1
11997	Carbon Tetrachloride	56-23-5	N.D.	1	0.2	1
11997	Chlorobenzene	108-90-7	N.D.	1	0.2	1
11997	Chlorodifluoromethane[1]	75-45-6	N.D.	5	2	1
11997	Chloroethane	75-00-3	N.D.	1	0.2	1
11997	Chloroform	67-66-3	N.D.	1	0.2	1
11997	Chloromethane	74-87-3	N.D.	1	0.2	1
11997	Cyclohexane	110-82-7	N.D.	5	1	1
11997	Cyclohexanone[1]	108-94-1	N.D.	100	25	1
11997	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	5	0.3	1
11997	Dibromochloromethane	124-48-1	N.D.	1	0.2	1
11997	1,2-Dibromoethane	106-93-4	N.D.	1	0.2	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	5	0.2	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	5	0.2	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	5	0.2	1
11997	Dichlorodifluoromethane	75-71-8	N.D.	1	0.2	1
11997	1,1-Dichloroethane	75-34-3	N.D.	1	0.2	1
11997	1,2-Dichloroethane	107-06-2	N.D.	1	0.3	1
11997	1,1-Dichloroethene	75-35-4	N.D.	1	0.2	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	1	0.2	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	1	0.2	1
11997	1,2-Dichloropropane	78-87-5	N.D.	1	0.2	1
11997	cis-1,3-Dichloropropene	10061-01-5	N.D.	1	0.2	1
11997	trans-1,3-Dichloropropene	10061-02-6	N.D.	1	0.2	1
11997	1,4-Dioxane	123-91-1	N.D.	250	29	1
11997	Ethyl Acetate	141-78-6	N.D.	5	0.7	1
11997	Ethyl ether	60-29-7	N.D.	5	0.2	1
11997	Ethylbenzene	100-41-4	N.D.	1	0.4	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **Trip Blank Water**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/31/2019 11:30
Collection Date/Time: 10/23/2019
SDG#: BMS82-08TB

ARCADIS U.S., Inc.
ELLE Sample #: GW 1188921
ELLE Group #: 2071978
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Freon 113	76-13-1	N.D.	10	0.2	1
11997	n-Heptane[1]	142-82-5	N.D.	5	2	1
11997	n-Hexane[1]	110-54-3	N.D.	5	2	1
11997	2-Hexanone	591-78-6	N.D.	10	0.3	1
11997	Isobutyl Alcohol	78-83-1	N.D.	250	36	1
11997	Isopropylbenzene	98-82-8	N.D.	5	0.2	1
11997	p-Isopropyltoluene	99-87-6	N.D.	5	0.2	1
11997	Methyl Acetate	79-20-9	N.D.	5	0.2	1
11997	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	1	0.2	1
11997	4-Methyl-2-pentanone	108-10-1	N.D.	10	0.5	1
11997	Methylcyclohexane	108-87-2	N.D.	5	0.5	1
11997	Methylene Chloride	75-09-2	N.D.	1	0.3	1
11997	Naphthalene	91-20-3	N.D.	5	1	1
11997	2-Nitropropane	79-46-9	N.D.	10	0.8	1
11997	Styrene	100-42-5	N.D.	5	0.2	1
11997	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	1	0.2	1
11997	Tetrachloroethene	127-18-4	N.D.	1	0.2	1
11997	Tetrahydrofuran	109-99-9	N.D.	10	0.7	1
11997	Toluene	108-88-3	N.D.	1	0.2	1
11997	1,2,3-Trichlorobenzene	87-61-6	N.D.	5	0.4	1
11997	1,2,4-Trichlorobenzene	120-82-1	N.D.	5	0.3	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	1	0.3	1
11997	1,1,2-Trichloroethane	79-00-5	N.D.	1	0.2	1
11997	Trichloroethene	79-01-6	N.D.	1	0.2	1
11997	Trichlorofluoromethane	75-69-4	N.D.	1	0.2	1
11997	1,2,4-Trimethylbenzene	95-63-6	N.D.	5	1	1
11997	1,3,5-Trimethylbenzene	108-67-8	N.D.	5	0.3	1
11997	Vinyl Chloride	75-01-4	N.D.	1	0.2	1
11997	m+p-Xylene	179601-23-1	N.D.	5	1	1
11997	o-Xylene	95-47-6	N.D.	1	0.4	1
11997	Xylene (Total)	1330-20-7	N.D.	6	1	1

Project defined calibration criteria are not met. The calibration is compliant with the method defined criteria.

A Report Limit Verification (RLV) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The RLV standard shows adequate sensitivity at or below the reporting limit.

00882 VOA Interp. Library Search-10

The results from the volatile library search are listed on the attached FORM 1 - VOA-TIC. The qualifiers appearing in the "Q" column are defined at the end of the report.

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **Trip Blank Water**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/31/2019 11:30
Collection Date/Time: 10/23/2019
SDG#: BMS82-08TB

ARCADIS U.S., Inc.
ELLE Sample #: GW 1188921
ELLE Group #: 2071978
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC Miscellaneous	**SW-846 8015D Rev.4, June 2003**		**ug/l**	**ug/l**	**ug/l**	
10603	Ethanol	64-17-5	N.D. D2	1,000	150	1
12926	Ethylene glycol[1]	107-21-1	N.D.	10,000	5,000	1
10603	Isopropanol[1]	67-63-0	N.D. D2	1,000	110	1
10603	Methanol	67-56-1	N.D. D2	1,000	220	1
12926	Propylene glycol[1]	57-55-6	N.D.	10,000	2,000	1

The response for tetramethylene glycol in the continuing calibration verification standard is outside the QC acceptance limits low. The following action was taken:
The analysis was repeated and the continuing calibration verification standard bracketing the sample on the second trial is also outside the acceptance limits. This effect is attributed to the sample matrix and the data is reported.

Sample Comments

State of New York Certification No. 10670

[1] = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	Y193091AA	11/05/2019 15:42	Corie Mellinger	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	Y193091AA	11/05/2019 15:41	Corie Mellinger	1
10603	Alcohols in Water	SW-846 8015D Rev.4, June 2003	1	193080008A	11/05/2019 02:52	Johanna C Kennedy	1
12926	Glycols in Water by 8015C/D	SW-846 8015D Rev.4, June 2003	1	193080028A	11/06/2019 02:03	Donald Brown	1

*=This limit was used in the evaluation of the final result

REVISED

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
S8208

Lab Name: Lancaster Laboratories Contract:_____
Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____
Matrix: (soil/water) WATER Lab Sample ID: 1188921
Sample wt/vol: 5.0 (g/mL)mL Lab File ID:HP09355.i/19nov05a.b/yn05s04.d
Level: (low/med) LOW Date Received: 10/31/19
% Moisture: not dec. Date Analyzed: 11/05/19
Column: (pack/cap) CAP Dilution Factor: 1.0
CONCENTRATION UNITS:
Number TICs found: 0 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	VOCTIC	Total VOC TICs		0	U
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page 1 of 1

FORM I VOA-TIC

REVISED

Sample Description: **BDA15RX Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/31/2019 11:30
Collection Date/Time: 10/30/2019 11:37
SDG#: BMS82-09

ARCADIS U.S., Inc.
ELLE Sample #: GW 1188922
ELLE Group #: 2071978
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	28	20	0.7	1
11997	Acetonitrile	75-05-8	N.D.	100	16	1
11997	Benzene	71-43-2	0.4 J	1	0.2	1
11997	Bromochloromethane	74-97-5	N.D.	5	0.2	1
11997	Bromodichloromethane	75-27-4	N.D.	1	0.2	1
11997	Bromoform	75-25-2	N.D.	4	1	1
11997	Bromomethane	74-83-9	N.D.	1	0.3	1
11997	n-Butanol	71-36-3	N.D.	250	61	1
11997	2-Butanone	78-93-3	2 J	10	0.3	1
11997	t-Butyl alcohol	75-65-0	N.D.	50	12	1
11997	n-Butylbenzene	104-51-8	N.D.	5	0.2	1
11997	sec-Butylbenzene	135-98-8	N.D.	5	0.2	1
11997	tert-Butylbenzene	98-06-6	N.D.	5	0.3	1
11997	Carbon Disulfide	75-15-0	N.D.	5	0.2	1
11997	Carbon Tetrachloride	56-23-5	N.D.	1	0.2	1
11997	Chlorobenzene	108-90-7	N.D.	1	0.2	1
11997	Chlorodifluoromethane[1]	75-45-6	N.D.	5	2	1
11997	Chloroethane	75-00-3	N.D.	1	0.2	1
11997	Chloroform	67-66-3	N.D.	1	0.2	1
11997	Chloromethane	74-87-3	N.D.	1	0.2	1
11997	Cyclohexane	110-82-7	N.D.	5	1	1
11997	Cyclohexanone[1]	108-94-1	N.D.	100	25	1
11997	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	5	0.3	1
11997	Dibromochloromethane	124-48-1	N.D.	1	0.2	1
11997	1,2-Dibromoethane	106-93-4	N.D.	1	0.2	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	5	0.2	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	5	0.2	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	5	0.2	1
11997	Dichlorodifluoromethane	75-71-8	N.D.	1	0.2	1
11997	1,1-Dichloroethane	75-34-3	N.D.	1	0.2	1
11997	1,2-Dichloroethane	107-06-2	N.D.	1	0.3	1
11997	1,1-Dichloroethene	75-35-4	N.D.	1	0.2	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	1	0.2	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	1	0.2	1
11997	1,2-Dichloropropane	78-87-5	N.D.	1	0.2	1
11997	cis-1,3-Dichloropropene	10061-01-5	N.D.	1	0.2	1
11997	trans-1,3-Dichloropropene	10061-02-6	N.D.	1	0.2	1
11997	1,4-Dioxane	123-91-1	N.D.	250	29	1
11997	Ethyl Acetate	141-78-6	N.D.	5	0.7	1
11997	Ethyl ether	60-29-7	N.D.	5	0.2	1
11997	Ethylbenzene	100-41-4	N.D.	1	0.4	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **BDA15RX Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/31/2019 11:30
Collection Date/Time: 10/30/2019 11:37
SDG#: BMS82-09

ARCADIS U.S., Inc.
ELLE Sample #: GW 1188922
ELLE Group #: 2071978
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Freon 113	76-13-1	N.D.	10	0.2	1
11997	n-Heptane[1]	142-82-5	N.D.	5	2	1
11997	n-Hexane[1]	110-54-3	N.D.	5	2	1
11997	2-Hexanone	591-78-6	N.D.	10	0.3	1
11997	Isobutyl Alcohol	78-83-1	N.D.	250	36	1
11997	Isopropylbenzene	98-82-8	N.D.	5	0.2	1
11997	p-Isopropyltoluene	99-87-6	N.D.	5	0.2	1
11997	Methyl Acetate	79-20-9	N.D.	5	0.2	1
11997	Methyl Tertiary Butyl Ether	1634-04-4	0.4 J	1	0.2	1
11997	4-Methyl-2-pentanone	108-10-1	1 J	10	0.5	1
11997	Methylcyclohexane	108-87-2	N.D.	5	0.5	1
11997	Methylene Chloride	75-09-2	1	1	0.3	1
11997	Naphthalene	91-20-3	N.D.	5	1	1
11997	2-Nitropropane	79-46-9	N.D.	10	0.8	1
11997	Styrene	100-42-5	N.D.	5	0.2	1
11997	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	1	0.2	1
11997	Tetrachloroethene	127-18-4	N.D.	1	0.2	1
11997	Tetrahydrofuran	109-99-9	N.D.	10	0.7	1
11997	Toluene	108-88-3	0.2 J	1	0.2	1
11997	1,2,3-Trichlorobenzene	87-61-6	N.D.	5	0.4	1
11997	1,2,4-Trichlorobenzene	120-82-1	N.D.	5	0.3	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	1	0.3	1
11997	1,1,2-Trichloroethane	79-00-5	N.D.	1	0.2	1
11997	Trichloroethene	79-01-6	N.D.	1	0.2	1
11997	Trichlorofluoromethane	75-69-4	N.D.	1	0.2	1
11997	1,2,4-Trimethylbenzene	95-63-6	N.D.	5	1	1
11997	1,3,5-Trimethylbenzene	108-67-8	N.D.	5	0.3	1
11997	Vinyl Chloride	75-01-4	N.D.	1	0.2	1
11997	m+p-Xylene	179601-23-1	N.D.	5	1	1
11997	o-Xylene	95-47-6	N.D.	1	0.4	1
11997	Xylene (Total)	1330-20-7	N.D.	6	1	1

Project defined calibration criteria are not met. The calibration is compliant with the method defined criteria.

A Report Limit Verification (RLV) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The RLV standard shows adequate sensitivity at or below the reporting limit.

00882 VOA Interp. Library Search-10

The results from the volatile library search are listed on the attached FORM 1 - VOA-TIC. The qualifiers appearing in the "Q" column are defined at the end of the report.

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **BDA15RX Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/31/2019 11:30
Collection Date/Time: 10/30/2019 11:37
SDG#: BMS82-09

ARCADIS U.S., Inc.
ELLE Sample #: GW 1188922
ELLE Group #: 2071978
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	Acenaphthene	83-32-9	N.D.	0.51	0.10	1
14241	Acenaphthylene	208-96-8	N.D.	0.51	0.10	1
14241	Acetophenone	98-86-2	N.D.	10	4.0	1
14241	Aniline	62-53-3	N.D.	10	3.0	1
14241	Anthracene	120-12-7	N.D.	0.51	0.10	1
14241	Atrazine	1912-24-9	N.D.	5.1	2.0	1
14241	Benzaldehyde	100-52-7	N.D.	10	3.0	1
14241	Benzo(a)anthracene	56-55-3	N.D.	0.51	0.10	1
14241	Benzo(a)pyrene	50-32-8	N.D.	0.51	0.10	1
14241	Benzo(b)fluoranthene	205-99-2	N.D.	0.51	0.10	1
14241	Benzo(g,h,i)perylene	191-24-2	N.D.	0.51	0.10	1
14241	Benzo(k)fluoranthene	207-08-9	N.D.	0.51	0.10	1
14241	Benzyl alcohol	100-51-6	N.D.	30	10	1
14241	1,1'-Biphenyl	92-52-4	N.D.	10	3.0	1
14241	4-Bromophenyl-phenylether	101-55-3	N.D.	2.0	0.51	1
14241	Butylbenzylphthalate	85-68-7	N.D.	5.1	2.0	1
14241	Di-n-butylphthalate	84-74-2	N.D.	5.1	2.0	1
14241	Caprolactam	105-60-2	13	11	5.1	1
14241	Carbazole	86-74-8	N.D.	2.0	0.51	1
14241	4-Chloro-3-methylphenol	59-50-7	N.D.	2.0	0.51	1
14241	4-Chloroaniline	106-47-8	N.D.	10	4.0	1
14241	bis(2-Chloroethoxy)methane	111-91-1	N.D.	2.0	0.51	1
14241	bis(2-Chloroethyl)ether	111-44-4	N.D.	2.0	0.51	1
14241	bis(2-Chloroisopropyl)ether[1]	39638-32-9	N.D.	2.0	0.51	1
	Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.					
14241	2-Chloronaphthalene	91-58-7	N.D.	1.0	0.40	1
14241	2-Chlorophenol	95-57-8	N.D.	2.0	0.51	1
14241	4-Chlorophenyl-phenylether	7005-72-3	N.D.	2.0	0.51	1
14241	Chrysene	218-01-9	N.D.	0.51	0.10	1
14241	Dibenz(a,h)anthracene	53-70-3	N.D.	0.51	0.10	1
14241	Dibenzofuran	132-64-9	N.D.	2.0	0.51	1
14241	3,3'-Dichlorobenzidine	91-94-1	N.D.	10	3.0	1
14241	2,4-Dichlorophenol	120-83-2	N.D.	2.0	0.51	1
14241	Dicyclohexylamine[1]	101-83-7	N.D.	10	10	1
14241	Diethylphthalate	84-66-2	N.D.	5.1	2.0	1
14241	N,N-Dimethylaniline[1]	121-69-7	N.D.	1.0	0.51	1
14241	2,4-Dimethylphenol	105-67-9	N.D.	10	3.0	1
14241	Dimethylphthalate	131-11-3	N.D.	5.1	2.0	1
14241	4,6-Dinitro-2-methylphenol	534-52-1	N.D.	21	8.1	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **BDA15RX Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/31/2019 11:30
Collection Date/Time: 10/30/2019 11:37
SDG#: BMS82-09

ARCADIS U.S., Inc.
ELLE Sample #: GW 1188922
ELLE Group #: 2071978
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	2,4-Dinitrophenol	51-28-5	N.D.	30	14	1
14241	2,4-Dinitrotoluene	121-14-2	N.D.	5.1	1.0	1
14241	2,6-Dinitrotoluene	606-20-2	N.D.	2.0	0.51	1
14241	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	11	5.1	1
14241	Fluoranthene	206-44-0	N.D.	0.51	0.10	1
14241	Fluorene	86-73-7	N.D.	0.51	0.10	1
14241	Hexachlorobenzene	118-74-1	N.D.	0.51	0.10	1
14241	Hexachlorobutadiene	87-68-3	N.D.	2.0	0.51	1
14241	Hexachlorocyclopentadiene	77-47-4	N.D.	11	5.1	1
14241	Hexachloroethane	67-72-1	N.D.	5.1	1.0	1
14241	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.51	0.10	1
14241	Isophorone	78-59-1	N.D.	2.0	0.51	1
14241	2-Methylnaphthalene	91-57-6	N.D.	0.51	0.10	1
14241	2-Methylphenol	95-48-7	N.D.	2.0	0.51	1
14241	4-Methylphenol	65794-96-9	N.D.	2.0	0.51	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
14241	Naphthalene	91-20-3	N.D.	0.51	0.10	1
14241	2-Nitroaniline	88-74-4	N.D.	7.1	2.0	1
14241	3-Nitroaniline	99-09-2	N.D.	7.1	3.0	1
14241	4-Nitroaniline	100-01-6	N.D.	3.0	0.91	1
14241	Nitrobenzene	98-95-3	N.D.	2.0	0.51	1
14241	2-Nitrophenol	88-75-5	N.D.	10	3.0	1
14241	4-Nitrophenol	100-02-7	N.D.	30	10	1
14241	N-Nitroso-di-n-propylamine	621-64-7	N.D.	3.0	0.71	1
14241	N-Nitrosodiphenylamine	86-30-6	N.D.	3.0	0.71	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.					
14241	Di-n-octylphthalate	117-84-0	N.D.	11	5.1	1
14241	Pentachlorophenol	87-86-5	N.D.	5.1	1.0	1
14241	Phenanthrene	85-01-8	N.D.	0.51	0.10	1
14241	Phenol	108-95-2	1.2 J	2.0	0.51	1
14241	Pyrene	129-00-0	N.D.	0.51	0.10	1
14241	Pyridine	110-86-1	N.D.	5.1	2.0	1
14241	1,2,4,5-Tetrachlorobenzene	95-94-3	N.D.	2.0	0.51	1
14241	2,3,4,6-Tetrachlorophenol	58-90-2	N.D.	10	4.0	1
14241	2,4,5-Trichlorophenol	95-95-4	N.D.	2.0	0.51	1
14241	2,4,6-Trichlorophenol	88-06-2	N.D.	2.0	0.51	1
14241	Triethylamine[1]	121-44-8	N.D.	10	10	1

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **BDA15RX Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/31/2019 11:30
Collection Date/Time: 10/30/2019 11:37
SDG#: BMS82-09

ARCADIS U.S., Inc.
ELLE Sample #: GW 1188922
ELLE Group #: 2071978
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor

Summary. Since the recovery is high and the target analyte(s) was not detected in the sample, the data is reported.

00886 SVOA TIC Interpretive(25)

The results from the semivolatile library search are listed on the attached FORM 1 - SV-TIC. The qualifiers appearing in the "Q" column are defined at the end of the report.

Sample Comments

State of New York Certification No. 10670

[1] = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	Y193121AA	11/08/2019 17:12	Corie Mellinger	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	Y193121AA	11/08/2019 17:11	Corie Mellinger	1
14241	Semi-annual Groundwater BMS	SW-846 8270D	1	19309WAJ026	11/09/2019 18:31	Holly B Ziegler	1
11010	8270D BNA Extraction	SW-846 3510C	1	19309WAJ026	11/06/2019 02:00	Mathias Okpo	1

*=This limit was used in the evaluation of the final result

REVISED

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
S8209

Lab Name: Lancaster Laboratories Contract:_____
Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____
Matrix: (soil/water) WATER Lab Sample ID: 1188922
Sample wt/vol: 5.0 (g/mL)mL Lab File ID:HP09355.i/19nov08a.b/yn08s15.d
Level: (low/med) LOW Date Received: 10/31/19
% Moisture: not dec. Date Analyzed: 11/08/19
Column: (pack/cap) CAP Dilution Factor: 1.0
CONCENTRATION UNITS:
Number TICs found: 2 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		Unknown alkane	13.26	210	J
2.		Unknown	13.32	5	J
3.					
4.	VOCTIC	Total VOC TICs		210	J
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page 1 of 1

FORM I VOA-TIC

REVISED

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EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

S8209

Lab Name: Lancaster Laboratories Contract:
Lab Code: LANCAS Case No.: SAS No.: SDG No.:
Matrix: (soil/water) WATER Lab Sample ID: 1188922
Sample wt/vol: 247 (g/mL) mL Lab File ID: lk0444.d
Level: (low/med) LOW Date Received: 10/31/19
% Moisture: Decanted: (Y/N) Date Extracted: 11/06/19
Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/09/19
Injection Volume: 1 (uL) Dilution Factor: 1
GPC Cleanup: N pH: Extraction: Sepf
CONCENTRATION UNITS:
Number TICs found: 15 (ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Unknown	5.465	51	J
2.	Unknown	5.855	10	J
3.	Unknown	6.978	8	J
4.	Unknown	7.080	290	J
5.	Unknown	7.224	8	J
6.	Unknown	8.016	5	J
7.	Unknown	8.160	81	J
8.65-85-0	Benzoic acid	8.765	190	J
9.	Unknown	8.807	85	J
10.	Unknown	8.829	50	J
11.	Unknown	8.856	70	J
12.	Unknown	8.888	99	J
13.	Unknown	9.631	6	J
14.	Unknown	15.547	5	J
15.85-60-9	Phenol, 4,4'-butylidenebis[2	18.842	7	J
16.				
17.SVOCTIC	Total SVOC TICs		970	J
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page 1 of 1

FORM I SV-1

REVISED

Sample Description: **PW-5T Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/31/2019 11:30
Collection Date/Time: 10/30/2019 14:07
SDG#: BMS82-10

ARCADIS U.S., Inc.
ELLE Sample #: GW 1188923
ELLE Group #: 2071978
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	20	0.7	1
11997	Acetonitrile	75-05-8	N.D.	100	16	1
11997	Benzene	71-43-2	N.D.	1	0.2	1
11997	Bromochloromethane	74-97-5	N.D.	5	0.2	1
11997	Bromodichloromethane	75-27-4	N.D.	1	0.2	1
11997	Bromoform	75-25-2	N.D.	4	1	1
11997	Bromomethane	74-83-9	N.D.	1	0.3	1
11997	n-Butanol	71-36-3	N.D.	250	61	1
11997	2-Butanone	78-93-3	N.D.	10	0.3	1
11997	t-Butyl alcohol	75-65-0	N.D.	50	12	1
11997	n-Butylbenzene	104-51-8	N.D.	5	0.2	1
11997	sec-Butylbenzene	135-98-8	N.D.	5	0.2	1
11997	tert-Butylbenzene	98-06-6	N.D.	5	0.3	1
11997	Carbon Disulfide	75-15-0	N.D.	5	0.2	1
11997	Carbon Tetrachloride	56-23-5	N.D.	1	0.2	1
11997	Chlorobenzene	108-90-7	N.D.	1	0.2	1
11997	Chlorodifluoromethane[1]	75-45-6	N.D.	5	2	1
11997	Chloroethane	75-00-3	N.D.	1	0.2	1
11997	Chloroform	67-66-3	N.D.	1	0.2	1
11997	Chloromethane	74-87-3	N.D.	1	0.2	1
11997	Cyclohexane	110-82-7	N.D.	5	1	1
11997	Cyclohexanone[1]	108-94-1	N.D.	100	25	1
11997	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	5	0.3	1
11997	Dibromochloromethane	124-48-1	N.D.	1	0.2	1
11997	1,2-Dibromoethane	106-93-4	N.D.	1	0.2	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	5	0.2	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	5	0.2	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	5	0.2	1
11997	Dichlorodifluoromethane	75-71-8	N.D.	1	0.2	1
11997	1,1-Dichloroethane	75-34-3	N.D.	1	0.2	1
11997	1,2-Dichloroethane	107-06-2	N.D.	1	0.3	1
11997	1,1-Dichloroethene	75-35-4	N.D.	1	0.2	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	1	0.2	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	1	0.2	1
11997	1,2-Dichloropropane	78-87-5	N.D.	1	0.2	1
11997	cis-1,3-Dichloropropene	10061-01-5	N.D.	1	0.2	1
11997	trans-1,3-Dichloropropene	10061-02-6	N.D.	1	0.2	1
11997	1,4-Dioxane	123-91-1	N.D.	250	29	1
11997	Ethyl Acetate	141-78-6	N.D.	5	0.7	1
11997	Ethyl ether	60-29-7	N.D.	5	0.2	1
11997	Ethylbenzene	100-41-4	N.D.	1	0.4	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **PW-5T Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/31/2019 11:30
Collection Date/Time: 10/30/2019 14:07
SDG#: BMS82-10

ARCADIS U.S., Inc.
ELLE Sample #: GW 1188923
ELLE Group #: 2071978
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Freon 113	76-13-1	N.D.	10	0.2	1
11997	n-Heptane[1]	142-82-5	N.D.	5	2	1
11997	n-Hexane[1]	110-54-3	N.D.	5	2	1
11997	2-Hexanone	591-78-6	N.D.	10	0.3	1
11997	Isobutyl Alcohol	78-83-1	N.D.	250	36	1
11997	Isopropylbenzene	98-82-8	N.D.	5	0.2	1
11997	p-Isopropyltoluene	99-87-6	N.D.	5	0.2	1
11997	Methyl Acetate	79-20-9	N.D.	5	0.2	1
11997	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	1	0.2	1
11997	4-Methyl-2-pentanone	108-10-1	N.D.	10	0.5	1
11997	Methylcyclohexane	108-87-2	N.D.	5	0.5	1
11997	Methylene Chloride	75-09-2	N.D.	1	0.3	1
11997	Naphthalene	91-20-3	N.D.	5	1	1
11997	2-Nitropropane	79-46-9	N.D.	10	0.8	1
11997	Styrene	100-42-5	N.D.	5	0.2	1
11997	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	1	0.2	1
11997	Tetrachloroethene	127-18-4	N.D.	1	0.2	1
11997	Tetrahydrofuran	109-99-9	N.D.	10	0.7	1
11997	Toluene	108-88-3	N.D.	1	0.2	1
11997	1,2,3-Trichlorobenzene	87-61-6	N.D.	5	0.4	1
11997	1,2,4-Trichlorobenzene	120-82-1	N.D.	5	0.3	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	1	0.3	1
11997	1,1,2-Trichloroethane	79-00-5	N.D.	1	0.2	1
11997	Trichloroethene	79-01-6	N.D.	1	0.2	1
11997	Trichlorofluoromethane	75-69-4	N.D.	1	0.2	1
11997	1,2,4-Trimethylbenzene	95-63-6	N.D.	5	1	1
11997	1,3,5-Trimethylbenzene	108-67-8	N.D.	5	0.3	1
11997	Vinyl Chloride	75-01-4	N.D.	1	0.2	1
11997	m+p-Xylene	179601-23-1	N.D.	5	1	1
11997	o-Xylene	95-47-6	N.D.	1	0.4	1
11997	Xylene (Total)	1330-20-7	N.D.	6	1	1

Project defined calibration criteria are not met. The calibration is compliant with the method defined criteria.

A Report Limit Verification (RLV) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The RLV standard shows adequate sensitivity at or below the reporting limit.

The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the TNI/DoD Standards. The following analytes are accepted based on this

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **PW-5T Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/31/2019 11:30
Collection Date/Time: 10/30/2019 14:07
SDG#: BMS82-10

ARCADIS U.S., Inc.
ELLE Sample #: GW 1188923
ELLE Group #: 2071978
Matrix: Groundwater

allowance: chloromethane, bromomethane and chloroethane.

A targeted library search was performed yielding the following results: hexachloroethane is non-detect.

Preservation requirements were not met. The sample was received at pH < 2 which is not the preservation specified for acrolein or acrylonitrile under the referenced method. The preservation criteria is pH of 4-5.

00882 VOA Interp. Library Search-10

The results from the volatile library search are listed on the attached FORM 1 - VOA-TIC. The qualifiers appearing in the "Q" column are defined at the end of the report.

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	Acenaphthene	83-32-9	N.D.	0.51	0.10	1
14241	Acenaphthylene	208-96-8	N.D.	0.51	0.10	1
14241	Acetophenone	98-86-2	N.D.	10	4.1	1
14241	Aniline	62-53-3	N.D.	10	3.1	1
14241	Anthracene	120-12-7	N.D.	0.51	0.10	1
14241	Atrazine	1912-24-9	N.D.	5.1	2.0	1
14241	Benzaldehyde	100-52-7	N.D.	10	3.1	1
14241	Benzo(a)anthracene	56-55-3	N.D.	0.51	0.10	1
14241	Benzo(a)pyrene	50-32-8	N.D.	0.51	0.10	1
14241	Benzo(b)fluoranthene	205-99-2	N.D.	0.51	0.10	1
14241	Benzo(g,h,i)perylene	191-24-2	N.D.	0.51	0.10	1
14241	Benzo(k)fluoranthene	207-08-9	N.D.	0.51	0.10	1
14241	Benzyl alcohol	100-51-6	N.D.	31	10	1
14241	1,1'-Biphenyl	92-52-4	N.D.	10	3.1	1
14241	4-Bromophenyl-phenylether	101-55-3	N.D.	2.0	0.51	1
14241	Butylbenzylphthalate	85-68-7	N.D.	5.1	2.0	1
14241	Di-n-butylphthalate	84-74-2	N.D.	5.1	2.0	1
14241	Caprolactam	105-60-2	N.D.	11	5.1	1
14241	Carbazole	86-74-8	N.D.	2.0	0.51	1
14241	4-Chloro-3-methylphenol	59-50-7	N.D.	2.0	0.51	1
14241	4-Chloroaniline	106-47-8	N.D.	10	4.1	1
14241	bis(2-Chloroethoxy)methane	111-91-1	N.D.	2.0	0.51	1
14241	bis(2-Chloroethyl)ether	111-44-4	N.D.	2.0	0.51	1
14241	bis(2-Chloroisopropyl)ether[1]	39638-32-9	N.D.	2.0	0.51	1
	Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.					
14241	2-Chloronaphthalene	91-58-7	N.D.	1.0	0.41	1
14241	2-Chlorophenol	95-57-8	N.D.	2.0	0.51	1
14241	4-Chlorophenyl-phenylether	7005-72-3	N.D.	2.0	0.51	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **PW-5T Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/31/2019 11:30
Collection Date/Time: 10/30/2019 14:07
SDG#: BMS82-10

ARCADIS U.S., Inc.
ELLE Sample #: GW 1188923
ELLE Group #: 2071978
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	Chrysene	218-01-9	N.D.	0.51	0.10	1
14241	Dibenz(a,h)anthracene	53-70-3	N.D.	0.51	0.10	1
14241	Dibenzofuran	132-64-9	N.D.	2.0	0.51	1
14241	3,3'-Dichlorobenzidine	91-94-1	N.D.	10	3.1	1
14241	2,4-Dichlorophenol	120-83-2	N.D.	2.0	0.51	1
14241	Dicyclohexylamine[1]	101-83-7	N.D.	10	10	1
14241	Diethylphthalate	84-66-2	N.D.	5.1	2.0	1
14241	N,N-Dimethylaniline[1]	121-69-7	N.D.	1.0	0.51	1
14241	2,4-Dimethylphenol	105-67-9	N.D.	10	3.1	1
14241	Dimethylphthalate	131-11-3	N.D.	5.1	2.0	1
14241	4,6-Dinitro-2-methylphenol	534-52-1	N.D.	22	8.2	1
14241	2,4-Dinitrophenol	51-28-5	N.D.	31	14	1
14241	2,4-Dinitrotoluene	121-14-2	N.D.	5.1	1.0	1
14241	2,6-Dinitrotoluene	606-20-2	N.D.	2.0	0.51	1
14241	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	11	5.1	1
14241	Fluoranthene	206-44-0	N.D.	0.51	0.10	1
14241	Fluorene	86-73-7	N.D.	0.51	0.10	1
14241	Hexachlorobenzene	118-74-1	N.D.	0.51	0.10	1
14241	Hexachlorobutadiene	87-68-3	N.D.	2.0	0.51	1
14241	Hexachlorocyclopentadiene	77-47-4	N.D.	11	5.1	1
14241	Hexachloroethane	67-72-1	N.D.	5.1	1.0	1
14241	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.51	0.10	1
14241	Isophorone	78-59-1	N.D.	2.0	0.51	1
14241	2-Methylnaphthalene	91-57-6	0.43 J	0.51	0.10	1
14241	2-Methylphenol	95-48-7	N.D.	2.0	0.51	1
14241	4-Methylphenol	65794-96-9	N.D.	2.0	0.51	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
14241	Naphthalene	91-20-3	N.D.	0.51	0.10	1
14241	2-Nitroaniline	88-74-4	N.D.	7.2	2.0	1
14241	3-Nitroaniline	99-09-2	N.D.	7.2	3.1	1
14241	4-Nitroaniline	100-01-6	N.D.	3.1	0.92	1
14241	Nitrobenzene	98-95-3	N.D.	2.0	0.51	1
14241	2-Nitrophenol	88-75-5	N.D.	10	3.1	1
14241	4-Nitrophenol	100-02-7	N.D.	31	10	1
14241	N-Nitroso-di-n-propylamine	621-64-7	N.D.	3.1	0.72	1
14241	N-Nitrosodiphenylamine	86-30-6	N.D.	3.1	0.72	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.					
14241	Di-n-octylphthalate	117-84-0	N.D.	11	5.1	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **PW-5T Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/31/2019 11:30
Collection Date/Time: 10/30/2019 14:07
SDG#: BMS82-10

ARCADIS U.S., Inc.
ELLE Sample #: GW 1188923
ELLE Group #: 2071978
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result		Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**		**ug/l**	**ug/l**	
14241	Pentachlorophenol	87-86-5	N.D.		5.1	1.0	1
14241	Phenanthrene	85-01-8	N.D.		0.51	0.10	1
14241	Phenol	108-95-2	N.D.		2.0	0.51	1
14241	Pyrene	129-00-0	N.D.		0.51	0.10	1
14241	Pyridine	110-86-1	N.D.		5.1	2.0	1
14241	1,2,4,5-Tetrachlorobenzene	95-94-3	N.D.		2.0	0.51	1
14241	2,3,4,6-Tetrachlorophenol	58-90-2	N.D.		10	4.1	1
14241	2,4,5-Trichlorophenol	95-95-4	N.D.		2.0	0.51	1
14241	2,4,6-Trichlorophenol	88-06-2	N.D.		2.0	0.51	1
14241	Triethylamine[1]	121-44-8	N.D.		10	10	1

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. Since the recovery is high and the target analyte(s) was not detected in the sample, the data is reported.

00886 SVOA TIC Interpretive(25)

The results from the semivolatile library search are listed on the attached FORM 1 - SV-TIC. The qualifiers appearing in the "Q" column are defined at the end of the report.

Aldehydes & Ketones	**SW-846 8315A**		**ug/l**		**ug/l**	**ug/l**	
13022	Acetaldehyde[1]	75-07-0	N.D.		60	35	1
13022	Formaldehyde	50-00-0	22	J	50	20	1

The response for a target analyte(s) in the initial calibration verification standard is outside the QC acceptance limits. The client was contacted and the data reported.
The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary.

GC Miscellaneous	**SW-846 8015D Rev.4, June 2003**		**ug/l**		**ug/l**	**ug/l**	
10603	Ethanol	64-17-5	N.D.	D2	1,000	150	1
12926	Ethylene glycol[1]	107-21-1	N.D.		10,000	5,000	1
10603	Isopropanol[1]	67-63-0	N.D.	D2	1,000	110	1
10603	Methanol	67-56-1	N.D.	D2	1,000	220	1
12926	Propylene glycol[1]	57-55-6	N.D.		10,000	2,000	1

The response for tetramethylene glycol in the continuing calibration verification standard is outside the QC acceptance limits low. The following action was taken:
The analysis was repeated and the continuing calibration verification standard bracketing the sample on the second trial is also outside the acceptance limits. This effect is attributed to the sample matrix and the data is reported.

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **PW-5T Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/31/2019 11:30
Collection Date/Time: 10/30/2019 14:07
SDG#: BMS82-10

ARCADIS U.S., Inc.
ELLE Sample #: GW 1188923
ELLE Group #: 2071978
Matrix: Groundwater

Sample Comments

State of New York Certification No. 10670

[1] = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	Y193131AA	11/09/2019 16:12	Linda C Pape	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	Y193131AA	11/09/2019 16:11	Linda C Pape	1
14241	Semi-annual Groundwater BMS	SW-846 8270D	1	19309WAJ026	11/09/2019 19:00	Holly B Ziegler	1
11010	8270D BNA Extraction	SW-846 3510C	1	19309WAJ026	11/06/2019 02:00	Mathias Okpo	1
13022	Short List Aldehydes- W 8315A	SW-846 8315A	1	193040018A	11/01/2019 19:32	Jessica L Miller	1
01013	Formaldehyde Extraction	SW-846 8315A	1	193040018A	11/01/2019 08:38	Alison Moll	1
10603	Alcohols in Water	SW-846 8015D Rev.4, June 2003	1	193080008A	11/05/2019 03:09	Johanna C Kennedy	1
12926	Glycols in Water by 8015C/D	SW-846 8015D Rev.4, June 2003	1	193080028A	11/06/2019 02:16	Donald Brown	1

*=This limit was used in the evaluation of the final result

REVISED

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
S8210

Lab Name: Lancaster Laboratories Contract:_____
Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____
Matrix: (soil/water) WATER Lab Sample ID: 1188923
Sample wt/vol: 5.0 (g/mL)mL Lab File ID:HP09355.i/19nov09a.b/yn09s13.d
Level: (low/med) LOW Date Received: 10/31/19
% Moisture: not dec. Date Analyzed: 11/09/19
Column: (pack/cap) CAP Dilution Factor: 1.0
CONCENTRATION UNITS:
Number TICs found: 0 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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page 1 of 1

FORM I VOA-TIC

REVISED

1F

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

S8210

Lab Name: Lancaster Laboratories Contract:
Lab Code: LANCAS Case No.: SAS No.: SDG No.:
Matrix: (soil/water) WATER Lab Sample ID: 1188923
Sample wt/vol: 244 (g/mL) mL Lab File ID: lk0445.d
Level: (low/med) LOW Date Received: 10/31/19
% Moisture: Decanted: (Y/N) Date Extracted: 11/06/19
Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/09/19
Injection Volume: 1 (uL) Dilution Factor: 1
GPC Cleanup: N pH: Extraction: Sepf
CONCENTRATION UNITS:
Number TICs found: 1 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		Unknown	21.393	33	J
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3.	SVOCTIC	Total SVOC TICs		33	J
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page 1 of 1

FORM I SV-1

REVISED

Sample Description: **PW-5RX Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/31/2019 11:30
Collection Date/Time: 10/30/2019 15:41
SDG#: BMS82-11

ARCADIS U.S., Inc.
ELLE Sample #: GW 1188924
ELLE Group #: 2071978
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	20	0.7	1
11997	Acetonitrile	75-05-8	N.D.	100	16	1
11997	Benzene	71-43-2	N.D.	1	0.2	1
11997	Bromochloromethane	74-97-5	N.D.	5	0.2	1
11997	Bromodichloromethane	75-27-4	N.D.	1	0.2	1
11997	Bromoform	75-25-2	N.D.	4	1	1
11997	Bromomethane	74-83-9	N.D.	1	0.3	1
11997	n-Butanol	71-36-3	N.D.	250	61	1
11997	2-Butanone	78-93-3	N.D.	10	0.3	1
11997	t-Butyl alcohol	75-65-0	N.D.	50	12	1
11997	n-Butylbenzene	104-51-8	N.D.	5	0.2	1
11997	sec-Butylbenzene	135-98-8	N.D.	5	0.2	1
11997	tert-Butylbenzene	98-06-6	N.D.	5	0.3	1
11997	Carbon Disulfide	75-15-0	N.D.	5	0.2	1
11997	Carbon Tetrachloride	56-23-5	N.D.	1	0.2	1
11997	Chlorobenzene	108-90-7	N.D.	1	0.2	1
11997	Chlorodifluoromethane[1]	75-45-6	N.D.	5	2	1
11997	Chloroethane	75-00-3	N.D.	1	0.2	1
11997	Chloroform	67-66-3	N.D.	1	0.2	1
11997	Chloromethane	74-87-3	N.D.	1	0.2	1
11997	Cyclohexane	110-82-7	N.D.	5	1	1
11997	Cyclohexanone[1]	108-94-1	N.D.	100	25	1
11997	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	5	0.3	1
11997	Dibromochloromethane	124-48-1	N.D.	1	0.2	1
11997	1,2-Dibromoethane	106-93-4	N.D.	1	0.2	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	5	0.2	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	5	0.2	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	5	0.2	1
11997	Dichlorodifluoromethane	75-71-8	N.D.	1	0.2	1
11997	1,1-Dichloroethane	75-34-3	N.D.	1	0.2	1
11997	1,2-Dichloroethane	107-06-2	N.D.	1	0.3	1
11997	1,1-Dichloroethene	75-35-4	N.D.	1	0.2	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	1	0.2	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	1	0.2	1
11997	1,2-Dichloropropane	78-87-5	N.D.	1	0.2	1
11997	cis-1,3-Dichloropropene	10061-01-5	N.D.	1	0.2	1
11997	trans-1,3-Dichloropropene	10061-02-6	N.D.	1	0.2	1
11997	1,4-Dioxane	123-91-1	N.D.	250	29	1
11997	Ethyl Acetate	141-78-6	N.D.	5	0.7	1
11997	Ethyl ether	60-29-7	N.D.	5	0.2	1
11997	Ethylbenzene	100-41-4	N.D.	1	0.4	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **PW-5RX Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/31/2019 11:30
Collection Date/Time: 10/30/2019 15:41
SDG#: BMS82-11

ARCADIS U.S., Inc.
ELLE Sample #: GW 1188924
ELLE Group #: 2071978
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Freon 113	76-13-1	N.D.	10	0.2	1
11997	n-Heptane[1]	142-82-5	N.D.	5	2	1
11997	n-Hexane[1]	110-54-3	N.D.	5	2	1
11997	2-Hexanone	591-78-6	N.D.	10	0.3	1
11997	Isobutyl Alcohol	78-83-1	N.D.	250	36	1
11997	Isopropylbenzene	98-82-8	N.D.	5	0.2	1
11997	p-Isopropyltoluene	99-87-6	N.D.	5	0.2	1
11997	Methyl Acetate	79-20-9	N.D.	5	0.2	1
11997	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	1	0.2	1
11997	4-Methyl-2-pentanone	108-10-1	N.D.	10	0.5	1
11997	Methylcyclohexane	108-87-2	N.D.	5	0.5	1
11997	Methylene Chloride	75-09-2	N.D.	1	0.3	1
11997	Naphthalene	91-20-3	N.D.	5	1	1
11997	2-Nitropropane	79-46-9	N.D.	10	0.8	1
11997	Styrene	100-42-5	N.D.	5	0.2	1
11997	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	1	0.2	1
11997	Tetrachloroethene	127-18-4	N.D.	1	0.2	1
11997	Tetrahydrofuran	109-99-9	N.D.	10	0.7	1
11997	Toluene	108-88-3	N.D.	1	0.2	1
11997	1,2,3-Trichlorobenzene	87-61-6	N.D.	5	0.4	1
11997	1,2,4-Trichlorobenzene	120-82-1	N.D.	5	0.3	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	1	0.3	1
11997	1,1,2-Trichloroethane	79-00-5	N.D.	1	0.2	1
11997	Trichloroethene	79-01-6	N.D.	1	0.2	1
11997	Trichlorofluoromethane	75-69-4	N.D.	1	0.2	1
11997	1,2,4-Trimethylbenzene	95-63-6	N.D.	5	1	1
11997	1,3,5-Trimethylbenzene	108-67-8	N.D.	5	0.3	1
11997	Vinyl Chloride	75-01-4	N.D.	1	0.2	1
11997	m+p-Xylene	179601-23-1	N.D.	5	1	1
11997	o-Xylene	95-47-6	N.D.	1	0.4	1
11997	Xylene (Total)	1330-20-7	N.D.	6	1	1

Project defined calibration criteria are not met. The calibration is compliant with the method defined criteria.

A Report Limit Verification (RLV) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The RLV standard shows adequate sensitivity at or below the reporting limit.

The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the TNI/DoD Standards. The following analytes are accepted based on this

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **PW-5RX Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/31/2019 11:30
Collection Date/Time: 10/30/2019 15:41
SDG#: BMS82-11

ARCADIS U.S., Inc.
ELLE Sample #: GW 1188924
ELLE Group #: 2071978
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
	allowance: chloromethane, bromomethane and chloroethane.					
00882	**VOA Interp. Library Search-10**					
	The results from the volatile library search are listed on the attached FORM 1 - VOA-TIC. The qualifiers appearing in the "Q" column are defined at the end of the report.					
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	Acenaphthene	83-32-9	N.D.	0.51	0.10	1
14241	Acenaphthylene	208-96-8	N.D.	0.51	0.10	1
14241	Acetophenone	98-86-2	N.D.	10	4.1	1
14241	Aniline	62-53-3	N.D.	10	3.1	1
14241	Anthracene	120-12-7	N.D.	0.51	0.10	1
14241	Atrazine	1912-24-9	N.D.	5.1	2.0	1
14241	Benzaldehyde	100-52-7	N.D.	10	3.1	1
14241	Benzo(a)anthracene	56-55-3	N.D.	0.51	0.10	1
14241	Benzo(a)pyrene	50-32-8	N.D.	0.51	0.10	1
14241	Benzo(b)fluoranthene	205-99-2	N.D.	0.51	0.10	1
14241	Benzo(g,h,i)perylene	191-24-2	N.D.	0.51	0.10	1
14241	Benzo(k)fluoranthene	207-08-9	N.D.	0.51	0.10	1
14241	Benzyl alcohol	100-51-6	N.D.	31	10	1
14241	1,1'-Biphenyl	92-52-4	N.D.	10	3.1	1
14241	4-Bromophenyl-phenylether	101-55-3	N.D.	2.0	0.51	1
14241	Butylbenzylphthalate	85-68-7	N.D.	5.1	2.0	1
14241	Di-n-butylphthalate	84-74-2	N.D.	5.1	2.0	1
14241	Caprolactam	105-60-2	N.D.	11	5.1	1
14241	Carbazole	86-74-8	N.D.	2.0	0.51	1
14241	4-Chloro-3-methylphenol	59-50-7	N.D.	2.0	0.51	1
14241	4-Chloroaniline	106-47-8	N.D.	10	4.1	1
14241	bis(2-Chloroethoxy)methane	111-91-1	N.D.	2.0	0.51	1
14241	bis(2-Chloroethyl)ether	111-44-4	N.D.	2.0	0.51	1
14241	bis(2-Chloroisopropyl)ether[1]	39638-32-9	N.D.	2.0	0.51	1
	Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.					
14241	2-Chloronaphthalene	91-58-7	N.D.	1.0	0.41	1
14241	2-Chlorophenol	95-57-8	N.D.	2.0	0.51	1
14241	4-Chlorophenyl-phenylether	7005-72-3	N.D.	2.0	0.51	1
14241	Chrysene	218-01-9	N.D.	0.51	0.10	1
14241	Dibenz(a,h)anthracene	53-70-3	N.D.	0.51	0.10	1
14241	Dibenzofuran	132-64-9	N.D.	2.0	0.51	1
14241	3,3'-Dichlorobenzidine	91-94-1	N.D.	10	3.1	1
14241	2,4-Dichlorophenol	120-83-2	N.D.	2.0	0.51	1
14241	Dicyclohexylamine[1]	101-83-7	N.D.	10	10	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **PW-5RX Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/31/2019 11:30
Collection Date/Time: 10/30/2019 15:41
SDG#: BMS82-11

ARCADIS U.S., Inc.
ELLE Sample #: GW 1188924
ELLE Group #: 2071978
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	Diethylphthalate	84-66-2	N.D.	5.1	2.0	1
14241	N,N-Dimethylaniline[1]	121-69-7	N.D.	1.0	0.51	1
14241	2,4-Dimethylphenol	105-67-9	N.D.	10	3.1	1
14241	Dimethylphthalate	131-11-3	N.D.	5.1	2.0	1
14241	4,6-Dinitro-2-methylphenol	534-52-1	N.D.	21	8.2	1
14241	2,4-Dinitrophenol	51-28-5	N.D.	31	14	1
14241	2,4-Dinitrotoluene	121-14-2	N.D.	5.1	1.0	1
14241	2,6-Dinitrotoluene	606-20-2	N.D.	2.0	0.51	1
14241	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	11	5.1	1
14241	Fluoranthene	206-44-0	N.D.	0.51	0.10	1
14241	Fluorene	86-73-7	N.D.	0.51	0.10	1
14241	Hexachlorobenzene	118-74-1	N.D.	0.51	0.10	1
14241	Hexachlorobutadiene	87-68-3	N.D.	2.0	0.51	1
14241	Hexachlorocyclopentadiene	77-47-4	N.D.	11	5.1	1
14241	Hexachloroethane	67-72-1	N.D.	5.1	1.0	1
14241	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.51	0.10	1
14241	Isophorone	78-59-1	N.D.	2.0	0.51	1
14241	2-Methylnaphthalene	91-57-6	N.D.	0.51	0.10	1
14241	2-Methylphenol	95-48-7	N.D.	2.0	0.51	1
14241	4-Methylphenol	65794-96-9	N.D.	2.0	0.51	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
14241	Naphthalene	91-20-3	N.D.	0.51	0.10	1
14241	2-Nitroaniline	88-74-4	N.D.	7.1	2.0	1
14241	3-Nitroaniline	99-09-2	N.D.	7.1	3.1	1
14241	4-Nitroaniline	100-01-6	N.D.	3.1	0.92	1
14241	Nitrobenzene	98-95-3	N.D.	2.0	0.51	1
14241	2-Nitrophenol	88-75-5	N.D.	10	3.1	1
14241	4-Nitrophenol	100-02-7	N.D.	31	10	1
14241	N-Nitroso-di-n-propylamine	621-64-7	N.D.	3.1	0.71	1
14241	N-Nitrosodiphenylamine	86-30-6	N.D.	3.1	0.71	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.					
14241	Di-n-octylphthalate	117-84-0	N.D.	11	5.1	1
14241	Pentachlorophenol	87-86-5	N.D.	5.1	1.0	1
14241	Phenanthrene	85-01-8	N.D.	0.51	0.10	1
14241	Phenol	108-95-2	N.D.	2.0	0.51	1
14241	Pyrene	129-00-0	N.D.	0.51	0.10	1
14241	Pyridine	110-86-1	N.D.	5.1	2.0	1
14241	1,2,4,5-Tetrachlorobenzene	95-94-3	N.D.	2.0	0.51	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **PW-5RX Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/31/2019 11:30
Collection Date/Time: 10/30/2019 15:41
SDG#: BMS82-11

ARCADIS U.S., Inc.
ELLE Sample #: GW 1188924
ELLE Group #: 2071978
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	2,3,4,6-Tetrachlorophenol	58-90-2	N.D.	10	4.1	1
14241	2,4,5-Trichlorophenol	95-95-4	N.D.	2.0	0.51	1
14241	2,4,6-Trichlorophenol	88-06-2	N.D.	2.0	0.51	1
14241	Triethylamine[1]	121-44-8	N.D.	10	10	1

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. Since the recovery is high and the target analyte(s) was not detected in the sample, the data is reported.

00886 SVOA TIC Interpretive(25)

The results from the semivolatile library search are listed on the attached FORM 1 - SV-TIC. The qualifiers appearing in the "Q" column are defined at the end of the report.

Aldehydes & Ketones	**SW-846 8315A**		**ug/l**	**ug/l**	**ug/l**	
13022	Acetaldehyde[1]	75-07-0	N.D.	60	35	1
13022	Formaldehyde	50-00-0	36 J	50	20	1

The response for a target analyte(s) in the initial calibration verification standard is outside the QC acceptance limits. The client was contacted and the data reported.
The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary.

GC Miscellaneous	**SW-846 8015D Rev.4, June 2003**		**ug/l**	**ug/l**	**ug/l**	
10603	Ethanol	64-17-5	N.D. D2	1,000	150	1
12926	Ethylene glycol[1]	107-21-1	N.D.	10,000	5,000	1
10603	Isopropanol[1]	67-63-0	N.D. D2	1,000	110	1
10603	Methanol	67-56-1	N.D. D2	1,000	220	1
12926	Propylene glycol[1]	57-55-6	N.D.	10,000	2,000	1

The response for tetramethylene glycol in the continuing calibration verification standard is outside the QC acceptance limits low. The following action was taken:
The analysis was repeated and the continuing calibration verification standard bracketing the sample on the second trial is also outside the acceptance limits. This effect is attributed to the sample matrix and the data is reported.

Sample Comments

State of New York Certification No. 10670

[1] = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **PW-5RX Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/31/2019 11:30
Collection Date/Time: 10/30/2019 15:41
SDG#: BMS82-11

ARCADIS U.S., Inc.
ELLE Sample #: GW 1188924
ELLE Group #: 2071978
Matrix: Groundwater

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	Y193131AA	11/09/2019 16:34	Linda C Pape	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	Y193131AA	11/09/2019 16:33	Linda C Pape	1
14241	Semi-annual Groundwater BMS	SW-846 8270D	1	19309WAJ026	11/10/2019 00:08	Holly B Ziegler	1
11010	8270D BNA Extraction	SW-846 3510C	1	19309WAJ026	11/06/2019 02:00	Mathias Okpo	1
13022	Short List Aldehydes- W 8315A	SW-846 8315A	1	193040018A	11/01/2019 19:42	Jessica L Miller	1
01013	Formaldehyde Extraction	SW-846 8315A	1	193040018A	11/01/2019 08:38	Alison Moll	1
10603	Alcohols in Water	SW-846 8015D Rev.4, June 2003	1	193080008A	11/05/2019 03:25	Johanna C Kennedy	1
12926	Glycols in Water by 8015C/D	SW-846 8015D Rev.4, June 2003	1	193080028A	11/06/2019 02:29	Donald Brown	1

*=This limit was used in the evaluation of the final result

REVISED

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
S8211

Lab Name: Lancaster Laboratories Contract:_____
Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____
Matrix: (soil/water) WATER Lab Sample ID: 1188924
Sample wt/vol: 5.0 (g/mL)mL Lab File ID:HP09355.i/19nov09a.b/yn09s14.d
Level: (low/med) LOW Date Received: 10/31/19
% Moisture: not dec. Date Analyzed: 11/09/19
Column: (pack/cap) CAP Dilution Factor: 1.0
CONCENTRATION UNITS:
Number TICs found: 0 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	VOCTIC	Total VOC TICs		0	U
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
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30.					

page 1 of 1

FORM I VOA-TIC

REVISED

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
S8211

Lab Name: Lancaster Laboratories Contract:
Lab Code: LANCAS Case No.: SAS No.: SDG No.:
Matrix: (soil/water) WATER Lab Sample ID: 1188924
Sample wt/vol: 245 (g/mL) mL Lab File ID: lk0459.d
Level: (low/med) LOW Date Received: 10/31/19
% Moisture: Decanted: (Y/N) Date Extracted: 11/06/19
Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/10/19
Injection Volume: 1 (uL) Dilution Factor: 1
GPC Cleanup: N pH: Extraction: Sepf
CONCENTRATION UNITS:
Number TICs found: 1 (ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 1000314-35-9	3-Amino-4,5-dimethyl-2(5H)-f	5.716	9	J
2.				
3. SVOCTIC	Total SVOC TICs		9	J
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
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page 1 of 1

FORM I SV-1

REVISED

Sample Description: **DUP-103019 Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/31/2019 11:30
Collection Date/Time: 10/30/2019
SDG#: BMS82-12FD

ARCADIS U.S., Inc.
ELLE Sample #: GW 1188925
ELLE Group #: 2071978
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	20	0.7	1
11997	Acetonitrile	75-05-8	N.D.	100	16	1
11997	Benzene	71-43-2	N.D.	1	0.2	1
11997	Bromochloromethane	74-97-5	N.D.	5	0.2	1
11997	Bromodichloromethane	75-27-4	N.D.	1	0.2	1
11997	Bromoform	75-25-2	N.D.	4	1	1
11997	Bromomethane	74-83-9	N.D.	1	0.3	1
11997	n-Butanol	71-36-3	N.D.	250	61	1
11997	2-Butanone	78-93-3	N.D.	10	0.3	1
11997	t-Butyl alcohol	75-65-0	N.D.	50	12	1
11997	n-Butylbenzene	104-51-8	N.D.	5	0.2	1
11997	sec-Butylbenzene	135-98-8	N.D.	5	0.2	1
11997	tert-Butylbenzene	98-06-6	N.D.	5	0.3	1
11997	Carbon Disulfide	75-15-0	N.D.	5	0.2	1
11997	Carbon Tetrachloride	56-23-5	N.D.	1	0.2	1
11997	Chlorobenzene	108-90-7	N.D.	1	0.2	1
11997	Chlorodifluoromethane[1]	75-45-6	N.D.	5	2	1
11997	Chloroethane	75-00-3	N.D.	1	0.2	1
11997	Chloroform	67-66-3	N.D.	1	0.2	1
11997	Chloromethane	74-87-3	N.D.	1	0.2	1
11997	Cyclohexane	110-82-7	N.D.	5	1	1
11997	Cyclohexanone[1]	108-94-1	N.D.	100	25	1
11997	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	5	0.3	1
11997	Dibromochloromethane	124-48-1	N.D.	1	0.2	1
11997	1,2-Dibromoethane	106-93-4	N.D.	1	0.2	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	5	0.2	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	5	0.2	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	5	0.2	1
11997	Dichlorodifluoromethane	75-71-8	N.D.	1	0.2	1
11997	1,1-Dichloroethane	75-34-3	N.D.	1	0.2	1
11997	1,2-Dichloroethane	107-06-2	N.D.	1	0.3	1
11997	1,1-Dichloroethene	75-35-4	N.D.	1	0.2	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	1	0.2	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	1	0.2	1
11997	1,2-Dichloropropane	78-87-5	N.D.	1	0.2	1
11997	cis-1,3-Dichloropropene	10061-01-5	N.D.	1	0.2	1
11997	trans-1,3-Dichloropropene	10061-02-6	N.D.	1	0.2	1
11997	1,4-Dioxane	123-91-1	N.D.	250	29	1
11997	Ethyl Acetate	141-78-6	N.D.	5	0.7	1
11997	Ethyl ether	60-29-7	N.D.	5	0.2	1
11997	Ethylbenzene	100-41-4	N.D.	1	0.4	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **DUP-103019 Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/31/2019 11:30
Collection Date/Time: 10/30/2019
SDG#: BMS82-12FD

ARCADIS U.S., Inc.
ELLE Sample #: GW 1188925
ELLE Group #: 2071978
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Freon 113	76-13-1	N.D.	10	0.2	1
11997	n-Heptane[1]	142-82-5	N.D.	5	2	1
11997	n-Hexane[1]	110-54-3	N.D.	5	2	1
11997	2-Hexanone	591-78-6	N.D.	10	0.3	1
11997	Isobutyl Alcohol	78-83-1	N.D.	250	36	1
11997	Isopropylbenzene	98-82-8	N.D.	5	0.2	1
11997	p-Isopropyltoluene	99-87-6	N.D.	5	0.2	1
11997	Methyl Acetate	79-20-9	N.D.	5	0.2	1
11997	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	1	0.2	1
11997	4-Methyl-2-pentanone	108-10-1	N.D.	10	0.5	1
11997	Methylcyclohexane	108-87-2	N.D.	5	0.5	1
11997	Methylene Chloride	75-09-2	N.D.	1	0.3	1
11997	Naphthalene	91-20-3	N.D.	5	1	1
11997	2-Nitropropane	79-46-9	N.D.	10	0.8	1
11997	Styrene	100-42-5	N.D.	5	0.2	1
11997	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	1	0.2	1
11997	Tetrachloroethene	127-18-4	N.D.	1	0.2	1
11997	Tetrahydrofuran	109-99-9	N.D.	10	0.7	1
11997	Toluene	108-88-3	N.D.	1	0.2	1
11997	1,2,3-Trichlorobenzene	87-61-6	N.D.	5	0.4	1
11997	1,2,4-Trichlorobenzene	120-82-1	N.D.	5	0.3	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	1	0.3	1
11997	1,1,2-Trichloroethane	79-00-5	N.D.	1	0.2	1
11997	Trichloroethene	79-01-6	N.D.	1	0.2	1
11997	Trichlorofluoromethane	75-69-4	N.D.	1	0.2	1
11997	1,2,4-Trimethylbenzene	95-63-6	N.D.	5	1	1
11997	1,3,5-Trimethylbenzene	108-67-8	N.D.	5	0.3	1
11997	Vinyl Chloride	75-01-4	N.D.	1	0.2	1
11997	m+p-Xylene	179601-23-1	N.D.	5	1	1
11997	o-Xylene	95-47-6	N.D.	1	0.4	1
11997	Xylene (Total)	1330-20-7	N.D.	6	1	1

Project defined calibration criteria are not met. The calibration is compliant with the method defined criteria.

A Report Limit Verification (RLV) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The RLV standard shows adequate sensitivity at or below the reporting limit.

The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the TNI/DoD Standards. The following analytes are accepted based on this

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **DUP-103019 Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/31/2019 11:30
Collection Date/Time: 10/30/2019
SDG#: BMS82-12FD

ARCADIS U.S., Inc.
ELLE Sample #: GW 1188925
ELLE Group #: 2071978
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
	allowance: chloromethane, bromomethane and chloroethane.					
00882	**VOA Interp. Library Search-10**					
	The results from the volatile library search are listed on the attached FORM 1 - VOA-TIC. The qualifiers appearing in the "Q" column are defined at the end of the report.					
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	Acenaphthene	83-32-9	N.D.	0.51	0.10	1
14241	Acenaphthylene	208-96-8	N.D.	0.51	0.10	1
14241	Acetophenone	98-86-2	N.D.	10	4.1	1
14241	Aniline	62-53-3	N.D.	10	3.0	1
14241	Anthracene	120-12-7	N.D.	0.51	0.10	1
14241	Atrazine	1912-24-9	N.D.	5.1	2.0	1
14241	Benzaldehyde	100-52-7	N.D.	10	3.0	1
14241	Benzo(a)anthracene	56-55-3	N.D.	0.51	0.10	1
14241	Benzo(a)pyrene	50-32-8	N.D.	0.51	0.10	1
14241	Benzo(b)fluoranthene	205-99-2	N.D.	0.51	0.10	1
14241	Benzo(g,h,i)perylene	191-24-2	N.D.	0.51	0.10	1
14241	Benzo(k)fluoranthene	207-08-9	N.D.	0.51	0.10	1
14241	Benzyl alcohol	100-51-6	N.D.	30	10	1
14241	1,1'-Biphenyl	92-52-4	N.D.	10	3.0	1
14241	4-Bromophenyl-phenylether	101-55-3	N.D.	2.0	0.51	1
14241	Butylbenzylphthalate	85-68-7	N.D.	5.1	2.0	1
14241	Di-n-butylphthalate	84-74-2	N.D.	5.1	2.0	1
14241	Caprolactam	105-60-2	N.D.	11	5.1	1
14241	Carbazole	86-74-8	N.D.	2.0	0.51	1
14241	4-Chloro-3-methylphenol	59-50-7	N.D.	2.0	0.51	1
14241	4-Chloroaniline	106-47-8	N.D.	10	4.1	1
14241	bis(2-Chloroethoxy)methane	111-91-1	N.D.	2.0	0.51	1
14241	bis(2-Chloroethyl)ether	111-44-4	N.D.	2.0	0.51	1
14241	bis(2-Chloroisopropyl)ether[1]	39638-32-9	N.D.	2.0	0.51	1
	Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.					
14241	2-Chloronaphthalene	91-58-7	N.D.	1.0	0.41	1
14241	2-Chlorophenol	95-57-8	N.D.	2.0	0.51	1
14241	4-Chlorophenyl-phenylether	7005-72-3	N.D.	2.0	0.51	1
14241	Chrysene	218-01-9	N.D.	0.51	0.10	1
14241	Dibenz(a,h)anthracene	53-70-3	N.D.	0.51	0.10	1
14241	Dibenzofuran	132-64-9	N.D.	2.0	0.51	1
14241	3,3'-Dichlorobenzidine	91-94-1	N.D.	10	3.0	1
14241	2,4-Dichlorophenol	120-83-2	N.D.	2.0	0.51	1
14241	Dicyclohexylamine[1]	101-83-7	N.D.	10	10	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **DUP-103019 Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/31/2019 11:30
Collection Date/Time: 10/30/2019
SDG#: BMS82-12FD

ARCADIS U.S., Inc.
ELLE Sample #: GW 1188925
ELLE Group #: 2071978
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	Diethylphthalate	84-66-2	N.D.	5.1	2.0	1
14241	N,N-Dimethylaniline[1]	121-69-7	N.D.	1.0	0.51	1
14241	2,4-Dimethylphenol	105-67-9	N.D.	10	3.0	1
14241	Dimethylphthalate	131-11-3	N.D.	5.1	2.0	1
14241	4,6-Dinitro-2-methylphenol	534-52-1	N.D.	21	8.1	1
14241	2,4-Dinitrophenol	51-28-5	N.D.	30	14	1
14241	2,4-Dinitrotoluene	121-14-2	N.D.	5.1	1.0	1
14241	2,6-Dinitrotoluene	606-20-2	N.D.	2.0	0.51	1
14241	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	11	5.1	1
14241	Fluoranthene	206-44-0	N.D.	0.51	0.10	1
14241	Fluorene	86-73-7	N.D.	0.51	0.10	1
14241	Hexachlorobenzene	118-74-1	N.D.	0.51	0.10	1
14241	Hexachlorobutadiene	87-68-3	N.D.	2.0	0.51	1
14241	Hexachlorocyclopentadiene	77-47-4	N.D.	11	5.1	1
14241	Hexachloroethane	67-72-1	N.D.	5.1	1.0	1
14241	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.51	0.10	1
14241	Isophorone	78-59-1	N.D.	2.0	0.51	1
14241	2-Methylnaphthalene	91-57-6	N.D.	0.51	0.10	1
14241	2-Methylphenol	95-48-7	N.D.	2.0	0.51	1
14241	4-Methylphenol	65794-96-9	N.D.	2.0	0.51	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
14241	Naphthalene	91-20-3	N.D.	0.51	0.10	1
14241	2-Nitroaniline	88-74-4	N.D.	7.1	2.0	1
14241	3-Nitroaniline	99-09-2	N.D.	7.1	3.0	1
14241	4-Nitroaniline	100-01-6	N.D.	3.0	0.91	1
14241	Nitrobenzene	98-95-3	N.D.	2.0	0.51	1
14241	2-Nitrophenol	88-75-5	N.D.	10	3.0	1
14241	4-Nitrophenol	100-02-7	N.D.	30	10	1
14241	N-Nitroso-di-n-propylamine	621-64-7	N.D.	3.0	0.71	1
14241	N-Nitrosodiphenylamine	86-30-6	N.D.	3.0	0.71	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.					
14241	Di-n-octylphthalate	117-84-0	N.D.	11	5.1	1
14241	Pentachlorophenol	87-86-5	N.D.	5.1	1.0	1
14241	Phenanthrene	85-01-8	N.D.	0.51	0.10	1
14241	Phenol	108-95-2	N.D.	2.0	0.51	1
14241	Pyrene	129-00-0	N.D.	0.51	0.10	1
14241	Pyridine	110-86-1	N.D.	5.1	2.0	1
14241	1,2,4,5-Tetrachlorobenzene	95-94-3	N.D.	2.0	0.51	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **DUP-103019 Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/31/2019 11:30
Collection Date/Time: 10/30/2019
SDG#: BMS82-12FD

ARCADIS U.S., Inc.
ELLE Sample #: GW 1188925
ELLE Group #: 2071978
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	2,3,4,6-Tetrachlorophenol	58-90-2	N.D.	10	4.1	1
14241	2,4,5-Trichlorophenol	95-95-4	N.D.	2.0	0.51	1
14241	2,4,6-Trichlorophenol	88-06-2	N.D.	2.0	0.51	1
14241	Triethylamine[1]	121-44-8	N.D.	10	10	1

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. Since the recovery is high and the target analyte(s) was not detected in the sample, the data is reported.

00886 SVOA TIC Interpretive(25)

The results from the semivolatile library search are listed on the attached FORM 1 - SV-TIC. The qualifiers appearing in the "Q" column are defined at the end of the report.

Aldehydes & Ketones	**SW-846 8315A**		**ug/l**	**ug/l**	**ug/l**	
13022	Acetaldehyde[1]	75-07-0	N.D.	60	35	1
13022	Formaldehyde	50-00-0	37 J	50	20	1

The response for a target analyte(s) in the initial calibration verification standard is outside the QC acceptance limits. The client was contacted and the data reported.
The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary.

GC Miscellaneous	**SW-846 8015D Rev.4, June 2003**		**ug/l**	**ug/l**	**ug/l**	
10603	Ethanol	64-17-5	N.D. D2	1,000	150	1
12926	Ethylene glycol[1]	107-21-1	N.D.	10,000	5,000	1
10603	Isopropanol[1]	67-63-0	N.D. D2	1,000	110	1
10603	Methanol	67-56-1	N.D. D2	1,000	220	1
12926	Propylene glycol[1]	57-55-6	N.D.	10,000	2,000	1

The response for tetramethylene glycol in the continuing calibration verification standard is outside the QC acceptance limits low. The following action was taken:
The analysis was repeated and the continuing calibration verification standard bracketing the sample on the second trial is also outside the acceptance limits. This effect is attributed to the sample matrix and the data is reported.

Sample Comments

State of New York Certification No. 10670

[1] = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **DUP-103019 Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/31/2019 11:30
Collection Date/Time: 10/30/2019
SDG#: BMS82-12FD

ARCADIS U.S., Inc.
ELLE Sample #: GW 1188925
ELLE Group #: 2071978
Matrix: Groundwater

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	Y193131AA	11/09/2019 16:56	Linda C Pape	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	Y193131AA	11/09/2019 16:55	Linda C Pape	1
14241	Semi-annual Groundwater BMS	SW-846 8270D	1	19309WAJ026	11/10/2019 00:37	Holly B Ziegler	1
11010	8270D BNA Extraction	SW-846 3510C	1	19309WAJ026	11/06/2019 02:00	Mathias Okpo	1
13022	Short List Aldehydes- W 8315A	SW-846 8315A	1	193040018A	11/01/2019 19:53	Jessica L Miller	1
01013	Formaldehyde Extraction	SW-846 8315A	1	193040018A	11/01/2019 08:38	Alison Moll	1
10603	Alcohols in Water	SW-846 8015D Rev.4, June 2003	1	193080008A	11/05/2019 03:42	Johanna C Kennedy	1
12926	Glycols in Water by 8015C/D	SW-846 8015D Rev.4, June 2003	1	193080028A	11/06/2019 02:41	Donald Brown	1

*=This limit was used in the evaluation of the final result

REVISED

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
S8212

Lab Name: Lancaster Laboratories Contract:_____
Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____
Matrix: (soil/water) WATER Lab Sample ID: 1188925
Sample wt/vol: 5.0 (g/mL)mL Lab File ID:HP09355.i/19nov09a.b/yn09s15.d
Level: (low/med) LOW Date Received: 10/31/19
% Moisture: not dec. Date Analyzed: 11/09/19
Column: (pack/cap) CAP Dilution Factor: 1.0
CONCENTRATION UNITS:
Number TICs found: 0 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	VOCTIC	Total VOC TICs		0	U
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
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29.					
30.					

page 1 of 1

FORM I VOA-TIC

REVISED

1F

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

S8212

Lab Name: Lancaster Laboratories Contract:
Lab Code: LANCAS Case No.: SAS No.: SDG No.:
Matrix: (soil/water) WATER Lab Sample ID: 1188925
Sample wt/vol: 246 (g/mL) mL Lab File ID: lk0460.d
Level: (low/med) LOW Date Received: 10/31/19
% Moisture: Decanted: (Y/N) Date Extracted: 11/06/19
Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/10/19
Injection Volume: 1 (uL) Dilution Factor: 1
GPC Cleanup: N pH: Extraction: Sepf
CONCENTRATION UNITS:
Number TICs found: 2 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		Unknown	3.218	4	J
2.		Unknown	19.232	4	J
3.					
4.	SVOCTIC	Total SVOC TICs		9	J
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
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page 1 of 1

FORM I SV-1

REVISED

Quality Control Summary

Client Name: ARCADIS U.S., Inc. Group Number: 2071978
Reported: 01/27/2020 16:56

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	LOQ**	MDL
	ug/l	ug/l	ug/l
Batch number: Y193091AA	Sample number(s): 1188921		
Acetone	N.D.	20	0.7
Acetonitrile	N.D.	100	16
Benzene	N.D.	1	0.2
Bromochloromethane	N.D.	5	0.2
Bromodichloromethane	N.D.	1	0.2
Bromoform	N.D.	4	1
Bromomethane	N.D.	1	0.3
n-Butanol	N.D.	250	61
2-Butanone	N.D.	10	0.3
t-Butyl alcohol	N.D.	50	12
n-Butylbenzene	N.D.	5	0.2
sec-Butylbenzene	N.D.	5	0.2
tert-Butylbenzene	N.D.	5	0.3
Carbon Disulfide	N.D.	5	0.2
Carbon Tetrachloride	N.D.	1	0.2
Chlorobenzene	N.D.	1	0.2
Chlorodifluoromethane	N.D.	5	2
Chloroethane	N.D.	1	0.2
Chloroform	N.D.	1	0.2
Chloromethane	N.D.	1	0.2
Cyclohexane	N.D.	5	1
Cyclohexanone	N.D.	100	25
1,2-Dibromo-3-chloropropane	N.D.	5	0.3
Dibromochloromethane	N.D.	1	0.2
1,2-Dibromoethane	N.D.	1	0.2
1,2-Dichlorobenzene	N.D.	5	0.2
1,3-Dichlorobenzene	N.D.	5	0.2
1,4-Dichlorobenzene	N.D.	5	0.2
Dichlorodifluoromethane	N.D.	1	0.2
1,1-Dichloroethane	N.D.	1	0.2
1,2-Dichloroethane	N.D.	1	0.3
1,1-Dichloroethene	N.D.	1	0.2
cis-1,2-Dichloroethene	N.D.	1	0.2
trans-1,2-Dichloroethene	N.D.	1	0.2
1,2-Dichloropropane	N.D.	1	0.2
cis-1,3-Dichloropropene	N.D.	1	0.2
trans-1,3-Dichloropropene	N.D.	1	0.2
1,4-Dioxane	N.D.	250	29
Ethyl Acetate	N.D.	5	0.7

*- Outside of specification
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REVISED

Quality Control Summary

Client Name: ARCADIS U.S., Inc.
Reported: 01/27/2020 16:56

Group Number: 2071978

Method Blank (continued)

Analysis Name	Result	LOQ**	MDL
	ug/l	ug/l	ug/l
Ethyl ether	N.D.	5	0.2
Ethylbenzene	N.D.	1	0.4
Freon 113	N.D.	10	0.2
n-Heptane	N.D.	5	2
n-Hexane	N.D.	5	2
2-Hexanone	N.D.	10	0.3
Isobutyl Alcohol	N.D.	250	36
Isopropylbenzene	N.D.	5	0.2
p-Isopropyltoluene	N.D.	5	0.2
Methyl Acetate	N.D.	5	0.2
Methyl Tertiary Butyl Ether	N.D.	1	0.2
4-Methyl-2-pentanone	N.D.	10	0.5
Methylcyclohexane	N.D.	5	0.5
Methylene Chloride	N.D.	1	0.3
Naphthalene	N.D.	5	1
2-Nitropropane	N.D.	10	0.8
Styrene	N.D.	5	0.2
1,1,2,2-Tetrachloroethane	N.D.	1	0.2
Tetrachloroethene	N.D.	1	0.2
Tetrahydrofuran	N.D.	10	0.7
Toluene	N.D.	1	0.2
1,2,3-Trichlorobenzene	N.D.	5	0.4
1,2,4-Trichlorobenzene	N.D.	5	0.3
1,1,1-Trichloroethane	N.D.	1	0.3
1,1,2-Trichloroethane	N.D.	1	0.2
Trichloroethene	N.D.	1	0.2
Trichlorofluoromethane	N.D.	1	0.2
1,2,4-Trimethylbenzene	N.D.	5	1
1,3,5-Trimethylbenzene	N.D.	5	0.3
Vinyl Chloride	N.D.	1	0.2
m+p-Xylene	N.D.	5	1
o-Xylene	N.D.	1	0.4
Xylene (Total)	N.D.	6	1
Batch number: Y193121AA	Sample number(s): 1188912-1188920,1188922		
Acetone	N.D.	20	0.7
Acetonitrile	N.D.	100	16
Benzene	N.D.	1	0.2
Bromochloromethane	N.D.	5	0.2
Bromodichloromethane	N.D.	1	0.2
Bromoform	N.D.	4	1
Bromomethane	N.D.	1	0.3
n-Butanol	N.D.	250	61
2-Butanone	N.D.	10	0.3
t-Butyl alcohol	N.D.	50	12

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REVISED

Quality Control Summary

Client Name: ARCADIS U.S., Inc.
Reported: 01/27/2020 16:56

Group Number: 2071978

Method Blank (continued)

Analysis Name	Result	LOQ**	MDL
	ug/l	ug/l	ug/l
n-Butylbenzene	N.D.	5	0.2
sec-Butylbenzene	N.D.	5	0.2
tert-Butylbenzene	N.D.	5	0.3
Carbon Disulfide	N.D.	5	0.2
Carbon Tetrachloride	N.D.	1	0.2
Chlorobenzene	N.D.	1	0.2
Chlorodifluoromethane	N.D.	5	2
Chloroethane	N.D.	1	0.2
Chloroform	N.D.	1	0.2
Chloromethane	N.D.	1	0.2
Cyclohexane	N.D.	5	1
Cyclohexanone	N.D.	100	25
1,2-Dibromo-3-chloropropane	N.D.	5	0.3
Dibromochloromethane	N.D.	1	0.2
1,2-Dibromoethane	N.D.	1	0.2
1,2-Dichlorobenzene	N.D.	5	0.2
1,3-Dichlorobenzene	N.D.	5	0.2
1,4-Dichlorobenzene	N.D.	5	0.2
Dichlorodifluoromethane	N.D.	1	0.2
1,1-Dichloroethane	N.D.	1	0.2
1,2-Dichloroethane	N.D.	1	0.3
1,1-Dichloroethene	N.D.	1	0.2
cis-1,2-Dichloroethene	N.D.	1	0.2
trans-1,2-Dichloroethene	N.D.	1	0.2
1,2-Dichloropropane	N.D.	1	0.2
cis-1,3-Dichloropropene	N.D.	1	0.2
trans-1,3-Dichloropropene	N.D.	1	0.2
1,4-Dioxane	N.D.	250	29
Ethyl Acetate	N.D.	5	0.7
Ethyl ether	N.D.	5	0.2
Ethylbenzene	N.D.	1	0.4
Freon 113	N.D.	10	0.2
n-Heptane	N.D.	5	2
n-Hexane	N.D.	5	2
2-Hexanone	N.D.	10	0.3
Isobutyl Alcohol	N.D.	250	36
Isopropylbenzene	N.D.	5	0.2
p-Isopropyltoluene	N.D.	5	0.2
Methyl Acetate	N.D.	5	0.2
Methyl Tertiary Butyl Ether	N.D.	1	0.2
4-Methyl-2-pentanone	N.D.	10	0.5
Methylcyclohexane	N.D.	5	0.5
Methylene Chloride	N.D.	1	0.3
Naphthalene	N.D.	5	1
2-Nitropropane	N.D.	10	0.8

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Quality Control Summary

Client Name: ARCADIS U.S., Inc.
Reported: 01/27/2020 16:56

Group Number: 2071978

Method Blank (continued)

Analysis Name	Result	LOQ**	MDL
	ug/l	ug/l	ug/l
Styrene	N.D.	5	0.2
1,1,2,2-Tetrachloroethane	N.D.	1	0.2
Tetrachloroethene	N.D.	1	0.2
Tetrahydrofuran	N.D.	10	0.7
Toluene	N.D.	1	0.2
1,2,3-Trichlorobenzene	N.D.	5	0.4
1,2,4-Trichlorobenzene	N.D.	5	0.3
1,1,1-Trichloroethane	N.D.	1	0.3
1,1,2-Trichloroethane	N.D.	1	0.2
Trichloroethene	N.D.	1	0.2
Trichlorofluoromethane	N.D.	1	0.2
1,2,4-Trimethylbenzene	N.D.	5	1
1,3,5-Trimethylbenzene	N.D.	5	0.3
Vinyl Chloride	N.D.	1	0.2
m+p-Xylene	N.D.	5	1
o-Xylene	N.D.	1	0.4
Xylene (Total)	N.D.	6	1
Batch number: Y193131AA	Sample number(s): 1188923-1188925		
Acetone	N.D.	20	0.7
Acetonitrile	N.D.	100	16
Benzene	N.D.	1	0.2
Bromochloromethane	N.D.	5	0.2
Bromodichloromethane	N.D.	1	0.2
Bromoform	N.D.	4	1
Bromomethane	N.D.	1	0.3
n-Butanol	N.D.	250	61
2-Butanone	N.D.	10	0.3
t-Butyl alcohol	N.D.	50	12
n-Butylbenzene	N.D.	5	0.2
sec-Butylbenzene	N.D.	5	0.2
tert-Butylbenzene	N.D.	5	0.3
Carbon Disulfide	N.D.	5	0.2
Carbon Tetrachloride	N.D.	1	0.2
Chlorobenzene	N.D.	1	0.2
Chlorodifluoromethane	N.D.	5	2
Chloroethane	N.D.	1	0.2
Chloroform	N.D.	1	0.2
Chloromethane	N.D.	1	0.2
Cyclohexane	N.D.	5	1
Cyclohexanone	N.D.	100	25
1,2-Dibromo-3-chloropropane	N.D.	5	0.3
Dibromochloromethane	N.D.	1	0.2
1,2-Dibromoethane	N.D.	1	0.2
1,2-Dichlorobenzene	N.D.	5	0.2

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Quality Control Summary

Client Name: ARCADIS U.S., Inc.
Reported: 01/27/2020 16:56

Group Number: 2071978

Method Blank (continued)

Analysis Name	Result	LOQ**	MDL
	ug/l	ug/l	ug/l
1,3-Dichlorobenzene	N.D.	5	0.2
1,4-Dichlorobenzene	N.D.	5	0.2
Dichlorodifluoromethane	N.D.	1	0.2
1,1-Dichloroethane	N.D.	1	0.2
1,2-Dichloroethane	N.D.	1	0.3
1,1-Dichloroethene	N.D.	1	0.2
cis-1,2-Dichloroethene	N.D.	1	0.2
trans-1,2-Dichloroethene	N.D.	1	0.2
1,2-Dichloropropane	N.D.	1	0.2
cis-1,3-Dichloropropene	N.D.	1	0.2
trans-1,3-Dichloropropene	N.D.	1	0.2
1,4-Dioxane	N.D.	250	29
Ethyl Acetate	N.D.	5	0.7
Ethyl ether	N.D.	5	0.2
Ethylbenzene	N.D.	1	0.4
Freon 113	N.D.	10	0.2
n-Heptane	N.D.	5	2
n-Hexane	N.D.	5	2
2-Hexanone	N.D.	10	0.3
Isobutyl Alcohol	N.D.	250	36
Isopropylbenzene	N.D.	5	0.2
p-Isopropyltoluene	N.D.	5	0.2
Methyl Acetate	N.D.	5	0.2
Methyl Tertiary Butyl Ether	N.D.	1	0.2
4-Methyl-2-pentanone	N.D.	10	0.5
Methylcyclohexane	N.D.	5	0.5
Methylene Chloride	N.D.	1	0.3
Naphthalene	N.D.	5	1
2-Nitropropane	N.D.	10	0.8
Styrene	N.D.	5	0.2
1,1,2,2-Tetrachloroethane	N.D.	1	0.2
Tetrachloroethene	N.D.	1	0.2
Tetrahydrofuran	N.D.	10	0.7
Toluene	N.D.	1	0.2
1,2,3-Trichlorobenzene	N.D.	5	0.4
1,2,4-Trichlorobenzene	N.D.	5	0.3
1,1,1-Trichloroethane	N.D.	1	0.3
1,1,2-Trichloroethane	N.D.	1	0.2
Trichloroethene	N.D.	1	0.2
Trichlorofluoromethane	N.D.	1	0.2
1,2,4-Trimethylbenzene	N.D.	5	1
1,3,5-Trimethylbenzene	N.D.	5	0.3
Vinyl Chloride	N.D.	1	0.2
m+p-Xylene	N.D.	5	1
o-Xylene	N.D.	1	0.4

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Quality Control Summary

Client Name: ARCADIS U.S., Inc.
Reported: 01/27/2020 16:56

Group Number: 2071978

Method Blank (continued)

Analysis Name	Result	LOQ**	MDL
	ug/l	ug/l	ug/l
Xylene (Total)	N.D.	6	1
Batch number: 19309WAJ026	Sample number(s): 1188913-1188920,1188922-1188925		
Acenaphthene	N.D.	0.50	0.10
Acenaphthylene	N.D.	0.50	0.10
Acetophenone	N.D.	10	4.0
Aniline	N.D.	10	3.0
Anthracene	N.D.	0.50	0.10
Atrazine	N.D.	5.0	2.0
Benzaldehyde	N.D.	10	3.0
Benzo(a)anthracene	N.D.	0.50	0.10
Benzo(a)pyrene	N.D.	0.50	0.10
Benzo(b)fluoranthene	N.D.	0.50	0.10
Benzo(g,h,i)perylene	N.D.	0.50	0.10
Benzo(k)fluoranthene	N.D.	0.50	0.10
Benzyl alcohol	N.D.	30	10
1,1'-Biphenyl	N.D.	10	3.0
4-Bromophenyl-phenylether	N.D.	2.0	0.50
Butylbenzylphthalate	N.D.	5.0	2.0
Di-n-butylphthalate	N.D.	5.0	2.0
Caprolactam	N.D.	11	5.0
Carbazole	N.D.	2.0	0.50
4-Chloro-3-methylphenol	N.D.	2.0	0.50
4-Chloroaniline	N.D.	10	4.0
bis(2-Chloroethoxy)methane	N.D.	2.0	0.50
bis(2-Chloroethyl)ether	N.D.	2.0	0.50
bis(2-Chloroisopropyl)ether	N.D.	2.0	0.50
2-Chloronaphthalene	N.D.	1.0	0.40
2-Chlorophenol	N.D.	2.0	0.50
4-Chlorophenyl-phenylether	N.D.	2.0	0.50
Chrysene	N.D.	0.50	0.10
Dibenz(a,h)anthracene	N.D.	0.50	0.10
Dibenzofuran	N.D.	2.0	0.50
3,3'-Dichlorobenzidine	N.D.	10	3.0
2,4-Dichlorophenol	N.D.	2.0	0.50
Dicyclohexylamine	N.D.	10	10
Diethylphthalate	N.D.	5.0	2.0
N,N-Dimethylaniline	N.D.	1.0	0.50
2,4-Dimethylphenol	N.D.	10	3.0
Dimethylphthalate	N.D.	5.0	2.0
4,6-Dinitro-2-methylphenol	N.D.	21	8.0
2,4-Dinitrophenol	N.D.	30	14
2,4-Dinitrotoluene	N.D.	5.0	1.0
2,6-Dinitrotoluene	N.D.	2.0	0.50
bis(2-Ethylhexyl)phthalate	N.D.	11	5.0

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Quality Control Summary

Client Name: ARCADIS U.S., Inc.
Reported: 01/27/2020 16:56

Group Number: 2071978

Method Blank (continued)

Analysis Name	Result	LOQ**	MDL
	ug/l	ug/l	ug/l
Fluoranthene	N.D.	0.50	0.10
Fluorene	N.D.	0.50	0.10
Hexachlorobenzene	N.D.	0.50	0.10
Hexachlorobutadiene	N.D.	2.0	0.50
Hexachlorocyclopentadiene	N.D.	11	5.0
Hexachloroethane	N.D.	5.0	1.0
Indeno(1,2,3-cd)pyrene	N.D.	0.50	0.10
Isophorone	N.D.	2.0	0.50
2-Methylnaphthalene	N.D.	0.50	0.10
2-Methylphenol	N.D.	2.0	0.50
4-Methylphenol	N.D.	2.0	0.50
Naphthalene	N.D.	0.50	0.10
2-Nitroaniline	N.D.	7.0	2.0
3-Nitroaniline	N.D.	7.0	3.0
4-Nitroaniline	N.D.	3.0	0.90
Nitrobenzene	N.D.	2.0	0.50
2-Nitrophenol	N.D.	10	3.0
4-Nitrophenol	N.D.	30	10
N-Nitroso-di-n-propylamine	N.D.	3.0	0.70
N-Nitrosodiphenylamine	N.D.	3.0	0.70
Di-n-octylphthalate	N.D.	11	5.0
Pentachlorophenol	N.D.	5.0	1.0
Phenanthrene	N.D.	0.50	0.10
Phenol	N.D.	2.0	0.50
Pyrene	N.D.	0.50	0.10
Pyridine	N.D.	5.0	2.0
1,2,4,5-Tetrachlorobenzene	N.D.	2.0	0.50
2,3,4,6-Tetrachlorophenol	N.D.	10	4.0
2,4,5-Trichlorophenol	N.D.	2.0	0.50
2,4,6-Trichlorophenol	N.D.	2.0	0.50
Triethylamine	N.D.	10	10
Batch number: 19316WAO026	Sample number(s): 1188912		
Acenaphthene	N.D.	0.50	0.10
Acenaphthylene	N.D.	0.50	0.10
Acetophenone	N.D.	10	4.0
Aniline	N.D.	10	3.0
Anthracene	N.D.	0.50	0.10
Atrazine	N.D.	5.0	2.0
Benzaldehyde	N.D.	10	3.0
Benzo(a)anthracene	N.D.	0.50	0.10
Benzo(a)pyrene	N.D.	0.50	0.10
Benzo(b)fluoranthene	N.D.	0.50	0.10
Benzo(g,h,i)perylene	N.D.	0.50	0.10
Benzo(k)fluoranthene	N.D.	0.50	0.10

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Quality Control Summary

Client Name: ARCADIS U.S., Inc.
Reported: 01/27/2020 16:56

Group Number: 2071978

Method Blank (continued)

Analysis Name	Result	LOQ**	MDL
	ug/l	ug/l	ug/l
Benzyl alcohol	N.D.	30	10
1,1'-Biphenyl	N.D.	10	3.0
4-Bromophenyl-phenylether	N.D.	2.0	0.50
Butylbenzylphthalate	N.D.	5.0	2.0
Di-n-butylphthalate	N.D.	5.0	2.0
Caprolactam	N.D.	11	5.0
Carbazole	N.D.	2.0	0.50
4-Chloro-3-methylphenol	N.D.	2.0	0.50
4-Chloroaniline	N.D.	10	4.0
bis(2-Chloroethoxy)methane	N.D.	2.0	0.50
bis(2-Chloroethyl)ether	N.D.	2.0	0.50
bis(2-Chloroisopropyl)ether	N.D.	2.0	0.50
2-Chloronaphthalene	N.D.	1.0	0.40
2-Chlorophenol	N.D.	2.0	0.50
4-Chlorophenyl-phenylether	N.D.	2.0	0.50
Chrysene	N.D.	0.50	0.10
Dibenz(a,h)anthracene	N.D.	0.50	0.10
Dibenzofuran	N.D.	2.0	0.50
3,3'-Dichlorobenzidine	N.D.	10	3.0
2,4-Dichlorophenol	N.D.	2.0	0.50
Dicyclohexylamine	N.D.	10	10
Diethylphthalate	N.D.	5.0	2.0
N,N-Dimethylaniline	N.D.	1.0	0.50
2,4-Dimethylphenol	N.D.	10	3.0
Dimethylphthalate	N.D.	5.0	2.0
4,6-Dinitro-2-methylphenol	N.D.	21	8.0
2,4-Dinitrophenol	N.D.	30	14
2,4-Dinitrotoluene	N.D.	5.0	1.0
2,6-Dinitrotoluene	N.D.	2.0	0.50
bis(2-Ethylhexyl)phthalate	N.D.	11	5.0
Fluoranthene	N.D.	0.50	0.10
Fluorene	N.D.	0.50	0.10
Hexachlorobenzene	N.D.	0.50	0.10
Hexachlorobutadiene	N.D.	2.0	0.50
Hexachlorocyclopentadiene	N.D.	11	5.0
Hexachloroethane	N.D.	5.0	1.0
Indeno(1,2,3-cd)pyrene	N.D.	0.50	0.10
Isophorone	N.D.	2.0	0.50
2-Methylnaphthalene	0.26 J	0.50	0.10
2-Methylphenol	N.D.	2.0	0.50
4-Methylphenol	N.D.	2.0	0.50
Naphthalene	0.47 J	0.50	0.10
2-Nitroaniline	N.D.	7.0	2.0
3-Nitroaniline	N.D.	7.0	3.0
4-Nitroaniline	N.D.	3.0	0.90

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Quality Control Summary

Client Name: ARCADIS U.S., Inc.
Reported: 01/27/2020 16:56

Group Number: 2071978

Method Blank (continued)

Analysis Name	Result	LOQ**	MDL
	ug/l	ug/l	ug/l
Nitrobenzene	N.D.	2.0	0.50
2-Nitrophenol	N.D.	10	3.0
4-Nitrophenol	N.D.	30	10
N-Nitroso-di-n-propylamine	N.D.	3.0	0.70
N-Nitrosodiphenylamine	N.D.	3.0	0.70
Di-n-octylphthalate	N.D.	11	5.0
Pentachlorophenol	N.D.	5.0	1.0
Phenanthrene	N.D.	0.50	0.10
Phenol	N.D.	2.0	0.50
Pyrene	N.D.	0.50	0.10
Pyridine	N.D.	5.0	2.0
1,2,4,5-Tetrachlorobenzene	N.D.	2.0	0.50
2,3,4,6-Tetrachlorophenol	N.D.	10	4.0
2,4,5-Trichlorophenol	N.D.	2.0	0.50
2,4,6-Trichlorophenol	N.D.	2.0	0.50
Triethylamine	N.D.	10	10
Batch number: 193040018A	Sample number(s): 1188912-1188920,1188923-1188925		
Acetaldehyde	N.D.	60	35
Formaldehyde	N.D.	50	20
Batch number: 193080007A	Sample number(s): 1188912		
Ethanol	N.D.	1,000	150
Isopropanol	N.D.	1,000	110
Methanol	N.D.	1,000	220
Batch number: 193080008A	Sample number(s): 1188913-1188921,1188923-1188925		
Ethanol	N.D.	1,000	150
Isopropanol	N.D.	1,000	110
Methanol	N.D.	1,000	220
Batch number: 193080027A	Sample number(s): 1188912,1188914-1188919		
Ethylene glycol	N.D.	10,000	5,000
Propylene glycol	N.D.	10,000	5,000
Batch number: 193080028A	Sample number(s): 1188920-1188921,1188923-1188925		
Ethylene glycol	N.D.	10,000	5,000
Propylene glycol	N.D.	10,000	5,000
Batch number: 193100033A	Sample number(s): 1188913		
Ethylene glycol	N.D.	10,000	5,000
Propylene glycol	N.D.	10,000	5,000

LCS/LCSD

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REVISED

Quality Control Summary

Client Name: ARCADIS U.S., Inc.
Reported: 01/27/2020 16:56

Group Number: 2071978

LCS/LCSD

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: Y193091AA	Sample number(s): 1188921								
Acetone	150	183.12			122		54-157		
Acetonitrile	150	180.61			120		66-149		
Benzene	20	21.44			107		80-120		
Bromochloromethane	20	19.57			98		80-120		
Bromodichloromethane	20	21.13			106		71-120		
Bromoform	20	21.48			107		51-120		
Bromomethane	20	13.96			70		53-128		
n-Butanol	1000	1134.36			113		57-130		
2-Butanone	150	161.09			107		59-135		
t-Butyl alcohol	200	222.22			111		60-130		
n-Butylbenzene	20	19.74			99		76-120		
sec-Butylbenzene	20	19.96			100		77-120		
tert-Butylbenzene	20	19.22			96		78-120		
Carbon Disulfide	20	18.37			92		65-128		
Carbon Tetrachloride	20	20.09			100		64-134		
Chlorobenzene	20	21.1			105		80-120		
Chlorodifluoromethane	20	15.85			79		45-149		
Chloroethane	20	15			75		55-123		
Chloroform	20	21.26			106		80-120		
Chloromethane	20	15.97			80		56-121		
Cyclohexane	20	16.83			84		68-126		
Cyclohexanone	500	508.09			102		27-141		
1,2-Dibromo-3-chloropropane	20	18.49			92		47-131		
Dibromochloromethane	20	21.41			107		71-120		
1,2-Dibromoethane	20	21.29			106		77-120		
1,2-Dichlorobenzene	20	21.36			107		80-120		
1,3-Dichlorobenzene	20	21.49			107		80-120		
1,4-Dichlorobenzene	20	21.99			110		80-120		
Dichlorodifluoromethane	20	12.72			64		41-127		
1,1-Dichloroethane	20	20.93			105		80-120		
1,2-Dichloroethane	20	20.4			102		73-124		
1,1-Dichloroethene	20	21.38			107		80-131		
cis-1,2-Dichloroethene	20	21.99			110		80-125		
trans-1,2-Dichloroethene	20	21.31			107		80-126		
1,2-Dichloropropane	20	22.2			111		80-120		
cis-1,3-Dichloropropene	20	20.61			103		75-120		
trans-1,3-Dichloropropene	20	19.65			98		67-120		
1,4-Dioxane	500	701.78			140		63-146		
Ethyl Acetate	20	20.99			105		67-131		
Ethyl ether	20	18.66			93		59-141		
Ethylbenzene	20	20.74			104		80-120		
Freon 113	20	18.33			92		73-139		
n-Heptane	20	18.2			91		56-133		

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REVISED

Quality Control Summary

Client Name: ARCADIS U.S., Inc.
Reported: 01/27/2020 16:56

Group Number: 2071978

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
n-Hexane	20	17.85			89		61-138		
2-Hexanone	100	104.2			104		56-135		
Isobutyl Alcohol	500	620.16			124		61-136		
Isopropylbenzene	20	20.05			100		80-120		
p-Isopropyltoluene	20	20.31			102		76-120		
Methyl Acetate	20	21.43			107		54-136		
Methyl Tertiary Butyl Ether	20	17.49			87		69-122		
4-Methyl-2-pentanone	100	103.14			103		62-133		
Methylcyclohexane	20	16.35			82		67-121		
Methylene Chloride	20	21.94			110		80-120		
Naphthalene	20	18.83			94		53-124		
2-Nitropropane	20	18.44			92		19-144		
Styrene	20	21.04			105		80-120		
1,1,2,2-Tetrachloroethane	20	20.32			102		72-120		
Tetrachloroethene	20	21.41			107		80-120		
Tetrahydrofuran	100	113.51			114		54-144		
Toluene	20	20.75			104		80-120		
1,2,3-Trichlorobenzene	20	19.85			99		66-120		
1,2,4-Trichlorobenzene	20	19.35			97		63-120		
1,1,1-Trichloroethane	20	20.32			102		67-126		
1,1,2-Trichloroethane	20	21.58			108		80-120		
Trichloroethene	20	20.96			105		80-120		
Trichlorofluoromethane	20	15.33			77		55-135		
1,2,4-Trimethylbenzene	20	19.88			99		75-120		
1,3,5-Trimethylbenzene	20	20.1			100		75-120		
Vinyl Chloride	20	15.46			77		56-120		
m+p-Xylene	40	42.09			105		80-120		
o-Xylene	20	19.81			99		80-120		
Xylene (Total)	60	61.89			103		80-120		
Batch number: Y193121AA	Sample number(s): 1188912-1188920,1188922								
Acetone	150	181.43			121		54-157		
Acetonitrile	150	177.28			118		66-149		
Benzene	20	21.45			107		80-120		
Bromochloromethane	20	20.35			102		80-120		
Bromodichloromethane	20	21.42			107		71-120		
Bromoform	20	20.24			101		51-120		
Bromomethane	20	12.53			63		53-128		
n-Butanol	1000	1148.96			115		57-130		
2-Butanone	150	158.95			106		59-135		
t-Butyl alcohol	200	222.89			111		60-130		
n-Butylbenzene	20	20.28			101		76-120		
sec-Butylbenzene	20	20.58			103		77-120		
tert-Butylbenzene	20	19.45			97		78-120		

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REVISED

Quality Control Summary

Client Name: ARCADIS U.S., Inc.
Reported: 01/27/2020 16:56

Group Number: 2071978

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Carbon Disulfide	20	17.59			88		65-128		
Carbon Tetrachloride	20	21.21			106		64-134		
Chlorobenzene	20	21.33			107		80-120		
Chlorodifluoromethane	20	14.15			71		45-149		
Chloroethane	20	12.53			63		55-123		
Chloroform	20	21.76			109		80-120		
Chloromethane	20	12.29			61		56-121		
Cyclohexane	20	17.65			88		68-126		
Cyclohexanone	500	478.77			96		27-141		
1,2-Dibromo-3-chloropropane	20	18.33			92		47-131		
Dibromochloromethane	20	20.88			104		71-120		
1,2-Dibromoethane	20	21.59			108		77-120		
1,2-Dichlorobenzene	20	21.77			109		80-120		
1,3-Dichlorobenzene	20	21.97			110		80-120		
1,4-Dichlorobenzene	20	22.4			112		80-120		
Dichlorodifluoromethane	20	13.41			67		41-127		
1,1-Dichloroethane	20	20.96			105		80-120		
1,2-Dichloroethane	20	21.38			107		73-124		
1,1-Dichloroethene	20	21.33			107		80-131		
cis-1,2-Dichloroethene	20	22.51			113		80-125		
trans-1,2-Dichloroethene	20	21.3			106		80-126		
1,2-Dichloropropane	20	22.12			111		80-120		
cis-1,3-Dichloropropene	20	20.56			103		75-120		
trans-1,3-Dichloropropene	20	19.34			97		67-120		
1,4-Dioxane	500	703.2			141		63-146		
Ethyl Acetate	20	21.86			109		67-131		
Ethyl ether	20	12.5			62		59-141		
Ethylbenzene	20	21.16			106		80-120		
Freon 113	20	19.71			99		73-139		
n-Heptane	20	19.76			99		56-133		
n-Hexane	20	18.86			94		61-138		
2-Hexanone	100	102.79			103		56-135		
Isobutyl Alcohol	500	636.82			127		61-136		
Isopropylbenzene	20	20.4			102		80-120		
p-Isopropyltoluene	20	20.86			104		76-120		
Methyl Acetate	20	22.53			113		54-136		
Methyl Tertiary Butyl Ether	20	17.74			89		69-122		
4-Methyl-2-pentanone	100	103.36			103		62-133		
Methylcyclohexane	20	18.81			94		67-121		
Methylene Chloride	20	21.77			109		80-120		
Naphthalene	20	19.43			97		53-124		
2-Nitropropane	20	17.57			88		19-144		
Styrene	20	21.46			107		80-120		
1,1,2,2-Tetrachloroethane	20	20.43			102		72-120		

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REVISED

Quality Control Summary

Client Name: ARCADIS U.S., Inc.
Reported: 01/27/2020 16:56

Group Number: 2071978

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Tetrachloroethene	20	22.05			110		80-120		
Tetrahydrofuran	100	110.02			110		54-144		
Toluene	20	20.92			105		80-120		
1,2,3-Trichlorobenzene	20	20.61			103		66-120		
1,2,4-Trichlorobenzene	20	19.83			99		63-120		
1,1,1-Trichloroethane	20	21.16			106		67-126		
1,1,2-Trichloroethane	20	22.09			110		80-120		
Trichloroethene	20	21.43			107		80-120		
Trichlorofluoromethane	20	11.93			60		55-135		
1,2,4-Trimethylbenzene	20	20.3			101		75-120		
1,3,5-Trimethylbenzene	20	20.5			103		75-120		
Vinyl Chloride	20	12.75			64		56-120		
m+p-Xylene	40	42.6			106		80-120		
o-Xylene	20	20.09			100		80-120		
Xylene (Total)	60	62.69			104		80-120		
Batch number: Y193131AA	Sample number(s): 1188923-1188925								
Acetone	150	178.91	150	177	119	118	54-157	1	30
Acetonitrile	150	161.45	150	163.81	108	109	66-149	1	30
Benzene	20	21.72	20	22.02	109	110	80-120	1	30
Bromochloromethane	20	20.81	20	21.11	104	106	80-120	1	30
Bromodichloromethane	20	22.25	20	22.57	111	113	71-120	1	30
Bromoform	20	22.09	20	22.42	110	112	51-120	1	30
Bromomethane	20	11.35	20	10.13	57	51*	53-128	11	30
n-Butanol	1000	1125.37	1000	1081.52	113	108	57-130	4	30
2-Butanone	150	159.94	150	163.88	107	109	59-135	2	30
t-Butyl alcohol	200	231.64	200	240.12	116	120	60-130	4	30
n-Butylbenzene	20	21.41	20	21.92	107	110	76-120	2	30
sec-Butylbenzene	20	21.31	20	21.6	107	108	77-120	1	30
tert-Butylbenzene	20	20.35	20	20.75	102	104	78-120	2	30
Carbon Disulfide	20	18.11	20	18.28	91	91	65-128	1	30
Carbon Tetrachloride	20	21.81	20	21.9	109	110	64-134	0	30
Chlorobenzene	20	21.92	20	22.28	110	111	80-120	2	30
Chlorodifluoromethane	20	9.95	20	9.46	50	47	45-149	5	30
Chloroethane	20	12.11	20	10.52	61	53*	55-123	14	30
Chloroform	20	22.11	20	22.2	111	111	80-120	0	30
Chloromethane	20	11.02	20	10.28	55*	51*	56-121	7	30
Cyclohexane	20	18.3	20	18.5	91	92	68-126	1	30
Cyclohexanone	500	493	500	484.67	99	97	27-141	2	30
1,2-Dibromo-3-chloropropane	20	19.48	20	20.34	97	102	47-131	4	30
Dibromochloromethane	20	22.16	20	22.2	111	111	71-120	0	30
1,2-Dibromoethane	20	22.47	20	22.53	112	113	77-120	0	30
1,2-Dichlorobenzene	20	22.39	20	22.63	112	113	80-120	1	30
1,3-Dichlorobenzene	20	22.66	20	23	113	115	80-120	1	30

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REVISED

Quality Control Summary

Client Name: ARCADIS U.S., Inc.
Reported: 01/27/2020 16:56

Group Number: 2071978

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
1,4-Dichlorobenzene	20	23.25	20	23.52	116	118	80-120	1	30
Dichlorodifluoromethane	20	11.83	20	12.4	59	62	41-127	5	30
1,1-Dichloroethane	20	21.28	20	21.48	106	107	80-120	1	30
1,2-Dichloroethane	20	21.77	20	22.17	109	111	73-124	2	30
1,1-Dichloroethene	20	21.93	20	22.25	110	111	80-131	1	30
cis-1,2-Dichloroethene	20	22.79	20	22.98	114	115	80-125	1	30
trans-1,2-Dichloroethene	20	22	20	22.13	110	111	80-126	1	30
1,2-Dichloropropane	20	22.57	20	22.87	113	114	80-120	1	30
cis-1,3-Dichloropropene	20	21.68	20	22.04	108	110	75-120	2	30
trans-1,3-Dichloropropene	20	20.63	20	21.23	103	106	67-120	3	30
1,4-Dioxane	500	715.09	500	687.44	143	137	63-146	4	30
Ethyl Acetate	20	21.63	20	21.26	108	106	67-131	2	30
Ethyl ether	20	17.65	20	20.05	88	100	59-141	13	30
Ethylbenzene	20	21.78	20	21.97	109	110	80-120	1	30
Freon 113	20	20.59	20	20.48	103	102	73-139	1	30
n-Heptane	20	20.55	20	20.58	103	103	56-133	0	30
n-Hexane	20	20.19	20	20.27	101	101	61-138	0	30
2-Hexanone	100	103.67	100	105.91	104	106	56-135	2	30
Isobutyl Alcohol	500	630.52	500	624.15	126	125	61-136	1	30
Isopropylbenzene	20	21.18	20	21.49	106	107	80-120	1	30
p-Isopropyltoluene	20	21.51	20	21.95	108	110	76-120	2	30
Methyl Acetate	20	22.35	20	23.08	112	115	54-136	3	30
Methyl Tertiary Butyl Ether	20	18.63	20	18.61	93	93	69-122	0	30
4-Methyl-2-pentanone	100	104.03	100	105.69	104	106	62-133	2	30
Methylcyclohexane	20	19.66	20	19.78	98	99	67-121	1	30
Methylene Chloride	20	22.17	20	22.36	111	112	80-120	1	30
Naphthalene	20	20.47	20	20.98	102	105	53-124	2	30
2-Nitropropane	20	18.7	20	19.34	94	97	19-144	3	30
Styrene	20	22.21	20	22.38	111	112	80-120	1	30
1,1,2,2-Tetrachloroethane	20	20.9	20	21.39	104	107	72-120	2	30
Tetrachloroethene	20	22.94	20	23.03	115	115	80-120	0	30
Tetrahydrofuran	100	110.36	100	107.99	110	108	54-144	2	30
Toluene	20	21.56	20	21.72	108	109	80-120	1	30
1,2,3-Trichlorobenzene	20	21.87	20	22.14	109	111	66-120	1	30
1,2,4-Trichlorobenzene	20	21.16	20	21.65	106	108	63-120	2	30
1,1,1-Trichloroethane	20	21.82	20	22.07	109	110	67-126	1	30
1,1,2-Trichloroethane	20	22.82	20	23.08	114	115	80-120	1	30
Trichloroethene	20	21.97	20	22	110	110	80-120	0	30
Trichlorofluoromethane	20	14.72	20	14.54	74	73	55-135	1	30
1,2,4-Trimethylbenzene	20	20.99	20	21.36	105	107	75-120	2	30
1,3,5-Trimethylbenzene	20	21.12	20	21.49	106	107	75-120	2	30
Vinyl Chloride	20	11.91	20	12.16	60	61	56-120	2	30
m+p-Xylene	40	43.78	40	44.19	109	110	80-120	1	30
o-Xylene	20	20.99	20	21.07	105	105	80-120	0	30

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REVISED

Quality Control Summary

Client Name: ARCADIS U.S., Inc.
Reported: 01/27/2020 16:56

Group Number: 2071978

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Xylene (Total)	60	64.77	60	65.26	108	109	80-120	1	30
	ug/l	ug/l	ug/l	ug/l					
Batch number: 19309WAJ026	Sample number(s): 1188913-1188920,1188922-1188925								
Acenaphthene	50	38.97			78		52-114		
Acenaphthylene	50	39.55			79		57-121		
Acetophenone	50	40.87			82		61-114		
Aniline	50	30.26			61		35-84		
Anthracene	50	44.6			89		62-116		
Atrazine	50	45.57			91		71-133		
Benzaldehyde	50	43.2			86		48-118		
Benzo(a)anthracene	50	47.45			95		70-118		
Benzo(a)pyrene	50	46.88			94		71-117		
Benzo(b)fluoranthene	50	46.97			94		71-115		
Benzo(g,h,i)perylene	50	50.09			100		60-119		
Benzo(k)fluoranthene	50	45.81			92		71-116		
Benzyl alcohol	50	42.72			85		58-121		
1,1'-Biphenyl	50	37.18			74		51-112		
4-Bromophenyl-phenylether	50	42.91			86		53-117		
Butylbenzylphthalate	50	28.5			57		44-124		
Di-n-butylphthalate	50	36.63			73		62-118		
Caprolactam	50	12.02			24		10-57		
Carbazole	50	44.37			89		64-127		
4-Chloro-3-methylphenol	50	36.96			74		60-118		
4-Chloroaniline	50	37.44			75		35-108		
bis(2-Chloroethoxy)methane	50	42.09			84		53-119		
bis(2-Chloroethyl)ether	50	40.72			81		49-110		
bis(2-Chloroisopropyl)ether	50	38.84			78		33-119		
2-Chloronaphthalene	50	36.53			73		42-111		
2-Chlorophenol	50	34.84			70		52-109		
4-Chlorophenyl-phenylether	50	38.51			77		46-113		
Chrysene	50	44.53			89		69-116		
Dibenz(a,h)anthracene	50	52.21			104		68-121		
Dibenzofuran	50	39.57			79		53-114		
3,3'-Dichlorobenzidine	50	33.37			67		42-107		
2,4-Dichlorophenol	50	39.07			78		58-114		
Dicyclohexylamine	200	156.35	200	161.11	78*	81*	22-75	3	30
Diethylphthalate	50	31.24			62		48-113		
N,N-Dimethylaniline	100	82.66	100	78.78	83	79	59-114	5	30
2,4-Dimethylphenol	50	32.46			65		48-91		
Dimethylphthalate	50	15.86			32		14-123		
4,6-Dinitro-2-methylphenol	50	57.58			115		63-129		
2,4-Dinitrophenol	100	101.48			101		44-134		
2,4-Dinitrotoluene	50	46.66			93		69-117		

*- Outside of specification
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(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

REVISED

Quality Control Summary

Client Name: ARCADIS U.S., Inc.
Reported: 01/27/2020 16:56

Group Number: 2071978

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
2,6-Dinitrotoluene	50	44.22			88		63-122		
bis(2-Ethylhexyl)phthalate	50	44.73			89		68-120		
Fluoranthene	50	43.7			87		63-122		
Fluorene	50	39.16			78		56-115		
Hexachlorobenzene	50	42.12			84		60-117		
Hexachlorobutadiene	50	29.21			58		20-108		
Hexachlorocyclopentadiene	100	36			36		10-91		
Hexachloroethane	50	28.34			57		23-95		
Indeno(1,2,3-cd)pyrene	50	49.98			100		63-114		
Isophorone	50	41.69			83		56-120		
2-Methylnaphthalene	50	37.03			74		44-111		
2-Methylphenol	50	33.81			68		53-107		
4-Methylphenol	50	33.47			67		49-108		
Naphthalene	50	37.13			74		45-105		
2-Nitroaniline	50	44.09			88		66-126		
3-Nitroaniline	50	39.4			79		47-119		
4-Nitroaniline	50	36.84			74		45-107		
Nitrobenzene	50	40.94			82		49-113		
2-Nitrophenol	50	43.72			87		57-116		
4-Nitrophenol	50	19.19			38		23-89		
N-Nitroso-di-n-propylamine	50	41.9			84		51-122		
N-Nitrosodiphenylamine	50	41.26			83		63-119		
Di-n-octylphthalate	50	44.17			88		67-120		
Pentachlorophenol	50	47.11			94		54-131		
Phenanthrene	50	43.88			88		65-113		
Phenol	50	20.59			41		19-79		
Pyrene	50	43.75			87		65-115		
Pyridine	50	18.75			37		13-83		
1,2,4,5-Tetrachlorobenzene	50	32.96			66		33-105		
2,3,4,6-Tetrachlorophenol	50	46.76			94		68-118		
2,4,5-Trichlorophenol	50	41.7			83		66-118		
2,4,6-Trichlorophenol	50	43.15			86		69-122		
Triethylamine	200	49.48	200	45.47	25	23	10-88	8	30
Batch number: 19316WAO026	Sample number(s): 1188912								
Acenaphthene	50	43.95	50	N.D.	88	0*	52-114	200*	30
Acenaphthylene	50	44.09	50	N.D.	88	0*	57-121	200*	30
Acetophenone	50	42.76	50	N.D.	86	0*	61-114	200*	30
Aniline	50	27.79	50	N.D.	56	0*	35-84	200*	30
Anthracene	50	45.71	50	N.D.	91	0*	62-116	200*	30
Atrazine	50	50.75	50	N.D.	102	0*	71-133	200*	30
Benzaldehyde	50	49.14	50	N.D.	98	0*	48-118	200*	30
Benzo(a)anthracene	50	49.05	50	N.D.	98	0*	70-118	200*	30
Benzo(a)pyrene	50	47.49	50	N.D.	95	0*	71-117	200*	30

*- Outside of specification
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(2) The unspiked result was more than four times the spike added.

REVISED

Quality Control Summary

Client Name: ARCADIS U.S., Inc.
Reported: 01/27/2020 16:56

Group Number: 2071978

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Benzo(b)fluoranthene	50	46.75	50	N.D.	94	0*	71-115	200*	30
Benzo(g,h,i)perylene	50	43.51	50	N.D.	87	0*	60-119	200*	30
Benzo(k)fluoranthene	50	47.45	50	N.D.	95	0*	71-116	200*	30
Benzyl alcohol	50	40.63	50	N.D.	81	0*	58-121	200*	30
1,1'-Biphenyl	50	43.47	50	N.D.	87	0*	51-112	200*	30
4-Bromophenyl-phenylether	50	43.14	50	N.D.	86	0*	53-117	200*	30
Butylbenzylphthalate	50	43.45	50	N.D.	87	0*	44-124	200*	30
Di-n-butylphthalate	50	44.47	50	N.D.	89	0*	62-118	200*	30
Caprolactam	50	12.33	50	N.D.	25	0*	10-57	200*	30
Carbazole	50	47.38	50	N.D.	95	0*	64-127	200*	30
4-Chloro-3-methylphenol	50	43.26	50	N.D.	87	0*	60-118	200*	30
4-Chloroaniline	50	30.6	50	N.D.	61	0*	35-108	200*	30
bis(2-Chloroethoxy)methane	50	43.35	50	N.D.	87	0*	53-119	200*	30
bis(2-Chloroethyl)ether	50	40.97	50	N.D.	82	0*	49-110	200*	30
bis(2-Chloroisopropyl)ether	50	41.44	50	N.D.	83	0*	33-119	200*	30
2-Chloronaphthalene	50	42.24	50	N.D.	84	0*	42-111	200*	30
2-Chlorophenol	50	40.72	50	N.D.	81	0*	52-109	200*	30
4-Chlorophenyl-phenylether	50	44.97	50	N.D.	90	0*	46-113	200*	30
Chrysene	50	46.86	50	N.D.	94	0*	69-116	200*	30
Dibenz(a,h)anthracene	50	45.06	50	N.D.	90	0*	68-121	200*	30
Dibenzofuran	50	45.09	50	N.D.	90	0*	53-114	200*	30
3,3'-Dichlorobenzidine	50	30.3	50	N.D.	61	0*	42-107	200*	30
2,4-Dichlorophenol	50	42.94	50	N.D.	86	0*	58-114	200*	30
Dicyclohexylamine	50	46.4	50	48.64	93*	97*	22-75	5	30
Diethylphthalate	50	44.22	50	N.D.	88	0*	48-113	200*	30
N,N-Dimethylaniline	25	20.43	25	20.72	82	83	59-114	1	30
2,4-Dimethylphenol	50	35.19	50	N.D.	70	0*	48-91	200*	30
Dimethylphthalate	50	39.94	50	N.D.	80	0*	14-123	200*	30
4,6-Dinitro-2-methylphenol	50	38.92	50	N.D.	78	0*	63-129	200*	30
2,4-Dinitrophenol	100	55.59	100	N.D.	56	0*	44-134	200*	30
2,4-Dinitrotoluene	50	45.81	50	N.D.	92	0*	69-117	200*	30
2,6-Dinitrotoluene	50	45.45	50	N.D.	91	0*	63-122	200*	30
bis(2-Ethylhexyl)phthalate	50	46.31	50	N.D.	93	0*	68-120	200*	30
Fluoranthene	50	46.49	50	N.D.	93	0*	63-122	200*	30
Fluorene	50	44.35	50	N.D.	89	0*	56-115	200*	30
Hexachlorobenzene	50	41.77	50	N.D.	84	0*	60-117	200*	30
Hexachlorobutadiene	50	35.98	50	N.D.	72	0*	20-108	200*	30
Hexachlorocyclopentadiene	100	48.04	100	N.D.	48	0*	10-91	200*	30
Hexachloroethane	50	33.35	50	N.D.	67	0*	23-95	200*	30
Indeno(1,2,3-cd)pyrene	50	44.08	50	N.D.	88	0*	63-114	200*	30
Isophorone	50	43.82	50	N.D.	88	0*	56-120	200*	30
2-Methylnaphthalene	50	42.58	50	N.D.	85	0*	44-111	200*	30
2-Methylphenol	50	40.15	50	N.D.	80	0*	53-107	200*	30
4-Methylphenol	50	37.25	50	N.D.	74	0*	49-108	200*	30

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(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

REVISED

Quality Control Summary

Client Name: ARCADIS U.S., Inc. Group Number: 2071978
Reported: 01/27/2020 16:56

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Naphthalene	50	39.78	50	N.D.	80	0*	45-105	200*	30
2-Nitroaniline	50	45.29	50	N.D.	91	0*	66-126	200*	30
3-Nitroaniline	50	38.97	50	N.D.	78	0*	47-119	200*	30
4-Nitroaniline	50	39.84	50	N.D.	80	0*	45-107	200*	30
Nitrobenzene	50	41.44	50	N.D.	83	0*	49-113	200*	30
2-Nitrophenol	50	38.92	50	N.D.	78	0*	57-116	200*	30
4-Nitrophenol	50	24.43	50	N.D.	49	0*	23-89	200*	30
N-Nitroso-di-n-propylamine	50	43.38	50	N.D.	87	0*	51-122	200*	30
N-Nitrosodiphenylamine	50	43.49	50	N.D.	87	0*	63-119	200*	30
Di-n-octylphthalate	50	45.82	50	N.D.	92	0*	67-120	200*	30
Pentachlorophenol	50	39.16	50	N.D.	78	0*	54-131	200*	30
Phenanthrene	50	45.33	50	N.D.	91	0*	65-113	200*	30
Phenol	50	23.38	50	N.D.	47	0*	19-79	200*	30
Pyrene	50	44.72	50	N.D.	89	0*	65-115	200*	30
Pyridine	50	20.05	50	N.D.	40	0*	13-83	200*	30
1,2,4,5-Tetrachlorobenzene	50	39.22	50	N.D.	78	0*	33-105	200*	30
2,3,4,6-Tetrachlorophenol	50	46.86	50	N.D.	94	0*	68-118	200*	30
2,4,5-Trichlorophenol	50	42.61	50	N.D.	85	0*	66-118	200*	30
2,4,6-Trichlorophenol	50	43.32	50	N.D.	87	0*	69-122	200*	30
Triethylamine	50	15.87	50	18	32	36	10-88	13	30
	ug/l	**ug/l**	**ug/l**	**ug/l**					
Batch number: 193040018A	Sample number(s): 1188912-1188920,1188923-1188925								
Acetaldehyde	500	367.32			73*		76-119		
Formaldehyde	500	437.07			87		77-122		
	ug/l	**ug/l**	**ug/l**	**ug/l**					
Batch number: 193080007A	Sample number(s): 1188912								
Ethanol	2501	2256.23			90		80-115		
Isopropanol	2505	2463.38			98		85-115		
Methanol	2503	2349.23			94		79-120		
Batch number: 193080008A	Sample number(s): 1188913-1188921,1188923-1188925								
Ethanol	2501	2251.83			90		80-115		
Isopropanol	2505	2434.08			97		85-115		
Methanol	2503	2363.84			94		79-120		
Batch number: 193080027A	Sample number(s): 1188912,1188914-1188919								
Ethylene glycol	102783.4	99472.88			97		69-118		
Propylene glycol	98902.99	93220.42			94		60-121		
Batch number: 193080028A	Sample number(s): 1188920-1188921,1188923-1188925								
Ethylene glycol	102783.4	96990.36			94		69-118		
Propylene glycol	98902.99	92316.44			93		60-121		

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REVISED

Quality Control Summary

Client Name: ARCADIS U.S., Inc.
Reported: 01/27/2020 16:56

Group Number: 2071978

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 193100033A	Sample number(s): 1188913								
Ethylene glycol	102783.4	85373.94			83		69-118		
Propylene glycol	98902.99	85508.54			86		60-121		

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: Y193121AA	Sample number(s): 1188912-1188920,1188922 UNSPK: 1188913									
Acetone	N.D.	150	187.47	150	167.7	125	112	54-157	11	30
Acetonitrile	N.D.	150	176.91	150	167.33	118	112	66-149	6	30
Benzene	N.D.	20	22.53	20	22.43	113	112	80-120	0	30
Bromochloromethane	N.D.	20	20.74	20	20	104	100	80-120	4	30
Bromodichloromethane	N.D.	20	22.33	20	22.15	112	111	71-120	1	30
Bromoform	N.D.	20	20.61	20	20.87	103	104	51-120	1	30
Bromomethane	N.D.	20	13.53	20	12.91	68	65	53-128	5	30
n-Butanol	N.D.	1000	1220.58	1000	1151.01	122	115	57-130	6	30
2-Butanone	N.D.	150	159.73	150	161.19	106	107	59-135	1	30
t-Butyl alcohol	N.D.	200	234.17	200	215.59	117	108	60-130	8	30
n-Butylbenzene	N.D.	20	21.44	20	21.56	107	108	76-120	1	30
sec-Butylbenzene	N.D.	20	21.8	20	21.93	109	110	77-120	1	30
tert-Butylbenzene	N.D.	20	20.53	20	20.59	103	103	78-120	0	30
Carbon Disulfide	N.D.	20	18.79	20	18.85	94	94	65-128	0	30
Carbon Tetrachloride	N.D.	20	22.96	20	22.72	115	114	64-134	1	30
Chlorobenzene	N.D.	20	22.1	20	22	111	110	80-120	0	30
Chlorodifluoromethane	N.D.	20	15.74	20	14.04	79	70	45-149	11	30
Chloroethane	N.D.	20	13.97	20	12.78	70	64	55-123	9	30
Chloroform	N.D.	20	22.82	20	22.56	114	113	80-120	1	30
Chloromethane	N.D.	20	13.11	20	12.96	66	65	56-121	1	30
Cyclohexane	N.D.	20	19.24	20	19.37	96	97	68-126	1	30
Cyclohexanone	N.D.	500	555.14	500	510.52	111	102	27-141	8	30
1,2-Dibromo-3-chloropropane	N.D.	20	19.03	20	19.58	95	98	47-131	3	30
Dibromochloromethane	N.D.	20	21.48	20	21.56	107	108	71-120	0	30
1,2-Dibromoethane	N.D.	20	21.48	20	21.58	107	108	77-120	0	30
1,2-Dichlorobenzene	N.D.	20	22.42	20	22.28	112	111	80-120	1	30
1,3-Dichlorobenzene	N.D.	20	22.97	20	22.73	115	114	80-120	1	30
1,4-Dichlorobenzene	N.D.	20	23.31	20	23.04	117	115	80-120	1	30
Dichlorodifluoromethane	N.D.	20	14.25	20	14.59	71	73	41-127	2	30
1,1-Dichloroethane	N.D.	20	21.94	20	21.75	110	109	80-120	1	30

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(2) The unspiked result was more than four times the spike added.

REVISED

Quality Control Summary

Client Name: ARCADIS U.S., Inc.
Reported: 01/27/2020 16:56

Group Number: 2071978

MS/MSD (continued)

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
1,2-Dichloroethane	N.D.	20	22.17	20	21.83	111	109	73-124	2	30
1,1-Dichloroethene	N.D.	20	23.06	20	23.01	115	115	80-131	0	30
cis-1,2-Dichloroethene	N.D.	20	23.58	20	23.17	118	116	80-120	2	30
trans-1,2-Dichloroethene	N.D.	20	22.69	20	22.4	113	112	80-120	1	30
1,2-Dichloropropane	N.D.	20	22.91	20	22.71	115	114	80-120	1	30
cis-1,3-Dichloropropene	N.D.	20	20.06	20	20.48	100	102	75-120	2	30
trans-1,3-Dichloropropene	N.D.	20	19.56	20	19.84	98	99	67-120	1	30
1,4-Dioxane	N.D.	500	756.75	500	714.53	151*	143	63-146	6	30
Ethyl Acetate	N.D.	20	21.97	20	21.79	110	109	67-131	1	30
Ethyl ether	N.D.	20	22.13	20	13.99	111	70	59-141	45*	30
Ethylbenzene	N.D.	20	22.07	20	22.02	110	110	80-120	0	30
Freon 113	N.D.	20	21.97	20	21.63	110	108	73-139	2	30
n-Heptane	N.D.	20	22.12	20	21.36	111	107	56-133	3	30
n-Hexane	N.D.	20	21.12	20	20.88	106	104	61-138	1	30
2-Hexanone	N.D.	100	104.76	100	106.07	105	106	56-135	1	30
Isobutyl Alcohol	N.D.	500	690.75	500	630.35	138*	126	61-136	9	30
Isopropylbenzene	N.D.	20	21.41	20	21.54	107	108	80-120	1	30
p-Isopropyltoluene	N.D.	20	22.03	20	21.91	110	110	76-120	1	30
Methyl Acetate	N.D.	20	22.31	20	22.74	112	114	54-136	2	30
Methyl Tertiary Butyl Ether	N.D.	20	17.54	20	17.77	88	89	69-122	1	30
4-Methyl-2-pentanone	N.D.	100	103.12	100	104.36	103	104	62-133	1	30
Methylcyclohexane	N.D.	20	20.38	20	20.14	102	101	67-121	1	30
Methylene Chloride	N.D.	20	22.5	20	22.32	112	112	80-120	1	30
Naphthalene	N.D.	20	19.51	20	19.71	98	99	53-124	1	30
2-Nitropropane	N.D.	20	18.11	20	18.64	91	93	19-144	3	30
Styrene	N.D.	20	22.08	20	22.07	110	110	80-120	0	30
1,1,2,2-Tetrachloroethane	N.D.	20	20.41	20	20.71	102	104	72-120	1	30
Tetrachloroethene	N.D.	20	23.27	20	23.42	116	117	80-120	1	30
Tetrahydrofuran	N.D.	100	115.65	100	106	116	106	54-144	9	30
Toluene	N.D.	20	21.79	20	21.85	109	109	80-120	0	30
1,2,3-Trichlorobenzene	N.D.	20	20.81	20	20.76	104	104	66-120	0	30
1,2,4-Trichlorobenzene	N.D.	20	20.4	20	20.57	102	103	63-120	1	30
1,1,1-Trichloroethane	N.D.	20	22.72	20	22.54	114	113	67-126	1	30
1,1,2-Trichloroethane	N.D.	20	22.21	20	22.31	111	112	80-120	0	30
Trichloroethene	N.D.	20	23.03	20	22.54	115	113	80-120	2	30
Trichlorofluoromethane	N.D.	20	17.84	20	13.05	89	65	55-135	31*	30
1,2,4-Trimethylbenzene	N.D.	20	21.19	20	21.18	106	106	75-120	0	30
1,3,5-Trimethylbenzene	N.D.	20	21.49	20	21.42	107	107	75-120	0	30
Vinyl Chloride	N.D.	20	13.59	20	13.14	68	66	56-120	3	30
m+p-Xylene	N.D.	40	44.39	40	44.45	111	111	80-120	0	30
o-Xylene	N.D.	20	20.6	20	20.86	103	104	80-120	1	30
Xylene (Total)	N.D.	60	64.99	60	65.31	108	109	80-120	0	30

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(2) The unspiked result was more than four times the spike added.

REVISED

Quality Control Summary

Client Name: ARCADIS U.S., Inc.
Reported: 01/27/2020 16:56

Group Number: 2071978

MS/MSD (continued)

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: 19309WAJ026	Sample number(s): 1188913-1188920,1188922-1188925 UNSPK: 1188913									
Acenaphthene	N.D.	51.23	42.01	50.4	37.43	82	74	52-114	12	30
Acenaphthylene	N.D.	51.23	43.75	50.4	39.05	85	77	57-121	11	30
Acetophenone	N.D.	51.23	40.65	50.4	35.64	79	71	61-114	13	30
Aniline	N.D.	51.23	28.33	50.4	25.62	55	51	35-84	10	30
Anthracene	N.D.	51.23	46	50.4	42.97	90	85	62-116	7	30
Atrazine	N.D.	51.23	44.87	50.4	46.16	88	92	71-133	3	30
Benzaldehyde	N.D.	51.23	45.87	50.4	44.1	90	87	48-118	4	30
Benzo(a)anthracene	N.D.	51.23	52.95	50.4	48.78	103	97	70-118	8	30
Benzo(a)pyrene	N.D.	51.23	45.45	50.4	43.69	89	87	71-117	4	30
Benzo(b)fluoranthene	N.D.	51.23	46.8	50.4	45.08	91	89	71-115	4	30
Benzo(g,h,i)perylene	N.D.	51.23	47.66	50.4	43.9	93	87	60-119	8	30
Benzo(k)fluoranthene	N.D.	51.23	47.35	50.4	44.43	92	88	71-116	6	30
Benzyl alcohol	N.D.	51.23	39.12	50.4	34.91	76	69	58-121	11	30
1,1'-Biphenyl	N.D.	51.23	39.93	50.4	35.46	78	70	51-112	12	30
4-Bromophenyl-phenylether	N.D.	51.23	44.75	50.4	40.76	87	81	53-117	9	30
Butylbenzylphthalate	N.D.	51.23	47.72	50.4	43.22	93	86	44-124	10	30
Di-n-butylphthalate	N.D.	51.23	42.5	50.4	39.08	83	78	62-118	8	30
Caprolactam	N.D.	51.23	13.86	50.4	12.99	27	26	10-57	6	30
Carbazole	N.D.	51.23	46.05	50.4	43.32	90	86	64-127	6	30
4-Chloro-3-methylphenol	N.D.	51.23	42.23	50.4	37.36	82	74	60-118	12	30
4-Chloroaniline	N.D.	51.23	37.2	50.4	34.53	73	69	35-108	7	30
bis(2-Chloroethoxy)methane	N.D.	51.23	44.4	50.4	39.98	87	79	53-119	10	30
bis(2-Chloroethyl)ether	N.D.	51.23	40.16	50.4	35.79	78	71	49-110	12	30
bis(2-Chloroisopropyl)ether	N.D.	51.23	38.26	50.4	33.81	75	67	33-119	12	30
2-Chloronaphthalene	N.D.	51.23	38.9	50.4	33.97	76	67	42-111	14	30
2-Chlorophenol	N.D.	51.23	34.01	50.4	30.32	66	60	52-109	11	30
4-Chlorophenyl-phenylether	N.D.	51.23	43.32	50.4	39.32	85	78	46-113	10	30
Chrysene	N.D.	51.23	49.78	50.4	45.84	97	91	69-116	8	30
Dibenz(a,h)anthracene	N.D.	51.23	49.59	50.4	47.49	97	94	68-121	4	30
Dibenzofuran	N.D.	51.23	43.65	50.4	38.07	85	76	53-114	14	30
3,3'-Dichlorobenzidine	N.D.	51.23	36.51	50.4	35.38	71	70	42-107	3	30
2,4-Dichlorophenol	N.D.	51.23	41.47	50.4	36.43	81	72	58-114	13	30
Diethylphthalate	N.D.	51.23	42.22	50.4	37.53	82	74	48-113	12	30
2,4-Dimethylphenol	N.D.	51.23	34.04	50.4	30.18	66	60	48-91	12	30
Dimethylphthalate	N.D.	51.23	44.44	50.4	37.02	87	73	14-123	18	30
4,6-Dinitro-2-methylphenol	N.D.	51.23	55.38	50.4	53.09	108	105	63-129	4	30
2,4-Dinitrophenol	N.D.	102.46	109.5	100.81	102.24	107	101	44-134	7	30
2,4-Dinitrotoluene	N.D.	51.23	51.2	50.4	44.61	100	89	69-117	14	30
2,6-Dinitrotoluene	N.D.	51.23	49.27	50.4	44.01	96	87	63-122	11	30
bis(2-Ethylhexyl)phthalate	N.D.	51.23	48.2	50.4	43.37	94	86	68-120	11	30
Fluoranthene	N.D.	51.23	45.92	50.4	41.56	90	82	63-122	10	30
Fluorene	N.D.	51.23	43.44	50.4	39.42	85	78	56-115	10	30

*- Outside of specification
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(2) The unspiked result was more than four times the spike added.

REVISED

Quality Control Summary

Client Name: ARCADIS U.S., Inc. Group Number: 2071978
Reported: 01/27/2020 16:56

MS/MSD (continued)

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Hexachlorobenzene	N.D.	51.23	45.29	50.4	41.32	88	82	60-117	9	30
Hexachlorobutadiene	N.D.	51.23	27.97	50.4	24.73	55	49	20-108	12	30
Hexachlorocyclopentadiene	N.D.	102.46	42.71	100.81	42.1	42	42	10-91	1	30
Hexachloroethane	N.D.	51.23	25.42	50.4	23.02	50	46	23-95	10	30
Indeno(1,2,3-cd)pyrene	N.D.	51.23	46.75	50.4	45.23	91	90	63-114	3	30
Isophorone	N.D.	51.23	43.76	50.4	39.43	85	78	56-120	10	30
2-Methylnaphthalene	N.D.	51.23	38.05	50.4	33.92	74	67	44-111	11	30
2-Methylphenol	N.D.	51.23	37.9	50.4	32.93	74	65	53-107	14	30
4-Methylphenol	N.D.	51.23	36.73	50.4	31.72	72	63	49-108	15	30
Naphthalene	N.D.	51.23	37.54	50.4	34.25	73	68	45-105	9	30
2-Nitroaniline	N.D.	51.23	51.1	50.4	45.28	100	90	66-126	12	30
3-Nitroaniline	N.D.	51.23	42.18	50.4	39.27	82	78	47-119	7	30
4-Nitroaniline	N.D.	51.23	40.32	50.4	36.63	79	73	45-107	10	30
Nitrobenzene	N.D.	51.23	42.44	50.4	37.71	83	75	49-113	12	30
2-Nitrophenol	N.D.	51.23	46.62	50.4	41.16	91	82	57-116	12	30
4-Nitrophenol	N.D.	51.23	23.29	50.4	20.23	45	40	23-89	14	30
N-Nitroso-di-n-propylamine	N.D.	51.23	41.93	50.4	36.66	82	73	51-122	13	30
N-Nitrosodiphenylamine	N.D.	51.23	43.36	50.4	41.2	85	82	63-119	5	30
Di-n-octylphthalate	N.D.	51.23	42.71	50.4	40.89	83	81	67-120	4	30
Pentachlorophenol	N.D.	51.23	46.57	50.4	43.17	91	86	54-131	8	30
Phenanthrene	N.D.	51.23	46.46	50.4	41.63	91	83	65-113	11	30
Phenol	N.D.	51.23	23.69	50.4	20.39	46	40	19-79	15	30
Pyrene	N.D.	51.23	46.2	50.4	42.98	90	85	65-115	7	30
Pyridine	N.D.	51.23	17.99	50.4	15.46	35	31	13-83	15	30
1,2,4,5-Tetrachlorobenzene	N.D.	51.23	33.78	50.4	28.29	66	56	33-105	18	30
2,3,4,6-Tetrachlorophenol	N.D.	51.23	48.33	50.4	45.08	94	89	68-118	7	30
2,4,5-Trichlorophenol	N.D.	51.23	45.56	50.4	39.63	89	79	66-118	14	30
2,4,6-Trichlorophenol	N.D.	51.23	45.46	50.4	38.7	89	77	69-122	16	30
	ug/l	**ug/l**	**ug/l**	**ug/l**	**ug/l**					
Batch number: 193040018A	Sample number(s): 1188912-1188920,1188923-1188925 UNSPK: 1188913									
Acetaldehyde	N.D.	500	373.34	500	373.21	75*	75*	76-119	0	30
Formaldehyde	N.D.	500	439.38	500	453.31	88	91	77-122	3	30
	ug/l	**ug/l**	**ug/l**	**ug/l**	**ug/l**					
Batch number: 193080008A	Sample number(s): 1188913-1188921,1188923-1188925 UNSPK: 1188913									
Ethanol	N.D.	2501	2206.75	2501	2152.95	88	86	80-115	2	30
Isopropanol	N.D.	2505	2418.92	2505	2336.66	97	93	85-115	3	30
Methanol	N.D.	2503	2332.91	2503	2251.27	93	90	79-120	4	30
Batch number: 193080027A	Sample number(s): 1188912,1188914-1188919 UNSPK: 1188913									
Ethylene glycol	N.D.	102783.4	76956.44	102783.4	94052.66	75	92	69-118	20	20
Propylene glycol	N.D.	98902.99	82293.85	98902.99	86785.93	83	88	60-121	5	20

*- Outside of specification
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(2) The unspiked result was more than four times the spike added.

REVISED

Quality Control Summary

Client Name: ARCADIS U.S., Inc.
Reported: 01/27/2020 16:56

Group Number: 2071978

MS/MSD (continued)

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: 193080028A	Sample number(s): 1188920-1188921,1188923-1188925 UNSPK: 1188920									
Ethylene glycol	N.D.	102783.4	97465.19	102783.4	100468	95	98	69-118	3	20
Propylene glycol	N.D.	98902.99	94527.95	98902.99	96404.72	96	97	60-121	2	20
Batch number: 193100033A	Sample number(s): 1188913 UNSPK: 1188913									
Ethylene glycol	N.D.	102783.4	52523.21	102783.4	62846.92	51*	61*	69-118	18	20
Propylene glycol	N.D.	98902.99	61730.25	98902.99	65033.09	62	66	60-121	5	20

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs- 5ml Water by 8260C/D
Batch number: Y193091AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
1188921	97	99	92	90
Blank	97	100	93	90
LCS	95	98	94	95
Limits:	80-120	80-120	80-120	80-120

Analysis Name: VOCs- 5ml Water by 8260C/D
Batch number: Y193121AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
1188912	103	98	90	93
1188913	100	99	92	89
1188914	98	99	93	95
1188915	97	97	94	96
1188916	100	99	92	90
1188917	101	100	93	89
1188918	100	99	92	89
1188919	100	98	92	90
1188920	100	101	92	89
1188922	101	100	92	93
Blank	98	99	92	90
LCS	97	98	94	96
MS	98	99	93	95
MSD	97	97	94	96

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(2) The unspiked result was more than four times the spike added.

REVISED

Quality Control Summary

Client Name: ARCADIS U.S., Inc. Group Number: 2071978
Reported: 01/27/2020 16:56

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs- 5ml Water by 8260C/D
Batch number: Y193121AA

Limits:	80-120	80-120	80-120	80-120

Analysis Name: VOCs- 5ml Water by 8260C/D
Batch number: Y193131AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
1188923	102	100	91	90
1188924	102	100	91	89
1188925	101	100	91	90
Blank	99	99	92	90
LCS	97	96	94	96
LCSD	97	96	94	96
Limits:	80-120	80-120	80-120	80-120

Analysis Name: Semi-annual Groundwater BMS
Batch number: 19309WAJ026

	Phenol-d6	2-Fluorophenol	2,4,6-Tribromophenol	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14
1188913	34	41	81	81	78	86
1188914	41	47	91	82	82	85
1188915	38	44	90	78	79	86
1188916	30	43	92	80	81	89
1188917	41	40	78	77	76	71
1188918	30	41	83	79	78	93
1188919	33	35	69	74	65	86
1188920	32	44	55	72	71	85
1188922	26	34	82	73	69	86
1188923	33	37	81	83	83	91
1188924	19	20	63	79	81	86
1188925	31	37	84	87	89	91
Blank	27	36	75	71	71	92
LCS	36	49	87	80	76	87
LCSD	37	48	88	81	77	91
MS	41	47	91	82	82	85
MSD	38	44	90	78	79	86
Limits:	10-67	10-84	23-135	33-113	44-102	39-125

Analysis Name: Semi-annual Groundwater BMS
Batch number: 19316WAO026

	Phenol-d6	2-Fluorophenol	2,4,6-Tribromophenol	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14
1188912	17	16	35	75	75	86
Blank	33	49	82	85	87	95

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(2) The unspiked result was more than four times the spike added.

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Quality Control Summary

Client Name: ARCADIS U.S., Inc. Group Number: 2071978
Reported: 01/27/2020 16:56

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: Semi-annual Groundwater BMS
Batch number: 19316WAO026

	Phenol-d6	2-Fluorophenol	2,4,6-Tribromophenol	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14
LCS	40	56	87	80	85	89
LCSD	1*	2*	3*	3*	4*	4*
Limits:	10-67	10-84	23-135	33-113	44-102	39-125

Analysis Name: Short List Aldehydes- W 8315A
Batch number: 193040018A

	Butyraldehyde
1188912	96
1188913	87
1188914	96
1188915	96
1188916	98
1188917	99
1188918	96
1188919	96
1188920	96
1188923	93
1188924	98
1188925	95
Blank	99
LCS	96
MS	96
MSD	96
Limits:	39-153

Analysis Name: Alcohols in Water
Batch number: 193080007A

	Acetone-D1	Acetone-D2
1188912	100	97
Blank	102	99
LCS	101	96
Limits:	58-149	58-149

Analysis Name: Alcohols in Water
Batch number: 193080008A

	Acetone-D1	Acetone-D2
1188913	96	103
1188914	96	96
1188915	95	96

*- Outside of specification
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Quality Control Summary

Client Name: ARCADIS U.S., Inc. Group Number: 2071978
Reported: 01/27/2020 16:56

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: Alcohols in Water
Batch number: 193080008A

	Acetone-D1	Acetone-D2
1188916	88	89
1188917	95	92
1188918	91	91
1188919	89	91
1188920	90	91
1188921	89	89
1188923	90	88
1188924	90	90
1188925	96	88
Blank	100	102
LCS	102	101
MS	96	96
MSD	95	96
Limits:	58-149	58-149

Analysis Name: Glycols in Water by 8015C/D
Batch number: 193080027A

	Tetramethylene glycol
1188912	7*
1188914	39
1188915	54
1188916	27
1188917	14*
1188918	6*
1188919	4*
Blank	36
LCS	89
MS	39
MSD	54
Limits:	22-129

Analysis Name: Glycols in Water by 8015C/D
Batch number: 193080028A

	Tetramethylene glycol
1188920	55
1188921	50
1188923	9*
1188924	5*
1188925	8*
Blank	66

*- Outside of specification
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Quality Control Summary

Client Name: ARCADIS U.S., Inc.
Reported: 01/27/2020 16:56

Group Number: 2071978

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: Glycols in Water by 8015C/D
Batch number: 193080028A

	Tetramethylene glycol
LCS	92
MS	88
MSD	93
Limits:	22-129

Analysis Name: Glycols in Water by 8015C/D
Batch number: 193100033A

	Tetramethylene glycol
1188913	12*
Blank	53
LCS	93
MS	35
MSD	45
Limits:	22-129

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Syracuse #225

Environmental Analysis Request/Chain of Custody

Acct. # 03074 Group # 2071978 Sample # ~~1188412-925~~ 1188912-25 #H01326 11/11/19 pg 1 of 3

Client: Arcadis			
Project Name/#: BMS Syracuse	Site ID #:		
Project Manager: Bill McCune	P.O. #: 30033396		
Sampler: Austin George, Josh Miller, Evan Green	PWSID #:		
Phone #: 315 671 6712	Quote #:		
State where samples were collected: NY	For Compliance: Yes ☐ No ☐		

Sample Identification	Collection Date	Collection Time	Grab	Composite	Matrix: Soil	Sediment	Tissue	Water: Potable	Ground	Surface	NPDES	Other:	Total # of Containers	VOCs 8260C	SVOCs 8270D	Glycols 8015C	Alcohols	Aldehydes 8315A			Remarks
														H			H				
PW-2T	10/30/19	1000	X					GW					10	X	X	X	X	X			
BDA-1WT	10/30/19	1135	X					GW					10	X	X	X	X	X			
BDA-1WTMS	10/30/19	1135	X					GW					10	X	X	X	X	X			
BDA-1WT MSD	10/30/19	1135	X					GW					10	X	X	X	X	X			
BDA-1F	10/30/19	1435	X					GW					10	X	X	X	X	X			
PW-6F	10/30/19	1030	X					GW					10	X	X	X	X	X			
PW-4T	10/30/19	1150	X					GW					10	X	X	X	X	X			
BDA-6WT	10/30/19	1405	X					GW					10	X	X	X	X	X			
BDA-6T	10/30/19	1515	X					GW					10	X	X	X	X	X			
Trip blank	10/23/19		X					W					4	X		X	X				

Analyses Requested — Preservation and Filtration Codes

For Lab Use Only
SF #:
SCR #:

Preservation Codes
H = HCl; T = Thiosulfate; N = HNO_3; B = NaOH; S = H_2SO_4; P = H_3PO_4; F = Field Filtered; O = Other

Turnaround Time Requested (TAT) (please check): Standard ☑ Rush ☐
(Rush TAT is subject to laboratory approval and surcharges.)

Date results are needed:

Rush results requested by (please check): E-Mail ☐ Phone ☐

E-mail Address: William.McCune@arcadis.com

Phone: 315 671 6712

Data Package Options (please check if required)

Type I (Validation/non-CLP) ☐ MA MCP ☐
Type III (Reduced non-CLP) ☐ CT RCP ☐
Type VI (Raw Data Only) ☐ TX TRRP-13 ☐
NJ DKQP ☐ NYSDEC Category ☐ A or ☐ B

EDD Required? Yes ☑ No ☐ If yes, format:

Relinquished by:	Date	Time		Date	Time
Josh Sling / MT	10/30/19	1638		10/30/19	1638
Relinquished by: / SYR TA Reling 11/6	Date 10/30/19	Time 19:00		Date	Time
Relinquished by:	Date	Time		Date	Time
Relinquished by:	Date	Time		Date	Time
Relinquished by:	Date	Time		Date 10/31/19	Time ~~11~~ 11:30

Relinquished by Commercial Carrier:

UPS _____ FedEx ✓ Other _____

NUA 2305 10/31/19

1188912-25

Syracuse *Environmental Analysis Request/Chain of Custody*

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#225

Acct. # 03074 Group # 2071978 Sample # ~~1188912-929~~ ~~1188912-929~~ 2401326 11/1/19 ~~QM 2588M~~ 10/31/19 pg 2 of 3

Client: Arcadis	
Project Name/#: BMS Syracuse	Site ID #:
Project Manager: Bill McCune	P.O. #: 30033396
Sampler: Austin George, Josh Miller, Evan Green	PWSID #:
Phone #: 315 671 6712	Quote #:
State where samples were collected: NY	For Compliance: Yes ☐ No ☐

Matrix: Tissue ☐ Ground ☑ Surface ☐; Sediment ☐ Potable ☐ NPDES ☐; Soil ☐ Water; Other:

Preservation and Filtration Codes: VOCs 8260C: H; Alcohols: H

Sample Identification	Collection Date	Collection Time	Grab	Composite	Soil	Water	Other	Total # of Containers	VOCs 8260C	SVOCs 8270D	Glycols 8015C	Alcohols	Aldehydes 8315A			Remarks
BDA15RX	10/30/19	1137	X			X		5	X	X						
PW-5T	10/30/19	1407	X			X		10	X	X	X	X	X			
PW-5RX	10/30/19	1541	X			X		10	X	X	X	X	X			
DUP-103019	10/30/19	/	X			X		10	X	X	X	X	X			

RGS 10-30-19

For Lab Use Only

SF #: ______

SCR #: ______

Preservation Codes

H = HCl	T = Thiosulfate
N = HNO_3	B = NaOH
S = H_2SO_4	P = H_3PO_4
F = Field Filtered	O = Other

Turnaround Time Requested (TAT) (please check): Standard ☑ Rush ☐

(Rush TAT is subject to laboratory approval and surcharges.)

Date results are needed:

Rush results requested by (please check): E-Mail ☐ Phone ☐

E-mail Address: William.McCune@arcadis.com

Phone: 315 671 6712

Data Package Options (please check if required)

Type I (Validation/non-CLP)	☐	MA MCP	☐
Type III (Reduced non-CLP)	☐	CT RCP	☐
Type VI (Raw Data Only)	☐	TX TRRP-13	☐
NJ DKQP	☐	NYSDEC Category ☐ A or ☐ B	

EDD Required? Yes ☑ No ☐ If yes, format:

Relinquished by	Date	Time	Received by	Date	Time
Josh Sinay	10/30/19	1638	[signature]	10/30/19	1638
R. Kellogg TA	10-30-19	19:00			
			[signature]	10/31/19	11:30

Relinquished by Commercial Carrier:

UPS ______ FedEx X Other ______

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Sample Administration Receipt Documentation Log

Doc Log ID: 264720

Group Number(s): 2071978

Client: Arcadis

BMS Syracuse

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Date:	10/31/2019
Number of Packages:	3	Number of Projects:	1
State/Province of Origin:	NY		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	No
Custody Seal Present:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	Total Trip Blank Qty:	4
Samples Chilled:	Yes	Trip Blank Type:	See Below
Paperwork Enclosed:	Yes	Air Quality Samples Present:	No
Samples Intact:	Yes		
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Trip Blank Type(s): 2 Unpreserved, 2 HCl

Unpacked by Nicole Reiff

Samples Chilled Details: BMS Syracuse

Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	192050133	2.2	IR	Wet	Y	Loose	N
2	192050133	3.6	IR	Wet	Y	Loose	N
3	192050133	3.4	IR	Wet	Y	Loose	N

Sample ID Discrepancy Details: BMS Syracuse

Sample ID on COC	Sample ID on Label	Comments
BDA-6WT	BDA-4WT	2 unpreserved vials, 2 unpreserved 250ml ambers.

2425 New Holland Pike
Lancaster, PA 17605-2425
T | 717-656-2300
F | 717-656-2681
www.LancasterLabs.com

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mL**	milliliter(s)
C	degrees Celsius	**MPN**	Most Probable Number
cfu	colony forming units	**N.D.**	non-detect
CP Units	cobalt-chloroplatinate units	**ng**	nanogram(s)
F	degrees Fahrenheit	**NTU**	nephelometric turbidity units
g	gram(s)	**pg/L**	picogram/liter
IU	International Units	**RL**	Reporting Limit
kg	kilogram(s)	**TNTC**	Too Numerous To Count
L	liter(s)	**µg**	microgram(s)
lb.	pound(s)	**µL**	microliter(s)
m3	cubic meter(s)	**umhos/cm**	micromhos/cm
meq	milliequivalents	**MCL**	Maximum Contamination Limit
mg	milligram(s)		

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

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Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
P^	Concentration difference between the primary and confirmation column > 40%. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

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ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

ARCADIS U.S., Inc.
630 Plaza Drive
Suite 600
Highlands Ranch CO 80129

Report Date: November 27, 2019 13:25

Project: Bristol-Myers Squibb

Account #: 03074
Group Number: 2072206
SDG: BMS82
PO Number: 30033396
State of Sample Origin: NY

Electronic Copy To	Arcadis	Attn: William McCune
Electronic Copy To	Arcadis	Attn: Lawrence Carey Healy

Respectfully Submitted,

Megan A. Moeller
Senior Specialist

(717) 556-7261

To view our laboratory's current scopes of accreditation please go to https://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/certifications-and-accreditations-eurofins-lancaster-laboratories-environmental/ . Historical copies may be requested through your project manager.



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SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
BDA-1RX Grab Groundwater	10/31/2019 09:22	1190178
BDA-11WT Grab Groundwater	10/31/2019 10:05	1190179
BDA-13WT Grab Groundwater	10/31/2019 10:27	1190180
BDA-8T Grab Groundwater	10/31/2019 11:05	1190181
BDA-4UT Grab Groundwater	10/31/2019 11:10	1190182
TRIP BLANK Water	10/23/2019	1190183

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

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Project Name: Bristol-Myers Squibb
ELLE Group #: 2072206

General Comments:

Through our technical processes and second person review of data, we have established that our data/deliverables are in compliance with the methods and project requirements unless otherwise noted or previously resolved with the client. The compliance signature is located on the cover page of the Analysis Reports.

See the Laboratory Sample Analysis Record section of the Analysis Report for the method references.

All QC met criteria unless otherwise noted in an Analysis Specific Comment below.

Refer to the QC Summary for specific values and acceptance criteria.

Project specific QC samples are not included in this data set.

Matrix QC may not be reported if site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

Surrogate recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in an Analysis Specific Comment below.

The samples were received at the appropriate temperature and in accordance with the chain of custody unless otherwise noted.

Analysis Specific Comments:

SW-846 8260C, GC/MS Volatiles

Sample #s: 1190183

Project defined calibration criteria are not met. The calibration is compliant with the method defined criteria.

A Report Limit Verification (RLV) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The RLV standard shows adequate sensitivity at or below the reporting limit.

Sample #s: 1190178, 1190179, 1190181

Project defined calibration criteria are not met. The calibration is compliant with the method defined criteria.

A Report Limit Verification (RLV) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The RLV standard shows adequate sensitivity at or below the reporting limit.

The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the TNI/DoD Standards. The following analytes are accepted based on this allowance: chloromethane, bromomethane and chloroethane.

Sample #s: 1190182

Project defined calibration criteria are not met. The calibration is compliant with the method defined criteria.

A Report Limit Verification (RLV) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The RLV standard shows adequate sensitivity at or below the reporting limit.

The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the TNI/DoD Standards. The following analytes are accepted based on this allowance: chloromethane, bromomethane and chloroethane.

The concentrations reported for Acetone, Methylene Chloride and 4-Methyl-2-pentanone are estimated since they exceed the calibration range of the instrument. A further diluted analysis was performed from a previously opened container with headspace. The result for Acetone was 170,000 ug/l. The result for Methylene Chloride was 390,000 ug/l. The result for 4-Methyl-2 pentanone was 210,000 ug/l.

Batch #: Y193131AA (Sample number(s): 1190178-1190182)

The recovery(ies) for the following analyte(s) in the LCS and/or LCSD were below the acceptance window: Chloromethane, Bromomethane, Chloroethane

SW-846 8270D, GC/MS Semivolatiles

Sample #s: 1190179, 1190182

The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the TNI/DoD Standards. The following analytes are accepted based on this allowance: Dicyclohexylamine

The recovery for the method blank surrogate(s) is outside the QC acceptance limits as noted on the QC Summary. The following action was taken:
The sample was re-extracted outside the method required holding time and the method blank surrogate recoveries are compliant.
All results are reported from the first trial.

Reporting limits were raised due to interference from the sample matrix.

Sample #s: 1190178, 1190180

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. Since the recovery is high and the target analyte(s) was not detected in the sample, the data is reported.

The recovery for the method blank surrogate(s) is outside the QC acceptance limits as noted on the QC Summary. The following action was taken:
The sample was re-extracted outside the method required holding time and the method blank surrogate recoveries are compliant.
All results are reported from the first trial.

Sample #s: 1190181

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. Since the recovery is high and the target analyte(s) was not detected in the sample, the data is reported.

The recovery for the method blank surrogate(s) is outside the QC acceptance limits as noted on the QC Summary. All other QC indicators for the batch are within specification, and there are no detections in the sample. The data is reported.

Batch #: 19310WAD026 (Sample number(s): 1190178-1190182)

The recovery(ies) for the following analyte(s) in the LCS and/or LCSD exceeded the acceptance window indicating a positive bias: Dicyclohexylamine

The recovery(ies) for one or more surrogates were below the acceptance window for sample(s) 1190182, Blank

SW-846 8315A, Aldehydes & Ketones

Sample #s: 1190178, 1190180, 1190181

The response for a target analyte(s) in the initial calibration verification standard is outside the QC acceptance limits.

SW-846 8015D Rev.4, June 2003, GC Miscellaneous

Sample #s: 1190178, 1190180, 1190181, 1190183

The response for tetramethylene glycol in the continuing calibration verification standard is outside the QC acceptance limits low. The following action was taken:
The analysis was repeated and the continuing calibration verification standard bracketing the sample on the second trial is also outside the acceptance limits. This effect is attributed to the sample matrix and the data is reported.

Sample Description: **BDA-1RX Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 11/01/2019 12:06
Collection Date/Time: 10/31/2019 09:22
SDG#: BMS82-13

ARCADIS U.S., Inc.
ELLE Sample #: GW 1190178
ELLE Group #: 2072206
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	0.9 J	20	0.7	1
11997	Acetonitrile	75-05-8	N.D.	100	16	1
11997	Benzene	71-43-2	N.D.	1	0.2	1
11997	Bromochloromethane	74-97-5	N.D.	5	0.2	1
11997	Bromodichloromethane	75-27-4	8	1	0.2	1
11997	Bromoform	75-25-2	N.D.	4	1	1
11997	Bromomethane	74-83-9	N.D.	1	0.3	1
11997	n-Butanol	71-36-3	N.D.	250	61	1
11997	2-Butanone	78-93-3	N.D.	10	0.3	1
11997	t-Butyl alcohol	75-65-0	N.D.	50	12	1
11997	n-Butylbenzene	104-51-8	N.D.	5	0.2	1
11997	sec-Butylbenzene	135-98-8	N.D.	5	0.2	1
11997	tert-Butylbenzene	98-06-6	N.D.	5	0.3	1
11997	Carbon Disulfide	75-15-0	N.D.	5	0.2	1
11997	Carbon Tetrachloride	56-23-5	N.D.	1	0.2	1
11997	Chlorobenzene	108-90-7	N.D.	1	0.2	1
11997	Chlorodifluoromethane[1]	75-45-6	N.D.	5	2	1
11997	Chloroethane	75-00-3	N.D.	1	0.2	1
11997	Chloroform	67-66-3	67	1	0.2	1
11997	Chloromethane	74-87-3	N.D.	1	0.2	1
11997	Cyclohexane	110-82-7	N.D.	5	1	1
11997	Cyclohexanone[1]	108-94-1	N.D.	100	25	1
11997	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	5	0.3	1
11997	Dibromochloromethane	124-48-1	2	1	0.2	1
11997	1,2-Dibromoethane	106-93-4	N.D.	1	0.2	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	5	0.2	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	5	0.2	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	5	0.2	1
11997	Dichlorodifluoromethane	75-71-8	N.D.	1	0.2	1
11997	1,1-Dichloroethane	75-34-3	N.D.	1	0.2	1
11997	1,2-Dichloroethane	107-06-2	N.D.	1	0.3	1
11997	1,1-Dichloroethene	75-35-4	N.D.	1	0.2	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	1	0.2	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	1	0.2	1
11997	1,2-Dichloropropane	78-87-5	N.D.	1	0.2	1
11997	cis-1,3-Dichloropropene	10061-01-5	N.D.	1	0.2	1
11997	trans-1,3-Dichloropropene	10061-02-6	N.D.	1	0.2	1
11997	1,4-Dioxane	123-91-1	N.D.	250	29	1
11997	Ethyl Acetate	141-78-6	N.D.	5	0.7	1
11997	Ethyl ether	60-29-7	N.D.	5	0.2	1
11997	Ethylbenzene	100-41-4	N.D.	1	0.4	1

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-1RX Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 11/01/2019 12:06
Collection Date/Time: 10/31/2019 09:22
SDG#: BMS82-13

ARCADIS U.S., Inc.
ELLE Sample #: GW 1190178
ELLE Group #: 2072206
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Freon 113	76-13-1	N.D.	10	0.2	1
11997	n-Heptane[1]	142-82-5	N.D.	5	2	1
11997	n-Hexane[1]	110-54-3	N.D.	5	2	1
11997	2-Hexanone	591-78-6	N.D.	10	0.3	1
11997	Isobutyl Alcohol	78-83-1	N.D.	250	36	1
11997	Isopropylbenzene	98-82-8	N.D.	5	0.2	1
11997	p-Isopropyltoluene	99-87-6	N.D.	5	0.2	1
11997	Methyl Acetate	79-20-9	N.D.	5	0.2	1
11997	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	1	0.2	1
11997	4-Methyl-2-pentanone	108-10-1	N.D.	10	0.5	1
11997	Methylcyclohexane	108-87-2	N.D.	5	0.5	1
11997	Methylene Chloride	75-09-2	0.8 J	1	0.3	1
11997	Naphthalene	91-20-3	N.D.	5	1	1
11997	2-Nitropropane	79-46-9	N.D.	10	0.8	1
11997	Styrene	100-42-5	N.D.	5	0.2	1
11997	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	1	0.2	1
11997	Tetrachloroethene	127-18-4	N.D.	1	0.2	1
11997	Tetrahydrofuran	109-99-9	N.D.	10	0.7	1
11997	Toluene	108-88-3	N.D.	1	0.2	1
11997	1,2,3-Trichlorobenzene	87-61-6	N.D.	5	0.4	1
11997	1,2,4-Trichlorobenzene	120-82-1	N.D.	5	0.3	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	1	0.3	1
11997	1,1,2-Trichloroethane	79-00-5	N.D.	1	0.2	1
11997	Trichloroethene	79-01-6	N.D.	1	0.2	1
11997	Trichlorofluoromethane	75-69-4	N.D.	1	0.2	1
11997	1,2,4-Trimethylbenzene	95-63-6	N.D.	5	1	1
11997	1,3,5-Trimethylbenzene	108-67-8	N.D.	5	0.3	1
11997	Vinyl Chloride	75-01-4	N.D.	1	0.2	1
11997	m+p-Xylene	179601-23-1	N.D.	5	1	1
11997	o-Xylene	95-47-6	N.D.	1	0.4	1
11997	Xylene (Total)	1330-20-7	N.D.	6	1	1

Project defined calibration criteria are not met. The calibration is compliant with the method defined criteria.

A Report Limit Verification (RLV) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The RLV standard shows adequate sensitivity at or below the reporting limit.

The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the TNI/DoD Standards. The following analytes are accepted based on this

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-1RX Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 11/01/2019 12:06
Collection Date/Time: 10/31/2019 09:22
SDG#: BMS82-13

ARCADIS U.S., Inc.
ELLE Sample #: GW 1190178
ELLE Group #: 2072206
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
	allowance: chloromethane, bromomethane and chloroethane.					
00882	**VOA Interp. Library Search-10**					
	The results from the volatile library search are listed on the attached FORM 1 - VOA-TIC. The qualifiers appearing in the "Q" column are defined at the end of the report.					
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	Acenaphthene	83-32-9	N.D.	0.51	0.10	1
14241	Acenaphthylene	208-96-8	N.D.	0.51	0.10	1
14241	Acetophenone	98-86-2	N.D.	10	4.0	1
14241	Aniline	62-53-3	N.D.	10	3.0	1
14241	Anthracene	120-12-7	N.D.	0.51	0.10	1
14241	Atrazine	1912-24-9	N.D.	5.1	2.0	1
14241	Benzaldehyde	100-52-7	N.D.	10	3.0	1
14241	Benzo(a)anthracene	56-55-3	N.D.	0.51	0.10	1
14241	Benzo(a)pyrene	50-32-8	N.D.	0.51	0.10	1
14241	Benzo(b)fluoranthene	205-99-2	N.D.	0.51	0.10	1
14241	Benzo(g,h,i)perylene	191-24-2	N.D.	0.51	0.10	1
14241	Benzo(k)fluoranthene	207-08-9	N.D.	0.51	0.10	1
14241	Benzyl alcohol	100-51-6	N.D.	30	10	1
14241	1,1'-Biphenyl	92-52-4	N.D.	10	3.0	1
14241	4-Bromophenyl-phenylether	101-55-3	N.D.	2.0	0.51	1
14241	Butylbenzylphthalate	85-68-7	N.D.	5.1	2.0	1
14241	Di-n-butylphthalate	84-74-2	N.D.	5.1	2.0	1
14241	Caprolactam	105-60-2	N.D.	11	5.1	1
14241	Carbazole	86-74-8	N.D.	2.0	0.51	1
14241	4-Chloro-3-methylphenol	59-50-7	N.D.	2.0	0.51	1
14241	4-Chloroaniline	106-47-8	N.D.	10	4.0	1
14241	bis(2-Chloroethoxy)methane	111-91-1	N.D.	2.0	0.51	1
14241	bis(2-Chloroethyl)ether	111-44-4	N.D.	2.0	0.51	1
14241	bis(2-Chloroisopropyl)ether[1]	39638-32-9	N.D.	2.0	0.51	1
	Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.					
14241	2-Chloronaphthalene	91-58-7	N.D.	1.0	0.40	1
14241	2-Chlorophenol	95-57-8	N.D.	2.0	0.51	1
14241	4-Chlorophenyl-phenylether	7005-72-3	N.D.	2.0	0.51	1
14241	Chrysene	218-01-9	N.D.	0.51	0.10	1
14241	Dibenz(a,h)anthracene	53-70-3	N.D.	0.51	0.10	1
14241	Dibenzofuran	132-64-9	N.D.	2.0	0.51	1
14241	3,3'-Dichlorobenzidine	91-94-1	N.D.	10	3.0	1
14241	2,4-Dichlorophenol	120-83-2	N.D.	2.0	0.51	1
14241	Dicyclohexylamine[1]	101-83-7	N.D.	10	10	1

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-1RX Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 11/01/2019 12:06
Collection Date/Time: 10/31/2019 09:22
SDG#: BMS82-13

ARCADIS U.S., Inc.
ELLE Sample #: GW 1190178
ELLE Group #: 2072206
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	Diethylphthalate	84-66-2	N.D.	5.1	2.0	1
14241	N,N-Dimethylaniline[1]	121-69-7	0.53 J	1.0	0.51	1
14241	2,4-Dimethylphenol	105-67-9	N.D.	10	3.0	1
14241	Dimethylphthalate	131-11-3	N.D.	5.1	2.0	1
14241	4,6-Dinitro-2-methylphenol	534-52-1	N.D.	21	8.1	1
14241	2,4-Dinitrophenol	51-28-5	N.D.	30	14	1
14241	2,4-Dinitrotoluene	121-14-2	N.D.	5.1	1.0	1
14241	2,6-Dinitrotoluene	606-20-2	N.D.	2.0	0.51	1
14241	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	11	5.1	1
14241	Fluoranthene	206-44-0	N.D.	0.51	0.10	1
14241	Fluorene	86-73-7	N.D.	0.51	0.10	1
14241	Hexachlorobenzene	118-74-1	N.D.	0.51	0.10	1
14241	Hexachlorobutadiene	87-68-3	N.D.	2.0	0.51	1
14241	Hexachlorocyclopentadiene	77-47-4	N.D.	11	5.1	1
14241	Hexachloroethane	67-72-1	N.D.	5.1	1.0	1
14241	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.51	0.10	1
14241	Isophorone	78-59-1	N.D.	2.0	0.51	1
14241	2-Methylnaphthalene	91-57-6	N.D.	0.51	0.10	1
14241	2-Methylphenol	95-48-7	N.D.	2.0	0.51	1
14241	4-Methylphenol	65794-96-9	N.D.	2.0	0.51	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
14241	Naphthalene	91-20-3	N.D.	0.51	0.10	1
14241	2-Nitroaniline	88-74-4	N.D.	7.1	2.0	1
14241	3-Nitroaniline	99-09-2	N.D.	7.1	3.0	1
14241	4-Nitroaniline	100-01-6	N.D.	3.0	0.91	1
14241	Nitrobenzene	98-95-3	N.D.	2.0	0.51	1
14241	2-Nitrophenol	88-75-5	N.D.	10	3.0	1
14241	4-Nitrophenol	100-02-7	N.D.	30	10	1
14241	N-Nitroso-di-n-propylamine	621-64-7	N.D.	3.0	0.71	1
14241	N-Nitrosodiphenylamine	86-30-6	N.D.	3.0	0.71	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.					
14241	Di-n-octylphthalate	117-84-0	N.D.	11	5.1	1
14241	Pentachlorophenol	87-86-5	N.D.	5.1	1.0	1
14241	Phenanthrene	85-01-8	N.D.	0.51	0.10	1
14241	Phenol	108-95-2	1.5 J	2.0	0.51	1
14241	Pyrene	129-00-0	N.D.	0.51	0.10	1
14241	Pyridine	110-86-1	N.D.	5.1	2.0	1
14241	1,2,4,5-Tetrachlorobenzene	95-94-3	N.D.	2.0	0.51	1

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-1RX Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 11/01/2019 12:06
Collection Date/Time: 10/31/2019 09:22
SDG#: BMS82-13

ARCADIS U.S., Inc.
ELLE Sample #: GW 1190178
ELLE Group #: 2072206
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	2,3,4,6-Tetrachlorophenol	58-90-2	N.D.	10	4.0	1
14241	2,4,5-Trichlorophenol	95-95-4	N.D.	2.0	0.51	1
14241	2,4,6-Trichlorophenol	88-06-2	N.D.	2.0	0.51	1
14241	Triethylamine[1]	121-44-8	N.D.	10	10	1

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. Since the recovery is high and the target analyte(s) was not detected in the sample, the data is reported.

The recovery for the method blank surrogate(s) is outside the QC acceptance limits as noted on the QC Summary. The following action was taken:
The sample was re-extracted outside the method required holding time and the method blank surrogate recoveries are compliant.
All results are reported from the first trial.

00886 SVOA TIC Interpretive(25)

The results from the semivolatile library search are listed on the attached FORM 1 - SV-TIC. The qualifiers appearing in the "Q" column are defined at the end of the report.

Aldehydes & Ketones	**SW-846 8315A**		**ug/l**	**ug/l**	**ug/l**	
13022	Acetaldehyde[1]	75-07-0	N.D.	60	35	1
13022	Formaldehyde	50-00-0	N.D.	50	20	1

The response for a target analyte(s) in the initial calibration verification standard is outside the QC acceptance limits.

GC Miscellaneous	**SW-846 8015D Rev.4, June 2003**		**ug/l**	**ug/l**	**ug/l**	
10603	Ethanol	64-17-5	N.D. D2	1,000	150	1
12926	Ethylene glycol[1]	107-21-1	N.D.	10,000	5,000	1
10603	Isopropanol[1]	67-63-0	N.D. D2	1,000	110	1
10603	Methanol	67-56-1	N.D. D2	1,000	220	1
12926	Propylene glycol[1]	57-55-6	N.D.	10,000	2,000	1

The response for tetramethylene glycol in the continuing calibration verification standard is outside the QC acceptance limits low. The following action was taken:
The analysis was repeated and the continuing calibration verification standard bracketing the sample on the second trial is also outside the acceptance limits. This effect is attributed to the sample matrix and the data is reported.

Sample Comments

State of New York Certification No. 10670

[1] = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

*=This limit was used in the evaluation of the final result

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

Sample Description: **BDA-1RX Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 11/01/2019 12:06
Collection Date/Time: 10/31/2019 09:22
SDG#: BMS82-13

ARCADIS U.S., Inc.
ELLE Sample #: GW 1190178
ELLE Group #: 2072206
Matrix: Groundwater

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	Y193131AA	11/09/2019 17:18	Linda C Pape	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	Y193131AA	11/09/2019 17:17	Linda C Pape	1
14241	Semi-annual Groundwater BMS	SW-846 8270D	1	19310WAD026	11/10/2019 01:06	Holly B Ziegler	1
11010	8270D BNA Extraction	SW-846 3510C	1	19310WAD026	11/06/2019 17:48	Laura Duquette	1
13022	Short List Aldehydes- W 8315A	SW-846 8315A	1	193050016A	11/04/2019 17:39	Jessica L Miller	1
01013	Formaldehyde Extraction	SW-846 8315A	1	193050016A	11/02/2019 07:32	Alison Moll	1
10603	Alcohols in Water	SW-846 8015D Rev.4, June 2003	1	193080008A	11/05/2019 03:58	Johanna C Kennedy	1
12926	Glycols in Water by 8015C/D	SW-846 8015D Rev.4, June 2003	1	193100032A	11/07/2019 00:01	Donald Brown	1

*=This limit was used in the evaluation of the final result

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
S8214

Lab Name: Lancaster Laboratories Contract:_____
Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____
Matrix: (soil/water) WATER Lab Sample ID: 1190178
Sample wt/vol: 5.0 (g/mL)mL Lab File ID:HP09355.i/19nov09a.b/yn09s16.d
Level: (low/med) LOW Date Received: 11/01/19
% Moisture: not dec. Date Analyzed: 11/09/19
Column: (pack/cap) CAP Dilution Factor: 1.0
CONCENTRATION UNITS:
Number TICs found: 0 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	VOCTIC	Total VOC TICs		0	U
2.					
3.					
4.					
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page 1 of 1

FORM I VOA-TIC

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
S8214

Lab Name: Lancaster Laboratories Contract:
Lab Code: LANCAS Case No.: SAS No.: SDG No.:
Matrix: (soil/water) WATER Lab Sample ID: 1190178
Sample wt/vol: 247 (g/mL) mL Lab File ID: lk0461.d
Level: (low/med) LOW Date Received: 11/01/19
% Moisture: Decanted: (Y/N) Date Extracted: 11/06/19
Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/10/19
Injection Volume: 1 (uL) Dilution Factor: 1
GPC Cleanup: N pH: Extraction: Sepf
CONCENTRATION UNITS:
Number TICs found: 3 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		Unknown	17.660	6	J
2.	791-28-6	Triphenylphosphine oxide	18.066	4	J
3.	85-60-9	Phenol, 4,4'-butylidenebis[2	18.847	14	J
4.					
5.	SVOCTIC	Total SVOC TICs		25	J
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7.					
8.					
9.					
10.					
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page 1 of 1

FORM I SV-1

Sample Description: **BDA-11WT Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 11/01/2019 12:06
Collection Date/Time: 10/31/2019 10:05
SDG#: BMS82-14

ARCADIS U.S., Inc.
ELLE Sample #: GW 1190179
ELLE Group #: 2072206
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result		Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**		**ug/l**	**ug/l**	
11997	Acetone	67-64-1	660		400	14	20
11997	Acetonitrile	75-05-8	N.D.		2,000	320	20
11997	Benzene	71-43-2	9	J	20	4	20
11997	Bromochloromethane	74-97-5	N.D.		100	4	20
11997	Bromodichloromethane	75-27-4	N.D.		20	4	20
11997	Bromoform	75-25-2	N.D.		80	20	20
11997	Bromomethane	74-83-9	N.D.		20	6	20
11997	n-Butanol	71-36-3	N.D.		5,000	1,200	20
11997	2-Butanone	78-93-3	51	J	200	6	20
11997	t-Butyl alcohol	75-65-0	N.D.		1,000	240	20
11997	n-Butylbenzene	104-51-8	N.D.		100	4	20
11997	sec-Butylbenzene	135-98-8	N.D.		100	4	20
11997	tert-Butylbenzene	98-06-6	N.D.		100	6	20
11997	Carbon Disulfide	75-15-0	N.D.		100	4	20
11997	Carbon Tetrachloride	56-23-5	N.D.		20	4	20
11997	Chlorobenzene	108-90-7	N.D.		20	4	20
11997	Chlorodifluoromethane[1]	75-45-6	N.D.		100	40	20
11997	Chloroethane	75-00-3	N.D.		20	4	20
11997	Chloroform	67-66-3	N.D.		20	4	20
11997	Chloromethane	74-87-3	N.D.		20	4	20
11997	Cyclohexane	110-82-7	N.D.		100	20	20
11997	Cyclohexanone[1]	108-94-1	N.D.		2,000	500	20
11997	1,2-Dibromo-3-chloropropane	96-12-8	N.D.		100	6	20
11997	Dibromochloromethane	124-48-1	N.D.		20	4	20
11997	1,2-Dibromoethane	106-93-4	N.D.		20	4	20
11997	1,2-Dichlorobenzene	95-50-1	4	J	100	4	20
11997	1,3-Dichlorobenzene	541-73-1	N.D.		100	4	20
11997	1,4-Dichlorobenzene	106-46-7	N.D.		100	4	20
11997	Dichlorodifluoromethane	75-71-8	N.D.		20	4	20
11997	1,1-Dichloroethane	75-34-3	N.D.		20	4	20
11997	1,2-Dichloroethane	107-06-2	N.D.		20	6	20
11997	1,1-Dichloroethene	75-35-4	N.D.		20	4	20
11997	cis-1,2-Dichloroethene	156-59-2	17	J	20	4	20
11997	trans-1,2-Dichloroethene	156-60-5	N.D.		20	4	20
11997	1,2-Dichloropropane	78-87-5	N.D.		20	4	20
11997	cis-1,3-Dichloropropene	10061-01-5	N.D.		20	4	20
11997	trans-1,3-Dichloropropene	10061-02-6	N.D.		20	4	20
11997	1,4-Dioxane	123-91-1	N.D.		5,000	580	20
11997	Ethyl Acetate	141-78-6	N.D.		100	14	20
11997	Ethyl ether	60-29-7	N.D.		100	4	20
11997	Ethylbenzene	100-41-4	N.D.		20	8	20

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-11WT Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 11/01/2019 12:06
Collection Date/Time: 10/31/2019 10:05
SDG#: BMS82-14

ARCADIS U.S., Inc.
ELLE Sample #: GW 1190179
ELLE Group #: 2072206
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result		Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**		**ug/l**	**ug/l**	
11997	Freon 113	76-13-1	N.D.		200	4	20
11997	n-Heptane[1]	142-82-5	N.D.		100	40	20
11997	n-Hexane[1]	110-54-3	N.D.		100	40	20
11997	2-Hexanone	591-78-6	N.D.		200	6	20
11997	Isobutyl Alcohol	78-83-1	1,400	J	5,000	720	20
11997	Isopropylbenzene	98-82-8	N.D.		100	4	20
11997	p-Isopropyltoluene	99-87-6	N.D.		100	4	20
11997	Methyl Acetate	79-20-9	25	J	100	4	20
11997	Methyl Tertiary Butyl Ether	1634-04-4	N.D.		20	4	20
11997	4-Methyl-2-pentanone	108-10-1	650		200	10	20
11997	Methylcyclohexane	108-87-2	N.D.		100	10	20
11997	Methylene Chloride	75-09-2	21,000		200	60	200
11997	Naphthalene	91-20-3	N.D.		100	20	20
11997	2-Nitropropane	79-46-9	N.D.		200	16	20
11997	Styrene	100-42-5	N.D.		100	4	20
11997	1,1,2,2-Tetrachloroethane	79-34-5	N.D.		20	4	20
11997	Tetrachloroethene	127-18-4	N.D.		20	4	20
11997	Tetrahydrofuran	109-99-9	N.D.		200	14	20
11997	Toluene	108-88-3	48		20	4	20
11997	1,2,3-Trichlorobenzene	87-61-6	N.D.		100	8	20
11997	1,2,4-Trichlorobenzene	120-82-1	N.D.		100	6	20
11997	1,1,1-Trichloroethane	71-55-6	N.D.		20	6	20
11997	1,1,2-Trichloroethane	79-00-5	N.D.		20	4	20
11997	Trichloroethene	79-01-6	N.D.		20	4	20
11997	Trichlorofluoromethane	75-69-4	N.D.		20	4	20
11997	1,2,4-Trimethylbenzene	95-63-6	N.D.		100	20	20
11997	1,3,5-Trimethylbenzene	108-67-8	N.D.		100	6	20
11997	Vinyl Chloride	75-01-4	N.D.		20	4	20
11997	m+p-Xylene	179601-23-1	N.D.		100	20	20
11997	o-Xylene	95-47-6	N.D.		20	8	20
11997	Xylene (Total)	1330-20-7	N.D.		120	28	20

Project defined calibration criteria are not met. The calibration is compliant with the method defined criteria.

A Report Limit Verification (RLV) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The RLV standard shows adequate sensitivity at or below the reporting limit.

The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the TNI/DoD Standards. The following analytes are accepted based on this

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-11WT Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 11/01/2019 12:06
Collection Date/Time: 10/31/2019 10:05
SDG#: BMS82-14

ARCADIS U.S., Inc.
ELLE Sample #: GW 1190179
ELLE Group #: 2072206
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
	allowance: chloromethane, bromomethane and chloroethane.					
00882	**VOA Interp. Library Search-10**					
	The results from the volatile library search are listed on the attached FORM 1 - VOA-TIC. The qualifiers appearing in the "Q" column are defined at the end of the report.					
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	Acenaphthene	83-32-9	N.D.	5.3	1.1	10
14241	Acenaphthylene	208-96-8	N.D.	5.3	1.1	10
14241	Acetophenone	98-86-2	N.D.	110	42	10
14241	Aniline	62-53-3	14,000	2,100	630	200
14241	Anthracene	120-12-7	N.D.	5.3	1.1	10
14241	Atrazine	1912-24-9	N.D.	53	21	10
14241	Benzaldehyde	100-52-7	N.D.	110	32	10
14241	Benzo(a)anthracene	56-55-3	N.D.	5.3	1.1	10
14241	Benzo(a)pyrene	50-32-8	N.D.	5.3	1.1	10
14241	Benzo(b)fluoranthene	205-99-2	N.D.	5.3	1.1	10
14241	Benzo(g,h,i)perylene	191-24-2	N.D.	5.3	1.1	10
14241	Benzo(k)fluoranthene	207-08-9	N.D.	5.3	1.1	10
14241	Benzyl alcohol	100-51-6	N.D.	320	110	10
14241	1,1'-Biphenyl	92-52-4	N.D.	110	32	10
14241	4-Bromophenyl-phenylether	101-55-3	N.D.	21	5.3	10
14241	Butylbenzylphthalate	85-68-7	N.D.	53	21	10
14241	Di-n-butylphthalate	84-74-2	N.D.	53	21	10
14241	Caprolactam	105-60-2	N.D.	120	53	10
14241	Carbazole	86-74-8	N.D.	21	5.3	10
14241	4-Chloro-3-methylphenol	59-50-7	N.D.	21	5.3	10
14241	4-Chloroaniline	106-47-8	N.D.	110	42	10
14241	bis(2-Chloroethoxy)methane	111-91-1	N.D.	21	5.3	10
14241	bis(2-Chloroethyl)ether	111-44-4	N.D.	21	5.3	10
14241	bis(2-Chloroisopropyl)ether[1]	39638-32-9	N.D.	21	5.3	10
	Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.					
14241	2-Chloronaphthalene	91-58-7	N.D.	11	4.2	10
14241	2-Chlorophenol	95-57-8	N.D.	21	5.3	10
14241	4-Chlorophenyl-phenylether	7005-72-3	N.D.	21	5.3	10
14241	Chrysene	218-01-9	N.D.	5.3	1.1	10
14241	Dibenz(a,h)anthracene	53-70-3	N.D.	5.3	1.1	10
14241	Dibenzofuran	132-64-9	N.D.	21	5.3	10
14241	3,3'-Dichlorobenzidine	91-94-1	N.D.	110	32	10
14241	2,4-Dichlorophenol	120-83-2	N.D.	21	5.3	10
14241	Dicyclohexylamine[1]	101-83-7	5,500	2,100	2,100	200

*=This limit was used in the evaluation of the final result

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Sample Description: **BDA-11WT Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 11/01/2019 12:06
Collection Date/Time: 10/31/2019 10:05
SDG#: BMS82-14

ARCADIS U.S., Inc.
ELLE Sample #: GW 1190179
ELLE Group #: 2072206
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	Diethylphthalate	84-66-2	N.D.	53	21	10
14241	N,N-Dimethylaniline[1]	121-69-7	6,600	210	110	200
14241	2,4-Dimethylphenol	105-67-9	N.D.	110	32	10
14241	Dimethylphthalate	131-11-3	N.D.	53	21	10
14241	4,6-Dinitro-2-methylphenol	534-52-1	N.D.	220	84	10
14241	2,4-Dinitrophenol	51-28-5	N.D.	320	150	10
14241	2,4-Dinitrotoluene	121-14-2	N.D.	53	11	10
14241	2,6-Dinitrotoluene	606-20-2	N.D.	21	5.3	10
14241	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	120	53	10
14241	Fluoranthene	206-44-0	N.D.	5.3	1.1	10
14241	Fluorene	86-73-7	N.D.	5.3	1.1	10
14241	Hexachlorobenzene	118-74-1	N.D.	5.3	1.1	10
14241	Hexachlorobutadiene	87-68-3	N.D.	21	5.3	10
14241	Hexachlorocyclopentadiene	77-47-4	N.D.	120	53	10
14241	Hexachloroethane	67-72-1	N.D.	53	11	10
14241	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	5.3	1.1	10
14241	Isophorone	78-59-1	N.D.	21	5.3	10
14241	2-Methylnaphthalene	91-57-6	N.D.	5.3	1.1	10
14241	2-Methylphenol	95-48-7	N.D.	21	5.3	10
14241	4-Methylphenol	65794-96-9	N.D.	21	5.3	10
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
14241	Naphthalene	91-20-3	N.D.	5.3	1.1	10
14241	2-Nitroaniline	88-74-4	N.D.	74	21	10
14241	3-Nitroaniline	99-09-2	N.D.	74	32	10
14241	4-Nitroaniline	100-01-6	N.D.	32	9.5	10
14241	Nitrobenzene	98-95-3	N.D.	21	5.3	10
14241	2-Nitrophenol	88-75-5	N.D.	110	32	10
14241	4-Nitrophenol	100-02-7	N.D.	320	110	10
14241	N-Nitroso-di-n-propylamine	621-64-7	N.D.	32	7.4	10
14241	N-Nitrosodiphenylamine	86-30-6	N.D.	32	7.4	10
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.					
14241	Di-n-octylphthalate	117-84-0	N.D.	120	53	10
14241	Pentachlorophenol	87-86-5	N.D.	53	11	10
14241	Phenanthrene	85-01-8	N.D.	5.3	1.1	10
14241	Phenol	108-95-2	13,000	420	110	200
14241	Pyrene	129-00-0	N.D.	5.3	1.1	10
14241	Pyridine	110-86-1	N.D.	53	21	10
14241	1,2,4,5-Tetrachlorobenzene	95-94-3	N.D.	21	5.3	10

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-11WT Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 11/01/2019 12:06
Collection Date/Time: 10/31/2019 10:05
SDG#: BMS82-14

ARCADIS U.S., Inc.
ELLE Sample #: GW 1190179
ELLE Group #: 2072206
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	2,3,4,6-Tetrachlorophenol	58-90-2	N.D.	110	42	10
14241	2,4,5-Trichlorophenol	95-95-4	N.D.	21	5.3	10
14241	2,4,6-Trichlorophenol	88-06-2	N.D.	21	5.3	10
14241	Triethylamine[1]	121-44-8	N.D.	110	110	10

The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the TNI/DoD Standards. The following analytes are accepted based on this allowance: Dicyclohexylamine

The recovery for the method blank surrogate(s) is outside the QC acceptance limits as noted on the QC Summary. The following action was taken:
The sample was re-extracted outside the method required holding time and the method blank surrogate recoveries are compliant.
All results are reported from the first trial.

Reporting limits were raised due to interference from the sample matrix.

00886 SVOA TIC Interpretive(25)

The results from the semivolatile library search are listed on the attached FORM 1 - SV-TIC. The qualifiers appearing in the "Q" column are defined at the end of the report.

Sample Comments

State of New York Certification No. 10670

[1] = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	Y193131AA	11/09/2019 18:46	Linda C Pape	20
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	Y193171AA	11/13/2019 17:34	Linda C Pape	200
01163	GC/MS VOA Water Prep	SW-846 5030C	1	Y193131AA	11/09/2019 18:45	Linda C Pape	20
01163	GC/MS VOA Water Prep	SW-846 5030C	2	Y193171AA	11/13/2019 17:33	Linda C Pape	200
14241	Semi-annual Groundwater BMS	SW-846 8270D	1	19310WAD026	11/10/2019 15:51	Ashley R Transue	10
14241	Semi-annual Groundwater BMS	SW-846 8270D	1	19310WAD026	11/13/2019 00:18	Ashley R Transue	200
11010	8270D BNA Extraction	SW-846 3510C	1	19310WAD026	11/06/2019 17:48	Laura Duquette	1

*=This limit was used in the evaluation of the final result

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
S8215

Lab Name: Lancaster Laboratories Contract:_____
Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____
Matrix: (soil/water) WATER Lab Sample ID: 1190179
Sample wt/vol: 5.0 (g/mL)mL Lab File ID:HP09355.i/19nov09a.b/yn09s20.d
Level: (low/med) LOW Date Received: 11/01/19
% Moisture: not dec. Date Analyzed: 11/09/19
Column: (pack/cap) CAP Dilution Factor: 20.0
CONCENTRATION UNITS:
Number TICs found: 0 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	VOCTIC	Total VOC TICs		0	U
2.					
3.					
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30.					

page 1 of 1

FORM I VOA-TIC

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
S8215

Lab Name: Lancaster Laboratories Contract:
Lab Code: LANCAS Case No.: SAS No.: SDG No.:
Matrix: (soil/water) WATER Lab Sample ID: 1190179
Sample wt/vol: 238 (g/mL) mL Lab File ID: lk0511.d
Level: (low/med) LOW Date Received: 11/01/19
% Moisture: Decanted: (Y/N) Date Extracted: 11/06/19
Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/10/19
Injection Volume: 1 (uL) Dilution Factor: 10
GPC Cleanup: N pH: Extraction: Sepf
CONCENTRATION UNITS:
Number TICs found: 20 (ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Unknown	3.261	190	J
2.	Unknown	3.951	160	J
3.	Unknown	3.999	190	J
4.	Unknown	4.020	130	J
5.541-05-9	Cyclotrisiloxane, hexamethyl	4.143	270	J
6.	Unknown	4.876	150	J
7.	Unknown	6.593	290	J
8.	Unknown	6.631	300	J
9.	Unknown	6.673	580	J
10.100-61-8	Aniline, N-methyl-	7.577	5400	J
11.	Unknown	8.016	86	J
12.	Unknown	8.717	510	J
13.	Unknown	8.743	390	J
14.698-01-1	Benzenamine, 2-chloro-N,N-di	8.824	150	J
15.	Unknown	8.872	68	J
16.	Unknown	10.573	95	J
17.	Unknown	11.054	260	J
18.	Unknown	11.091	94	J
19.101-77-9	Benzenamine, 4,4'-methyleneb	15.697	3000	J
20.	Unknown	16.237	180	J
21.				
22.SVOCTIC	Total SVOC TICs		12000	J
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

Sample Description: **BDA-13WT Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 11/01/2019 12:06
Collection Date/Time: 10/31/2019 10:27
SDG#: BMS82-15

ARCADIS U.S., Inc.
ELLE Sample #: GW 1190180
ELLE Group #: 2072206
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	4 J	20	0.7	1
11997	Acetonitrile	75-05-8	N.D.	100	16	1
11997	Benzene	71-43-2	N.D.	1	0.2	1
11997	Bromochloromethane	74-97-5	N.D.	5	0.2	1
11997	Bromodichloromethane	75-27-4	N.D.	1	0.2	1
11997	Bromoform	75-25-2	N.D.	4	1	1
11997	Bromomethane	74-83-9	N.D.	1	0.3	1
11997	n-Butanol	71-36-3	N.D.	250	61	1
11997	2-Butanone	78-93-3	2 J	10	0.3	1
11997	t-Butyl alcohol	75-65-0	N.D.	50	12	1
11997	n-Butylbenzene	104-51-8	0.5 J	5	0.2	1
11997	sec-Butylbenzene	135-98-8	2 J	5	0.2	1
11997	tert-Butylbenzene	98-06-6	N.D.	5	0.3	1
11997	Carbon Disulfide	75-15-0	N.D.	5	0.2	1
11997	Carbon Tetrachloride	56-23-5	N.D.	1	0.2	1
11997	Chlorobenzene	108-90-7	N.D.	1	0.2	1
11997	Chlorodifluoromethane[1]	75-45-6	N.D.	5	2	1
11997	Chloroethane	75-00-3	N.D.	1	0.2	1
11997	Chloroform	67-66-3	2	1	0.2	1
11997	Chloromethane	74-87-3	N.D.	1	0.2	1
11997	Cyclohexane	110-82-7	27	5	1	1
11997	Cyclohexanone[1]	108-94-1	80 J	100	25	1
11997	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	5	0.3	1
11997	Dibromochloromethane	124-48-1	N.D.	1	0.2	1
11997	1,2-Dibromoethane	106-93-4	N.D.	1	0.2	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	5	0.2	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	5	0.2	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	5	0.2	1
11997	Dichlorodifluoromethane	75-71-8	N.D.	1	0.2	1
11997	1,1-Dichloroethane	75-34-3	N.D.	1	0.2	1
11997	1,2-Dichloroethane	107-06-2	N.D.	1	0.3	1
11997	1,1-Dichloroethene	75-35-4	N.D.	1	0.2	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	1	0.2	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	1	0.2	1
11997	1,2-Dichloropropane	78-87-5	N.D.	1	0.2	1
11997	cis-1,3-Dichloropropene	10061-01-5	N.D.	1	0.2	1
11997	trans-1,3-Dichloropropene	10061-02-6	N.D.	1	0.2	1
11997	1,4-Dioxane	123-91-1	N.D.	250	29	1
11997	Ethyl Acetate	141-78-6	N.D.	5	0.7	1
11997	Ethyl ether	60-29-7	N.D.	5	0.2	1
11997	Ethylbenzene	100-41-4	2	1	0.4	1

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-13WT Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 11/01/2019 12:06
Collection Date/Time: 10/31/2019 10:27
SDG#: BMS82-15

ARCADIS U.S., Inc.
ELLE Sample #: GW 1190180
ELLE Group #: 2072206
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Freon 113	76-13-1	N.D.	10	0.2	1
11997	n-Heptane[1]	142-82-5	N.D.	5	2	1
11997	n-Hexane[1]	110-54-3	N.D.	5	2	1
11997	2-Hexanone	591-78-6	N.D.	10	0.3	1
11997	Isobutyl Alcohol	78-83-1	N.D.	250	36	1
11997	Isopropylbenzene	98-82-8	2 J	5	0.2	1
11997	p-Isopropyltoluene	99-87-6	N.D.	5	0.2	1
11997	Methyl Acetate	79-20-9	N.D.	5	0.2	1
11997	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	1	0.2	1
11997	4-Methyl-2-pentanone	108-10-1	N.D.	10	0.5	1
11997	Methylcyclohexane	108-87-2	3 J	5	0.5	1
11997	Methylene Chloride	75-09-2	2	1	0.3	1
11997	Naphthalene	91-20-3	N.D.	5	1	1
11997	2-Nitropropane	79-46-9	4 J	10	0.8	1
11997	Styrene	100-42-5	N.D.	5	0.2	1
11997	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	1	0.2	1
11997	Tetrachloroethene	127-18-4	N.D.	1	0.2	1
11997	Tetrahydrofuran	109-99-9	N.D.	10	0.7	1
11997	Toluene	108-88-3	N.D.	1	0.2	1
11997	1,2,3-Trichlorobenzene	87-61-6	N.D.	5	0.4	1
11997	1,2,4-Trichlorobenzene	120-82-1	N.D.	5	0.3	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	1	0.3	1
11997	1,1,2-Trichloroethane	79-00-5	N.D.	1	0.2	1
11997	Trichloroethene	79-01-6	N.D.	1	0.2	1
11997	Trichlorofluoromethane	75-69-4	N.D.	1	0.2	1
11997	1,2,4-Trimethylbenzene	95-63-6	N.D.	5	1	1
11997	1,3,5-Trimethylbenzene	108-67-8	0.4 J	5	0.3	1
11997	Vinyl Chloride	75-01-4	N.D.	1	0.2	1
11997	m+p-Xylene	179601-23-1	N.D.	5	1	1
11997	o-Xylene	95-47-6	N.D.	1	0.4	1
11997	Xylene (Total)	1330-20-7	N.D.	6	1	1

00882 VOA Interp. Library Search-10

The results from the volatile library search are listed on the attached FORM 1 - VOA-TIC. The qualifiers appearing in the "Q" column are defined at the end of the report.

GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	Acenaphthene	83-32-9	N.D.	0.51	0.10	1
14241	Acenaphthylene	208-96-8	N.D.	0.51	0.10	1
14241	Acetophenone	98-86-2	N.D.	10	4.0	1
14241	Aniline	62-53-3	7.5 J	10	3.0	1

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-13WT Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 11/01/2019 12:06
Collection Date/Time: 10/31/2019 10:27
SDG#: BMS82-15

ARCADIS U.S., Inc.
ELLE Sample #: GW 1190180
ELLE Group #: 2072206
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	Anthracene	120-12-7	N.D.	0.51	0.10	1
14241	Atrazine	1912-24-9	N.D.	5.1	2.0	1
14241	Benzaldehyde	100-52-7	N.D.	10	3.0	1
14241	Benzo(a)anthracene	56-55-3	N.D.	0.51	0.10	1
14241	Benzo(a)pyrene	50-32-8	N.D.	0.51	0.10	1
14241	Benzo(b)fluoranthene	205-99-2	N.D.	0.51	0.10	1
14241	Benzo(g,h,i)perylene	191-24-2	N.D.	0.51	0.10	1
14241	Benzo(k)fluoranthene	207-08-9	N.D.	0.51	0.10	1
14241	Benzyl alcohol	100-51-6	N.D.	30	10	1
14241	1,1'-Biphenyl	92-52-4	N.D.	10	3.0	1
14241	4-Bromophenyl-phenylether	101-55-3	N.D.	2.0	0.51	1
14241	Butylbenzylphthalate	85-68-7	N.D.	5.1	2.0	1
14241	Di-n-butylphthalate	84-74-2	N.D.	5.1	2.0	1
14241	Caprolactam	105-60-2	N.D.	11	5.1	1
14241	Carbazole	86-74-8	N.D.	2.0	0.51	1
14241	4-Chloro-3-methylphenol	59-50-7	N.D.	2.0	0.51	1
14241	4-Chloroaniline	106-47-8	N.D.	10	4.0	1
14241	bis(2-Chloroethoxy)methane	111-91-1	N.D.	2.0	0.51	1
14241	bis(2-Chloroethyl)ether	111-44-4	N.D.	2.0	0.51	1
14241	bis(2-Chloroisopropyl)ether[1]	39638-32-9	N.D.	2.0	0.51	1
	Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.					
14241	2-Chloronaphthalene	91-58-7	N.D.	1.0	0.40	1
14241	2-Chlorophenol	95-57-8	N.D.	2.0	0.51	1
14241	4-Chlorophenyl-phenylether	7005-72-3	N.D.	2.0	0.51	1
14241	Chrysene	218-01-9	N.D.	0.51	0.10	1
14241	Dibenz(a,h)anthracene	53-70-3	N.D.	0.51	0.10	1
14241	Dibenzofuran	132-64-9	N.D.	2.0	0.51	1
14241	3,3'-Dichlorobenzidine	91-94-1	N.D.	10	3.0	1
14241	2,4-Dichlorophenol	120-83-2	N.D.	2.0	0.51	1
14241	Dicyclohexylamine[1]	101-83-7	290	100	100	10
14241	Diethylphthalate	84-66-2	N.D.	5.1	2.0	1
14241	N,N-Dimethylaniline[1]	121-69-7	2.6	1.0	0.51	1
14241	2,4-Dimethylphenol	105-67-9	N.D.	10	3.0	1
14241	Dimethylphthalate	131-11-3	N.D.	5.1	2.0	1
14241	4,6-Dinitro-2-methylphenol	534-52-1	N.D.	21	8.1	1
14241	2,4-Dinitrophenol	51-28-5	N.D.	30	14	1
14241	2,4-Dinitrotoluene	121-14-2	N.D.	5.1	1.0	1
14241	2,6-Dinitrotoluene	606-20-2	N.D.	2.0	0.51	1
14241	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	11	5.1	1

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-13WT Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 11/01/2019 12:06
Collection Date/Time: 10/31/2019 10:27
SDG#: BMS82-15

ARCADIS U.S., Inc.
ELLE Sample #: GW 1190180
ELLE Group #: 2072206
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	Fluoranthene	206-44-0	N.D.	0.51	0.10	1
14241	Fluorene	86-73-7	N.D.	0.51	0.10	1
14241	Hexachlorobenzene	118-74-1	N.D.	0.51	0.10	1
14241	Hexachlorobutadiene	87-68-3	N.D.	2.0	0.51	1
14241	Hexachlorocyclopentadiene	77-47-4	N.D.	11	5.1	1
14241	Hexachloroethane	67-72-1	N.D.	5.1	1.0	1
14241	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.51	0.10	1
14241	Isophorone	78-59-1	N.D.	2.0	0.51	1
14241	2-Methylnaphthalene	91-57-6	N.D.	0.51	0.10	1
14241	2-Methylphenol	95-48-7	N.D.	2.0	0.51	1
14241	4-Methylphenol	65794-96-9	N.D.	2.0	0.51	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
14241	Naphthalene	91-20-3	N.D.	0.51	0.10	1
14241	2-Nitroaniline	88-74-4	N.D.	7.1	2.0	1
14241	3-Nitroaniline	99-09-2	N.D.	7.1	3.0	1
14241	4-Nitroaniline	100-01-6	N.D.	3.0	0.91	1
14241	Nitrobenzene	98-95-3	N.D.	2.0	0.51	1
14241	2-Nitrophenol	88-75-5	N.D.	10	3.0	1
14241	4-Nitrophenol	100-02-7	N.D.	30	10	1
14241	N-Nitroso-di-n-propylamine	621-64-7	N.D.	3.0	0.71	1
14241	N-Nitrosodiphenylamine	86-30-6	N.D.	3.0	0.71	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.					
14241	Di-n-octylphthalate	117-84-0	N.D.	11	5.1	1
14241	Pentachlorophenol	87-86-5	N.D.	5.1	1.0	1
14241	Phenanthrene	85-01-8	N.D.	0.51	0.10	1
14241	Phenol	108-95-2	7.7	2.0	0.51	1
14241	Pyrene	129-00-0	N.D.	0.51	0.10	1
14241	Pyridine	110-86-1	N.D.	5.1	2.0	1
14241	1,2,4,5-Tetrachlorobenzene	95-94-3	N.D.	2.0	0.51	1
14241	2,3,4,6-Tetrachlorophenol	58-90-2	N.D.	10	4.0	1
14241	2,4,5-Trichlorophenol	95-95-4	N.D.	2.0	0.51	1
14241	2,4,6-Trichlorophenol	88-06-2	N.D.	2.0	0.51	1
14241	Triethylamine[1]	121-44-8	N.D.	10	10	1

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. Since the recovery is high and the target analyte(s) was not detected in the sample, the data is reported.

The recovery for the method blank surrogate(s) is outside the QC acceptance

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-13WT Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 11/01/2019 12:06
Collection Date/Time: 10/31/2019 10:27
SDG#: BMS82-15

ARCADIS U.S., Inc.
ELLE Sample #: GW 1190180
ELLE Group #: 2072206
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result		Limit of Quantitation*	Method Detection Limit	Dilution Factor

limits as noted on the QC Summary. The following action was taken:
The sample was re-extracted outside the method required holding time and the method blank surrogate recoveries are compliant.
All results are reported from the first trial.

00886 SVOA TIC Interpretive(25)

The results from the semivolatile library search are listed on the attached FORM 1 - SV-TIC. The qualifiers appearing in the "Q" column are defined at the end of the report.

Aldehydes & Ketones		**SW-846 8315A**	**ug/l**		**ug/l**	**ug/l**	
13022	Acetaldehyde[1]	75-07-0	N.D.		60	35	1
13022	Formaldehyde	50-00-0	35	J	50	20	1

The response for a target analyte(s) in the initial calibration verification standard is outside the QC acceptance limits.

GC Miscellaneous		**SW-846 8015D Rev.4, June 2003**	**ug/l**		**ug/l**	**ug/l**	
10603	Ethanol	64-17-5	N.D.	D2	1,000	150	1
12926	Ethylene glycol[1]	107-21-1	N.D.		10,000	5,000	1
10603	Isopropanol[1]	67-63-0	N.D.	D2	1,000	110	1
10603	Methanol	67-56-1	N.D.	D2	1,000	220	1
12926	Propylene glycol[1]	57-55-6	N.D.		10,000	2,000	1

The response for tetramethylene glycol in the continuing calibration verification standard is outside the QC acceptance limits low. The following action was taken:
The analysis was repeated and the continuing calibration verification standard bracketing the sample on the second trial is also outside the acceptance limits. This effect is attributed to the sample matrix and the data is reported.

Sample Comments

State of New York Certification No. 10670

[1] = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	Y193131AA	11/09/2019 17:40	Linda C Pape	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	Y193131AA	11/09/2019 17:39	Linda C Pape	1
14241	Semi-annual Groundwater BMS	SW-846 8270D	1	19310WAD026	11/10/2019 02:04	Holly B Ziegler	1
14241	Semi-annual Groundwater BMS	SW-846 8270D	1	19310WAD026	11/10/2019 15:22	Ashley R Transue	10
11010	8270D BNA Extraction	SW-846 3510C	1	19310WAD026	11/06/2019 17:48	Laura Duquette	1
13022	Short List Aldehydes- W 8315A	SW-846 8315A	1	193050016A	11/04/2019 17:49	Jessica L Miller	1
01013	Formaldehyde Extraction	SW-846 8315A	1	193050016A	11/02/2019 07:32	Alison Moll	1

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-13WT Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 11/01/2019 12:06
Collection Date/Time: 10/31/2019 10:27
SDG#: BMS82-15

ARCADIS U.S., Inc.
ELLE Sample #: GW 1190180
ELLE Group #: 2072206
Matrix: Groundwater

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10603	Alcohols in Water	SW-846 8015D Rev.4, June 2003	1	193080008A	11/05/2019 04:14	Johanna C Kennedy	1
12926	Glycols in Water by 8015C/D	SW-846 8015D Rev.4, June 2003	1	193100032A	11/07/2019 00:14	Donald Brown	1

*=This limit was used in the evaluation of the final result

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
S8216

Lab Name: Lancaster Laboratories Contract:_____
Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____
Matrix: (soil/water) WATER Lab Sample ID: 1190180
Sample wt/vol: 5.0 (g/mL)mL Lab File ID:HP09355.i/19nov09a.b/yn09s17.d
Level: (low/med) LOW Date Received: 11/01/19
% Moisture: not dec. Date Analyzed: 11/09/19
Column: (pack/cap) CAP Dilution Factor: 1.0
CONCENTRATION UNITS:
Number TICs found: 10 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	108-08-7	Pentane, 2,4-dimethyl-	6.03	10	J
2.		Unknown alicyclic	7.66	8	J
3.	872-56-0	Isopropylcyclobutane	7.76	10	J
4.		Unknown alkane	9.36	9	J
5.		Unknown alkane	9.79	7	J
6.		Unknown alkane	10.10	10	J
7.	103-65-1	Benzene, propyl-	12.48	6	J
8.	76089-59-3	1,3-Cyclopentadiene, 1,2,3,4	13.94	6	J
9.	17057-82-8	1H-Indene, 2,3-dihydro-1,2-d	14.19	7	J
10.	4830-99-3	1H-Indene, 1-ethyl-2,3-dihyd	14.56	7	J
11.					
12.	VOCTIC	Total VOC TICs		81	J
13.					
14.					
15.					
16.					
17.					
18.					
19.					
20.					
21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

page 1 of 1

FORM I VOA-TIC

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
S8216

Lab Name: Lancaster Laboratories Contract:
Lab Code: LANCAS Case No.: SAS No.: SDG No.:
Matrix: (soil/water) WATER Lab Sample ID: 1190180
Sample wt/vol: 247 (g/mL) mL Lab File ID: lk0463.d
Level: (low/med) LOW Date Received: 11/01/19
% Moisture: Decanted: (Y/N) Date Extracted: 11/06/19
Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/10/19
Injection Volume: 1 (uL) Dilution Factor: 1
GPC Cleanup: N pH: Extraction: Sepf
CONCENTRATION UNITS:
Number TICs found: 11 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		Unknown	2.919	8	J
2.		Unknown	3.213	4	J
3.		Unknown	3.256	9	J
4.		Unknown	4.010	6	J
5.		Unknown	6.572	6	J
6.		Unknown	6.866	6	J
7.	100-61-8	Aniline, N-methyl-	7.556	6	J
8.		Unknown	12.883	5	J
9.		Unknown	20.639	27	J
10.		Unknown	20.676	12	J
11.		Unknown	23.089	390	J
12.					
13.	SVOCTIC	Total SVOC TICs		480	J
14.					
15.					
16.					
17.					
18.					
19.					
20.					
21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

page 1 of 1

FORM I SV-1

Sample Description: **BDA-8T Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 11/01/2019 12:06
Collection Date/Time: 10/31/2019 11:05
SDG#: BMS82-16

ARCADIS U.S., Inc.
ELLE Sample #: GW 1190181
ELLE Group #: 2072206
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	20	0.7	1
11997	Acetonitrile	75-05-8	N.D.	100	16	1
11997	Benzene	71-43-2	N.D.	1	0.2	1
11997	Bromochloromethane	74-97-5	N.D.	5	0.2	1
11997	Bromodichloromethane	75-27-4	N.D.	1	0.2	1
11997	Bromoform	75-25-2	N.D.	4	1	1
11997	Bromomethane	74-83-9	N.D.	1	0.3	1
11997	n-Butanol	71-36-3	N.D.	250	61	1
11997	2-Butanone	78-93-3	N.D.	10	0.3	1
11997	t-Butyl alcohol	75-65-0	N.D.	50	12	1
11997	n-Butylbenzene	104-51-8	N.D.	5	0.2	1
11997	sec-Butylbenzene	135-98-8	N.D.	5	0.2	1
11997	tert-Butylbenzene	98-06-6	N.D.	5	0.3	1
11997	Carbon Disulfide	75-15-0	N.D.	5	0.2	1
11997	Carbon Tetrachloride	56-23-5	N.D.	1	0.2	1
11997	Chlorobenzene	108-90-7	N.D.	1	0.2	1
11997	Chlorodifluoromethane[1]	75-45-6	N.D.	5	2	1
11997	Chloroethane	75-00-3	N.D.	1	0.2	1
11997	Chloroform	67-66-3	N.D.	1	0.2	1
11997	Chloromethane	74-87-3	N.D.	1	0.2	1
11997	Cyclohexane	110-82-7	N.D.	5	1	1
11997	Cyclohexanone[1]	108-94-1	N.D.	100	25	1
11997	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	5	0.3	1
11997	Dibromochloromethane	124-48-1	N.D.	1	0.2	1
11997	1,2-Dibromoethane	106-93-4	N.D.	1	0.2	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	5	0.2	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	5	0.2	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	5	0.2	1
11997	Dichlorodifluoromethane	75-71-8	N.D.	1	0.2	1
11997	1,1-Dichloroethane	75-34-3	N.D.	1	0.2	1
11997	1,2-Dichloroethane	107-06-2	N.D.	1	0.3	1
11997	1,1-Dichloroethene	75-35-4	N.D.	1	0.2	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	1	0.2	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	1	0.2	1
11997	1,2-Dichloropropane	78-87-5	N.D.	1	0.2	1
11997	cis-1,3-Dichloropropene	10061-01-5	N.D.	1	0.2	1
11997	trans-1,3-Dichloropropene	10061-02-6	N.D.	1	0.2	1
11997	1,4-Dioxane	123-91-1	N.D.	250	29	1
11997	Ethyl Acetate	141-78-6	N.D.	5	0.7	1
11997	Ethyl ether	60-29-7	N.D.	5	0.2	1
11997	Ethylbenzene	100-41-4	N.D.	1	0.4	1

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-8T Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 11/01/2019 12:06
Collection Date/Time: 10/31/2019 11:05
SDG#: BMS82-16

ARCADIS U.S., Inc.
ELLE Sample #: GW 1190181
ELLE Group #: 2072206
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Freon 113	76-13-1	N.D.	10	0.2	1
11997	n-Heptane[1]	142-82-5	N.D.	5	2	1
11997	n-Hexane[1]	110-54-3	N.D.	5	2	1
11997	2-Hexanone	591-78-6	N.D.	10	0.3	1
11997	Isobutyl Alcohol	78-83-1	N.D.	250	36	1
11997	Isopropylbenzene	98-82-8	N.D.	5	0.2	1
11997	p-Isopropyltoluene	99-87-6	N.D.	5	0.2	1
11997	Methyl Acetate	79-20-9	N.D.	5	0.2	1
11997	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	1	0.2	1
11997	4-Methyl-2-pentanone	108-10-1	N.D.	10	0.5	1
11997	Methylcyclohexane	108-87-2	N.D.	5	0.5	1
11997	Methylene Chloride	75-09-2	N.D.	1	0.3	1
11997	Naphthalene	91-20-3	N.D.	5	1	1
11997	2-Nitropropane	79-46-9	N.D.	10	0.8	1
11997	Styrene	100-42-5	N.D.	5	0.2	1
11997	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	1	0.2	1
11997	Tetrachloroethene	127-18-4	N.D.	1	0.2	1
11997	Tetrahydrofuran	109-99-9	N.D.	10	0.7	1
11997	Toluene	108-88-3	N.D.	1	0.2	1
11997	1,2,3-Trichlorobenzene	87-61-6	N.D.	5	0.4	1
11997	1,2,4-Trichlorobenzene	120-82-1	N.D.	5	0.3	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	1	0.3	1
11997	1,1,2-Trichloroethane	79-00-5	N.D.	1	0.2	1
11997	Trichloroethene	79-01-6	N.D.	1	0.2	1
11997	Trichlorofluoromethane	75-69-4	N.D.	1	0.2	1
11997	1,2,4-Trimethylbenzene	95-63-6	N.D.	5	1	1
11997	1,3,5-Trimethylbenzene	108-67-8	N.D.	5	0.3	1
11997	Vinyl Chloride	75-01-4	N.D.	1	0.2	1
11997	m+p-Xylene	179601-23-1	N.D.	5	1	1
11997	o-Xylene	95-47-6	N.D.	1	0.4	1
11997	Xylene (Total)	1330-20-7	N.D.	6	1	1

Project defined calibration criteria are not met. The calibration is compliant with the method defined criteria.

A Report Limit Verification (RLV) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The RLV standard shows adequate sensitivity at or below the reporting limit.

The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the TNI/DoD Standards. The following analytes are accepted based on this

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-8T Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 11/01/2019 12:06
Collection Date/Time: 10/31/2019 11:05
SDG#: BMS82-16

ARCADIS U.S., Inc.
ELLE Sample #: GW 1190181
ELLE Group #: 2072206
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
	allowance: chloromethane, bromomethane and chloroethane.					
00882	**VOA Interp. Library Search-10**					
	The results from the volatile library search are listed on the attached FORM 1 - VOA-TIC. The qualifiers appearing in the "Q" column are defined at the end of the report.					
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	Acenaphthene	83-32-9	N.D.	0.52	0.10	1
14241	Acenaphthylene	208-96-8	N.D.	0.52	0.10	1
14241	Acetophenone	98-86-2	N.D.	10	4.1	1
14241	Aniline	62-53-3	N.D.	10	3.1	1
14241	Anthracene	120-12-7	N.D.	0.52	0.10	1
14241	Atrazine	1912-24-9	N.D.	5.2	2.1	1
14241	Benzaldehyde	100-52-7	N.D.	10	3.1	1
14241	Benzo(a)anthracene	56-55-3	N.D.	0.52	0.10	1
14241	Benzo(a)pyrene	50-32-8	N.D.	0.52	0.10	1
14241	Benzo(b)fluoranthene	205-99-2	N.D.	0.52	0.10	1
14241	Benzo(g,h,i)perylene	191-24-2	N.D.	0.52	0.10	1
14241	Benzo(k)fluoranthene	207-08-9	N.D.	0.52	0.10	1
14241	Benzyl alcohol	100-51-6	N.D.	31	10	1
14241	1,1'-Biphenyl	92-52-4	N.D.	10	3.1	1
14241	4-Bromophenyl-phenylether	101-55-3	N.D.	2.1	0.52	1
14241	Butylbenzylphthalate	85-68-7	N.D.	5.2	2.1	1
14241	Di-n-butylphthalate	84-74-2	N.D.	5.2	2.1	1
14241	Caprolactam	105-60-2	N.D.	11	5.2	1
14241	Carbazole	86-74-8	N.D.	2.1	0.52	1
14241	4-Chloro-3-methylphenol	59-50-7	N.D.	2.1	0.52	1
14241	4-Chloroaniline	106-47-8	N.D.	10	4.1	1
14241	bis(2-Chloroethoxy)methane	111-91-1	N.D.	2.1	0.52	1
14241	bis(2-Chloroethyl)ether	111-44-4	N.D.	2.1	0.52	1
14241	bis(2-Chloroisopropyl)ether[1]	39638-32-9	N.D.	2.1	0.52	1
	Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.					
14241	2-Chloronaphthalene	91-58-7	N.D.	1.0	0.41	1
14241	2-Chlorophenol	95-57-8	N.D.	2.1	0.52	1
14241	4-Chlorophenyl-phenylether	7005-72-3	N.D.	2.1	0.52	1
14241	Chrysene	218-01-9	N.D.	0.52	0.10	1
14241	Dibenz(a,h)anthracene	53-70-3	N.D.	0.52	0.10	1
14241	Dibenzofuran	132-64-9	N.D.	2.1	0.52	1
14241	3,3'-Dichlorobenzidine	91-94-1	N.D.	10	3.1	1
14241	2,4-Dichlorophenol	120-83-2	N.D.	2.1	0.52	1
14241	Dicyclohexylamine[1]	101-83-7	N.D.	10	10	1

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-8T Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 11/01/2019 12:06
Collection Date/Time: 10/31/2019 11:05
SDG#: BMS82-16

ARCADIS U.S., Inc.
ELLE Sample #: GW 1190181
ELLE Group #: 2072206
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	Diethylphthalate	84-66-2	N.D.	5.2	2.1	1
14241	N,N-Dimethylaniline[1]	121-69-7	N.D.	1.0	0.52	1
14241	2,4-Dimethylphenol	105-67-9	N.D.	10	3.1	1
14241	Dimethylphthalate	131-11-3	N.D.	5.2	2.1	1
14241	4,6-Dinitro-2-methylphenol	534-52-1	N.D.	22	8.3	1
14241	2,4-Dinitrophenol	51-28-5	N.D.	31	14	1
14241	2,4-Dinitrotoluene	121-14-2	N.D.	5.2	1.0	1
14241	2,6-Dinitrotoluene	606-20-2	N.D.	2.1	0.52	1
14241	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	11	5.2	1
14241	Fluoranthene	206-44-0	N.D.	0.52	0.10	1
14241	Fluorene	86-73-7	N.D.	0.52	0.10	1
14241	Hexachlorobenzene	118-74-1	N.D.	0.52	0.10	1
14241	Hexachlorobutadiene	87-68-3	N.D.	2.1	0.52	1
14241	Hexachlorocyclopentadiene	77-47-4	N.D.	11	5.2	1
14241	Hexachloroethane	67-72-1	N.D.	5.2	1.0	1
14241	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.52	0.10	1
14241	Isophorone	78-59-1	N.D.	2.1	0.52	1
14241	2-Methylnaphthalene	91-57-6	N.D.	0.52	0.10	1
14241	2-Methylphenol	95-48-7	N.D.	2.1	0.52	1
14241	4-Methylphenol	65794-96-9	N.D.	2.1	0.52	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
14241	Naphthalene	91-20-3	N.D.	0.52	0.10	1
14241	2-Nitroaniline	88-74-4	N.D.	7.2	2.1	1
14241	3-Nitroaniline	99-09-2	N.D.	7.2	3.1	1
14241	4-Nitroaniline	100-01-6	N.D.	3.1	0.93	1
14241	Nitrobenzene	98-95-3	N.D.	2.1	0.52	1
14241	2-Nitrophenol	88-75-5	N.D.	10	3.1	1
14241	4-Nitrophenol	100-02-7	N.D.	31	10	1
14241	N-Nitroso-di-n-propylamine	621-64-7	N.D.	3.1	0.72	1
14241	N-Nitrosodiphenylamine	86-30-6	N.D.	3.1	0.72	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.					
14241	Di-n-octylphthalate	117-84-0	N.D.	11	5.2	1
14241	Pentachlorophenol	87-86-5	N.D.	5.2	1.0	1
14241	Phenanthrene	85-01-8	N.D.	0.52	0.10	1
14241	Phenol	108-95-2	N.D.	2.1	0.52	1
14241	Pyrene	129-00-0	N.D.	0.52	0.10	1
14241	Pyridine	110-86-1	N.D.	5.2	2.1	1
14241	1,2,4,5-Tetrachlorobenzene	95-94-3	N.D.	2.1	0.52	1

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-8T Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 11/01/2019 12:06
Collection Date/Time: 10/31/2019 11:05
SDG#: BMS82-16

ARCADIS U.S., Inc.
ELLE Sample #: GW 1190181
ELLE Group #: 2072206
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	2,3,4,6-Tetrachlorophenol	58-90-2	N.D.	10	4.1	1
14241	2,4,5-Trichlorophenol	95-95-4	N.D.	2.1	0.52	1
14241	2,4,6-Trichlorophenol	88-06-2	N.D.	2.1	0.52	1
14241	Triethylamine[1]	121-44-8	N.D.	10	10	1

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. Since the recovery is high and the target analyte(s) was not detected in the sample, the data is reported.

The recovery for the method blank surrogate(s) is outside the QC acceptance limits as noted on the QC Summary. All other QC indicators for the batch are within specification, and there are no detections in the sample. The data is reported.

00886 SVOA TIC Interpretive(25)

The results from the semivolatile library search are listed on the attached FORM 1 - SV-TIC. The qualifiers appearing in the "Q" column are defined at the end of the report.

Aldehydes & Ketones	**SW-846 8315A**		**ug/l**	**ug/l**	**ug/l**	
13022	Acetaldehyde[1]	75-07-0	N.D.	60	35	1
13022	Formaldehyde	50-00-0	N.D.	50	20	1

The response for a target analyte(s) in the initial calibration verification standard is outside the QC acceptance limits.

GC Miscellaneous	**SW-846 8015D Rev.4, June 2003**		**ug/l**	**ug/l**	**ug/l**	
10603	Ethanol	64-17-5	N.D. D2	1,000	150	1
12926	Ethylene glycol[1]	107-21-1	N.D.	10,000	5,000	1
10603	Isopropanol[1]	67-63-0	N.D. D2	1,000	110	1
10603	Methanol	67-56-1	N.D. D2	1,000	220	1
12926	Propylene glycol[1]	57-55-6	N.D.	10,000	2,000	1

The response for tetramethylene glycol in the continuing calibration verification standard is outside the QC acceptance limits low. The following action was taken:
The analysis was repeated and the continuing calibration verification standard bracketing the sample on the second trial is also outside the acceptance limits. This effect is attributed to the sample matrix and the data is reported.

Sample Comments

State of New York Certification No. 10670

[1] = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-8T Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 11/01/2019 12:06
Collection Date/Time: 10/31/2019 11:05
SDG#: BMS82-16

ARCADIS U.S., Inc.
ELLE Sample #: GW 1190181
ELLE Group #: 2072206
Matrix: Groundwater

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	Y193131AA	11/09/2019 18:02	Linda C Pape	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	Y193131AA	11/09/2019 18:01	Linda C Pape	1
14241	Semi-annual Groundwater BMS	SW-846 8270D	1	19310WAD026	11/10/2019 02:33	Holly B Ziegler	1
11010	8270D BNA Extraction	SW-846 3510C	1	19310WAD026	11/06/2019 17:48	Laura Duquette	1
13022	Short List Aldehydes- W 8315A	SW-846 8315A	1	193050016A	11/04/2019 18:00	Jessica L Miller	1
01013	Formaldehyde Extraction	SW-846 8315A	1	193050016A	11/02/2019 07:32	Alison Moll	1
10603	Alcohols in Water	SW-846 8015D Rev.4, June 2003	1	193080008A	11/05/2019 04:31	Johanna C Kennedy	1
12926	Glycols in Water by 8015C/D	SW-846 8015D Rev.4, June 2003	1	193100032A	11/07/2019 00:27	Donald Brown	1

*=This limit was used in the evaluation of the final result

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
S8217

Lab Name: Lancaster Laboratories Contract:_____
Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____
Matrix: (soil/water) WATER Lab Sample ID: 1190181
Sample wt/vol: 5.0 (g/mL)mL Lab File ID:HP09355.i/19nov09a.b/yn09s18.d
Level: (low/med) LOW Date Received: 11/01/19
% Moisture: not dec. Date Analyzed: 11/09/19
Column: (pack/cap) CAP Dilution Factor: 1.0
CONCENTRATION UNITS:
Number TICs found: 0 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	VOCTIC	Total VOC TICs		0	U
2.					
3.					
4.					
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30.					

page 1 of 1

FORM I VOA-TIC

1F

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

S8217

Lab Name: Lancaster Laboratories Contract:
Lab Code: LANCAS Case No.: SAS No.: SDG No.:
Matrix: (soil/water) WATER Lab Sample ID: 1190181
Sample wt/vol: 242 (g/mL) mL Lab File ID: lk0464.d
Level: (low/med) LOW Date Received: 11/01/19
% Moisture: Decanted: (Y/N) Date Extracted: 11/06/19
Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/10/19
Injection Volume: 1 (uL) Dilution Factor: 1
GPC Cleanup: N pH: Extraction: Sepf
CONCENTRATION UNITS:
Number TICs found: 2 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		Unknown	2.919	47	J
2.		Unknown	3.256	49	J
3.					
4.	SVOCTIC	Total SVOC TICs		97	J
5.					
6.					
7.					
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page 1 of 1

FORM I SV-1

Sample Description: **BDA-4UT Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 11/01/2019 12:06
Collection Date/Time: 10/31/2019 11:10
SDG#: BMS82-17

ARCADIS U.S., Inc.
ELLE Sample #: GW 1190182
ELLE Group #: 2072206
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	100,000 E	200	7	10
11997	Acetonitrile	75-05-8	N.D.	1,000	160	10
11997	Benzene	71-43-2	9 J	10	2	10
11997	Bromochloromethane	74-97-5	N.D.	50	2	10
11997	Bromodichloromethane	75-27-4	N.D.	10	2	10
11997	Bromoform	75-25-2	N.D.	40	10	10
11997	Bromomethane	74-83-9	N.D.	10	3	10
11997	n-Butanol	71-36-3	N.D.	2,500	610	10
11997	2-Butanone	78-93-3	690	100	3	10
11997	t-Butyl alcohol	75-65-0	N.D.	500	120	10
11997	n-Butylbenzene	104-51-8	N.D.	50	2	10
11997	sec-Butylbenzene	135-98-8	N.D.	50	2	10
11997	tert-Butylbenzene	98-06-6	N.D.	50	3	10
11997	Carbon Disulfide	75-15-0	26 J	50	2	10
11997	Carbon Tetrachloride	56-23-5	N.D.	10	2	10
11997	Chlorobenzene	108-90-7	N.D.	10	2	10
11997	Chlorodifluoromethane[1]	75-45-6	N.D.	50	20	10
11997	Chloroethane	75-00-3	N.D.	10	2	10
11997	Chloroform	67-66-3	N.D.	10	2	10
11997	Chloromethane	74-87-3	35	10	2	10
11997	Cyclohexane	110-82-7	37 J	50	10	10
11997	Cyclohexanone[1]	108-94-1	470 J	1,000	250	10
11997	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	50	3	10
11997	Dibromochloromethane	124-48-1	N.D.	10	2	10
11997	1,2-Dibromoethane	106-93-4	N.D.	10	2	10
11997	1,2-Dichlorobenzene	95-50-1	N.D.	50	2	10
11997	1,3-Dichlorobenzene	541-73-1	N.D.	50	2	10
11997	1,4-Dichlorobenzene	106-46-7	N.D.	50	2	10
11997	Dichlorodifluoromethane	75-71-8	N.D.	10	2	10
11997	1,1-Dichloroethane	75-34-3	12	10	2	10
11997	1,2-Dichloroethane	107-06-2	N.D.	10	3	10
11997	1,1-Dichloroethene	75-35-4	33	10	2	10
11997	cis-1,2-Dichloroethene	156-59-2	170	10	2	10
11997	trans-1,2-Dichloroethene	156-60-5	58	10	2	10
11997	1,2-Dichloropropane	78-87-5	N.D.	10	2	10
11997	cis-1,3-Dichloropropene	10061-01-5	N.D.	10	2	10
11997	trans-1,3-Dichloropropene	10061-02-6	N.D.	10	2	10
11997	1,4-Dioxane	123-91-1	N.D.	2,500	290	10
11997	Ethyl Acetate	141-78-6	N.D.	50	7	10
11997	Ethyl ether	60-29-7	N.D.	50	2	10
11997	Ethylbenzene	100-41-4	16	10	4	10

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-4UT Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 11/01/2019 12:06
Collection Date/Time: 10/31/2019 11:10
SDG#: BMS82-17

ARCADIS U.S., Inc.
ELLE Sample #: GW 1190182
ELLE Group #: 2072206
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result		Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**		**ug/l**	**ug/l**	
11997	Freon 113	76-13-1	N.D.		100	2	10
11997	n-Heptane[1]	142-82-5	N.D.		50	20	10
11997	n-Hexane[1]	110-54-3	N.D.		50	20	10
11997	2-Hexanone	591-78-6	N.D.		100	3	10
11997	Isobutyl Alcohol	78-83-1	1,300	J	2,500	360	10
11997	Isopropylbenzene	98-82-8	N.D.		50	2	10
11997	p-Isopropyltoluene	99-87-6	3	J	50	2	10
11997	Methyl Acetate	79-20-9	N.D.		50	2	10
11997	Methyl Tertiary Butyl Ether	1634-04-4	N.D.		10	2	10
11997	4-Methyl-2-pentanone	108-10-1	33,000	E	100	5	10
11997	Methylcyclohexane	108-87-2	N.D.		50	5	10
11997	Methylene Chloride	75-09-2	93,000	E	10	3	10
11997	Naphthalene	91-20-3	400		50	10	10
11997	2-Nitropropane	79-46-9	N.D.		100	8	10
11997	Styrene	100-42-5	N.D.		50	2	10
11997	1,1,2,2-Tetrachloroethane	79-34-5	N.D.		10	2	10
11997	Tetrachloroethene	127-18-4	23		10	2	10
11997	Tetrahydrofuran	109-99-9	150		100	7	10
11997	Toluene	108-88-3	400		10	2	10
11997	1,2,3-Trichlorobenzene	87-61-6	N.D.		50	4	10
11997	1,2,4-Trichlorobenzene	120-82-1	N.D.		50	3	10
11997	1,1,1-Trichloroethane	71-55-6	N.D.		10	3	10
11997	1,1,2-Trichloroethane	79-00-5	N.D.		10	2	10
11997	Trichloroethene	79-01-6	18		10	2	10
11997	Trichlorofluoromethane	75-69-4	N.D.		10	2	10
11997	1,2,4-Trimethylbenzene	95-63-6	N.D.		50	10	10
11997	1,3,5-Trimethylbenzene	108-67-8	8	J	50	3	10
11997	Vinyl Chloride	75-01-4	8	J	10	2	10
11997	m+p-Xylene	179601-23-1	26	J	50	10	10
11997	o-Xylene	95-47-6	10		10	4	10
11997	Xylene (Total)	1330-20-7	36	J	60	14	10

Project defined calibration criteria are not met. The calibration is compliant with the method defined criteria.

A Report Limit Verification (RLV) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The RLV standard shows adequate sensitivity at or below the reporting limit.

The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the TNI/DoD Standards. The following analytes are accepted based on this

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-4UT Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 11/01/2019 12:06
Collection Date/Time: 10/31/2019 11:10
SDG#: BMS82-17

ARCADIS U.S., Inc.
ELLE Sample #: GW 1190182
ELLE Group #: 2072206
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result		Limit of Quantitation*	Method Detection Limit	Dilution Factor
	allowance: chloromethane, bromomethane and chloroethane.						
	The concentrations reported for Acetone, Methylene Chloride and 4-Methyl-2-pentanone are estimated since they exceed the calibration range of the instrument. A further diluted analysis was performed from a previously opened container with headspace. The result for Acetone was 170,000 ug/l. The result for Methylene Chloride was 390,000 ug/l. The result for 4-Methyl-2 pentanone was 210,000 ug/l.						
00882	**VOA Interp. Library Search-10**						
	The results from the volatile library search are listed on the attached FORM 1 - VOA-TIC. The qualifiers appearing in the "Q" column are defined at the end of the report.						
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**		**ug/l**	**ug/l**	
14241	Acenaphthene	83-32-9	N.D.		5.2	1.0	10
14241	Acenaphthylene	208-96-8	N.D.		5.2	1.0	10
14241	Acetophenone	98-86-2	64	J	100	42	10
14241	Aniline	62-53-3	N.D.		100	31	10
14241	Anthracene	120-12-7	N.D.		5.2	1.0	10
14241	Atrazine	1912-24-9	N.D.		52	21	10
14241	Benzaldehyde	100-52-7	N.D.		100	31	10
14241	Benzo(a)anthracene	56-55-3	N.D.		5.2	1.0	10
14241	Benzo(a)pyrene	50-32-8	N.D.		5.2	1.0	10
14241	Benzo(b)fluoranthene	205-99-2	N.D.		5.2	1.0	10
14241	Benzo(g,h,i)perylene	191-24-2	N.D.		5.2	1.0	10
14241	Benzo(k)fluoranthene	207-08-9	N.D.		5.2	1.0	10
14241	Benzyl alcohol	100-51-6	N.D.		310	100	10
14241	1,1'-Biphenyl	92-52-4	N.D.		100	31	10
14241	4-Bromophenyl-phenylether	101-55-3	N.D.		21	5.2	10
14241	Butylbenzylphthalate	85-68-7	N.D.		52	21	10
14241	Di-n-butylphthalate	84-74-2	N.D.		52	21	10
14241	Caprolactam	105-60-2	N.D.		110	52	10
14241	Carbazole	86-74-8	7.5	J	21	5.2	10
14241	4-Chloro-3-methylphenol	59-50-7	N.D.		21	5.2	10
14241	4-Chloroaniline	106-47-8	N.D.		100	42	10
14241	bis(2-Chloroethoxy)methane	111-91-1	N.D.		21	5.2	10
14241	bis(2-Chloroethyl)ether	111-44-4	N.D.		21	5.2	10
14241	bis(2-Chloroisopropyl)ether[1]	39638-32-9	N.D.		21	5.2	10
	Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.						
14241	2-Chloronaphthalene	91-58-7	N.D.		10	4.2	10
14241	2-Chlorophenol	95-57-8	N.D.		21	5.2	10
14241	4-Chlorophenyl-phenylether	7005-72-3	N.D.		21	5.2	10

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-4UT Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 11/01/2019 12:06
Collection Date/Time: 10/31/2019 11:10
SDG#: BMS82-17

ARCADIS U.S., Inc.
ELLE Sample #: GW 1190182
ELLE Group #: 2072206
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	Chrysene	218-01-9	N.D.	5.2	1.0	10
14241	Dibenz(a,h)anthracene	53-70-3	N.D.	5.2	1.0	10
14241	Dibenzofuran	132-64-9	N.D.	21	5.2	10
14241	3,3'-Dichlorobenzidine	91-94-1	N.D.	100	31	10
14241	2,4-Dichlorophenol	120-83-2	N.D.	21	5.2	10
14241	Dicyclohexylamine[1]	101-83-7	N.D.	100	100	10
14241	Diethylphthalate	84-66-2	N.D.	52	21	10
14241	N,N-Dimethylaniline[1]	121-69-7	N.D.	10	5.2	10
14241	2,4-Dimethylphenol	105-67-9	N.D.	100	31	10
14241	Dimethylphthalate	131-11-3	N.D.	52	21	10
14241	4,6-Dinitro-2-methylphenol	534-52-1	N.D.	220	83	10
14241	2,4-Dinitrophenol	51-28-5	N.D.	310	150	10
14241	2,4-Dinitrotoluene	121-14-2	N.D.	52	10	10
14241	2,6-Dinitrotoluene	606-20-2	N.D.	21	5.2	10
14241	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	110	52	10
14241	Fluoranthene	206-44-0	N.D.	5.2	1.0	10
14241	Fluorene	86-73-7	N.D.	5.2	1.0	10
14241	Hexachlorobenzene	118-74-1	N.D.	5.2	1.0	10
14241	Hexachlorobutadiene	87-68-3	N.D.	21	5.2	10
14241	Hexachlorocyclopentadiene	77-47-4	N.D.	110	52	10
14241	Hexachloroethane	67-72-1	N.D.	52	10	10
14241	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	5.2	1.0	10
14241	Isophorone	78-59-1	N.D.	21	5.2	10
14241	2-Methylnaphthalene	91-57-6	16	5.2	1.0	10
14241	2-Methylphenol	95-48-7	130	21	5.2	10
14241	4-Methylphenol	65794-96-9	560	21	5.2	10
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
14241	Naphthalene	91-20-3	240	5.2	1.0	10
14241	2-Nitroaniline	88-74-4	N.D.	73	21	10
14241	3-Nitroaniline	99-09-2	N.D.	73	31	10
14241	4-Nitroaniline	100-01-6	N.D.	31	9.4	10
14241	Nitrobenzene	98-95-3	N.D.	21	5.2	10
14241	2-Nitrophenol	88-75-5	N.D.	100	31	10
14241	4-Nitrophenol	100-02-7	N.D.	310	100	10
14241	N-Nitroso-di-n-propylamine	621-64-7	N.D.	31	7.3	10
14241	N-Nitrosodiphenylamine	86-30-6	N.D.	31	7.3	10
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.					
14241	Di-n-octylphthalate	117-84-0	N.D.	110	52	10

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-4UT Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 11/01/2019 12:06
Collection Date/Time: 10/31/2019 11:10
SDG#: BMS82-17

ARCADIS U.S., Inc.
ELLE Sample #: GW 1190182
ELLE Group #: 2072206
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	Pentachlorophenol	87-86-5	N.D.	52	10	10
14241	Phenanthrene	85-01-8	N.D.	5.2	1.0	10
14241	Phenol	108-95-2	3,300	100	26	50
14241	Pyrene	129-00-0	N.D.	5.2	1.0	10
14241	Pyridine	110-86-1	N.D.	52	21	10
14241	1,2,4,5-Tetrachlorobenzene	95-94-3	N.D.	21	5.2	10
14241	2,3,4,6-Tetrachlorophenol	58-90-2	N.D.	100	42	10
14241	2,4,5-Trichlorophenol	95-95-4	N.D.	21	5.2	10
14241	2,4,6-Trichlorophenol	88-06-2	N.D.	21	5.2	10
14241	Triethylamine[1]	121-44-8	210	100	100	10

The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the TNI/DoD Standards. The following analytes are accepted based on this allowance: Dicyclohexylamine

The recovery for the method blank surrogate(s) is outside the QC acceptance limits as noted on the QC Summary. The following action was taken:
The sample was re-extracted outside the method required holding time and the method blank surrogate recoveries are compliant.
All results are reported from the first trial.

Reporting limits were raised due to interference from the sample matrix.

00886 SVOA TIC Interpretive(25)

The results from the semivolatile library search are listed on the attached FORM 1 - SV-TIC. The qualifiers appearing in the "Q" column are defined at the end of the report.

Sample Comments

State of New York Certification No. 10670

[1] = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	Y193131AA	11/09/2019 19:30	Linda C Pape	10
01163	GC/MS VOA Water Prep	SW-846 5030C	1	Y193131AA	11/09/2019 19:29	Linda C Pape	10
14241	Semi-annual Groundwater BMS	SW-846 8270D	1	19310WAD026	11/10/2019 16:20	Ashley R Transue	10
14241	Semi-annual Groundwater BMS	SW-846 8270D	1	19310WAD026	11/11/2019 14:12	Ashley R Transue	50
11010	8270D BNA Extraction	SW-846 3510C	1	19310WAD026	11/06/2019 17:48	Laura Duquette	1

*=This limit was used in the evaluation of the final result

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
S8218

Lab Name: Lancaster Laboratories Contract:_____
Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____
Matrix: (soil/water) WATER Lab Sample ID: 1190182
Sample wt/vol: 5.0 (g/mL)mL Lab File ID:HP09355.i/19nov09a.b/yn09s22.d
Level: (low/med) LOW Date Received: 11/01/19
% Moisture: not dec. Date Analyzed: 11/09/19
Column: (pack/cap) CAP Dilution Factor: 10.0
CONCENTRATION UNITS:
Number TICs found: 9 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		Unknown alcohol	8.91	220	J
2.		Unknown alicyclic	11.13	590	J
3.		Unknown alicyclic	11.47	180	J
4.	1618-26-4	2,4-Dithiapentane	11.94	620	J
5.		Unknown	12.02	140	J
6.		Unknown alkane	12.36	180	J
7.		Unknown alicyclic	12.47	130	J
8.		Unknown alcohol	12.70	140	J
9.		Unknown alkane	12.85	230	J
10.					
11.	VOCTIC	Total VOC TICs		2400	J
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page 1 of 1

FORM I VOA-TIC

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
S8218

Lab Name: Lancaster Laboratories Contract:
Lab Code: LANCAS Case No.: SAS No.: SDG No.:
Matrix: (soil/water) WATER Lab Sample ID: 1190182
Sample wt/vol: 240 (g/mL) mL Lab File ID: lk0512.d
Level: (low/med) LOW Date Received: 11/01/19
% Moisture: Decanted: (Y/N) Date Extracted: 11/06/19
Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/10/19
Injection Volume: 1 (uL) Dilution Factor: 10
GPC Cleanup: N pH: Extraction: Sepf
CONCENTRATION UNITS:
Number TICs found: 20 (ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Unknown	2.266	790	J
2.	Unknown	3.068	97000	J
3.108-11-2	2-Pentanol, 4-methyl-	3.464	75000	J
4.	Unknown	4.331	2600	J
5.	Unknown	4.470	1700	J
6.	Unknown	4.534	1800	J
7.	Unknown	4.550	720	J
8.503-74-2	Butanoic acid, 3-methyl-	4.919	1000	J
9.	Unknown	4.994	1200	J
10.	Unknown	5.138	750	J
11.	Unknown	5.229	1700	J
12.1618-26-4	2,4-Dithiapentane	5.304	1100	J
13.	Unknown	5.539	1900	J
14.	Unknown	6.620	1300	J
15.	Unknown	6.748	3500	J
16.	Unknown	7.042	750	J
17.149-57-5	Hexanoic acid, 2-ethyl-	8.454	16000	J
18.65-85-0	Benzoic acid	8.802	1500	J
19.291-21-4	1,3,5-Trithiane	10.321	1200	J
20.	Unknown	11.872	780	J
21.				
22.SVOCTIC	Total SVOC TICs		210000	J
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page 1 of 1

FORM I SV-1

Sample Description: **TRIP BLANK Water**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 11/01/2019 12:06
Collection Date/Time: 10/23/2019
SDG#: BMS82-18TB

ARCADIS U.S., Inc.
ELLE Sample #: GW 1190183
ELLE Group #: 2072206
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	20	0.7	1
11997	Acetonitrile	75-05-8	N.D.	100	16	1
11997	Benzene	71-43-2	N.D.	1	0.2	1
11997	Bromochloromethane	74-97-5	N.D.	5	0.2	1
11997	Bromodichloromethane	75-27-4	N.D.	1	0.2	1
11997	Bromoform	75-25-2	N.D.	4	1	1
11997	Bromomethane	74-83-9	N.D.	1	0.3	1
11997	n-Butanol	71-36-3	N.D.	250	61	1
11997	2-Butanone	78-93-3	N.D.	10	0.3	1
11997	t-Butyl alcohol	75-65-0	N.D.	50	12	1
11997	n-Butylbenzene	104-51-8	N.D.	5	0.2	1
11997	sec-Butylbenzene	135-98-8	N.D.	5	0.2	1
11997	tert-Butylbenzene	98-06-6	N.D.	5	0.3	1
11997	Carbon Disulfide	75-15-0	N.D.	5	0.2	1
11997	Carbon Tetrachloride	56-23-5	N.D.	1	0.2	1
11997	Chlorobenzene	108-90-7	N.D.	1	0.2	1
11997	Chlorodifluoromethane[1]	75-45-6	N.D.	5	2	1
11997	Chloroethane	75-00-3	N.D.	1	0.2	1
11997	Chloroform	67-66-3	N.D.	1	0.2	1
11997	Chloromethane	74-87-3	N.D.	1	0.2	1
11997	Cyclohexane	110-82-7	N.D.	5	1	1
11997	Cyclohexanone[1]	108-94-1	N.D.	100	25	1
11997	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	5	0.3	1
11997	Dibromochloromethane	124-48-1	N.D.	1	0.2	1
11997	1,2-Dibromoethane	106-93-4	N.D.	1	0.2	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	5	0.2	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	5	0.2	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	5	0.2	1
11997	Dichlorodifluoromethane	75-71-8	N.D.	1	0.2	1
11997	1,1-Dichloroethane	75-34-3	N.D.	1	0.2	1
11997	1,2-Dichloroethane	107-06-2	N.D.	1	0.3	1
11997	1,1-Dichloroethene	75-35-4	N.D.	1	0.2	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	1	0.2	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	1	0.2	1
11997	1,2-Dichloropropane	78-87-5	N.D.	1	0.2	1
11997	cis-1,3-Dichloropropene	10061-01-5	N.D.	1	0.2	1
11997	trans-1,3-Dichloropropene	10061-02-6	N.D.	1	0.2	1
11997	1,4-Dioxane	123-91-1	N.D.	250	29	1
11997	Ethyl Acetate	141-78-6	N.D.	5	0.7	1
11997	Ethyl ether	60-29-7	N.D.	5	0.2	1
11997	Ethylbenzene	100-41-4	N.D.	1	0.4	1

*=This limit was used in the evaluation of the final result

Sample Description: **TRIP BLANK Water**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 11/01/2019 12:06
Collection Date/Time: 10/23/2019
SDG#: BMS82-18TB

ARCADIS U.S., Inc.
ELLE Sample #: GW 1190183
ELLE Group #: 2072206
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Freon 113	76-13-1	N.D.	10	0.2	1
11997	n-Heptane[1]	142-82-5	N.D.	5	2	1
11997	n-Hexane[1]	110-54-3	N.D.	5	2	1
11997	2-Hexanone	591-78-6	N.D.	10	0.3	1
11997	Isobutyl Alcohol	78-83-1	N.D.	250	36	1
11997	Isopropylbenzene	98-82-8	N.D.	5	0.2	1
11997	p-Isopropyltoluene	99-87-6	N.D.	5	0.2	1
11997	Methyl Acetate	79-20-9	N.D.	5	0.2	1
11997	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	1	0.2	1
11997	4-Methyl-2-pentanone	108-10-1	N.D.	10	0.5	1
11997	Methylcyclohexane	108-87-2	N.D.	5	0.5	1
11997	Methylene Chloride	75-09-2	N.D.	1	0.3	1
11997	Naphthalene	91-20-3	N.D.	5	1	1
11997	2-Nitropropane	79-46-9	N.D.	10	0.8	1
11997	Styrene	100-42-5	N.D.	5	0.2	1
11997	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	1	0.2	1
11997	Tetrachloroethene	127-18-4	N.D.	1	0.2	1
11997	Tetrahydrofuran	109-99-9	N.D.	10	0.7	1
11997	Toluene	108-88-3	N.D.	1	0.2	1
11997	1,2,3-Trichlorobenzene	87-61-6	N.D.	5	0.4	1
11997	1,2,4-Trichlorobenzene	120-82-1	N.D.	5	0.3	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	1	0.3	1
11997	1,1,2-Trichloroethane	79-00-5	N.D.	1	0.2	1
11997	Trichloroethene	79-01-6	N.D.	1	0.2	1
11997	Trichlorofluoromethane	75-69-4	N.D.	1	0.2	1
11997	1,2,4-Trimethylbenzene	95-63-6	N.D.	5	1	1
11997	1,3,5-Trimethylbenzene	108-67-8	N.D.	5	0.3	1
11997	Vinyl Chloride	75-01-4	N.D.	1	0.2	1
11997	m+p-Xylene	179601-23-1	N.D.	5	1	1
11997	o-Xylene	95-47-6	N.D.	1	0.4	1
11997	Xylene (Total)	1330-20-7	N.D.	6	1	1

Project defined calibration criteria are not met. The calibration is compliant with the method defined criteria.

A Report Limit Verification (RLV) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The RLV standard shows adequate sensitivity at or below the reporting limit.

00882 VOA Interp. Library Search-10

The results from the volatile library search are listed on the attached FORM 1 - VOA-TIC. The qualifiers appearing in the "Q" column are defined at the end of the report.

*=This limit was used in the evaluation of the final result

Sample Description: **TRIP BLANK Water**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 11/01/2019 12:06
Collection Date/Time: 10/23/2019
SDG#: BMS82-18TB

ARCADIS U.S., Inc.
ELLE Sample #: GW 1190183
ELLE Group #: 2072206
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC Miscellaneous	**SW-846 8015D Rev.4, June 2003**		**ug/l**	**ug/l**	**ug/l**	
10603	Ethanol	64-17-5	N.D. D2	1,000	150	1
12926	Ethylene glycol[1]	107-21-1	N.D.	10,000	5,000	1
10603	Isopropanol[1]	67-63-0	N.D. D2	1,000	110	1
10603	Methanol	67-56-1	N.D. D2	1,000	220	1
12926	Propylene glycol[1]	57-55-6	N.D.	10,000	2,000	1

The response for tetramethylene glycol in the continuing calibration verification standard is outside the QC acceptance limits low. The following action was taken:
The analysis was repeated and the continuing calibration verification standard bracketing the sample on the second trial is also outside the acceptance limits. This effect is attributed to the sample matrix and the data is reported.

Sample Comments

State of New York Certification No. 10670

[1] = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	Y193091AA	11/05/2019 16:04	Corie Mellinger	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	Y193091AA	11/05/2019 16:03	Corie Mellinger	1
10603	Alcohols in Water	SW-846 8015D Rev.4, June 2003	1	193080008A	11/05/2019 04:48	Johanna C Kennedy	1
12926	Glycols in Water by 8015C/D	SW-846 8015D Rev.4, June 2003	1	193100032A	11/07/2019 00:40	Donald Brown	1

*=This limit was used in the evaluation of the final result

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
S8219

Lab Name: Lancaster Laboratories Contract:_____
Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____
Matrix: (soil/water) WATER Lab Sample ID: 1190183
Sample wt/vol: 5.0 (g/mL)mL Lab File ID:HP09355.i/19nov05a.b/yn05s05.d
Level: (low/med) LOW Date Received: 11/01/19
% Moisture: not dec. Date Analyzed: 11/05/19
Column: (pack/cap) CAP Dilution Factor: 1.0
CONCENTRATION UNITS:
Number TICs found: 0 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	VOCTIC	Total VOC TICs		0	U
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page 1 of 1

FORM I VOA-TIC

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

Quality Control Summary

Client Name: ARCADIS U.S., Inc. Group Number: 2072206
Reported: 11/27/2019 13:25

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	LOQ**	MDL
	ug/l	ug/l	ug/l
Batch number: Y193091AA	Sample number(s): 1190183		
Acetone	N.D.	20	0.7
Acetonitrile	N.D.	100	16
Benzene	N.D.	1	0.2
Bromochloromethane	N.D.	5	0.2
Bromodichloromethane	N.D.	1	0.2
Bromoform	N.D.	4	1
Bromomethane	N.D.	1	0.3
n-Butanol	N.D.	250	61
2-Butanone	N.D.	10	0.3
t-Butyl alcohol	N.D.	50	12
n-Butylbenzene	N.D.	5	0.2
sec-Butylbenzene	N.D.	5	0.2
tert-Butylbenzene	N.D.	5	0.3
Carbon Disulfide	N.D.	5	0.2
Carbon Tetrachloride	N.D.	1	0.2
Chlorobenzene	N.D.	1	0.2
Chlorodifluoromethane	N.D.	5	2
Chloroethane	N.D.	1	0.2
Chloroform	N.D.	1	0.2
Chloromethane	N.D.	1	0.2
Cyclohexane	N.D.	5	1
Cyclohexanone	N.D.	100	25
1,2-Dibromo-3-chloropropane	N.D.	5	0.3
Dibromochloromethane	N.D.	1	0.2
1,2-Dibromoethane	N.D.	1	0.2
1,2-Dichlorobenzene	N.D.	5	0.2
1,3-Dichlorobenzene	N.D.	5	0.2
1,4-Dichlorobenzene	N.D.	5	0.2
Dichlorodifluoromethane	N.D.	1	0.2
1,1-Dichloroethane	N.D.	1	0.2
1,2-Dichloroethane	N.D.	1	0.3
1,1-Dichloroethene	N.D.	1	0.2
cis-1,2-Dichloroethene	N.D.	1	0.2
trans-1,2-Dichloroethene	N.D.	1	0.2
1,2-Dichloropropane	N.D.	1	0.2
cis-1,3-Dichloropropene	N.D.	1	0.2
trans-1,3-Dichloropropene	N.D.	1	0.2
1,4-Dioxane	N.D.	250	29
Ethyl Acetate	N.D.	5	0.7

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: ARCADIS U.S., Inc. Group Number: 2072206
Reported: 11/27/2019 13:25

Method Blank (continued)

Analysis Name	Result	LOQ**	MDL
	ug/l	ug/l	ug/l
Ethyl ether	N.D.	5	0.2
Ethylbenzene	N.D.	1	0.4
Freon 113	N.D.	10	0.2
n-Heptane	N.D.	5	2
n-Hexane	N.D.	5	2
2-Hexanone	N.D.	10	0.3
Isobutyl Alcohol	N.D.	250	36
Isopropylbenzene	N.D.	5	0.2
p-Isopropyltoluene	N.D.	5	0.2
Methyl Acetate	N.D.	5	0.2
Methyl Tertiary Butyl Ether	N.D.	1	0.2
4-Methyl-2-pentanone	N.D.	10	0.5
Methylcyclohexane	N.D.	5	0.5
Methylene Chloride	N.D.	1	0.3
Naphthalene	N.D.	5	1
2-Nitropropane	N.D.	10	0.8
Styrene	N.D.	5	0.2
1,1,2,2-Tetrachloroethane	N.D.	1	0.2
Tetrachloroethene	N.D.	1	0.2
Tetrahydrofuran	N.D.	10	0.7
Toluene	N.D.	1	0.2
1,2,3-Trichlorobenzene	N.D.	5	0.4
1,2,4-Trichlorobenzene	N.D.	5	0.3
1,1,1-Trichloroethane	N.D.	1	0.3
1,1,2-Trichloroethane	N.D.	1	0.2
Trichloroethene	N.D.	1	0.2
Trichlorofluoromethane	N.D.	1	0.2
1,2,4-Trimethylbenzene	N.D.	5	1
1,3,5-Trimethylbenzene	N.D.	5	0.3
Vinyl Chloride	N.D.	1	0.2
m+p-Xylene	N.D.	5	1
o-Xylene	N.D.	1	0.4
Xylene (Total)	N.D.	6	1
Batch number: Y193131AA	Sample number(s): 1190178-1190182		
Acetone	N.D.	20	0.7
Acetonitrile	N.D.	100	16
Benzene	N.D.	1	0.2
Bromochloromethane	N.D.	5	0.2
Bromodichloromethane	N.D.	1	0.2
Bromoform	N.D.	4	1
Bromomethane	N.D.	1	0.3
n-Butanol	N.D.	250	61
2-Butanone	N.D.	10	0.3
t-Butyl alcohol	N.D.	50	12

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Quality Control Summary

Client Name: ARCADIS U.S., Inc.
Reported: 11/27/2019 13:25

Group Number: 2072206

Method Blank (continued)

Analysis Name	Result	LOQ**	MDL
	ug/l	ug/l	ug/l
n-Butylbenzene	N.D.	5	0.2
sec-Butylbenzene	N.D.	5	0.2
tert-Butylbenzene	N.D.	5	0.3
Carbon Disulfide	N.D.	5	0.2
Carbon Tetrachloride	N.D.	1	0.2
Chlorobenzene	N.D.	1	0.2
Chlorodifluoromethane	N.D.	5	2
Chloroethane	N.D.	1	0.2
Chloroform	N.D.	1	0.2
Chloromethane	N.D.	1	0.2
Cyclohexane	N.D.	5	1
Cyclohexanone	N.D.	100	25
1,2-Dibromo-3-chloropropane	N.D.	5	0.3
Dibromochloromethane	N.D.	1	0.2
1,2-Dibromoethane	N.D.	1	0.2
1,2-Dichlorobenzene	N.D.	5	0.2
1,3-Dichlorobenzene	N.D.	5	0.2
1,4-Dichlorobenzene	N.D.	5	0.2
Dichlorodifluoromethane	N.D.	1	0.2
1,1-Dichloroethane	N.D.	1	0.2
1,2-Dichloroethane	N.D.	1	0.3
1,1-Dichloroethene	N.D.	1	0.2
cis-1,2-Dichloroethene	N.D.	1	0.2
trans-1,2-Dichloroethene	N.D.	1	0.2
1,2-Dichloropropane	N.D.	1	0.2
cis-1,3-Dichloropropene	N.D.	1	0.2
trans-1,3-Dichloropropene	N.D.	1	0.2
1,4-Dioxane	N.D.	250	29
Ethyl Acetate	N.D.	5	0.7
Ethyl ether	N.D.	5	0.2
Ethylbenzene	N.D.	1	0.4
Freon 113	N.D.	10	0.2
n-Heptane	N.D.	5	2
n-Hexane	N.D.	5	2
2-Hexanone	N.D.	10	0.3
Isobutyl Alcohol	N.D.	250	36
Isopropylbenzene	N.D.	5	0.2
p-Isopropyltoluene	N.D.	5	0.2
Methyl Acetate	N.D.	5	0.2
Methyl Tertiary Butyl Ether	N.D.	1	0.2
4-Methyl-2-pentanone	N.D.	10	0.5
Methylcyclohexane	N.D.	5	0.5
Methylene Chloride	N.D.	1	0.3
Naphthalene	N.D.	5	1
2-Nitropropane	N.D.	10	0.8

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Quality Control Summary

Client Name: ARCADIS U.S., Inc. Group Number: 2072206
Reported: 11/27/2019 13:25

Method Blank (continued)

Analysis Name	Result	LOQ**	MDL
	ug/l	ug/l	ug/l
Styrene	N.D.	5	0.2
1,1,2,2-Tetrachloroethane	N.D.	1	0.2
Tetrachloroethene	N.D.	1	0.2
Tetrahydrofuran	N.D.	10	0.7
Toluene	N.D.	1	0.2
1,2,3-Trichlorobenzene	N.D.	5	0.4
1,2,4-Trichlorobenzene	N.D.	5	0.3
1,1,1-Trichloroethane	N.D.	1	0.3
1,1,2-Trichloroethane	N.D.	1	0.2
Trichloroethene	N.D.	1	0.2
Trichlorofluoromethane	N.D.	1	0.2
1,2,4-Trimethylbenzene	N.D.	5	1
1,3,5-Trimethylbenzene	N.D.	5	0.3
Vinyl Chloride	N.D.	1	0.2
m+p-Xylene	N.D.	5	1
o-Xylene	N.D.	1	0.4
Xylene (Total)	N.D.	6	1
Batch number: Y193171AA	Sample number(s): 1190179		
Methylene Chloride	N.D.	1	0.3
Batch number: 19310WAD026	Sample number(s): 1190178-1190182		
Acenaphthene	N.D.	0.50	0.10
Acenaphthylene	N.D.	0.50	0.10
Acetophenone	N.D.	10	4.0
Aniline	N.D.	10	3.0
Anthracene	N.D.	0.50	0.10
Atrazine	N.D.	5.0	2.0
Benzaldehyde	N.D.	10	3.0
Benzo(a)anthracene	N.D.	0.50	0.10
Benzo(a)pyrene	N.D.	0.50	0.10
Benzo(b)fluoranthene	N.D.	0.50	0.10
Benzo(g,h,i)perylene	N.D.	0.50	0.10
Benzo(k)fluoranthene	N.D.	0.50	0.10
Benzyl alcohol	N.D.	30	10
1,1'-Biphenyl	N.D.	10	3.0
4-Bromophenyl-phenylether	N.D.	2.0	0.50
Butylbenzylphthalate	N.D.	5.0	2.0
Di-n-butylphthalate	N.D.	5.0	2.0
Caprolactam	N.D.	11	5.0
Carbazole	N.D.	2.0	0.50
4-Chloro-3-methylphenol	N.D.	2.0	0.50
4-Chloroaniline	N.D.	10	4.0
bis(2-Chloroethoxy)methane	N.D.	2.0	0.50
bis(2-Chloroethyl)ether	N.D.	2.0	0.50
bis(2-Chloroisopropyl)ether	N.D.	2.0	0.50

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Quality Control Summary

Client Name: ARCADIS U.S., Inc.
Reported: 11/27/2019 13:25

Group Number: 2072206

Method Blank (continued)

Analysis Name	Result	LOQ**	MDL
	ug/l	ug/l	ug/l
2-Chloronaphthalene	N.D.	1.0	0.40
2-Chlorophenol	N.D.	2.0	0.50
4-Chlorophenyl-phenylether	N.D.	2.0	0.50
Chrysene	N.D.	0.50	0.10
Dibenz(a,h)anthracene	N.D.	0.50	0.10
Dibenzofuran	N.D.	2.0	0.50
3,3'-Dichlorobenzidine	N.D.	10	3.0
2,4-Dichlorophenol	N.D.	2.0	0.50
Dicyclohexylamine	N.D.	10	10
Diethylphthalate	N.D.	5.0	2.0
N,N-Dimethylaniline	N.D.	1.0	0.50
2,4-Dimethylphenol	N.D.	10	3.0
Dimethylphthalate	N.D.	5.0	2.0
4,6-Dinitro-2-methylphenol	N.D.	21	8.0
2,4-Dinitrophenol	N.D.	30	14
2,4-Dinitrotoluene	N.D.	5.0	1.0
2,6-Dinitrotoluene	N.D.	2.0	0.50
bis(2-Ethylhexyl)phthalate	N.D.	11	5.0
Fluoranthene	N.D.	0.50	0.10
Fluorene	N.D.	0.50	0.10
Hexachlorobenzene	N.D.	0.50	0.10
Hexachlorobutadiene	N.D.	2.0	0.50
Hexachlorocyclopentadiene	N.D.	11	5.0
Hexachloroethane	N.D.	5.0	1.0
Indeno(1,2,3-cd)pyrene	N.D.	0.50	0.10
Isophorone	N.D.	2.0	0.50
2-Methylnaphthalene	N.D.	0.50	0.10
2-Methylphenol	N.D.	2.0	0.50
4-Methylphenol	N.D.	2.0	0.50
Naphthalene	N.D.	0.50	0.10
2-Nitroaniline	N.D.	7.0	2.0
3-Nitroaniline	N.D.	7.0	3.0
4-Nitroaniline	N.D.	3.0	0.90
Nitrobenzene	N.D.	2.0	0.50
2-Nitrophenol	N.D.	10	3.0
4-Nitrophenol	N.D.	30	10
N-Nitroso-di-n-propylamine	N.D.	3.0	0.70
N-Nitrosodiphenylamine	N.D.	3.0	0.70
Di-n-octylphthalate	N.D.	11	5.0
Pentachlorophenol	N.D.	5.0	1.0
Phenanthrene	N.D.	0.50	0.10
Phenol	N.D.	2.0	0.50
Pyrene	N.D.	0.50	0.10
Pyridine	N.D.	5.0	2.0
1,2,4,5-Tetrachlorobenzene	N.D.	2.0	0.50

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Quality Control Summary

Client Name: ARCADIS U.S., Inc. Group Number: 2072206
Reported: 11/27/2019 13:25

Method Blank (continued)

Analysis Name	Result	LOQ**	MDL
	ug/l	ug/l	ug/l
2,3,4,6-Tetrachlorophenol	N.D.	10	4.0
2,4,5-Trichlorophenol	N.D.	2.0	0.50
2,4,6-Trichlorophenol	N.D.	2.0	0.50
Triethylamine	N.D.	10	10
Batch number: 193050016A	Sample number(s): 1190178,1190180-1190181		
Acetaldehyde	N.D.	60	35
Formaldehyde	N.D.	50	20
Batch number: 193080008A	Sample number(s): 1190178,1190180-1190181,1190183		
Ethanol	N.D.	1,000	150
Isopropanol	N.D.	1,000	110
Methanol	N.D.	1,000	220
Batch number: 193100032A	Sample number(s): 1190178,1190180-1190181,1190183		
Ethylene glycol	N.D.	10,000	5,000
Propylene glycol	N.D.	10,000	5,000

LCS/LCSD

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: Y193091AA	Sample number(s): 1190183								
Acetone	150	183.12			122		54-157		
Acetonitrile	150	180.61			120		66-149		
Benzene	20	21.44			107		80-120		
Bromochloromethane	20	19.57			98		80-120		
Bromodichloromethane	20	21.13			106		71-120		
Bromoform	20	21.48			107		51-120		
Bromomethane	20	13.96			70		53-128		
n-Butanol	1000	1134.36			113		57-130		
2-Butanone	150	161.09			107		59-135		
t-Butyl alcohol	200	222.22			111		60-130		
n-Butylbenzene	20	19.74			99		76-120		
sec-Butylbenzene	20	19.96			100		77-120		
tert-Butylbenzene	20	19.22			96		78-120		
Carbon Disulfide	20	18.37			92		65-128		
Carbon Tetrachloride	20	20.09			100		64-134		
Chlorobenzene	20	21.1			105		80-120		
Chlorodifluoromethane	20	15.85			79		45-149		
Chloroethane	20	15			75		55-123		
Chloroform	20	21.26			106		80-120		

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Quality Control Summary

Client Name: ARCADIS U.S., Inc. Group Number: 2072206
Reported: 11/27/2019 13:25

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Chloromethane	20	15.97			80		56-121		
Cyclohexane	20	16.83			84		68-126		
Cyclohexanone	500	508.09			102		27-141		
1,2-Dibromo-3-chloropropane	20	18.49			92		47-131		
Dibromochloromethane	20	21.41			107		71-120		
1,2-Dibromoethane	20	21.29			106		77-120		
1,2-Dichlorobenzene	20	21.36			107		80-120		
1,3-Dichlorobenzene	20	21.49			107		80-120		
1,4-Dichlorobenzene	20	21.99			110		80-120		
Dichlorodifluoromethane	20	12.72			64		41-127		
1,1-Dichloroethane	20	20.93			105		80-120		
1,2-Dichloroethane	20	20.4			102		73-124		
1,1-Dichloroethene	20	21.38			107		80-131		
cis-1,2-Dichloroethene	20	21.99			110		80-125		
trans-1,2-Dichloroethene	20	21.31			107		80-126		
1,2-Dichloropropane	20	22.2			111		80-120		
cis-1,3-Dichloropropene	20	20.61			103		75-120		
trans-1,3-Dichloropropene	20	19.65			98		67-120		
1,4-Dioxane	500	701.78			140		63-146		
Ethyl Acetate	20	20.99			105		67-131		
Ethyl ether	20	18.66			93		59-141		
Ethylbenzene	20	20.74			104		80-120		
Freon 113	20	18.33			92		73-139		
n-Heptane	20	18.2			91		56-133		
n-Hexane	20	17.85			89		61-138		
2-Hexanone	100	104.2			104		56-135		
Isobutyl Alcohol	500	620.16			124		61-136		
Isopropylbenzene	20	20.05			100		80-120		
p-Isopropyltoluene	20	20.31			102		76-120		
Methyl Acetate	20	21.43			107		54-136		
Methyl Tertiary Butyl Ether	20	17.49			87		69-122		
4-Methyl-2-pentanone	100	103.14			103		62-133		
Methylcyclohexane	20	16.35			82		67-121		
Methylene Chloride	20	21.94			110		80-120		
Naphthalene	20	18.83			94		53-124		
2-Nitropropane	20	18.44			92		19-144		
Styrene	20	21.04			105		80-120		
1,1,2,2-Tetrachloroethane	20	20.32			102		72-120		
Tetrachloroethene	20	21.41			107		80-120		
Tetrahydrofuran	100	113.51			114		54-144		
Toluene	20	20.75			104		80-120		
1,2,3-Trichlorobenzene	20	19.85			99		66-120		
1,2,4-Trichlorobenzene	20	19.35			97		63-120		
1,1,1-Trichloroethane	20	20.32			102		67-126		

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Quality Control Summary

Client Name: ARCADIS U.S., Inc. Group Number: 2072206
Reported: 11/27/2019 13:25

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
1,1,2-Trichloroethane	20	21.58			108		80-120		
Trichloroethene	20	20.96			105		80-120		
Trichlorofluoromethane	20	15.33			77		55-135		
1,2,4-Trimethylbenzene	20	19.88			99		75-120		
1,3,5-Trimethylbenzene	20	20.1			100		75-120		
Vinyl Chloride	20	15.46			77		56-120		
m+p-Xylene	40	42.09			105		80-120		
o-Xylene	20	19.81			99		80-120		
Xylene (Total)	60	61.89			103		80-120		
Batch number: Y193131AA	Sample number(s): 1190178-1190182								
Acetone	150	178.91	150	177	119	118	54-157	1	30
Acetonitrile	150	161.45	150	163.81	108	109	66-149	1	30
Benzene	20	21.72	20	22.02	109	110	80-120	1	30
Bromochloromethane	20	20.81	20	21.11	104	106	80-120	1	30
Bromodichloromethane	20	22.25	20	22.57	111	113	71-120	1	30
Bromoform	20	22.09	20	22.42	110	112	51-120	1	30
Bromomethane	20	11.35	20	10.13	57	51*	53-128	11	30
n-Butanol	1000	1125.37	1000	1081.52	113	108	57-130	4	30
2-Butanone	150	159.94	150	163.88	107	109	59-135	2	30
t-Butyl alcohol	200	231.64	200	240.12	116	120	60-130	4	30
n-Butylbenzene	20	21.41	20	21.92	107	110	76-120	2	30
sec-Butylbenzene	20	21.31	20	21.6	107	108	77-120	1	30
tert-Butylbenzene	20	20.35	20	20.75	102	104	78-120	2	30
Carbon Disulfide	20	18.11	20	18.28	91	91	65-128	1	30
Carbon Tetrachloride	20	21.81	20	21.9	109	110	64-134	0	30
Chlorobenzene	20	21.92	20	22.28	110	111	80-120	2	30
Chlorodifluoromethane	20	9.95	20	9.46	50	47	45-149	5	30
Chloroethane	20	12.11	20	10.52	61	53*	55-123	14	30
Chloroform	20	22.11	20	22.2	111	111	80-120	0	30
Chloromethane	20	11.02	20	10.28	55*	51*	56-121	7	30
Cyclohexane	20	18.3	20	18.5	91	92	68-126	1	30
Cyclohexanone	500	493	500	484.67	99	97	27-141	2	30
1,2-Dibromo-3-chloropropane	20	19.48	20	20.34	97	102	47-131	4	30
Dibromochloromethane	20	22.16	20	22.2	111	111	71-120	0	30
1,2-Dibromoethane	20	22.47	20	22.53	112	113	77-120	0	30
1,2-Dichlorobenzene	20	22.39	20	22.63	112	113	80-120	1	30
1,3-Dichlorobenzene	20	22.66	20	23	113	115	80-120	1	30
1,4-Dichlorobenzene	20	23.25	20	23.52	116	118	80-120	1	30
Dichlorodifluoromethane	20	11.83	20	12.4	59	62	41-127	5	30
1,1-Dichloroethane	20	21.28	20	21.48	106	107	80-120	1	30
1,2-Dichloroethane	20	21.77	20	22.17	109	111	73-124	2	30
1,1-Dichloroethene	20	21.93	20	22.25	110	111	80-131	1	30
cis-1,2-Dichloroethene	20	22.79	20	22.98	114	115	80-125	1	30

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Quality Control Summary

Client Name: ARCADIS U.S., Inc.
Reported: 11/27/2019 13:25

Group Number: 2072206

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
trans-1,2-Dichloroethene	20	22	20	22.13	110	111	80-126	1	30
1,2-Dichloropropane	20	22.57	20	22.87	113	114	80-120	1	30
cis-1,3-Dichloropropene	20	21.68	20	22.04	108	110	75-120	2	30
trans-1,3-Dichloropropene	20	20.63	20	21.23	103	106	67-120	3	30
1,4-Dioxane	500	715.09	500	687.44	143	137	63-146	4	30
Ethyl Acetate	20	21.63	20	21.26	108	106	67-131	2	30
Ethyl ether	20	17.65	20	20.05	88	100	59-141	13	30
Ethylbenzene	20	21.78	20	21.97	109	110	80-120	1	30
Freon 113	20	20.59	20	20.48	103	102	73-139	1	30
n-Heptane	20	20.55	20	20.58	103	103	56-133	0	30
n-Hexane	20	20.19	20	20.27	101	101	61-138	0	30
2-Hexanone	100	103.67	100	105.91	104	106	56-135	2	30
Isobutyl Alcohol	500	630.52	500	624.15	126	125	61-136	1	30
Isopropylbenzene	20	21.18	20	21.49	106	107	80-120	1	30
p-Isopropyltoluene	20	21.51	20	21.95	108	110	76-120	2	30
Methyl Acetate	20	22.35	20	23.08	112	115	54-136	3	30
Methyl Tertiary Butyl Ether	20	18.63	20	18.61	93	93	69-122	0	30
4-Methyl-2-pentanone	100	104.03	100	105.69	104	106	62-133	2	30
Methylcyclohexane	20	19.66	20	19.78	98	99	67-121	1	30
Methylene Chloride	20	22.17	20	22.36	111	112	80-120	1	30
Naphthalene	20	20.47	20	20.98	102	105	53-124	2	30
2-Nitropropane	20	18.7	20	19.34	94	97	19-144	3	30
Styrene	20	22.21	20	22.38	111	112	80-120	1	30
1,1,2,2-Tetrachloroethane	20	20.9	20	21.39	104	107	72-120	2	30
Tetrachloroethene	20	22.94	20	23.03	115	115	80-120	0	30
Tetrahydrofuran	100	110.36	100	107.99	110	108	54-144	2	30
Toluene	20	21.56	20	21.72	108	109	80-120	1	30
1,2,3-Trichlorobenzene	20	21.87	20	22.14	109	111	66-120	1	30
1,2,4-Trichlorobenzene	20	21.16	20	21.65	106	108	63-120	2	30
1,1,1-Trichloroethane	20	21.82	20	22.07	109	110	67-126	1	30
1,1,2-Trichloroethane	20	22.82	20	23.08	114	115	80-120	1	30
Trichloroethene	20	21.97	20	22	110	110	80-120	0	30
Trichlorofluoromethane	20	14.72	20	14.54	74	73	55-135	1	30
1,2,4-Trimethylbenzene	20	20.99	20	21.36	105	107	75-120	2	30
1,3,5-Trimethylbenzene	20	21.12	20	21.49	106	107	75-120	2	30
Vinyl Chloride	20	11.91	20	12.16	60	61	56-120	2	30
m+p-Xylene	40	43.78	40	44.19	109	110	80-120	1	30
o-Xylene	20	20.99	20	21.07	105	105	80-120	0	30
Xylene (Total)	60	64.77	60	65.26	108	109	80-120	1	30
Batch number: Y193171AA	Sample number(s): 1190179								
Methylene Chloride	20	23.53	20	23.56	118	118	80-120	0	30
	ug/l	ug/l	ug/l	ug/l					

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: ARCADIS U.S., Inc. Group Number: 2072206
Reported: 11/27/2019 13:25

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 19310WAD026	Sample number(s): 1190178-1190182								
Acenaphthene	50	31.5	50	35.48	63	71	52-114	12	30
Acenaphthylene	50	34.41	50	37.98	69	76	57-121	10	30
Acetophenone	50	36.28	50	39.09	73	78	61-114	7	30
Aniline	50	31.82	50	32.48	64	65	35-84	2	30
Anthracene	50	41.74	50	44.8	83	90	62-116	7	30
Atrazine	50	45.5	50	50.2	91	100	71-133	10	30
Benzaldehyde	50	41.99	50	45.17	84	90	48-118	7	30
Benzo(a)anthracene	50	48.48	50	50.58	97	101	70-118	4	30
Benzo(a)pyrene	50	42.6	50	48.39	85	97	71-117	13	30
Benzo(b)fluoranthene	50	42.63	50	47.47	85	95	71-115	11	30
Benzo(g,h,i)perylene	50	43.06	50	48.4	86	97	60-119	12	30
Benzo(k)fluoranthene	50	43.11	50	48.19	86	96	71-116	11	30
Benzyl alcohol	50	38.22	50	38.18	76	76	58-121	0	30
1,1'-Biphenyl	50	30.15	50	32.86	60	66	51-112	9	30
4-Bromophenyl-phenylether	50	37.5	50	39.97	75	80	53-117	6	30
Butylbenzylphthalate	50	42.83	50	45.58	86	91	44-124	6	30
Di-n-butylphthalate	50	41.05	50	44.13	82	88	62-118	7	30
Caprolactam	50	11.65	50	11.52	23	23	10-57	1	30
Carbazole	50	45.13	50	47.6	90	95	64-127	5	30
4-Chloro-3-methylphenol	50	42.45	50	42.58	85	85	60-118	0	30
4-Chloroaniline	50	39.41	50	41.67	79	83	35-108	6	30
bis(2-Chloroethoxy)methane	50	39.77	50	43.34	80	87	53-119	9	30
bis(2-Chloroethyl)ether	50	36.33	50	38.09	73	76	49-110	5	30
bis(2-Chloroisopropyl)ether	50	34.11	50	35.22	68	70	33-119	3	30
2-Chloronaphthalene	50	28.19	50	31.03	56	62	42-111	10	30
2-Chlorophenol	50	38.3	50	37.83	77	76	52-109	1	30
4-Chlorophenyl-phenylether	50	30.99	50	32.51	62	65	46-113	5	30
Chrysene	50	46.13	50	47.56	92	95	69-116	3	30
Dibenz(a,h)anthracene	50	45.77	50	50.3	92	101	68-121	9	30
Dibenzofuran	50	34.3	50	36.37	69	73	53-114	6	30
3,3'-Dichlorobenzidine	50	42.02	50	43.02	84	86	42-107	2	30
2,4-Dichlorophenol	50	42.41	50	43.53	85	87	58-114	3	30
Dicyclohexylamine	50	41.21	50	34.93	82*	70	22-75	16	30
Diethylphthalate	50	39.09	50	43.91	78	88	48-113	12	30
N,N-Dimethylaniline	25	21.68	25	19.31	87	77	59-114	12	30
2,4-Dimethylphenol	50	33.43	50	34.59	67	69	48-91	3	30
Dimethylphthalate	50	36.72	50	40.65	73	81	14-123	10	30
4,6-Dinitro-2-methylphenol	50	59.06	50	61.85	118	124	63-129	5	30
2,4-Dinitrophenol	100	112.72	100	113.53	113	114	44-134	1	30
2,4-Dinitrotoluene	50	43.9	50	50.19	88	100	69-117	13	30
2,6-Dinitrotoluene	50	43.52	50	48.32	87	97	63-122	10	30
bis(2-Ethylhexyl)phthalate	50	44.68	50	46	89	92	68-120	3	30
Fluoranthene	50	44.55	50	46.83	89	94	63-122	5	30

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: ARCADIS U.S., Inc. Group Number: 2072206
Reported: 11/27/2019 13:25

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Fluorene	50	34.35	50	37.8	69	76	56-115	10	30
Hexachlorobenzene	50	39.92	50	42.87	80	86	60-117	7	30
Hexachlorobutadiene	50	18.53	50	17.98	37	36	20-108	3	30
Hexachlorocyclopentadiene	100	17.3	100	15.98	17	16	10-91	8	30
Hexachloroethane	50	17.84	50	17.67	36	35	23-95	1	30
Indeno(1,2,3-cd)pyrene	50	43.27	50	49.16	87	98	63-114	13	30
Isophorone	50	39.27	50	43.25	79	86	56-120	10	30
2-Methylnaphthalene	50	29.16	50	32.18	58	64	44-111	10	30
2-Methylphenol	50	38.87	50	38.22	78	76	53-107	2	30
4-Methylphenol	50	39.34	50	39.16	79	78	49-108	0	30
Naphthalene	50	31.51	50	34.6	63	69	45-105	9	30
2-Nitroaniline	50	42.01	50	47.52	84	95	66-126	12	30
3-Nitroaniline	50	40.78	50	45.88	82	92	47-119	12	30
4-Nitroaniline	50	41.87	50	44.85	84	90	45-107	7	30
Nitrobenzene	50	37.93	50	41.54	76	83	49-113	9	30
2-Nitrophenol	50	46.86	50	50.87	94	102	57-116	8	30
4-Nitrophenol	50	24.82	50	26.95	50	54	23-89	8	30
N-Nitroso-di-n-propylamine	50	37.8	50	38.52	76	77	51-122	2	30
N-Nitrosodiphenylamine	50	41.56	50	44.69	83	89	63-119	7	30
Di-n-octylphthalate	50	38.95	50	43.32	78	87	67-120	11	30
Pentachlorophenol	50	50.4	50	54.33	101	109	54-131	8	30
Phenanthrene	50	40.56	50	44.18	81	88	65-113	9	30
Phenol	50	23.86	50	23.51	48	47	19-79	1	30
Pyrene	50	42.74	50	44.28	85	89	65-115	4	30
Pyridine	50	18.79	50	18.63	38	37	13-83	1	30
1,2,4,5-Tetrachlorobenzene	50	23.4	50	24.04	47	48	33-105	3	30
2,3,4,6-Tetrachlorophenol	50	52.05	50	54.63	104	109	68-118	5	30
2,4,5-Trichlorophenol	50	46.56	50	48.18	93	96	66-118	3	30
2,4,6-Trichlorophenol	50	45.83	50	48.81	92	98	69-122	6	30
Triethylamine	50	14.52	50	12.02	29	24	10-88	19	30
	ug/l	**ug/l**	**ug/l**	**ug/l**					
Batch number: 193050016A	Sample number(s): 1190178,1190180-1190181								
Acetaldehyde	500	403.3	500	402.31	81	80	76-119	0	30
Formaldehyde	500	485.99	500	491.37	97	98	77-122	1	30
	ug/l	**ug/l**	**ug/l**	**ug/l**					
Batch number: 193080008A	Sample number(s): 1190178,1190180-1190181,1190183								
Ethanol	2501	2251.83			90		80-115		
Isopropanol	2505	2434.08			97		85-115		
Methanol	2503	2363.84			94		79-120		
Batch number: 193100032A	Sample number(s): 1190178,1190180-1190181,1190183								
Ethylene glycol	102783.4	98750.18			96		69-118		

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(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: ARCADIS U.S., Inc. Group Number: 2072206
Reported: 11/27/2019 13:25

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Propylene glycol	98902.99	94680.98			96		60-121		

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs- 5ml Water by 8260C/D
Batch number: Y193091AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
1190183	97	98	92	89
Blank	97	100	93	90
LCS	95	98	94	95
Limits:	80-120	80-120	80-120	80-120

Analysis Name: VOCs- 5ml Water by 8260C/D
Batch number: Y193131AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
1190178	104	100	92	90
1190179	100	100	96	94
1190180	97	95	92	95
1190181	101	99	92	90
1190182	97	97	97	98
Blank	99	99	92	90
LCS	97	96	94	96
LCSD	97	96	94	96
Limits:	80-120	80-120	80-120	80-120

Analysis Name: Semi-annual Groundwater BMS
Batch number: 19310WAD026

	Phenol-d6	2-Fluorophenol	2,4,6-Tribromophenol	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14
1190178	34	47	92	73	66	85
1190179	27	39	95	58	51	74
1190180	46	48	42	76	64	87
1190181	36	46	87	73	65	94
1190182	57	73	107	24*	67	64
Blank	33	45	83	69	39*	86
LCS	41	54	96	70	56	89
LCSD	41	53	101	78	69	89

*- Outside of specification
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(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: ARCADIS U.S., Inc. Group Number: 2072206
Reported: 11/27/2019 13:25

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: Semi-annual Groundwater BMS
Batch number: 19310WAD026

Limits:	10-67	10-84	23-135	33-113	44-102	39-125

Analysis Name: Short List Aldehydes- W 8315A
Batch number: 193050016A

	Butyraldehyde
1190178	102
1190180	92
1190181	102
Blank	101
LCS	106
LCSD	104
Limits:	39-153

Analysis Name: Alcohols in Water
Batch number: 193080008A

	Acetone-D1	Acetone-D2
1190178	91	90
1190180	93	88
1190181	94	89
1190183	96	91
Blank	100	102
LCS	102	101
Limits:	58-149	58-149

Analysis Name: Glycols in Water by 8015C/D
Batch number: 193100032A

	Tetramethylene glycol
1190178	26
1190180	32
1190181	29
1190183	34
Blank	54
LCS	90
Limits:	22-129

*- Outside of specification
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(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Syracuse
#225

Environmental Analysis Request/Chain of Custody

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Acct. # 3074 Group # 2072206 Sample # 1190178-83

Client: Arcadis			
Project Name/#: BMS Syracuse	Site ID #:		
Project Manager: Bill McCune	P.O. #: 30033396		
Sampler: Austin George, Josh Miller, Evan Green	PWSID #:		
Phone #: 315 671 6712	Quote #:		
State where samples were collected: NY	For Compliance: Yes ☐ No ☐		

Matrix: Soil ☐ Sediment ☐ Tissue ☐ | Water: Potable ☐ Ground ☒ NPDES ☐ Surface ☐ | Other: ☐ | Total # of Containers

Analyses Requested — Preservation and Filtration Codes

Sample Identification	Collection Date	Collection Time	Grab	Composite	Soil	Sediment	Tissue	Potable	Ground	NPDES	Surface	Other	Total # of Containers	VOCs 8260C (H)	SVOCs 8270D	Glycols 8015C	Alcohols (H)	Aldehydes 8315A			Remarks
BDA-1RX	10/31/19	0922	X					X					10	X	X	X	X	X			
BDA-11WT	10/31/19	1005	X					X					5	X	X						
BDA-13WT	10/31/19	1027	X					X					10	X	X	X	X	X			
BDA-8T	10/31/19	1105	X					X					10	X	X	X	X	X			
BDA-4UT	10/31/19	1110	X					X					5	X	X						
TRIP BLANK	10/23/19	—	X					W					4	X		X	X				
Rec 10.31.19																					

For Lab Use Only
SF #: _____
SCR #: _____

Preservation Codes
H = HCl | T = Thiosulfate
N = HNO_3 | B = NaOH
S = H_2SO_4 | P = H_3PO_4
F = Field Filtered | O = Other

Turnaround Time Requested (TAT) (please check): Standard ☑ Rush ☐
(Rush TAT is subject to laboratory approval and surcharges.)

Date results are needed:

Rush results requested by (please check): E-Mail ☐ Phone ☐

E-mail Address: William.McCune@arcadis.com

Phone: 315 671 6712

Data Package Options (please check if required)

Type I (Validation/non-CLP)	☐	MA MCP	☐
Type III (Reduced non-CLP)	☐	CT RCP	☐
Type VI (Raw Data Only)	☐	TX TRRP-13	☐
NJ DKQP	☐	NYSDEC Category	☐ A or ☒ B

EDD Required? Yes ☑ No ☐ If yes, format:

Relinquished by:	Date	Time	Received by:	Date	Time
Josh Sing	10/31/19	1430	Rec'd English TALQA	10/31/19	1430
Relinquished by:	Date	Time		Date	Time
Rec'd English TALQA	10/31/19	1900			
Relinquished by:	Date	Time		Date	Time
Relinquished by:	Date	Time		Date	Time
Relinquished by:	Date	Time	Chul Webb	Date	Time
				11/1/19	12:06

Relinquished by Commercial Carrier:

UPS _____ FedEx X Other _____

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Sample Administration Receipt Documentation Log

Doc Log ID: 264871

Group Number(s): 2072206

Client: Arcadis

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Date:	11/01/2019
Number of Packages:	1	Number of Projects:	1
State/Province of Origin:	NY		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	Total Trip Blank Qty:	4
Samples Chilled:	Yes	Trip Blank Type:	See Below
Paperwork Enclosed:	Yes	Air Quality Samples Present:	No
Samples Intact:	Yes		
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Trip Blank Type(s): 2-40 mL vials (HCl), 2-40 mL vials (Unpre)

Unpacked by Melvin Sanchez

Samples Chilled Details

Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	192050133	2.4	IR	Wet	Y	Loose/Bag	N

2425 New Holland Pike
Lancaster, PA 17605-2425
T | 717-656-2300
F | 717-656-2681
www.LancasterLabs.com

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mL**	milliliter(s)
C	degrees Celsius	**MPN**	Most Probable Number
cfu	colony forming units	**N.D.**	non-detect
CP Units	cobalt-chloroplatinate units	**ng**	nanogram(s)
F	degrees Fahrenheit	**NTU**	nephelometric turbidity units
g	gram(s)	**pg/L**	picogram/liter
IU	International Units	**RL**	Reporting Limit
kg	kilogram(s)	**TNTC**	Too Numerous To Count
L	liter(s)	**µg**	microgram(s)
lb.	pound(s)	**µL**	microliter(s)
m3	cubic meter(s)	**umhos/cm**	micromhos/cm
meq	milliequivalents	**MCL**	Maximum Contamination Limit
mg	milligram(s)		

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
P^	Concentration difference between the primary and confirmation column > 40%. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

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ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

ARCADIS U.S., Inc.
630 Plaza Drive
Suite 600
Highlands Ranch CO 80129

Report Date: November 06, 2019 05:56

Project: Bristol-Myers Squibb

Account #: 03074
Group Number: 2072188
SDG: BMS83
PO Number: 30033396
State of Sample Origin: NY

Electronic Copy To	Arcadis	Attn: William McCune
Electronic Copy To	Arcadis	Attn: Lawrence Carey Healy

Respectfully Submitted,

Megan A. Moeller
Senior Specialist

(717) 556-7261

To view our laboratory's current scopes of accreditation please go to https://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/certifications-and-accreditations-eurofins-lancaster-laboratories-environmental/ . Historical copies may be requested through your project manager.



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SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
BDA-17WT Grab Groundwater	10/30/2019 08:55	1188926
BDA-17WT MS Grab Groundwater	10/30/2019 08:55	1188927
BDA-17WT MSD Grab Groundwater	10/30/2019 08:55	1188928
BDA-17WT DUP Grab Groundwater	10/30/2019 08:55	1188929

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

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Project Name: Bristol-Myers Squibb
ELLE Group #: 2072188

General Comments:

Through our technical processes and second person review of data, we have established that our data/deliverables are in compliance with the methods and project requirements unless otherwise noted or previously resolved with the client. The compliance signature is located on the cover page of the Analysis Reports.

See the Laboratory Sample Analysis Record section of the Analysis Report for the method references.

All QC met criteria unless otherwise noted in an Analysis Specific Comment below.

Refer to the QC Summary for specific values and acceptance criteria.

Project specific QC samples are included in this data set.

Matrix QC may not be reported if site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

Surrogate recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in an Analysis Specific Comment below.

The samples were received at the appropriate temperature and in accordance with the chain of custody unless otherwise noted.

Preservation requirements were not met.

Sample #: 1188927

Preservation requirements were not met. The pH preservation of all non-volatile containers was checked upon receipt at the laboratory. The container for the following analysis was not within the specification and was adjusted accordingly by the laboratory: Ammonia Nitrogen

Analysis Specific Comments:

EPA 350.1, Wet Chemistry

Batch #: 19309107102A (Sample number(s): 1188926-1188929 UNSPK: 1188926 BKG: 1188926)

The recovery(ies) for the following analyte(s) in the MS and/or MSD exceeded the acceptance window indicating a positive bias: Ammonia Nitrogen

The relative percent difference(s) for the following analyte(s) in the MS/MSD were outside acceptance windows: Ammonia Nitrogen

EPA 410.4, Wet Chemistry

Batch #: 19308400102B (Sample number(s): 1188926-1188929 UNSPK: 1188926 BKG: 1188926)

The recovery(ies) for the following analyte(s) in the MS and/or MSD were below the acceptance window: Chemical Oxygen Demand

The duplicate RPD for the following analyte(s) exceeded the acceptance window: Chemical Oxygen Demand

Sample Description: **BDA-17WT Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/31/2019 11:30
Collection Date/Time: 10/30/2019 08:55
SDG#: BMS83-01BKG

ARCADIS U.S., Inc.
ELLE Sample #: GW 1188926
ELLE Group #: 2072188
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result		Limit of Quantitation*	Method Detection Limit	Dilution Factor
Wet Chemistry	**EPA 350.1**		**ug/l**		**ug/l**	**ug/l**	
12892	Ammonia Nitrogen	7664-41-7	300		100	50	1
	SM 4500-P F-2011		**ug/l**		**ug/l**	**ug/l**	
00227	Total Phosphorus as P (water)	7723-14-0	N.D.		100	50	1
	EPA 410.4		**ug/l**		**ug/l**	**ug/l**	
04001	Chemical Oxygen Demand	n.a.	40,300	J	50,000	12,800	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12892	Ammonia Nitrogen	EPA 350.1	1	19309107102A	11/05/2019 11:20	Jonathan Saul	1
00227	Total Phosphorus as P (water)	SM 4500-P F-2011	1	19309109101B	11/05/2019 14:56	Jonathan Saul	1
08263	Total Phos as P Prep (water)	SM 4500-P B(5)-2011	1	19309109101B	11/05/2019 09:35	Nancy J Shoop	1
04001	Chemical Oxygen Demand	EPA 410.4	1	19308400102B	11/04/2019 07:11	Susan A Engle	1

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-17WT MS Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/31/2019 11:30
Collection Date/Time: 10/30/2019 08:55
SDG#: BMS83-02MS

ARCADIS U.S., Inc.
ELLE Sample #: GW 1188927
ELLE Group #: 2072188
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
Wet Chemistry	**EPA 350.1**		**ug/l**	**ug/l**	**ug/l**	
12892	Ammonia Nitrogen	7664-41-7	1,600	100	50	1
	SM 4500-P F-2011		**ug/l**	**ug/l**	**ug/l**	
00227	Total Phosphorus as P (water)	7723-14-0	2,000	100	50	1
	EPA 410.4		**ug/l**	**ug/l**	**ug/l**	
04001	Chemical Oxygen Demand	n.a.	417,000	50,000	12,800	1

Sample Comments

State of New York Certification No. 10670
Preservation requirements were not met. The pH preservation of all non-volatile containers was checked upon receipt at the laboratory. The container for the following analysis was not within the specification and was adjusted accordingly by the laboratory: Ammonia Nitrogen

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12892	Ammonia Nitrogen	EPA 350.1	1	19309107102A	11/05/2019 11:22	Jonathan Saul	1
00227	Total Phosphorus as P (water)	SM 4500-P F-2011	1	19309109101B	11/05/2019 14:56	Jonathan Saul	1
08263	Total Phos as P Prep (water)	SM 4500-P B(5)-2011	1	19309109101B	11/05/2019 09:35	Nancy J Shoop	1
04001	Chemical Oxygen Demand	EPA 410.4	1	19308400102B	11/04/2019 07:11	Susan A Engle	1

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: **BDA-17WT MSD Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/31/2019 11:30
Collection Date/Time: 10/30/2019 08:55
SDG#: BMS83-03MSD

ARCADIS U.S., Inc.
ELLE Sample #: GW 1188928
ELLE Group #: 2072188
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
Wet Chemistry	**EPA 350.1**		**ug/l**	**ug/l**	**ug/l**	
12892	Ammonia Nitrogen	7664-41-7	1,300	100	50	1
	EPA 410.4		**ug/l**	**ug/l**	**ug/l**	
04001	Chemical Oxygen Demand	n.a.	412,000	50,000	12,800	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12892	Ammonia Nitrogen	EPA 350.1	1	19309107102A	11/05/2019 11:24	Jonathan Saul	1
04001	Chemical Oxygen Demand	EPA 410.4	1	19308400102B	11/04/2019 07:11	Susan A Engle	1

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-17WT DUP Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/31/2019 11:30
Collection Date/Time: 10/30/2019 08:55
SDG#: BMS83-04DUP

ARCADIS U.S., Inc.
ELLE Sample #: GW 1188929
ELLE Group #: 2072188
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
Wet Chemistry	**EPA 350.1**		**ug/l**	**ug/l**	**ug/l**	
12892	Ammonia Nitrogen	7664-41-7	300	100	50	1
	SM 4500-P F-2011		**ug/l**	**ug/l**	**ug/l**	
00227	Total Phosphorus as P (water)	7723-14-0	N.D.	100	50	1
	EPA 410.4		**ug/l**	**ug/l**	**ug/l**	
04001	Chemical Oxygen Demand	n.a.	50,800	50,000	12,800	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12892	Ammonia Nitrogen	EPA 350.1	1	19309107102A	11/05/2019 11:26	Jonathan Saul	1
00227	Total Phosphorus as P (water)	SM 4500-P F-2011	1	19309109101B	11/05/2019 14:56	Jonathan Saul	1
08263	Total Phos as P Prep (water)	SM 4500-P B(5)-2011	1	19309109101B	11/05/2019 09:35	Nancy J Shoop	1
04001	Chemical Oxygen Demand	EPA 410.4	1	19308400102B	11/04/2019 07:11	Susan A Engle	1

*=This limit was used in the evaluation of the final result

Quality Control Summary

Client Name: ARCADIS U.S., Inc. Group Number: 2072188
Reported: 11/06/2019 05:56

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	LOQ**	MDL
	ug/l	ug/l	ug/l
Batch number: 19309107102A	Sample number(s): 1188926-1188929		
Ammonia Nitrogen	N.D.	100	50
Batch number: 19309109101B	Sample number(s): 1188926-1188927,1188929		
Total Phosphorus as P (water)	N.D.	100	50
Batch number: 19308400102B	Sample number(s): 1188926-1188929		
Chemical Oxygen Demand	N.D.	50,000	12,800

LCS/LCSD

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 19309107102A	Sample number(s): 1188926-1188929								
Ammonia Nitrogen	1500	1485.6			99		90-110		
Batch number: 19309109101B	Sample number(s): 1188926-1188927,1188929								
Total Phosphorus as P (water)	4550	4337.75			95		90-110		
	ug/l	ug/l	ug/l	ug/l					
Batch number: 19308400102B	Sample number(s): 1188926-1188929								
Chemical Oxygen Demand	500000	493700			99		94-110		

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: 19309107102A	Sample number(s): 1188926-1188929 UNSPK: 1188926									
Ammonia Nitrogen	302.5	1000	1572.1	1000	1287.9	127*	99	90-110	20*	8
Batch number: 19309109101B	Sample number(s): 1188926-1188927,1188929 UNSPK: 1188926									
Total Phosphorus as P (water)	N.D.	2000	2027.64			101		90-110		

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: ARCADIS U.S., Inc. Group Number: 2072188
Reported: 11/06/2019 05:56

MS/MSD (continued)

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
	ug/l	ug/l	ug/l	ug/l	ug/l					
Batch number: 19308400102B	Sample number(s): 1188926-1188929 UNSPK: 1188926									
Chemical Oxygen Demand	40300	400000	416600	400000	412400	94	93*	94-110	1	5

Laboratory Duplicate

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc ug/l	DUP Conc ug/l	DUP RPD	DUP RPD Max
Batch number: 19309107102A	Sample number(s): 1188926-1188929 BKG: 1188926			
Ammonia Nitrogen	302.5	296.2	2 (1)	20
Batch number: 19309109101B	Sample number(s): 1188926-1188927,1188929 BKG: 1188926			
Total Phosphorus as P (water)	N.D.	N.D.	0 (1)	4
	ug/l	ug/l		
Batch number: 19308400102B	Sample number(s): 1188926-1188929 BKG: 1188926			
Chemical Oxygen Demand	40300	50800	23* (1)	9

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Syracuse #225

2072188 1188926-90101

Environmental Analysis Request/Chain of Custody

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Acct. # 03074 Group # ~~2071978~~ 211326 11/1/19 Sample # ~~1188926-929~~

pg 3 of 3

Client: Arcadis			
Project Name/#: BMS Syracuse	Site ID #:		
Project Manager: Bill McCune	P.O. #: 30033396		
Sampler: Austin George, Josh Miller, Evan Green	PWSID #:		
Phone #: 315 671 6712	Quote #:		
State where samples were collected: NY	For Compliance: Yes ☐ No ☐		

Sample Identification	Collection Date	Collection Time	Grab	Composite	Matrix: Soil ☐ Sediment ☐ Tissue ☐	Water: Potable ☐ Ground ☑ NPDES ☐ Surface ☐	Other:	Total # of Containers	1,4-Dioxane	PFAS	Nitrogen as Ammonia (S)	Nitrate & Nitrite, Chloride, Fluoride, Sulfate	TAL Metals Total / TAL Metals Dissolved (N, F)	Total Alkalinity	Total Organic Carbon (P)	Total Phosphorus / Chemical Oxygen Demand (S)	Biological Oxygen Demand	Remarks
BOA-17WT	10/30/19	0855	X			GW		2			X					X		5-day TAT or ASAP
BOA-17WT MS	10/30/19	0855	X			GW		2			X					X		5-day TAT or ASAP
BOA-17WT MSD	10/30/19	0855	X			GW		2			X					X		5-day TAT or ASAP
RC 10:30:19																		

For Lab Use Only: SF #: _____ SCR #: _____

Preservation Codes: H = HCl; T = Thiosulfate; N = HNO_3; B = NaOH; S = H_2SO_4; P = H_3PO_4; F = Field Filtered; O = Other

Turnaround Time Requested (TAT) (please check): Standard ☑ Rush ☐
(Rush TAT is subject to laboratory approval and surcharges.)

Date results are needed:

Rush results requested by (please check): E-Mail ☐ Phone ☐

E-mail Address: William.McCune@arcadis.com

Phone: 315 671 6712

Data Package Options (please check if required)

Type I (Validation/non-CLP) ☐ MA MCP ☐
Type III (Reduced non-CLP) ☐ CT RCP ☐
Type VI (Raw Data Only) ☐ TX TRRP-13 ☐
NJ DKQP ☐ NYSDEC Category ☐ A or ☐ B

EDD Required? Yes ☑ No ☐ If yes, format:

Relinquished by:	Date	Time	Received by:	Date	Time
Josh Sinay	10/30/19	1638		10/30/19	1635
RELadd	10-30-19	1910			
				10/31/19	11:30

Relinquished by Commercial Carrier: UPS _____ FedEx X Other _____

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Sample Administration Receipt Documentation Log

Doc Log ID: 264720

Group Number(s): ~~2071478~~ JH01326 11/1/19 2072188

Client: Arcadis

BMS Syracuse

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Date:	10/31/2019
Number of Packages:	3	Number of Projects:	1
State/Province of Origin:	NY		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	No
Custody Seal Present:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	Total Trip Blank Qty:	4
Samples Chilled:	Yes	Trip Blank Type:	See Below
Paperwork Enclosed:	Yes	Air Quality Samples Present:	No
Samples Intact:	Yes		
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Trip Blank Type(s): 2 Unpreserved, 2 HCl

Unpacked by Nicole Reiff

Samples Chilled Details: BMS Syracuse

Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	192050133	2.2	IR	Wet	Y	Loose	N
2	192050133	3.6	IR	Wet	Y	Loose	N
3	192050133	3.4	IR	Wet	Y	Loose	N

Sample ID Discrepancy Details: BMS Syracuse

Sample ID on COC	Sample ID on Label	Comments
BDA-6WT	BDA-4WT	2 unpreserved vials, 2 unpreserved 250ml ambers.

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Lancaster, PA 17605-2425

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www.LancasterLabs.com

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mL**	milliliter(s)
C	degrees Celsius	**MPN**	Most Probable Number
cfu	colony forming units	**N.D.**	non-detect
CP Units	cobalt-chloroplatinate units	**ng**	nanogram(s)
F	degrees Fahrenheit	**NTU**	nephelometric turbidity units
g	gram(s)	**pg/L**	picogram/liter
IU	International Units	**RL**	Reporting Limit
kg	kilogram(s)	**TNTC**	Too Numerous To Count
L	liter(s)	**µg**	microgram(s)
lb.	pound(s)	**µL**	microliter(s)
m3	cubic meter(s)	**umhos/cm**	micromhos/cm
meq	milliequivalents	**MCL**	Maximum Contamination Limit
mg	milligram(s)		

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
P^	Concentration difference between the primary and confirmation column > 40%. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

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ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

ARCADIS U.S., Inc.
630 Plaza Drive
Suite 600
Highlands Ranch CO 80129

Report Date: November 15, 2019 14:47

Project: Bristol-Myers Squibb

Account #: 03074
Group Number: 2072391
SDG: BMS84
PO Number: 30033396
State of Sample Origin: NY

Electronic Copy To	Arcadis	Attn: William McCune
Electronic Copy To	Arcadis	Attn: Lawrence Carey Healy

Respectfully Submitted,

Megan A. Moeller
Senior Specialist

(717) 556-7261

To view our laboratory's current scopes of accreditation please go to https://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/certifications-and-accreditations-eurofins-lancaster-laboratories-environmental/ . Historical copies may be requested through your project manager.



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SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
BDA-12RX Grab Groundwater	11/01/2019 10:20	1191061
BDA-12T Grab Groundwater	11/01/2019 11:40	1191062
BDA-8WT Grab Groundwater	11/01/2019 10:00	1191063
BDA-8RX Grab Groundwater	11/01/2019 11:40	1191064
CHP-43RX Grab Groundwater	11/01/2019 10:27	1191065

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

Project Name: Bristol-Myers Squibb
ELLE Group #: 2072391

General Comments:

Through our technical processes and second person review of data, we have established that our data/deliverables are in compliance with the methods and project requirements unless otherwise noted or previously resolved with the client. The compliance signature is located on the cover page of the Analysis Reports.

See the Laboratory Sample Analysis Record section of the Analysis Report for the method references.

All QC met criteria unless otherwise noted in an Analysis Specific Comment below.

Refer to the QC Summary for specific values and acceptance criteria.

Project specific QC samples are not included in this data set.

Matrix QC may not be reported if site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

Surrogate recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in an Analysis Specific Comment below.

The samples were received at the appropriate temperature and in accordance with the chain of custody unless otherwise noted.

Trip blank vials were not received by the laboratory for this sample group.

Analysis Specific Comments:

SW-846 8260C, GC/MS Volatiles

Sample #s: 1191065

Preservation requirements were not met.
A preserved vial was submitted for analysis. However, the pH at the time of analysis was 13.

Preservation requirements were not met. The sample was received at pH <2 which is not the preservation specified for acrolein or acrylonitrile under the referenced method. The preservation criteria is pH of 4-5.

The concentration reported for methylene chloride is estimated since it exceeds the calibration range of the instrument. A further diluted analysis was performed from a previously opened container with headspace and/or outside of the method holding time. The result for methylene chloride is 430,000 ug/l.

Sample #s: 1191061, 1191063, 1191064

Project defined calibration criteria are not met. The calibration is compliant with the method defined criteria.

A Report Limit Verification (RLV) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The RLV standard shows adequate sensitivity at or below the reporting limit.

Sample #s: 1191062

Project defined calibration criteria are not met. The calibration is compliant with the method defined criteria.

A Report Limit Verification (RLV) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The RLV standard shows adequate sensitivity at or below the reporting limit.

Batch #: Y193171AA (Sample number(s): 1191061-1191064)

The recovery(ies) for the following analyte(s) in the LCS and/or LCSD exceeded the acceptance window indicating a positive bias: 1,2-Dichloropropane, 1,1,2,2-Tetrachloroethane, sec-Butylbenzene, 1,4-Dioxane

SW-846 8270D, GC/MS Semivolatiles

Sample #s: 1191061, 1191062, 1191063, 1191064, 1191065

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. Since the recovery is high and the target analyte(s) was not detected in the sample, the data is reported.

Batch #: 19311WAK026 (Sample number(s): 1191061-1191065)

The recovery(ies) for the following analyte(s) in the LCS and/or LCSD exceeded the acceptance window indicating a positive bias: Dicyclohexylamine

SW-846 8315A, Aldehydes & Ketones

Sample #s: 1191061

The response for a target analyte(s) in the initial calibration verification standard is outside the QC acceptance limits.

SW-846 8015D Rev.4, June 2003, GC Miscellaneous

Sample #s: 1191061, 1191062, 1191063, 1191064

The response for tetramethylene glycol in the continuing calibration verification standard is outside the QC acceptance limits low. The following action was taken:
The analysis was repeated and the continuing calibration verification standard bracketing the sample on the second trial is also outside the acceptance limits. This effect is attributed to the sample matrix and the data is reported.

Sample Description: **BDA-12RX Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 11/02/2019 09:59
Collection Date/Time: 11/01/2019 10:20
SDG#: BMS84-01

ARCADIS U.S., Inc.
ELLE Sample #: GW 1191061
ELLE Group #: 2072391
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	20	0.7	1
11997	Acetonitrile	75-05-8	N.D.	100	16	1
11997	Benzene	71-43-2	N.D.	1	0.2	1
11997	Bromochloromethane	74-97-5	N.D.	5	0.2	1
11997	Bromodichloromethane	75-27-4	N.D.	1	0.2	1
11997	Bromoform	75-25-2	N.D.	4	1	1
11997	Bromomethane	74-83-9	N.D.	1	0.3	1
11997	n-Butanol	71-36-3	N.D.	250	61	1
11997	2-Butanone	78-93-3	N.D.	10	0.3	1
11997	t-Butyl alcohol	75-65-0	N.D.	50	12	1
11997	n-Butylbenzene	104-51-8	N.D.	5	0.2	1
11997	sec-Butylbenzene	135-98-8	N.D.	5	0.2	1
11997	tert-Butylbenzene	98-06-6	N.D.	5	0.3	1
11997	Carbon Disulfide	75-15-0	0.3 J	5	0.2	1
11997	Carbon Tetrachloride	56-23-5	N.D.	1	0.2	1
11997	Chlorobenzene	108-90-7	N.D.	1	0.2	1
11997	Chlorodifluoromethane[1]	75-45-6	N.D.	5	2	1
11997	Chloroethane	75-00-3	N.D.	1	0.2	1
11997	Chloroform	67-66-3	N.D.	1	0.2	1
11997	Chloromethane	74-87-3	N.D.	1	0.2	1
11997	Cyclohexane	110-82-7	N.D.	5	1	1
11997	Cyclohexanone[1]	108-94-1	N.D.	100	25	1
11997	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	5	0.3	1
11997	Dibromochloromethane	124-48-1	N.D.	1	0.2	1
11997	1,2-Dibromoethane	106-93-4	N.D.	1	0.2	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	5	0.2	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	5	0.2	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	5	0.2	1
11997	Dichlorodifluoromethane	75-71-8	N.D.	1	0.2	1
11997	1,1-Dichloroethane	75-34-3	N.D.	1	0.2	1
11997	1,2-Dichloroethane	107-06-2	N.D.	1	0.3	1
11997	1,1-Dichloroethene	75-35-4	N.D.	1	0.2	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	1	0.2	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	1	0.2	1
11997	1,2-Dichloropropane	78-87-5	N.D.	1	0.2	1
11997	cis-1,3-Dichloropropene	10061-01-5	N.D.	1	0.2	1
11997	trans-1,3-Dichloropropene	10061-02-6	N.D.	1	0.2	1
11997	1,4-Dioxane	123-91-1	N.D.	250	29	1
11997	Ethyl Acetate	141-78-6	N.D.	5	0.7	1
11997	Ethyl ether	60-29-7	N.D.	5	0.2	1
11997	Ethylbenzene	100-41-4	N.D.	1	0.4	1

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-12RX Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 11/02/2019 09:59
Collection Date/Time: 11/01/2019 10:20
SDG#: BMS84-01

ARCADIS U.S., Inc.
ELLE Sample #: GW 1191061
ELLE Group #: 2072391
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Freon 113	76-13-1	N.D.	10	0.2	1
11997	n-Heptane[1]	142-82-5	N.D.	5	2	1
11997	n-Hexane[1]	110-54-3	N.D.	5	2	1
11997	2-Hexanone	591-78-6	N.D.	10	0.3	1
11997	Isobutyl Alcohol	78-83-1	N.D.	250	36	1
11997	Isopropylbenzene	98-82-8	N.D.	5	0.2	1
11997	p-Isopropyltoluene	99-87-6	N.D.	5	0.2	1
11997	Methyl Acetate	79-20-9	N.D.	5	0.2	1
11997	Methyl Tertiary Butyl Ether	1634-04-4	0.3 J	1	0.2	1
11997	4-Methyl-2-pentanone	108-10-1	N.D.	10	0.5	1
11997	Methylcyclohexane	108-87-2	N.D.	5	0.5	1
11997	Methylene Chloride	75-09-2	N.D.	1	0.3	1
11997	Naphthalene	91-20-3	N.D.	5	1	1
11997	2-Nitropropane	79-46-9	N.D.	10	0.8	1
11997	Styrene	100-42-5	N.D.	5	0.2	1
11997	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	1	0.2	1
11997	Tetrachloroethene	127-18-4	N.D.	1	0.2	1
11997	Tetrahydrofuran	109-99-9	N.D.	10	0.7	1
11997	Toluene	108-88-3	N.D.	1	0.2	1
11997	1,2,3-Trichlorobenzene	87-61-6	N.D.	5	0.4	1
11997	1,2,4-Trichlorobenzene	120-82-1	N.D.	5	0.3	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	1	0.3	1
11997	1,1,2-Trichloroethane	79-00-5	N.D.	1	0.2	1
11997	Trichloroethene	79-01-6	N.D.	1	0.2	1
11997	Trichlorofluoromethane	75-69-4	N.D.	1	0.2	1
11997	1,2,4-Trimethylbenzene	95-63-6	N.D.	5	1	1
11997	1,3,5-Trimethylbenzene	108-67-8	N.D.	5	0.3	1
11997	Vinyl Chloride	75-01-4	N.D.	1	0.2	1
11997	m+p-Xylene	179601-23-1	N.D.	5	1	1
11997	o-Xylene	95-47-6	N.D.	1	0.4	1
11997	Xylene (Total)	1330-20-7	N.D.	6	1	1

Project defined calibration criteria are not met. The calibration is compliant with the method defined criteria.

A Report Limit Verification (RLV) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The RLV standard shows adequate sensitivity at or below the reporting limit.

00882 VOA Interp. Library Search-10

The results from the volatile library search are listed on the attached FORM 1 - VOA-TIC. The qualifiers appearing in the "Q" column are defined at the end of the report.

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-12RX Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 11/02/2019 09:59
Collection Date/Time: 11/01/2019 10:20
SDG#: BMS84-01

ARCADIS U.S., Inc.
ELLE Sample #: GW 1191061
ELLE Group #: 2072391
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	Acenaphthene	83-32-9	N.D.	0.46	0.093	1
14241	Acenaphthylene	208-96-8	N.D.	0.46	0.093	1
14241	Acetophenone	98-86-2	N.D.	9.3	3.7	1
14241	Aniline	62-53-3	N.D.	9.3	2.8	1
14241	Anthracene	120-12-7	N.D.	0.46	0.093	1
14241	Atrazine	1912-24-9	N.D.	4.6	1.9	1
14241	Benzaldehyde	100-52-7	N.D.	9.3	2.8	1
14241	Benzo(a)anthracene	56-55-3	N.D.	0.46	0.093	1
14241	Benzo(a)pyrene	50-32-8	N.D.	0.46	0.093	1
14241	Benzo(b)fluoranthene	205-99-2	N.D.	0.46	0.093	1
14241	Benzo(g,h,i)perylene	191-24-2	N.D.	0.46	0.093	1
14241	Benzo(k)fluoranthene	207-08-9	N.D.	0.46	0.093	1
14241	Benzyl alcohol	100-51-6	N.D.	28	9.3	1
14241	1,1'-Biphenyl	92-52-4	N.D.	9.3	2.8	1
14241	4-Bromophenyl-phenylether	101-55-3	N.D.	1.9	0.46	1
14241	Butylbenzylphthalate	85-68-7	N.D.	4.6	1.9	1
14241	Di-n-butylphthalate	84-74-2	N.D.	4.6	1.9	1
14241	Caprolactam	105-60-2	350	100	46	10
14241	Carbazole	86-74-8	N.D.	1.9	0.46	1
14241	4-Chloro-3-methylphenol	59-50-7	N.D.	1.9	0.46	1
14241	4-Chloroaniline	106-47-8	N.D.	9.3	3.7	1
14241	bis(2-Chloroethoxy)methane	111-91-1	N.D.	1.9	0.46	1
14241	bis(2-Chloroethyl)ether	111-44-4	N.D.	1.9	0.46	1
14241	bis(2-Chloroisopropyl)ether[1]	39638-32-9	N.D.	1.9	0.46	1
	Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.					
14241	2-Chloronaphthalene	91-58-7	N.D.	0.93	0.37	1
14241	2-Chlorophenol	95-57-8	N.D.	1.9	0.46	1
14241	4-Chlorophenyl-phenylether	7005-72-3	N.D.	1.9	0.46	1
14241	Chrysene	218-01-9	N.D.	0.46	0.093	1
14241	Dibenz(a,h)anthracene	53-70-3	N.D.	0.46	0.093	1
14241	Dibenzofuran	132-64-9	N.D.	1.9	0.46	1
14241	3,3'-Dichlorobenzidine	91-94-1	N.D.	9.3	2.8	1
14241	2,4-Dichlorophenol	120-83-2	N.D.	1.9	0.46	1
14241	Dicyclohexylamine[1]	101-83-7	N.D.	9.3	9.3	1
14241	Diethylphthalate	84-66-2	N.D.	4.6	1.9	1
14241	N,N-Dimethylaniline[1]	121-69-7	N.D.	0.93	0.46	1
14241	2,4-Dimethylphenol	105-67-9	N.D.	9.3	2.8	1
14241	Dimethylphthalate	131-11-3	N.D.	4.6	1.9	1
14241	4,6-Dinitro-2-methylphenol	534-52-1	N.D.	20	7.4	1

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-12RX Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 11/02/2019 09:59
Collection Date/Time: 11/01/2019 10:20
SDG#: BMS84-01

ARCADIS U.S., Inc.
ELLE Sample #: GW 1191061
ELLE Group #: 2072391
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	2,4-Dinitrophenol	51-28-5	N.D.	28	13	1
14241	2,4-Dinitrotoluene	121-14-2	N.D.	4.6	0.93	1
14241	2,6-Dinitrotoluene	606-20-2	N.D.	1.9	0.46	1
14241	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	10	4.6	1
14241	Fluoranthene	206-44-0	N.D.	0.46	0.093	1
14241	Fluorene	86-73-7	N.D.	0.46	0.093	1
14241	Hexachlorobenzene	118-74-1	N.D.	0.46	0.093	1
14241	Hexachlorobutadiene	87-68-3	N.D.	1.9	0.46	1
14241	Hexachlorocyclopentadiene	77-47-4	N.D.	10	4.6	1
14241	Hexachloroethane	67-72-1	N.D.	4.6	0.93	1
14241	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.46	0.093	1
14241	Isophorone	78-59-1	N.D.	1.9	0.46	1
14241	2-Methylnaphthalene	91-57-6	N.D.	0.46	0.093	1
14241	2-Methylphenol	95-48-7	N.D.	1.9	0.46	1
14241	4-Methylphenol	65794-96-9	N.D.	1.9	0.46	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
14241	Naphthalene	91-20-3	0.14 J	0.46	0.093	1
14241	2-Nitroaniline	88-74-4	N.D.	6.5	1.9	1
14241	3-Nitroaniline	99-09-2	N.D.	6.5	2.8	1
14241	4-Nitroaniline	100-01-6	N.D.	2.8	0.84	1
14241	Nitrobenzene	98-95-3	N.D.	1.9	0.46	1
14241	2-Nitrophenol	88-75-5	N.D.	9.3	2.8	1
14241	4-Nitrophenol	100-02-7	N.D.	28	9.3	1
14241	N-Nitroso-di-n-propylamine	621-64-7	N.D.	2.8	0.65	1
14241	N-Nitrosodiphenylamine	86-30-6	N.D.	2.8	0.65	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.					
14241	Di-n-octylphthalate	117-84-0	N.D.	10	4.6	1
14241	Pentachlorophenol	87-86-5	N.D.	4.6	0.93	1
14241	Phenanthrene	85-01-8	N.D.	0.46	0.093	1
14241	Phenol	108-95-2	N.D.	1.9	0.46	1
14241	Pyrene	129-00-0	N.D.	0.46	0.093	1
14241	Pyridine	110-86-1	N.D.	4.6	1.9	1
14241	1,2,4,5-Tetrachlorobenzene	95-94-3	N.D.	1.9	0.46	1
14241	2,3,4,6-Tetrachlorophenol	58-90-2	N.D.	9.3	3.7	1
14241	2,4,5-Trichlorophenol	95-95-4	N.D.	1.9	0.46	1
14241	2,4,6-Trichlorophenol	88-06-2	N.D.	1.9	0.46	1
14241	Triethylamine[1]	121-44-8	N.D.	9.3	9.3	1

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-12RX Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 11/02/2019 09:59
Collection Date/Time: 11/01/2019 10:20
SDG#: BMS84-01

ARCADIS U.S., Inc.
ELLE Sample #: GW 1191061
ELLE Group #: 2072391
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result		Limit of Quantitation*	Method Detection Limit	Dilution Factor
	Summary. Since the recovery is high and the target analyte(s) was not detected in the sample, the data is reported.						
00886	**SVOA TIC Interpretive(25)**						
	The results from the semivolatile library search are listed on the attached FORM 1 - SV-TIC. The qualifiers appearing in the "Q" column are defined at the end of the report.						
Aldehydes & Ketones		**SW-846 8315A**	**ug/l**		**ug/l**	**ug/l**	
13022	Acetaldehyde[1]	75-07-0	N.D.		60	35	1
13022	Formaldehyde	50-00-0	22	J	50	20	1
	The response for a target analyte(s) in the initial calibration verification standard is outside the QC acceptance limits.						
GC Miscellaneous		**SW-846 8015D Rev.4, June 2003**	**ug/l**		**ug/l**	**ug/l**	
10603	Ethanol	64-17-5	N.D.	D2	1,000	150	1
12926	Ethylene glycol[1]	107-21-1	N.D.		10,000	5,000	1
10603	Isopropanol[1]	67-63-0	N.D.	D2	1,000	110	1
10603	Methanol	67-56-1	N.D.	D2	1,000	220	1
12926	Propylene glycol[1]	57-55-6	N.D.		10,000	2,000	1
	The response for tetramethylene glycol in the continuing calibration verification standard is outside the QC acceptance limits low. The following action was taken: The analysis was repeated and the continuing calibration verification standard bracketing the sample on the second trial is also outside the acceptance limits. This effect is attributed to the sample matrix and the data is reported.						

Sample Comments

State of New York Certification No. 10670
Trip blank vials were not received by the laboratory for this sample group.

[1] = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	Y193171AA	11/13/2019 15:44	Linda C Pape	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	Y193171AA	11/13/2019 15:43	Linda C Pape	1
14241	Semi-annual Groundwater BMS	SW-846 8270D	1	19311WAK026	11/09/2019 02:25	Ashley R Transue	1
14241	Semi-annual Groundwater BMS	SW-846 8270D	1	19311WAK026	11/09/2019 13:13	Holly B Ziegler	10
11010	8270D BNA Extraction	SW-846 3510C	1	19311WAK026	11/08/2019 09:00	Joshua S Ruth	1
13022	Short List Aldehydes- W 8315A	SW-846 8315A	1	193080009A	11/04/2019 18:51	Jessica L Miller	1
01013	Formaldehyde Extraction	SW-846 8315A	1	193080009A	11/04/2019 11:20	Shawn J McMullen	1
10603	Alcohols in Water	SW-846 8015D Rev.4, June 2003	1	193080008A	11/05/2019 05:05	Johanna C Kennedy	1

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-12RX Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 11/02/2019 09:59
Collection Date/Time: 11/01/2019 10:20
SDG#: BMS84-01

ARCADIS U.S., Inc.
ELLE Sample #: GW 1191061
ELLE Group #: 2072391
Matrix: Groundwater

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12926	Glycols in Water by 8015C/D	SW-846 8015D Rev.4, June 2003	1	193100032A	11/07/2019 00:52	Donald Brown	1

*=This limit was used in the evaluation of the final result

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
B12RX

Lab Name: Lancaster Laboratories Contract:_____
Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____
Matrix: (soil/water) WATER Lab Sample ID: 1191061
Sample wt/vol: 5.0 (g/mL)mL Lab File ID:HP09355.i/19nov13a.b/yn13s05.d
Level: (low/med) LOW Date Received: 11/02/19
% Moisture: not dec. Date Analyzed: 11/13/19
Column: (pack/cap) CAP Dilution Factor: 1.0
CONCENTRATION UNITS:
Number TICs found: 0 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	VOCTIC	Total VOC TICs		0	U
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page 1 of 1

FORM I VOA-TIC

1F

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

B12RX

Lab Name: Lancaster Laboratories Contract:
Lab Code: LANCAS Case No.: SAS No.: SDG No.:
Matrix: (soil/water) WATER Lab Sample ID: 1191061
Sample wt/vol: 269 (g/mL) mL Lab File ID: lk0411.d
Level: (low/med) LOW Date Received: 11/02/19
% Moisture: Decanted: (Y/N) Date Extracted: 11/08/19
Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/09/19
Injection Volume: 1 (uL) Dilution Factor: 1
GPC Cleanup: N pH: Extraction: Sepf

CONCENTRATION UNITS:
Number TICs found: 7 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		Unknown	11.803	4	J
2.		Unknown	12.102	5	J
3.	57-10-3	n-Hexadecanoic acid	14.482	4	J
4.	10544-50-0	Cyclic octaatomic sulfur	15.483	13	J
5.		Unknown	21.751	4	J
6.		Unknown	23.474	6	J
7.		Unknown	23.511	5	J
8.					
9.	SVOCTIC	Total SVOC TICs		41	J
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page 1 of 1

FORM I SV-1

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

Sample Description: **BDA-12T Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 11/02/2019 09:59
Collection Date/Time: 11/01/2019 11:40
SDG#: BMS84-02

ARCADIS U.S., Inc.
ELLE Sample #: GW 1191062
ELLE Group #: 2072391
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	20	0.7	1
11997	Acetonitrile	75-05-8	N.D.	100	16	1
11997	Benzene	71-43-2	N.D.	1	0.2	1
11997	Bromochloromethane	74-97-5	N.D.	5	0.2	1
11997	Bromodichloromethane	75-27-4	N.D.	1	0.2	1
11997	Bromoform	75-25-2	N.D.	4	1	1
11997	Bromomethane	74-83-9	N.D.	1	0.3	1
11997	n-Butanol	71-36-3	N.D.	250	61	1
11997	2-Butanone	78-93-3	N.D.	10	0.3	1
11997	t-Butyl alcohol	75-65-0	N.D.	50	12	1
11997	n-Butylbenzene	104-51-8	N.D.	5	0.2	1
11997	sec-Butylbenzene	135-98-8	N.D.	5	0.2	1
11997	tert-Butylbenzene	98-06-6	N.D.	5	0.3	1
11997	Carbon Disulfide	75-15-0	N.D.	5	0.2	1
11997	Carbon Tetrachloride	56-23-5	N.D.	1	0.2	1
11997	Chlorobenzene	108-90-7	N.D.	1	0.2	1
11997	Chlorodifluoromethane[1]	75-45-6	N.D.	5	2	1
11997	Chloroethane	75-00-3	N.D.	1	0.2	1
11997	Chloroform	67-66-3	N.D.	1	0.2	1
11997	Chloromethane	74-87-3	N.D.	1	0.2	1
11997	Cyclohexane	110-82-7	N.D.	5	1	1
11997	Cyclohexanone[1]	108-94-1	N.D.	100	25	1
11997	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	5	0.3	1
11997	Dibromochloromethane	124-48-1	N.D.	1	0.2	1
11997	1,2-Dibromoethane	106-93-4	N.D.	1	0.2	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	5	0.2	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	5	0.2	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	5	0.2	1
11997	Dichlorodifluoromethane	75-71-8	N.D.	1	0.2	1
11997	1,1-Dichloroethane	75-34-3	N.D.	1	0.2	1
11997	1,2-Dichloroethane	107-06-2	N.D.	1	0.3	1
11997	1,1-Dichloroethene	75-35-4	N.D.	1	0.2	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	1	0.2	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	1	0.2	1
11997	1,2-Dichloropropane	78-87-5	N.D.	1	0.2	1
11997	cis-1,3-Dichloropropene	10061-01-5	N.D.	1	0.2	1
11997	trans-1,3-Dichloropropene	10061-02-6	N.D.	1	0.2	1
11997	1,4-Dioxane	123-91-1	N.D.	250	29	1
11997	Ethyl Acetate	141-78-6	N.D.	5	0.7	1
11997	Ethyl ether	60-29-7	N.D.	5	0.2	1
11997	Ethylbenzene	100-41-4	N.D.	1	0.4	1

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-12T Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 11/02/2019 09:59
Collection Date/Time: 11/01/2019 11:40
SDG#: BMS84-02

ARCADIS U.S., Inc.
ELLE Sample #: GW 1191062
ELLE Group #: 2072391
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Freon 113	76-13-1	N.D.	10	0.2	1
11997	n-Heptane[1]	142-82-5	N.D.	5	2	1
11997	n-Hexane[1]	110-54-3	N.D.	5	2	1
11997	2-Hexanone	591-78-6	N.D.	10	0.3	1
11997	Isobutyl Alcohol	78-83-1	N.D.	250	36	1
11997	Isopropylbenzene	98-82-8	N.D.	5	0.2	1
11997	p-Isopropyltoluene	99-87-6	N.D.	5	0.2	1
11997	Methyl Acetate	79-20-9	N.D.	5	0.2	1
11997	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	1	0.2	1
11997	4-Methyl-2-pentanone	108-10-1	N.D.	10	0.5	1
11997	Methylcyclohexane	108-87-2	N.D.	5	0.5	1
11997	Methylene Chloride	75-09-2	N.D.	1	0.3	1
11997	Naphthalene	91-20-3	N.D.	5	1	1
11997	2-Nitropropane	79-46-9	N.D.	10	0.8	1
11997	Styrene	100-42-5	N.D.	5	0.2	1
11997	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	1	0.2	1
11997	Tetrachloroethene	127-18-4	N.D.	1	0.2	1
11997	Tetrahydrofuran	109-99-9	N.D.	10	0.7	1
11997	Toluene	108-88-3	N.D.	1	0.2	1
11997	1,2,3-Trichlorobenzene	87-61-6	N.D.	5	0.4	1
11997	1,2,4-Trichlorobenzene	120-82-1	N.D.	5	0.3	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	1	0.3	1
11997	1,1,2-Trichloroethane	79-00-5	N.D.	1	0.2	1
11997	Trichloroethene	79-01-6	N.D.	1	0.2	1
11997	Trichlorofluoromethane	75-69-4	N.D.	1	0.2	1
11997	1,2,4-Trimethylbenzene	95-63-6	N.D.	5	1	1
11997	1,3,5-Trimethylbenzene	108-67-8	N.D.	5	0.3	1
11997	Vinyl Chloride	75-01-4	N.D.	1	0.2	1
11997	m+p-Xylene	179601-23-1	N.D.	5	1	1
11997	o-Xylene	95-47-6	N.D.	1	0.4	1
11997	Xylene (Total)	1330-20-7	N.D.	6	1	1

Project defined calibration criteria are not met. The calibration is compliant with the method defined criteria.

A Report Limit Verification (RLV) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The RLV standard shows adequate sensitivity at or below the reporting limit.

00882 VOA Interp. Library Search-10

The results from the volatile library search are listed on the attached FORM 1 - VOA-TIC. The qualifiers appearing in the "Q" column are defined at the end of the report.

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-12T Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 11/02/2019 09:59
Collection Date/Time: 11/01/2019 11:40
SDG#: BMS84-02

ARCADIS U.S., Inc.
ELLE Sample #: GW 1191062
ELLE Group #: 2072391
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	Acenaphthene	83-32-9	N.D.	0.47	0.094	1
14241	Acenaphthylene	208-96-8	N.D.	0.47	0.094	1
14241	Acetophenone	98-86-2	N.D.	9.4	3.8	1
14241	Aniline	62-53-3	N.D.	9.4	2.8	1
14241	Anthracene	120-12-7	N.D.	0.47	0.094	1
14241	Atrazine	1912-24-9	N.D.	4.7	1.9	1
14241	Benzaldehyde	100-52-7	N.D.	9.4	2.8	1
14241	Benzo(a)anthracene	56-55-3	N.D.	0.47	0.094	1
14241	Benzo(a)pyrene	50-32-8	N.D.	0.47	0.094	1
14241	Benzo(b)fluoranthene	205-99-2	N.D.	0.47	0.094	1
14241	Benzo(g,h,i)perylene	191-24-2	N.D.	0.47	0.094	1
14241	Benzo(k)fluoranthene	207-08-9	N.D.	0.47	0.094	1
14241	Benzyl alcohol	100-51-6	N.D.	28	9.4	1
14241	1,1'-Biphenyl	92-52-4	N.D.	9.4	2.8	1
14241	4-Bromophenyl-phenylether	101-55-3	N.D.	1.9	0.47	1
14241	Butylbenzylphthalate	85-68-7	N.D.	4.7	1.9	1
14241	Di-n-butylphthalate	84-74-2	N.D.	4.7	1.9	1
14241	Caprolactam	105-60-2	N.D.	10	4.7	1
14241	Carbazole	86-74-8	N.D.	1.9	0.47	1
14241	4-Chloro-3-methylphenol	59-50-7	N.D.	1.9	0.47	1
14241	4-Chloroaniline	106-47-8	N.D.	9.4	3.8	1
14241	bis(2-Chloroethoxy)methane	111-91-1	N.D.	1.9	0.47	1
14241	bis(2-Chloroethyl)ether	111-44-4	N.D.	1.9	0.47	1
14241	bis(2-Chloroisopropyl)ether[1]	39638-32-9	N.D.	1.9	0.47	1
	Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.					
14241	2-Chloronaphthalene	91-58-7	N.D.	0.94	0.38	1
14241	2-Chlorophenol	95-57-8	N.D.	1.9	0.47	1
14241	4-Chlorophenyl-phenylether	7005-72-3	N.D.	1.9	0.47	1
14241	Chrysene	218-01-9	N.D.	0.47	0.094	1
14241	Dibenz(a,h)anthracene	53-70-3	N.D.	0.47	0.094	1
14241	Dibenzofuran	132-64-9	N.D.	1.9	0.47	1
14241	3,3'-Dichlorobenzidine	91-94-1	N.D.	9.4	2.8	1
14241	2,4-Dichlorophenol	120-83-2	N.D.	1.9	0.47	1
14241	Dicyclohexylamine[1]	101-83-7	N.D.	9.4	9.4	1
14241	Diethylphthalate	84-66-2	N.D.	4.7	1.9	1
14241	N,N-Dimethylaniline[1]	121-69-7	N.D.	0.94	0.47	1
14241	2,4-Dimethylphenol	105-67-9	N.D.	9.4	2.8	1
14241	Dimethylphthalate	131-11-3	N.D.	4.7	1.9	1
14241	4,6-Dinitro-2-methylphenol	534-52-1	N.D.	20	7.5	1

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-12T Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 11/02/2019 09:59
Collection Date/Time: 11/01/2019 11:40
SDG#: BMS84-02

ARCADIS U.S., Inc.
ELLE Sample #: GW 1191062
ELLE Group #: 2072391
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	2,4-Dinitrophenol	51-28-5	N.D.	28	13	1
14241	2,4-Dinitrotoluene	121-14-2	N.D.	4.7	0.94	1
14241	2,6-Dinitrotoluene	606-20-2	N.D.	1.9	0.47	1
14241	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	10	4.7	1
14241	Fluoranthene	206-44-0	N.D.	0.47	0.094	1
14241	Fluorene	86-73-7	N.D.	0.47	0.094	1
14241	Hexachlorobenzene	118-74-1	N.D.	0.47	0.094	1
14241	Hexachlorobutadiene	87-68-3	N.D.	1.9	0.47	1
14241	Hexachlorocyclopentadiene	77-47-4	N.D.	10	4.7	1
14241	Hexachloroethane	67-72-1	N.D.	4.7	0.94	1
14241	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.47	0.094	1
14241	Isophorone	78-59-1	N.D.	1.9	0.47	1
14241	2-Methylnaphthalene	91-57-6	N.D.	0.47	0.094	1
14241	2-Methylphenol	95-48-7	N.D.	1.9	0.47	1
14241	4-Methylphenol	65794-96-9	N.D.	1.9	0.47	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
14241	Naphthalene	91-20-3	N.D.	0.47	0.094	1
14241	2-Nitroaniline	88-74-4	N.D.	6.6	1.9	1
14241	3-Nitroaniline	99-09-2	N.D.	6.6	2.8	1
14241	4-Nitroaniline	100-01-6	N.D.	2.8	0.85	1
14241	Nitrobenzene	98-95-3	N.D.	1.9	0.47	1
14241	2-Nitrophenol	88-75-5	N.D.	9.4	2.8	1
14241	4-Nitrophenol	100-02-7	N.D.	28	9.4	1
14241	N-Nitroso-di-n-propylamine	621-64-7	N.D.	2.8	0.66	1
14241	N-Nitrosodiphenylamine	86-30-6	N.D.	2.8	0.66	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.					
14241	Di-n-octylphthalate	117-84-0	N.D.	10	4.7	1
14241	Pentachlorophenol	87-86-5	N.D.	4.7	0.94	1
14241	Phenanthrene	85-01-8	N.D.	0.47	0.094	1
14241	Phenol	108-95-2	N.D.	1.9	0.47	1
14241	Pyrene	129-00-0	N.D.	0.47	0.094	1
14241	Pyridine	110-86-1	N.D.	4.7	1.9	1
14241	1,2,4,5-Tetrachlorobenzene	95-94-3	N.D.	1.9	0.47	1
14241	2,3,4,6-Tetrachlorophenol	58-90-2	N.D.	9.4	3.8	1
14241	2,4,5-Trichlorophenol	95-95-4	N.D.	1.9	0.47	1
14241	2,4,6-Trichlorophenol	88-06-2	N.D.	1.9	0.47	1
14241	Triethylamine[1]	121-44-8	N.D.	9.4	9.4	1

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-12T Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 11/02/2019 09:59
Collection Date/Time: 11/01/2019 11:40
SDG#: BMS84-02

ARCADIS U.S., Inc.
ELLE Sample #: GW 1191062
ELLE Group #: 2072391
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor

Summary. Since the recovery is high and the target analyte(s) was not detected in the sample, the data is reported.

00886 SVOA TIC Interpretive(25)

The results from the semivolatile library search are listed on the attached FORM 1 - SV-TIC. The qualifiers appearing in the "Q" column are defined at the end of the report.

Aldehydes & Ketones	**SW-846 8315A**		**ug/l**	**ug/l**	**ug/l**	
13022	Acetaldehyde[1]	75-07-0	N.D.	60	35	1
13022	Formaldehyde	50-00-0	N.D.	50	20	1
GC Miscellaneous	**SW-846 8015D Rev.4, June 2003**		**ug/l**	**ug/l**	**ug/l**	
10603	Ethanol	64-17-5	N.D. D2	1,000	150	1
12926	Ethylene glycol[1]	107-21-1	N.D.	10,000	5,000	1
10603	Isopropanol[1]	67-63-0	N.D. D2	1,000	110	1
10603	Methanol	67-56-1	N.D. D2	1,000	220	1
12926	Propylene glycol[1]	57-55-6	N.D.	10,000	2,000	1

The response for tetramethylene glycol in the continuing calibration verification standard is outside the QC acceptance limits low. The following action was taken:
The analysis was repeated and the continuing calibration verification standard bracketing the sample on the second trial is also outside the acceptance limits. This effect is attributed to the sample matrix and the data is reported.

Sample Comments

State of New York Certification No. 10670
Trip blank vials were not received by the laboratory for this sample group.

[1] = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	Y193171AA	11/13/2019 16:06	Linda C Pape	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	Y193171AA	11/13/2019 16:05	Linda C Pape	1
14241	Semi-annual Groundwater BMS	SW-846 8270D	1	19311WAK026	11/09/2019 02:54	Ashley R Transue	1
11010	8270D BNA Extraction	SW-846 3510C	1	19311WAK026	11/08/2019 09:00	Joshua S Ruth	1
13022	Short List Aldehydes- W 8315A	SW-846 8315A	1	193080009A	11/04/2019 19:02	Jessica L Miller	1
01013	Formaldehyde Extraction	SW-846 8315A	1	193080009A	11/04/2019 11:20	Shawn J McMullen	1
10603	Alcohols in Water	SW-846 8015D Rev.4, June 2003	1	193080008A	11/05/2019 05:21	Johanna C Kennedy	1
12926	Glycols in Water by 8015C/D	SW-846 8015D Rev.4, June 2003	1	193100032A	11/07/2019 01:05	Donald Brown	1

*=This limit was used in the evaluation of the final result

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
BD12T

Lab Name: Lancaster Laboratories Contract:_____
Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____
Matrix: (soil/water) WATER Lab Sample ID: 1191062
Sample wt/vol: 5.0 (g/mL)mL Lab File ID:HP09355.i/19nov13a.b/yn13s06.d
Level: (low/med) LOW Date Received: 11/02/19
% Moisture: not dec. Date Analyzed: 11/13/19
Column: (pack/cap) CAP Dilution Factor: 1.0
CONCENTRATION UNITS:
Number TICs found: 0 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	VOCTIC	Total VOC TICs		0	U
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page 1 of 1

FORM I VOA-TIC

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
BD12T

Lab Name: Lancaster Laboratories Contract:
Lab Code: LANCAS Case No.: SAS No.: SDG No.:
Matrix: (soil/water) WATER Lab Sample ID: 1191062
Sample wt/vol: 265 (g/mL) mL Lab File ID: lk0412.d
Level: (low/med) LOW Date Received: 11/02/19
% Moisture: Decanted: (Y/N) Date Extracted: 11/08/19
Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/09/19
Injection Volume: 1 (uL) Dilution Factor: 1
GPC Cleanup: N pH: Extraction: Sepf
CONCENTRATION UNITS:
Number TICs found: 3 (ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 128-37-0	Butylated Hydroxytoluene	11.835	75	J
2.	Unknown	22.618	9	J
3.	Unknown	22.714	4	J
4.				
5. SVOCTIC	Total SVOC TICs		89	J
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page 1 of 1

FORM I SV-1

Sample Description: **BDA-8WT Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 11/02/2019 09:59
Collection Date/Time: 11/01/2019 10:00
SDG#: BMS84-03

ARCADIS U.S., Inc.
ELLE Sample #: GW 1191063
ELLE Group #: 2072391
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	20	0.7	1
11997	Acetonitrile	75-05-8	N.D.	100	16	1
11997	Benzene	71-43-2	N.D.	1	0.2	1
11997	Bromochloromethane	74-97-5	N.D.	5	0.2	1
11997	Bromodichloromethane	75-27-4	N.D.	1	0.2	1
11997	Bromoform	75-25-2	N.D.	4	1	1
11997	Bromomethane	74-83-9	N.D.	1	0.3	1
11997	n-Butanol	71-36-3	N.D.	250	61	1
11997	2-Butanone	78-93-3	N.D.	10	0.3	1
11997	t-Butyl alcohol	75-65-0	N.D.	50	12	1
11997	n-Butylbenzene	104-51-8	N.D.	5	0.2	1
11997	sec-Butylbenzene	135-98-8	N.D.	5	0.2	1
11997	tert-Butylbenzene	98-06-6	N.D.	5	0.3	1
11997	Carbon Disulfide	75-15-0	N.D.	5	0.2	1
11997	Carbon Tetrachloride	56-23-5	N.D.	1	0.2	1
11997	Chlorobenzene	108-90-7	N.D.	1	0.2	1
11997	Chlorodifluoromethane[1]	75-45-6	N.D.	5	2	1
11997	Chloroethane	75-00-3	N.D.	1	0.2	1
11997	Chloroform	67-66-3	1	1	0.2	1
11997	Chloromethane	74-87-3	N.D.	1	0.2	1
11997	Cyclohexane	110-82-7	N.D.	5	1	1
11997	Cyclohexanone[1]	108-94-1	N.D.	100	25	1
11997	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	5	0.3	1
11997	Dibromochloromethane	124-48-1	N.D.	1	0.2	1
11997	1,2-Dibromoethane	106-93-4	N.D.	1	0.2	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	5	0.2	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	5	0.2	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	5	0.2	1
11997	Dichlorodifluoromethane	75-71-8	N.D.	1	0.2	1
11997	1,1-Dichloroethane	75-34-3	N.D.	1	0.2	1
11997	1,2-Dichloroethane	107-06-2	N.D.	1	0.3	1
11997	1,1-Dichloroethene	75-35-4	N.D.	1	0.2	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	1	0.2	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	1	0.2	1
11997	1,2-Dichloropropane	78-87-5	N.D.	1	0.2	1
11997	cis-1,3-Dichloropropene	10061-01-5	N.D.	1	0.2	1
11997	trans-1,3-Dichloropropene	10061-02-6	N.D.	1	0.2	1
11997	1,4-Dioxane	123-91-1	N.D.	250	29	1
11997	Ethyl Acetate	141-78-6	N.D.	5	0.7	1
11997	Ethyl ether	60-29-7	N.D.	5	0.2	1
11997	Ethylbenzene	100-41-4	N.D.	1	0.4	1

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-8WT Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 11/02/2019 09:59
Collection Date/Time: 11/01/2019 10:00
SDG#: BMS84-03

ARCADIS U.S., Inc.
ELLE Sample #: GW 1191063
ELLE Group #: 2072391
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Freon 113	76-13-1	N.D.	10	0.2	1
11997	n-Heptane[1]	142-82-5	N.D.	5	2	1
11997	n-Hexane[1]	110-54-3	N.D.	5	2	1
11997	2-Hexanone	591-78-6	N.D.	10	0.3	1
11997	Isobutyl Alcohol	78-83-1	N.D.	250	36	1
11997	Isopropylbenzene	98-82-8	N.D.	5	0.2	1
11997	p-Isopropyltoluene	99-87-6	N.D.	5	0.2	1
11997	Methyl Acetate	79-20-9	N.D.	5	0.2	1
11997	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	1	0.2	1
11997	4-Methyl-2-pentanone	108-10-1	N.D.	10	0.5	1
11997	Methylcyclohexane	108-87-2	N.D.	5	0.5	1
11997	Methylene Chloride	75-09-2	N.D.	1	0.3	1
11997	Naphthalene	91-20-3	N.D.	5	1	1
11997	2-Nitropropane	79-46-9	N.D.	10	0.8	1
11997	Styrene	100-42-5	N.D.	5	0.2	1
11997	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	1	0.2	1
11997	Tetrachloroethene	127-18-4	N.D.	1	0.2	1
11997	Tetrahydrofuran	109-99-9	N.D.	10	0.7	1
11997	Toluene	108-88-3	N.D.	1	0.2	1
11997	1,2,3-Trichlorobenzene	87-61-6	N.D.	5	0.4	1
11997	1,2,4-Trichlorobenzene	120-82-1	N.D.	5	0.3	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	1	0.3	1
11997	1,1,2-Trichloroethane	79-00-5	N.D.	1	0.2	1
11997	Trichloroethene	79-01-6	1	1	0.2	1
11997	Trichlorofluoromethane	75-69-4	N.D.	1	0.2	1
11997	1,2,4-Trimethylbenzene	95-63-6	N.D.	5	1	1
11997	1,3,5-Trimethylbenzene	108-67-8	N.D.	5	0.3	1
11997	Vinyl Chloride	75-01-4	N.D.	1	0.2	1
11997	m+p-Xylene	179601-23-1	N.D.	5	1	1
11997	o-Xylene	95-47-6	N.D.	1	0.4	1
11997	Xylene (Total)	1330-20-7	N.D.	6	1	1

Project defined calibration criteria are not met. The calibration is compliant with the method defined criteria.

A Report Limit Verification (RLV) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The RLV standard shows adequate sensitivity at or below the reporting limit.

00882 VOA Interp. Library Search-10

The results from the volatile library search are listed on the attached FORM 1 - VOA-TIC. The qualifiers appearing in the "Q" column are defined at the end of the report.

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-8WT Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 11/02/2019 09:59
Collection Date/Time: 11/01/2019 10:00
SDG#: BMS84-03

ARCADIS U.S., Inc.
ELLE Sample #: GW 1191063
ELLE Group #: 2072391
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	Acenaphthene	83-32-9	N.D.	0.51	0.10	1
14241	Acenaphthylene	208-96-8	N.D.	0.51	0.10	1
14241	Acetophenone	98-86-2	N.D.	10	4.1	1
14241	Aniline	62-53-3	N.D.	10	3.1	1
14241	Anthracene	120-12-7	N.D.	0.51	0.10	1
14241	Atrazine	1912-24-9	N.D.	5.1	2.0	1
14241	Benzaldehyde	100-52-7	N.D.	10	3.1	1
14241	Benzo(a)anthracene	56-55-3	N.D.	0.51	0.10	1
14241	Benzo(a)pyrene	50-32-8	N.D.	0.51	0.10	1
14241	Benzo(b)fluoranthene	205-99-2	N.D.	0.51	0.10	1
14241	Benzo(g,h,i)perylene	191-24-2	N.D.	0.51	0.10	1
14241	Benzo(k)fluoranthene	207-08-9	N.D.	0.51	0.10	1
14241	Benzyl alcohol	100-51-6	N.D.	31	10	1
14241	1,1'-Biphenyl	92-52-4	N.D.	10	3.1	1
14241	4-Bromophenyl-phenylether	101-55-3	N.D.	2.0	0.51	1
14241	Butylbenzylphthalate	85-68-7	N.D.	5.1	2.0	1
14241	Di-n-butylphthalate	84-74-2	N.D.	5.1	2.0	1
14241	Caprolactam	105-60-2	N.D.	11	5.1	1
14241	Carbazole	86-74-8	N.D.	2.0	0.51	1
14241	4-Chloro-3-methylphenol	59-50-7	N.D.	2.0	0.51	1
14241	4-Chloroaniline	106-47-8	N.D.	10	4.1	1
14241	bis(2-Chloroethoxy)methane	111-91-1	N.D.	2.0	0.51	1
14241	bis(2-Chloroethyl)ether	111-44-4	N.D.	2.0	0.51	1
14241	bis(2-Chloroisopropyl)ether[1]	39638-32-9	N.D.	2.0	0.51	1
	Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.					
14241	2-Chloronaphthalene	91-58-7	N.D.	1.0	0.41	1
14241	2-Chlorophenol	95-57-8	N.D.	2.0	0.51	1
14241	4-Chlorophenyl-phenylether	7005-72-3	N.D.	2.0	0.51	1
14241	Chrysene	218-01-9	N.D.	0.51	0.10	1
14241	Dibenz(a,h)anthracene	53-70-3	N.D.	0.51	0.10	1
14241	Dibenzofuran	132-64-9	N.D.	2.0	0.51	1
14241	3,3'-Dichlorobenzidine	91-94-1	N.D.	10	3.1	1
14241	2,4-Dichlorophenol	120-83-2	N.D.	2.0	0.51	1
14241	Dicyclohexylamine[1]	101-83-7	N.D.	10	10	1
14241	Diethylphthalate	84-66-2	N.D.	5.1	2.0	1
14241	N,N-Dimethylaniline[1]	121-69-7	N.D.	1.0	0.51	1
14241	2,4-Dimethylphenol	105-67-9	N.D.	10	3.1	1
14241	Dimethylphthalate	131-11-3	N.D.	5.1	2.0	1
14241	4,6-Dinitro-2-methylphenol	534-52-1	N.D.	21	8.2	1

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-8WT Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 11/02/2019 09:59
Collection Date/Time: 11/01/2019 10:00
SDG#: BMS84-03

ARCADIS U.S., Inc.
ELLE Sample #: GW 1191063
ELLE Group #: 2072391
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	2,4-Dinitrophenol	51-28-5	N.D.	31	14	1
14241	2,4-Dinitrotoluene	121-14-2	N.D.	5.1	1.0	1
14241	2,6-Dinitrotoluene	606-20-2	N.D.	2.0	0.51	1
14241	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	11	5.1	1
14241	Fluoranthene	206-44-0	N.D.	0.51	0.10	1
14241	Fluorene	86-73-7	N.D.	0.51	0.10	1
14241	Hexachlorobenzene	118-74-1	N.D.	0.51	0.10	1
14241	Hexachlorobutadiene	87-68-3	N.D.	2.0	0.51	1
14241	Hexachlorocyclopentadiene	77-47-4	N.D.	11	5.1	1
14241	Hexachloroethane	67-72-1	N.D.	5.1	1.0	1
14241	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.51	0.10	1
14241	Isophorone	78-59-1	N.D.	2.0	0.51	1
14241	2-Methylnaphthalene	91-57-6	N.D.	0.51	0.10	1
14241	2-Methylphenol	95-48-7	N.D.	2.0	0.51	1
14241	4-Methylphenol	65794-96-9	N.D.	2.0	0.51	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
14241	Naphthalene	91-20-3	N.D.	0.51	0.10	1
14241	2-Nitroaniline	88-74-4	N.D.	7.1	2.0	1
14241	3-Nitroaniline	99-09-2	N.D.	7.1	3.1	1
14241	4-Nitroaniline	100-01-6	N.D.	3.1	0.92	1
14241	Nitrobenzene	98-95-3	N.D.	2.0	0.51	1
14241	2-Nitrophenol	88-75-5	N.D.	10	3.1	1
14241	4-Nitrophenol	100-02-7	N.D.	31	10	1
14241	N-Nitroso-di-n-propylamine	621-64-7	N.D.	3.1	0.71	1
14241	N-Nitrosodiphenylamine	86-30-6	N.D.	3.1	0.71	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.					
14241	Di-n-octylphthalate	117-84-0	N.D.	11	5.1	1
14241	Pentachlorophenol	87-86-5	N.D.	5.1	1.0	1
14241	Phenanthrene	85-01-8	N.D.	0.51	0.10	1
14241	Phenol	108-95-2	N.D.	2.0	0.51	1
14241	Pyrene	129-00-0	N.D.	0.51	0.10	1
14241	Pyridine	110-86-1	N.D.	5.1	2.0	1
14241	1,2,4,5-Tetrachlorobenzene	95-94-3	N.D.	2.0	0.51	1
14241	2,3,4,6-Tetrachlorophenol	58-90-2	N.D.	10	4.1	1
14241	2,4,5-Trichlorophenol	95-95-4	N.D.	2.0	0.51	1
14241	2,4,6-Trichlorophenol	88-06-2	N.D.	2.0	0.51	1
14241	Triethylamine[1]	121-44-8	N.D.	10	10	1

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-8WT Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 11/02/2019 09:59
Collection Date/Time: 11/01/2019 10:00
SDG#: BMS84-03

ARCADIS U.S., Inc.
ELLE Sample #: GW 1191063
ELLE Group #: 2072391
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor

Summary. Since the recovery is high and the target analyte(s) was not detected in the sample, the data is reported.

00886 SVOA TIC Interpretive(25)

The results from the semivolatile library search are listed on the attached FORM 1 - SV-TIC. The qualifiers appearing in the "Q" column are defined at the end of the report.

Aldehydes & Ketones	**SW-846 8315A**		**ug/l**	**ug/l**	**ug/l**	
13022	Acetaldehyde[1]	75-07-0	N.D.	60	35	1
13022	Formaldehyde	50-00-0	N.D.	50	20	1
GC Miscellaneous	**SW-846 8015D Rev.4, June 2003**		**ug/l**	**ug/l**	**ug/l**	
10603	Ethanol	64-17-5	N.D. D2	1,000	150	1
12926	Ethylene glycol[1]	107-21-1	N.D.	10,000	5,000	1
10603	Isopropanol[1]	67-63-0	N.D. D2	1,000	110	1
10603	Methanol	67-56-1	N.D. D2	1,000	220	1
12926	Propylene glycol[1]	57-55-6	N.D.	10,000	2,000	1

The response for tetramethylene glycol in the continuing calibration verification standard is outside the QC acceptance limits low. The following action was taken:
The analysis was repeated and the continuing calibration verification standard bracketing the sample on the second trial is also outside the acceptance limits. This effect is attributed to the sample matrix and the data is reported.

Sample Comments

State of New York Certification No. 10670
Trip blank vials were not received by the laboratory for this sample group.

[1] = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	Y193171AA	11/13/2019 16:28	Linda C Pape	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	Y193171AA	11/13/2019 16:27	Linda C Pape	1
14241	Semi-annual Groundwater BMS	SW-846 8270D	1	19311WAK026	11/09/2019 03:23	Ashley R Transue	1
11010	8270D BNA Extraction	SW-846 3510C	1	19311WAK026	11/08/2019 09:00	Joshua S Ruth	1
13022	Short List Aldehydes- W 8315A	SW-846 8315A	1	193080009A	11/04/2019 19:12	Jessica L Miller	1
01013	Formaldehyde Extraction	SW-846 8315A	1	193080009A	11/04/2019 11:20	Shawn J McMullen	1
10603	Alcohols in Water	SW-846 8015D Rev.4, June 2003	1	193080008A	11/05/2019 05:55	Johanna C Kennedy	1
12926	Glycols in Water by 8015C/D	SW-846 8015D Rev.4, June 2003	1	193100032A	11/07/2019 01:18	Donald Brown	1

*=This limit was used in the evaluation of the final result

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
BD8WT

Lab Name: Lancaster Laboratories Contract:_____
Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____
Matrix: (soil/water) WATER Lab Sample ID: 1191063
Sample wt/vol: 5.0 (g/mL)mL Lab File ID:HP09355.i/19nov13a.b/yn13s07.d
Level: (low/med) LOW Date Received: 11/02/19
% Moisture: not dec. Date Analyzed: 11/13/19
Column: (pack/cap) CAP Dilution Factor: 1.0
CONCENTRATION UNITS:
Number TICs found: 0 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	VOCTIC	Total VOC TICs		0	U
2.					
3.					
4.					
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6.					
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29.					
30.					

page 1 of 1

FORM I VOA-TIC

1F

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

BD8WT

Lab Name: Lancaster Laboratories Contract:
Lab Code: LANCAS Case No.: SAS No.: SDG No.:
Matrix: (soil/water) WATER Lab Sample ID: 1191063
Sample wt/vol: 245 (g/mL) mL Lab File ID: lk0413.d
Level: (low/med) LOW Date Received: 11/02/19
% Moisture: Decanted: (Y/N) Date Extracted: 11/08/19
Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/09/19
Injection Volume: 1 (uL) Dilution Factor: 1
GPC Cleanup: N pH: Extraction: Sepf

CONCENTRATION UNITS:
Number TICs found: 1 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		Unknown	3.208	4	J
2.					
3.	SVOCTIC	Total SVOC TICs		4	J
4.					
5.					
6.					
7.					
8.					
9.					
10.					
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page 1 of 1

FORM I SV-1

Sample Description: **BDA-8RX Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 11/02/2019 09:59
Collection Date/Time: 11/01/2019 11:40
SDG#: BMS84-04

ARCADIS U.S., Inc.
ELLE Sample #: GW 1191064
ELLE Group #: 2072391
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	20	0.7	1
11997	Acetonitrile	75-05-8	N.D.	100	16	1
11997	Benzene	71-43-2	N.D.	1	0.2	1
11997	Bromochloromethane	74-97-5	N.D.	5	0.2	1
11997	Bromodichloromethane	75-27-4	N.D.	1	0.2	1
11997	Bromoform	75-25-2	N.D.	4	1	1
11997	Bromomethane	74-83-9	N.D.	1	0.3	1
11997	n-Butanol	71-36-3	N.D.	250	61	1
11997	2-Butanone	78-93-3	N.D.	10	0.3	1
11997	t-Butyl alcohol	75-65-0	N.D.	50	12	1
11997	n-Butylbenzene	104-51-8	N.D.	5	0.2	1
11997	sec-Butylbenzene	135-98-8	N.D.	5	0.2	1
11997	tert-Butylbenzene	98-06-6	N.D.	5	0.3	1
11997	Carbon Disulfide	75-15-0	N.D.	5	0.2	1
11997	Carbon Tetrachloride	56-23-5	N.D.	1	0.2	1
11997	Chlorobenzene	108-90-7	N.D.	1	0.2	1
11997	Chlorodifluoromethane[1]	75-45-6	N.D.	5	2	1
11997	Chloroethane	75-00-3	N.D.	1	0.2	1
11997	Chloroform	67-66-3	N.D.	1	0.2	1
11997	Chloromethane	74-87-3	N.D.	1	0.2	1
11997	Cyclohexane	110-82-7	N.D.	5	1	1
11997	Cyclohexanone[1]	108-94-1	N.D.	100	25	1
11997	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	5	0.3	1
11997	Dibromochloromethane	124-48-1	N.D.	1	0.2	1
11997	1,2-Dibromoethane	106-93-4	N.D.	1	0.2	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	5	0.2	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	5	0.2	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	5	0.2	1
11997	Dichlorodifluoromethane	75-71-8	N.D.	1	0.2	1
11997	1,1-Dichloroethane	75-34-3	N.D.	1	0.2	1
11997	1,2-Dichloroethane	107-06-2	N.D.	1	0.3	1
11997	1,1-Dichloroethene	75-35-4	N.D.	1	0.2	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	1	0.2	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	1	0.2	1
11997	1,2-Dichloropropane	78-87-5	N.D.	1	0.2	1
11997	cis-1,3-Dichloropropene	10061-01-5	N.D.	1	0.2	1
11997	trans-1,3-Dichloropropene	10061-02-6	N.D.	1	0.2	1
11997	1,4-Dioxane	123-91-1	N.D.	250	29	1
11997	Ethyl Acetate	141-78-6	N.D.	5	0.7	1
11997	Ethyl ether	60-29-7	N.D.	5	0.2	1
11997	Ethylbenzene	100-41-4	N.D.	1	0.4	1

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-8RX Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 11/02/2019 09:59
Collection Date/Time: 11/01/2019 11:40
SDG#: BMS84-04

ARCADIS U.S., Inc.
ELLE Sample #: GW 1191064
ELLE Group #: 2072391
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Freon 113	76-13-1	N.D.	10	0.2	1
11997	n-Heptane[1]	142-82-5	N.D.	5	2	1
11997	n-Hexane[1]	110-54-3	N.D.	5	2	1
11997	2-Hexanone	591-78-6	N.D.	10	0.3	1
11997	Isobutyl Alcohol	78-83-1	N.D.	250	36	1
11997	Isopropylbenzene	98-82-8	N.D.	5	0.2	1
11997	p-Isopropyltoluene	99-87-6	N.D.	5	0.2	1
11997	Methyl Acetate	79-20-9	N.D.	5	0.2	1
11997	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	1	0.2	1
11997	4-Methyl-2-pentanone	108-10-1	N.D.	10	0.5	1
11997	Methylcyclohexane	108-87-2	N.D.	5	0.5	1
11997	Methylene Chloride	75-09-2	N.D.	1	0.3	1
11997	Naphthalene	91-20-3	N.D.	5	1	1
11997	2-Nitropropane	79-46-9	N.D.	10	0.8	1
11997	Styrene	100-42-5	N.D.	5	0.2	1
11997	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	1	0.2	1
11997	Tetrachloroethene	127-18-4	N.D.	1	0.2	1
11997	Tetrahydrofuran	109-99-9	N.D.	10	0.7	1
11997	Toluene	108-88-3	N.D.	1	0.2	1
11997	1,2,3-Trichlorobenzene	87-61-6	N.D.	5	0.4	1
11997	1,2,4-Trichlorobenzene	120-82-1	N.D.	5	0.3	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	1	0.3	1
11997	1,1,2-Trichloroethane	79-00-5	N.D.	1	0.2	1
11997	Trichloroethene	79-01-6	N.D.	1	0.2	1
11997	Trichlorofluoromethane	75-69-4	N.D.	1	0.2	1
11997	1,2,4-Trimethylbenzene	95-63-6	N.D.	5	1	1
11997	1,3,5-Trimethylbenzene	108-67-8	N.D.	5	0.3	1
11997	Vinyl Chloride	75-01-4	N.D.	1	0.2	1
11997	m+p-Xylene	179601-23-1	N.D.	5	1	1
11997	o-Xylene	95-47-6	N.D.	1	0.4	1
11997	Xylene (Total)	1330-20-7	N.D.	6	1	1

Project defined calibration criteria are not met. The calibration is compliant with the method defined criteria.

A Report Limit Verification (RLV) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The RLV standard shows adequate sensitivity at or below the reporting limit.

00882 VOA Interp. Library Search-10

The results from the volatile library search are listed on the attached FORM 1 - VOA-TIC. The qualifiers appearing in the "Q" column are defined at the end of the report.

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-8RX Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 11/02/2019 09:59
Collection Date/Time: 11/01/2019 11:40
SDG#: BMS84-04

ARCADIS U.S., Inc.
ELLE Sample #: GW 1191064
ELLE Group #: 2072391
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	Acenaphthene	83-32-9	N.D.	0.51	0.10	1
14241	Acenaphthylene	208-96-8	N.D.	0.51	0.10	1
14241	Acetophenone	98-86-2	N.D.	10	4.1	1
14241	Aniline	62-53-3	N.D.	10	3.1	1
14241	Anthracene	120-12-7	N.D.	0.51	0.10	1
14241	Atrazine	1912-24-9	N.D.	5.1	2.0	1
14241	Benzaldehyde	100-52-7	N.D.	10	3.1	1
14241	Benzo(a)anthracene	56-55-3	N.D.	0.51	0.10	1
14241	Benzo(a)pyrene	50-32-8	N.D.	0.51	0.10	1
14241	Benzo(b)fluoranthene	205-99-2	N.D.	0.51	0.10	1
14241	Benzo(g,h,i)perylene	191-24-2	N.D.	0.51	0.10	1
14241	Benzo(k)fluoranthene	207-08-9	N.D.	0.51	0.10	1
14241	Benzyl alcohol	100-51-6	N.D.	31	10	1
14241	1,1'-Biphenyl	92-52-4	N.D.	10	3.1	1
14241	4-Bromophenyl-phenylether	101-55-3	N.D.	2.0	0.51	1
14241	Butylbenzylphthalate	85-68-7	N.D.	5.1	2.0	1
14241	Di-n-butylphthalate	84-74-2	N.D.	5.1	2.0	1
14241	Caprolactam	105-60-2	N.D.	11	5.1	1
14241	Carbazole	86-74-8	N.D.	2.0	0.51	1
14241	4-Chloro-3-methylphenol	59-50-7	N.D.	2.0	0.51	1
14241	4-Chloroaniline	106-47-8	N.D.	10	4.1	1
14241	bis(2-Chloroethoxy)methane	111-91-1	N.D.	2.0	0.51	1
14241	bis(2-Chloroethyl)ether	111-44-4	N.D.	2.0	0.51	1
14241	bis(2-Chloroisopropyl)ether[1]	39638-32-9	N.D.	2.0	0.51	1
	Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.					
14241	2-Chloronaphthalene	91-58-7	N.D.	1.0	0.41	1
14241	2-Chlorophenol	95-57-8	N.D.	2.0	0.51	1
14241	4-Chlorophenyl-phenylether	7005-72-3	N.D.	2.0	0.51	1
14241	Chrysene	218-01-9	N.D.	0.51	0.10	1
14241	Dibenz(a,h)anthracene	53-70-3	N.D.	0.51	0.10	1
14241	Dibenzofuran	132-64-9	N.D.	2.0	0.51	1
14241	3,3'-Dichlorobenzidine	91-94-1	N.D.	10	3.1	1
14241	2,4-Dichlorophenol	120-83-2	N.D.	2.0	0.51	1
14241	Dicyclohexylamine[1]	101-83-7	N.D.	10	10	1
14241	Diethylphthalate	84-66-2	N.D.	5.1	2.0	1
14241	N,N-Dimethylaniline[1]	121-69-7	N.D.	1.0	0.51	1
14241	2,4-Dimethylphenol	105-67-9	N.D.	10	3.1	1
14241	Dimethylphthalate	131-11-3	N.D.	5.1	2.0	1
14241	4,6-Dinitro-2-methylphenol	534-52-1	N.D.	21	8.2	1

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-8RX Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 11/02/2019 09:59
Collection Date/Time: 11/01/2019 11:40
SDG#: BMS84-04

ARCADIS U.S., Inc.
ELLE Sample #: GW 1191064
ELLE Group #: 2072391
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	2,4-Dinitrophenol	51-28-5	N.D.	31	14	1
14241	2,4-Dinitrotoluene	121-14-2	N.D.	5.1	1.0	1
14241	2,6-Dinitrotoluene	606-20-2	N.D.	2.0	0.51	1
14241	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	11	5.1	1
14241	Fluoranthene	206-44-0	N.D.	0.51	0.10	1
14241	Fluorene	86-73-7	N.D.	0.51	0.10	1
14241	Hexachlorobenzene	118-74-1	N.D.	0.51	0.10	1
14241	Hexachlorobutadiene	87-68-3	N.D.	2.0	0.51	1
14241	Hexachlorocyclopentadiene	77-47-4	N.D.	11	5.1	1
14241	Hexachloroethane	67-72-1	N.D.	5.1	1.0	1
14241	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.51	0.10	1
14241	Isophorone	78-59-1	N.D.	2.0	0.51	1
14241	2-Methylnaphthalene	91-57-6	N.D.	0.51	0.10	1
14241	2-Methylphenol	95-48-7	N.D.	2.0	0.51	1
14241	4-Methylphenol	65794-96-9	N.D.	2.0	0.51	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
14241	Naphthalene	91-20-3	N.D.	0.51	0.10	1
14241	2-Nitroaniline	88-74-4	N.D.	7.1	2.0	1
14241	3-Nitroaniline	99-09-2	N.D.	7.1	3.1	1
14241	4-Nitroaniline	100-01-6	N.D.	3.1	0.92	1
14241	Nitrobenzene	98-95-3	N.D.	2.0	0.51	1
14241	2-Nitrophenol	88-75-5	N.D.	10	3.1	1
14241	4-Nitrophenol	100-02-7	N.D.	31	10	1
14241	N-Nitroso-di-n-propylamine	621-64-7	N.D.	3.1	0.71	1
14241	N-Nitrosodiphenylamine	86-30-6	N.D.	3.1	0.71	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.					
14241	Di-n-octylphthalate	117-84-0	N.D.	11	5.1	1
14241	Pentachlorophenol	87-86-5	N.D.	5.1	1.0	1
14241	Phenanthrene	85-01-8	N.D.	0.51	0.10	1
14241	Phenol	108-95-2	N.D.	2.0	0.51	1
14241	Pyrene	129-00-0	N.D.	0.51	0.10	1
14241	Pyridine	110-86-1	N.D.	5.1	2.0	1
14241	1,2,4,5-Tetrachlorobenzene	95-94-3	N.D.	2.0	0.51	1
14241	2,3,4,6-Tetrachlorophenol	58-90-2	N.D.	10	4.1	1
14241	2,4,5-Trichlorophenol	95-95-4	N.D.	2.0	0.51	1
14241	2,4,6-Trichlorophenol	88-06-2	N.D.	2.0	0.51	1
14241	Triethylamine[1]	121-44-8	N.D.	10	10	1

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-8RX Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 11/02/2019 09:59
Collection Date/Time: 11/01/2019 11:40
SDG#: BMS84-04

ARCADIS U.S., Inc.
ELLE Sample #: GW 1191064
ELLE Group #: 2072391
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result		Limit of Quantitation*	Method Detection Limit	Dilution Factor
	Summary. Since the recovery is high and the target analyte(s) was not detected in the sample, the data is reported.						
00886	**SVOA TIC Interpretive(25)**						
	The results from the semivolatile library search are listed on the attached FORM 1 - SV-TIC. The qualifiers appearing in the "Q" column are defined at the end of the report.						
Aldehydes & Ketones	**SW-846 8315A**		**ug/l**		**ug/l**	**ug/l**	
13022	Acetaldehyde[1]	75-07-0	N.D.		60	35	1
13022	Formaldehyde	50-00-0	45	J	50	20	1
GC Miscellaneous	**SW-846 8015D Rev.4, June 2003**		**ug/l**		**ug/l**	**ug/l**	
10603	Ethanol	64-17-5	N.D.	D2	1,000	150	1
12926	Ethylene glycol[1]	107-21-1	N.D.		10,000	5,000	1
10603	Isopropanol[1]	67-63-0	N.D.	D2	1,000	110	1
10603	Methanol	67-56-1	N.D.	D2	1,000	220	1
12926	Propylene glycol[1]	57-55-6	N.D.		10,000	2,000	1
	The response for tetramethylene glycol in the continuing calibration verification standard is outside the QC acceptance limits low. The following action was taken: The analysis was repeated and the continuing calibration verification standard bracketing the sample on the second trial is also outside the acceptance limits. This effect is attributed to the sample matrix and the data is reported.						

Sample Comments

State of New York Certification No. 10670
Trip blank vials were not received by the laboratory for this sample group.

[1] = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	Y193171AA	11/13/2019 16:50	Linda C Pape	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	Y193171AA	11/13/2019 16:49	Linda C Pape	1
14241	Semi-annual Groundwater BMS	SW-846 8270D	1	19311WAK026	11/09/2019 03:52	Ashley R Transue	1
11010	8270D BNA Extraction	SW-846 3510C	1	19311WAK026	11/08/2019 09:00	Joshua S Ruth	1
13022	Short List Aldehydes- W 8315A	SW-846 8315A	1	193080009A	11/04/2019 19:23	Jessica L Miller	1
01013	Formaldehyde Extraction	SW-846 8315A	1	193080009A	11/04/2019 11:20	Shawn J McMullen	1
10603	Alcohols in Water	SW-846 8015D Rev.4, June 2003	1	193080008A	11/05/2019 06:11	Johanna C Kennedy	1
12926	Glycols in Water by 8015C/D	SW-846 8015D Rev.4, June 2003	1	193100032A	11/07/2019 01:30	Donald Brown	1

*=This limit was used in the evaluation of the final result

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
BD8RX

Lab Name: Lancaster Laboratories Contract:_____
Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____
Matrix: (soil/water) WATER Lab Sample ID: 1191064
Sample wt/vol: 5.0 (g/mL)mL Lab File ID:HP09355.i/19nov13a.b/yn13s08.d
Level: (low/med) LOW Date Received: 11/02/19
% Moisture: not dec. Date Analyzed: 11/13/19
Column: (pack/cap) CAP Dilution Factor: 1.0
CONCENTRATION UNITS:
Number TICs found: 0 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	VOCTIC	Total VOC TICs		0	U
2.					
3.					
4.					
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page 1 of 1

FORM I VOA-TIC

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
BD8RX

Lab Name: Lancaster Laboratories Contract:
Lab Code: LANCAS Case No.: SAS No.: SDG No.:
Matrix: (soil/water) WATER Lab Sample ID: 1191064
Sample wt/vol: 245 (g/mL) mL Lab File ID: lk0414.d
Level: (low/med) LOW Date Received: 11/02/19
% Moisture: Decanted: (Y/N) Date Extracted: 11/08/19
Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/09/19
Injection Volume: 1 (uL) Dilution Factor: 1
GPC Cleanup: N pH: Extraction: Sepf
CONCENTRATION UNITS:
Number TICs found: 6 (ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Unknown	3.208	5	J
2.	Unknown	12.102	6	J
3.	Unknown	15.419	4	J
4. 10544-50-0	Cyclic octaatomic sulfur	15.499	36	J
5.	Unknown	20.617	7	J
6.	Unknown	22.982	48	J
7.				
8. SVOCTIC	Total SVOC TICs		110	J
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10.				
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page 1 of 1

FORM I SV-1

Sample Description: **CHP-43RX Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 11/02/2019 09:59
Collection Date/Time: 11/01/2019 10:27
SDG#: BMS84-05

ARCADIS U.S., Inc.
ELLE Sample #: GW 1191065
ELLE Group #: 2072391
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	110 J	2,000	70	100
11997	Acetonitrile	75-05-8	N.D.	10,000	1,600	100
11997	Benzene	71-43-2	N.D.	100	20	100
11997	Bromochloromethane	74-97-5	N.D.	500	20	100
11997	Bromodichloromethane	75-27-4	N.D.	100	20	100
11997	Bromoform	75-25-2	N.D.	400	100	100
11997	Bromomethane	74-83-9	N.D.	100	30	100
11997	n-Butanol	71-36-3	N.D.	25,000	6,100	100
11997	2-Butanone	78-93-3	N.D.	1,000	30	100
11997	t-Butyl alcohol	75-65-0	N.D.	5,000	1,200	100
11997	n-Butylbenzene	104-51-8	N.D.	500	20	100
11997	sec-Butylbenzene	135-98-8	N.D.	500	20	100
11997	tert-Butylbenzene	98-06-6	N.D.	500	30	100
11997	Carbon Disulfide	75-15-0	N.D.	500	20	100
11997	Carbon Tetrachloride	56-23-5	N.D.	100	20	100
11997	Chlorobenzene	108-90-7	N.D.	100	20	100
11997	Chlorodifluoromethane[1]	75-45-6	N.D.	500	200	100
11997	Chloroethane	75-00-3	N.D.	100	20	100
11997	Chloroform	67-66-3	N.D.	100	20	100
11997	Chloromethane	74-87-3	N.D.	100	20	100
11997	Cyclohexane	110-82-7	N.D.	500	100	100
11997	Cyclohexanone[1]	108-94-1	N.D.	10,000	2,500	100
11997	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	500	30	100
11997	Dibromochloromethane	124-48-1	N.D.	100	20	100
11997	1,2-Dibromoethane	106-93-4	N.D.	100	20	100
11997	1,2-Dichlorobenzene	95-50-1	N.D.	500	20	100
11997	1,3-Dichlorobenzene	541-73-1	N.D.	500	20	100
11997	1,4-Dichlorobenzene	106-46-7	N.D.	500	20	100
11997	Dichlorodifluoromethane	75-71-8	N.D.	100	20	100
11997	1,1-Dichloroethane	75-34-3	N.D.	100	20	100
11997	1,2-Dichloroethane	107-06-2	N.D.	100	30	100
11997	1,1-Dichloroethene	75-35-4	N.D.	100	20	100
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	100	20	100
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	100	20	100
11997	1,2-Dichloropropane	78-87-5	N.D.	100	20	100
11997	cis-1,3-Dichloropropene	10061-01-5	N.D.	100	20	100
11997	trans-1,3-Dichloropropene	10061-02-6	N.D.	100	20	100
11997	1,4-Dioxane	123-91-1	N.D.	25,000	2,900	100
11997	Ethyl Acetate	141-78-6	N.D.	500	70	100
11997	Ethyl ether	60-29-7	N.D.	500	20	100
11997	Ethylbenzene	100-41-4	N.D.	100	40	100

*=This limit was used in the evaluation of the final result

Sample Description: **CHP-43RX Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 11/02/2019 09:59
Collection Date/Time: 11/01/2019 10:27
SDG#: BMS84-05

ARCADIS U.S., Inc.
ELLE Sample #: GW 1191065
ELLE Group #: 2072391
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Freon 113	76-13-1	N.D.	1,000	20	100
11997	n-Heptane[1]	142-82-5	N.D.	500	200	100
11997	n-Hexane[1]	110-54-3	N.D.	500	200	100
11997	2-Hexanone	591-78-6	N.D.	1,000	30	100
11997	Isobutyl Alcohol	78-83-1	N.D.	25,000	3,600	100
11997	Isopropylbenzene	98-82-8	N.D.	500	20	100
11997	p-Isopropyltoluene	99-87-6	N.D.	500	20	100
11997	Methyl Acetate	79-20-9	N.D.	500	20	100
11997	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	100	20	100
11997	4-Methyl-2-pentanone	108-10-1	N.D.	1,000	50	100
11997	Methylcyclohexane	108-87-2	N.D.	500	50	100
11997	Methylene Chloride	75-09-2	370,000 E	100	30	100
11997	Naphthalene	91-20-3	N.D.	500	100	100
11997	2-Nitropropane	79-46-9	N.D.	1,000	80	100
11997	Styrene	100-42-5	N.D.	500	20	100
11997	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	100	20	100
11997	Tetrachloroethene	127-18-4	N.D.	100	20	100
11997	Tetrahydrofuran	109-99-9	N.D.	1,000	70	100
11997	Toluene	108-88-3	N.D.	100	20	100
11997	1,2,3-Trichlorobenzene	87-61-6	N.D.	500	40	100
11997	1,2,4-Trichlorobenzene	120-82-1	N.D.	500	30	100
11997	1,1,1-Trichloroethane	71-55-6	N.D.	100	30	100
11997	1,1,2-Trichloroethane	79-00-5	N.D.	100	20	100
11997	Trichloroethene	79-01-6	N.D.	100	20	100
11997	Trichlorofluoromethane	75-69-4	N.D.	100	20	100
11997	1,2,4-Trimethylbenzene	95-63-6	N.D.	500	100	100
11997	1,3,5-Trimethylbenzene	108-67-8	N.D.	500	30	100
11997	Vinyl Chloride	75-01-4	N.D.	100	20	100
11997	m+p-Xylene	179601-23-1	N.D.	500	100	100
11997	o-Xylene	95-47-6	N.D.	100	40	100
11997	Xylene (Total)	1330-20-7	N.D.	600	140	100

Preservation requirements were not met.
A preserved vial was submitted for analysis. However, the pH at the time of analysis was 13.

Preservation requirements were not met. The sample was received at pH <2 which is not the preservation specified for acrolein or acrylonitrile under the referenced method. The preservation criteria is pH of 4-5.

The concentration reported for methylene chloride is estimated since it exceeds the calibration range of the instrument. A further diluted analysis was performed from a previously opened container with headspace and/or outside of the method holding time. The result

*=This limit was used in the evaluation of the final result

Sample Description: **CHP-43RX Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 11/02/2019 09:59
Collection Date/Time: 11/01/2019 10:27
SDG#: BMS84-05

ARCADIS U.S., Inc.
ELLE Sample #: GW 1191065
ELLE Group #: 2072391
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
	for methylene chloride is 430,000 ug/l.					
00882	**VOA Interp. Library Search-10**					
	The results from the volatile library search are listed on the attached FORM 1 - VOA-TIC. The qualifiers appearing in the "Q" column are defined at the end of the report.					
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	Acenaphthene	83-32-9	N.D.	0.51	0.10	1
14241	Acenaphthylene	208-96-8	N.D.	0.51	0.10	1
14241	Acetophenone	98-86-2	N.D.	10	4.1	1
14241	Aniline	62-53-3	12	10	3.0	1
14241	Anthracene	120-12-7	N.D.	0.51	0.10	1
14241	Atrazine	1912-24-9	N.D.	5.1	2.0	1
14241	Benzaldehyde	100-52-7	N.D.	10	3.0	1
14241	Benzo(a)anthracene	56-55-3	N.D.	0.51	0.10	1
14241	Benzo(a)pyrene	50-32-8	N.D.	0.51	0.10	1
14241	Benzo(b)fluoranthene	205-99-2	N.D.	0.51	0.10	1
14241	Benzo(g,h,i)perylene	191-24-2	N.D.	0.51	0.10	1
14241	Benzo(k)fluoranthene	207-08-9	N.D.	0.51	0.10	1
14241	Benzyl alcohol	100-51-6	N.D.	30	10	1
14241	1,1'-Biphenyl	92-52-4	N.D.	10	3.0	1
14241	4-Bromophenyl-phenylether	101-55-3	N.D.	2.0	0.51	1
14241	Butylbenzylphthalate	85-68-7	N.D.	5.1	2.0	1
14241	Di-n-butylphthalate	84-74-2	N.D.	5.1	2.0	1
14241	Caprolactam	105-60-2	N.D.	11	5.1	1
14241	Carbazole	86-74-8	N.D.	2.0	0.51	1
14241	4-Chloro-3-methylphenol	59-50-7	N.D.	2.0	0.51	1
14241	4-Chloroaniline	106-47-8	N.D.	10	4.1	1
14241	bis(2-Chloroethoxy)methane	111-91-1	N.D.	2.0	0.51	1
14241	bis(2-Chloroethyl)ether	111-44-4	N.D.	2.0	0.51	1
14241	bis(2-Chloroisopropyl)ether[1]	39638-32-9	N.D.	2.0	0.51	1
	Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.					
14241	2-Chloronaphthalene	91-58-7	N.D.	1.0	0.41	1
14241	2-Chlorophenol	95-57-8	N.D.	2.0	0.51	1
14241	4-Chlorophenyl-phenylether	7005-72-3	N.D.	2.0	0.51	1
14241	Chrysene	218-01-9	N.D.	0.51	0.10	1
14241	Dibenz(a,h)anthracene	53-70-3	N.D.	0.51	0.10	1
14241	Dibenzofuran	132-64-9	N.D.	2.0	0.51	1
14241	3,3'-Dichlorobenzidine	91-94-1	N.D.	10	3.0	1
14241	2,4-Dichlorophenol	120-83-2	N.D.	2.0	0.51	1
14241	Dicyclohexylamine[1]	101-83-7	N.D.	10	10	1

*=This limit was used in the evaluation of the final result

Sample Description: **CHP-43RX Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 11/02/2019 09:59
Collection Date/Time: 11/01/2019 10:27
SDG#: BMS84-05

ARCADIS U.S., Inc.
ELLE Sample #: GW 1191065
ELLE Group #: 2072391
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	Diethylphthalate	84-66-2	N.D.	5.1	2.0	1
14241	N,N-Dimethylaniline[1]	121-69-7	0.68 J	1.0	0.51	1
14241	2,4-Dimethylphenol	105-67-9	N.D.	10	3.0	1
14241	Dimethylphthalate	131-11-3	N.D.	5.1	2.0	1
14241	4,6-Dinitro-2-methylphenol	534-52-1	N.D.	21	8.1	1
14241	2,4-Dinitrophenol	51-28-5	N.D.	30	14	1
14241	2,4-Dinitrotoluene	121-14-2	N.D.	5.1	1.0	1
14241	2,6-Dinitrotoluene	606-20-2	N.D.	2.0	0.51	1
14241	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	11	5.1	1
14241	Fluoranthene	206-44-0	N.D.	0.51	0.10	1
14241	Fluorene	86-73-7	N.D.	0.51	0.10	1
14241	Hexachlorobenzene	118-74-1	N.D.	0.51	0.10	1
14241	Hexachlorobutadiene	87-68-3	N.D.	2.0	0.51	1
14241	Hexachlorocyclopentadiene	77-47-4	N.D.	11	5.1	1
14241	Hexachloroethane	67-72-1	N.D.	5.1	1.0	1
14241	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.51	0.10	1
14241	Isophorone	78-59-1	N.D.	2.0	0.51	1
14241	2-Methylnaphthalene	91-57-6	N.D.	0.51	0.10	1
14241	2-Methylphenol	95-48-7	N.D.	2.0	0.51	1
14241	4-Methylphenol	65794-96-9	N.D.	2.0	0.51	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
14241	Naphthalene	91-20-3	N.D.	0.51	0.10	1
14241	2-Nitroaniline	88-74-4	N.D.	7.1	2.0	1
14241	3-Nitroaniline	99-09-2	N.D.	7.1	3.0	1
14241	4-Nitroaniline	100-01-6	N.D.	3.0	0.91	1
14241	Nitrobenzene	98-95-3	3.1	2.0	0.51	1
14241	2-Nitrophenol	88-75-5	N.D.	10	3.0	1
14241	4-Nitrophenol	100-02-7	N.D.	30	10	1
14241	N-Nitroso-di-n-propylamine	621-64-7	N.D.	3.0	0.71	1
14241	N-Nitrosodiphenylamine	86-30-6	N.D.	3.0	0.71	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.					
14241	Di-n-octylphthalate	117-84-0	N.D.	11	5.1	1
14241	Pentachlorophenol	87-86-5	N.D.	5.1	1.0	1
14241	Phenanthrene	85-01-8	N.D.	0.51	0.10	1
14241	Phenol	108-95-2	15	2.0	0.51	1
14241	Pyrene	129-00-0	N.D.	0.51	0.10	1
14241	Pyridine	110-86-1	N.D.	5.1	2.0	1
14241	1,2,4,5-Tetrachlorobenzene	95-94-3	N.D.	2.0	0.51	1

*=This limit was used in the evaluation of the final result

Sample Description: **CHP-43RX Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 11/02/2019 09:59
Collection Date/Time: 11/01/2019 10:27
SDG#: BMS84-05

ARCADIS U.S., Inc.
ELLE Sample #: GW 1191065
ELLE Group #: 2072391
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	2,3,4,6-Tetrachlorophenol	58-90-2	N.D.	10	4.1	1
14241	2,4,5-Trichlorophenol	95-95-4	N.D.	2.0	0.51	1
14241	2,4,6-Trichlorophenol	88-06-2	N.D.	2.0	0.51	1
14241	Triethylamine[1]	121-44-8	N.D.	10	10	1

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. Since the recovery is high and the target analyte(s) was not detected in the sample, the data is reported.

00886 SVOA TIC Interpretive(25)

The results from the semivolatile library search are listed on the attached FORM 1 - SV-TIC. The qualifiers appearing in the "Q" column are defined at the end of the report.

Sample Comments

State of New York Certification No. 10670
Trip blank vials were not received by the laboratory for this sample group.

[1] = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	L193183AA	11/15/2019 05:43	Don V Viray	100
01163	GC/MS VOA Water Prep	SW-846 5030C	1	L193183AA	11/15/2019 05:42	Don V Viray	100
14241	Semi-annual Groundwater BMS	SW-846 8270D	1	19311WAK026	11/09/2019 04:21	Ashley R Transue	1
11010	8270D BNA Extraction	SW-846 3510C	1	19311WAK026	11/08/2019 09:00	Joshua S Ruth	1

*=This limit was used in the evaluation of the final result

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
C43RX

Lab Name: Lancaster Laboratories Contract:_____
Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____
Matrix: (soil/water) WATER Lab Sample ID: 1191065
Sample wt/vol: 5.0 (g/mL)mL Lab File ID:HP09915.i/19nov14b.b/ln14s65.d
Level: (low/med) LOW Date Received: 11/02/19
% Moisture: not dec. Date Analyzed: 11/15/19
Column: (pack/cap) CAP Dilution Factor: 100.0
CONCENTRATION UNITS:
Number TICs found: 0 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	VOCTIC	Total VOC TICs		0	U
2.					
3.					
4.					
5.					
6.					
7.					
8.					
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11.					
12.					
13.					
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22.					
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25.					
26.					
27.					
28.					
29.					
30.					

page 1 of 1

FORM I VOA-TIC

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
C43RX

Lab Name: Lancaster Laboratories Contract:
Lab Code: LANCAS Case No.: SAS No.: SDG No.:
Matrix: (soil/water) WATER Lab Sample ID: 1191065
Sample wt/vol: 246 (g/mL) mL Lab File ID: lk0415.d
Level: (low/med) LOW Date Received: 11/02/19
% Moisture: Decanted: (Y/N) Date Extracted: 11/08/19
Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/09/19
Injection Volume: 1 (uL) Dilution Factor: 1
GPC Cleanup: N pH: Extraction: Sepf
CONCENTRATION UNITS:
Number TICs found: 20 (ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Unknown	4.550	12	J
2.	Unknown	4.614	13	J
3.1618-26-4	2,4-Dithiapentane	5.288	52	J
4.	Unknown	7.069	52	J
5.	Unknown	7.545	18	J
6.149-57-5	Hexanoic acid, 2-ethyl-	8.059	10	J
7.65-85-0	Benzoic acid	8.551	7	J
8.124-07-2	Octanoic acid	8.631	14	J
9.	Unknown	8.759	22	J
10.	Unknown	8.839	6	J
11.	Unknown	9.016	21	J
12.	Unknown	9.187	6	J
13.	Unknown	9.219	7	J
14.	Unknown	9.326	7	J
15.	Unknown	9.604	13	J
16.	Unknown	10.979	10	J
17.143-07-7	Dodecanoic acid	12.156	7	J
18.57-10-3	n-Hexadecanoic acid	14.482	8	J
19.	Unknown	14.525	15	J
20.	Unknown	21.377	11	J
21.				
22.SVOCTIC	Total SVOC TICs		310	J
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

page 1 of 1

FORM I SV-1

Quality Control Summary

Client Name: ARCADIS U.S., Inc. Group Number: 2072391
Reported: 11/15/2019 14:47

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	LOQ**	MDL
	ug/l	ug/l	ug/l
Batch number: L193183AA	Sample number(s): 1191065		
Acetone	N.D.	20	0.7
Acetonitrile	N.D.	100	16
Benzene	N.D.	1	0.2
Bromochloromethane	N.D.	5	0.2
Bromodichloromethane	N.D.	1	0.2
Bromoform	N.D.	4	1
Bromomethane	N.D.	1	0.3
n-Butanol	N.D.	250	61
2-Butanone	N.D.	10	0.3
t-Butyl alcohol	N.D.	50	12
n-Butylbenzene	N.D.	5	0.2
sec-Butylbenzene	N.D.	5	0.2
tert-Butylbenzene	N.D.	5	0.3
Carbon Disulfide	N.D.	5	0.2
Carbon Tetrachloride	N.D.	1	0.2
Chlorobenzene	N.D.	1	0.2
Chlorodifluoromethane	N.D.	5	2
Chloroethane	N.D.	1	0.2
Chloroform	N.D.	1	0.2
Chloromethane	N.D.	1	0.2
Cyclohexane	N.D.	5	1
Cyclohexanone	N.D.	100	25
1,2-Dibromo-3-chloropropane	N.D.	5	0.3
Dibromochloromethane	N.D.	1	0.2
1,2-Dibromoethane	N.D.	1	0.2
1,2-Dichlorobenzene	N.D.	5	0.2
1,3-Dichlorobenzene	N.D.	5	0.2
1,4-Dichlorobenzene	N.D.	5	0.2
Dichlorodifluoromethane	N.D.	1	0.2
1,1-Dichloroethane	N.D.	1	0.2
1,2-Dichloroethane	N.D.	1	0.3
1,1-Dichloroethene	N.D.	1	0.2
cis-1,2-Dichloroethene	N.D.	1	0.2
trans-1,2-Dichloroethene	N.D.	1	0.2
1,2-Dichloropropane	N.D.	1	0.2
cis-1,3-Dichloropropene	N.D.	1	0.2
trans-1,3-Dichloropropene	N.D.	1	0.2
1,4-Dioxane	N.D.	250	29
Ethyl Acetate	N.D.	5	0.7

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: ARCADIS U.S., Inc.
Reported: 11/15/2019 14:47

Group Number: 2072391

Method Blank (continued)

Analysis Name	Result	LOQ**	MDL
	ug/l	ug/l	ug/l
Ethyl ether	N.D.	5	0.2
Ethylbenzene	N.D.	1	0.4
Freon 113	N.D.	10	0.2
n-Heptane	N.D.	5	2
n-Hexane	N.D.	5	2
2-Hexanone	N.D.	10	0.3
Isobutyl Alcohol	N.D.	250	36
Isopropylbenzene	N.D.	5	0.2
p-Isopropyltoluene	N.D.	5	0.2
Methyl Acetate	N.D.	5	0.2
Methyl Tertiary Butyl Ether	N.D.	1	0.2
4-Methyl-2-pentanone	N.D.	10	0.5
Methylcyclohexane	N.D.	5	0.5
Methylene Chloride	N.D.	1	0.3
Naphthalene	N.D.	5	1
2-Nitropropane	N.D.	10	0.8
Styrene	N.D.	5	0.2
1,1,2,2-Tetrachloroethane	N.D.	1	0.2
Tetrachloroethene	N.D.	1	0.2
Tetrahydrofuran	N.D.	10	0.7
Toluene	N.D.	1	0.2
1,2,3-Trichlorobenzene	N.D.	5	0.4
1,2,4-Trichlorobenzene	N.D.	5	0.3
1,1,1-Trichloroethane	N.D.	1	0.3
1,1,2-Trichloroethane	N.D.	1	0.2
Trichloroethene	N.D.	1	0.2
Trichlorofluoromethane	N.D.	1	0.2
1,2,4-Trimethylbenzene	N.D.	5	1
1,3,5-Trimethylbenzene	N.D.	5	0.3
Vinyl Chloride	N.D.	1	0.2
m+p-Xylene	N.D.	5	1
o-Xylene	N.D.	1	0.4
Xylene (Total)	N.D.	6	1
Batch number: Y193171AA	Sample number(s): 1191061-1191064		
Acetone	N.D.	20	0.7
Acetonitrile	N.D.	100	16
Benzene	N.D.	1	0.2
Bromochloromethane	N.D.	5	0.2
Bromodichloromethane	N.D.	1	0.2
Bromoform	N.D.	4	1
Bromomethane	N.D.	1	0.3
n-Butanol	N.D.	250	61
2-Butanone	N.D.	10	0.3
t-Butyl alcohol	N.D.	50	12

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: ARCADIS U.S., Inc.
Reported: 11/15/2019 14:47

Group Number: 2072391

Method Blank (continued)

Analysis Name	Result	LOQ**	MDL
	ug/l	ug/l	ug/l
n-Butylbenzene	N.D.	5	0.2
sec-Butylbenzene	N.D.	5	0.2
tert-Butylbenzene	N.D.	5	0.3
Carbon Disulfide	N.D.	5	0.2
Carbon Tetrachloride	N.D.	1	0.2
Chlorobenzene	N.D.	1	0.2
Chlorodifluoromethane	N.D.	5	2
Chloroethane	N.D.	1	0.2
Chloroform	N.D.	1	0.2
Chloromethane	N.D.	1	0.2
Cyclohexane	N.D.	5	1
Cyclohexanone	N.D.	100	25
1,2-Dibromo-3-chloropropane	N.D.	5	0.3
Dibromochloromethane	N.D.	1	0.2
1,2-Dibromoethane	N.D.	1	0.2
1,2-Dichlorobenzene	N.D.	5	0.2
1,3-Dichlorobenzene	N.D.	5	0.2
1,4-Dichlorobenzene	N.D.	5	0.2
Dichlorodifluoromethane	N.D.	1	0.2
1,1-Dichloroethane	N.D.	1	0.2
1,2-Dichloroethane	N.D.	1	0.3
1,1-Dichloroethene	N.D.	1	0.2
cis-1,2-Dichloroethene	N.D.	1	0.2
trans-1,2-Dichloroethene	N.D.	1	0.2
1,2-Dichloropropane	N.D.	1	0.2
cis-1,3-Dichloropropene	N.D.	1	0.2
trans-1,3-Dichloropropene	N.D.	1	0.2
1,4-Dioxane	N.D.	250	29
Ethyl Acetate	N.D.	5	0.7
Ethyl ether	N.D.	5	0.2
Ethylbenzene	N.D.	1	0.4
Freon 113	N.D.	10	0.2
n-Heptane	N.D.	5	2
n-Hexane	N.D.	5	2
2-Hexanone	N.D.	10	0.3
Isobutyl Alcohol	N.D.	250	36
Isopropylbenzene	N.D.	5	0.2
p-Isopropyltoluene	N.D.	5	0.2
Methyl Acetate	N.D.	5	0.2
Methyl Tertiary Butyl Ether	N.D.	1	0.2
4-Methyl-2-pentanone	N.D.	10	0.5
Methylcyclohexane	N.D.	5	0.5
Methylene Chloride	N.D.	1	0.3
Naphthalene	N.D.	5	1
2-Nitropropane	N.D.	10	0.8

*- Outside of specification
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Quality Control Summary

Client Name: ARCADIS U.S., Inc. Group Number: 2072391
Reported: 11/15/2019 14:47

Method Blank (continued)

Analysis Name	Result	LOQ**	MDL
	ug/l	ug/l	ug/l
Styrene	N.D.	5	0.2
1,1,2,2-Tetrachloroethane	N.D.	1	0.2
Tetrachloroethene	N.D.	1	0.2
Tetrahydrofuran	N.D.	10	0.7
Toluene	N.D.	1	0.2
1,2,3-Trichlorobenzene	N.D.	5	0.4
1,2,4-Trichlorobenzene	N.D.	5	0.3
1,1,1-Trichloroethane	N.D.	1	0.3
1,1,2-Trichloroethane	N.D.	1	0.2
Trichloroethene	N.D.	1	0.2
Trichlorofluoromethane	N.D.	1	0.2
1,2,4-Trimethylbenzene	N.D.	5	1
1,3,5-Trimethylbenzene	N.D.	5	0.3
Vinyl Chloride	N.D.	1	0.2
m+p-Xylene	N.D.	5	1
o-Xylene	N.D.	1	0.4
Xylene (Total)	N.D.	6	1
Batch number: 19311WAK026	Sample number(s): 1191061-1191065		
Acenaphthene	N.D.	0.50	0.10
Acenaphthylene	N.D.	0.50	0.10
Acetophenone	N.D.	10	4.0
Aniline	N.D.	10	3.0
Anthracene	N.D.	0.50	0.10
Atrazine	N.D.	5.0	2.0
Benzaldehyde	N.D.	10	3.0
Benzo(a)anthracene	N.D.	0.50	0.10
Benzo(a)pyrene	N.D.	0.50	0.10
Benzo(b)fluoranthene	N.D.	0.50	0.10
Benzo(g,h,i)perylene	N.D.	0.50	0.10
Benzo(k)fluoranthene	N.D.	0.50	0.10
Benzyl alcohol	N.D.	30	10
1,1'-Biphenyl	N.D.	10	3.0
4-Bromophenyl-phenylether	N.D.	2.0	0.50
Butylbenzylphthalate	N.D.	5.0	2.0
Di-n-butylphthalate	N.D.	5.0	2.0
Caprolactam	N.D.	11	5.0
Carbazole	N.D.	2.0	0.50
4-Chloro-3-methylphenol	N.D.	2.0	0.50
4-Chloroaniline	N.D.	10	4.0
bis(2-Chloroethoxy)methane	N.D.	2.0	0.50
bis(2-Chloroethyl)ether	N.D.	2.0	0.50
bis(2-Chloroisopropyl)ether	N.D.	2.0	0.50
2-Chloronaphthalene	N.D.	1.0	0.40
2-Chlorophenol	N.D.	2.0	0.50

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Quality Control Summary

Client Name: ARCADIS U.S., Inc. Group Number: 2072391
Reported: 11/15/2019 14:47

Method Blank (continued)

Analysis Name	Result	LOQ**	MDL
	ug/l	ug/l	ug/l
4-Chlorophenyl-phenylether	N.D.	2.0	0.50
Chrysene	N.D.	0.50	0.10
Dibenz(a,h)anthracene	N.D.	0.50	0.10
Dibenzofuran	N.D.	2.0	0.50
3,3'-Dichlorobenzidine	N.D.	10	3.0
2,4-Dichlorophenol	N.D.	2.0	0.50
Dicyclohexylamine	N.D.	10	10
Diethylphthalate	N.D.	5.0	2.0
N,N-Dimethylaniline	N.D.	1.0	0.50
2,4-Dimethylphenol	N.D.	10	3.0
Dimethylphthalate	N.D.	5.0	2.0
4,6-Dinitro-2-methylphenol	N.D.	21	8.0
2,4-Dinitrophenol	N.D.	30	14
2,4-Dinitrotoluene	N.D.	5.0	1.0
2,6-Dinitrotoluene	N.D.	2.0	0.50
bis(2-Ethylhexyl)phthalate	N.D.	11	5.0
Fluoranthene	N.D.	0.50	0.10
Fluorene	N.D.	0.50	0.10
Hexachlorobenzene	N.D.	0.50	0.10
Hexachlorobutadiene	N.D.	2.0	0.50
Hexachlorocyclopentadiene	N.D.	11	5.0
Hexachloroethane	N.D.	5.0	1.0
Indeno(1,2,3-cd)pyrene	N.D.	0.50	0.10
Isophorone	N.D.	2.0	0.50
2-Methylnaphthalene	N.D.	0.50	0.10
2-Methylphenol	N.D.	2.0	0.50
4-Methylphenol	N.D.	2.0	0.50
Naphthalene	N.D.	0.50	0.10
2-Nitroaniline	N.D.	7.0	2.0
3-Nitroaniline	N.D.	7.0	3.0
4-Nitroaniline	N.D.	3.0	0.90
Nitrobenzene	N.D.	2.0	0.50
2-Nitrophenol	N.D.	10	3.0
4-Nitrophenol	N.D.	30	10
N-Nitroso-di-n-propylamine	N.D.	3.0	0.70
N-Nitrosodiphenylamine	N.D.	3.0	0.70
Di-n-octylphthalate	N.D.	11	5.0
Pentachlorophenol	N.D.	5.0	1.0
Phenanthrene	N.D.	0.50	0.10
Phenol	N.D.	2.0	0.50
Pyrene	N.D.	0.50	0.10
Pyridine	N.D.	5.0	2.0
1,2,4,5-Tetrachlorobenzene	N.D.	2.0	0.50
2,3,4,6-Tetrachlorophenol	N.D.	10	4.0
2,4,5-Trichlorophenol	N.D.	2.0	0.50

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Quality Control Summary

Client Name: ARCADIS U.S., Inc. Group Number: 2072391
Reported: 11/15/2019 14:47

Method Blank (continued)

Analysis Name	Result	LOQ**	MDL
	ug/l	ug/l	ug/l
2,4,6-Trichlorophenol	N.D.	2.0	0.50
Triethylamine	N.D.	10	10
Batch number: 193080009A	Sample number(s): 1191061-1191064		
Acetaldehyde	N.D.	60	35
Formaldehyde	N.D.	50	20
Batch number: 193080008A	Sample number(s): 1191061-1191064		
Ethanol	N.D.	1,000	150
Isopropanol	N.D.	1,000	110
Methanol	N.D.	1,000	220
Batch number: 193100032A	Sample number(s): 1191061-1191064		
Ethylene glycol	N.D.	10,000	5,000
Propylene glycol	N.D.	10,000	5,000

LCS/LCSD

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: L193183AA	Sample number(s): 1191065								
Acetone	150	152.35	150	156.15	102	104	54-157	2	30
Acetonitrile	150	158.26	150	156.66	106	104	66-149	1	30
Benzene	20	21.26	20	21.36	106	107	80-120	1	30
Bromochloromethane	20	19.4	20	19.23	97	96	80-120	1	30
Bromodichloromethane	20	19.76	20	19.73	99	99	71-120	0	30
Bromoform	20	14.68	20	14.62	73	73	51-120	0	30
Bromomethane	20	15.65	20	15.89	78	79	53-128	2	30
n-Butanol	1000	962.83	1000	941.67	96	94	57-130	2	30
2-Butanone	150	134.26	150	134.72	90	90	59-135	0	30
t-Butyl alcohol	200	179.96	200	186.55	90	93	60-130	4	30
n-Butylbenzene	20	20.06	20	20.55	100	103	76-120	2	30
sec-Butylbenzene	20	21.15	20	21.49	106	107	77-120	2	30
tert-Butylbenzene	20	20.96	20	21.09	105	105	78-120	1	30
Carbon Disulfide	20	17.58	20	17.49	88	87	65-128	1	30
Carbon Tetrachloride	20	19.05	20	19.38	95	97	64-134	2	30
Chlorobenzene	20	21.05	20	20.96	105	105	80-120	0	30
Chlorodifluoromethane	20	22.03	20	21.55	110	108	45-149	2	30
Chloroethane	20	16.95	20	17.08	85	85	55-123	1	30
Chloroform	20	20.71	20	20.69	104	103	80-120	0	30
Chloromethane	20	18.07	20	17.83	90	89	56-121	1	30
Cyclohexane	20	18.57	20	18.87	93	94	68-126	2	30

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Quality Control Summary

Client Name: ARCADIS U.S., Inc. Group Number: 2072391
Reported: 11/15/2019 14:47

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Cyclohexanone	500	515.97	500	515.46	103	103	27-141	0	30
1,2-Dibromo-3-chloropropane	20	17.06	20	16.9	85	84	47-131	1	30
Dibromochloromethane	20	18.43	20	18.31	92	92	71-120	1	30
1,2-Dibromoethane	20	20.39	20	20.17	102	101	77-120	1	30
1,2-Dichlorobenzene	20	20.8	20	20.88	104	104	80-120	0	30
1,3-Dichlorobenzene	20	20.83	20	20.81	104	104	80-120	0	30
1,4-Dichlorobenzene	20	20.9	20	20.93	105	105	80-120	0	30
Dichlorodifluoromethane	20	14.91	20	15.09	75	75	41-127	1	30
1,1-Dichloroethane	20	20.44	20	20.49	102	102	80-120	0	30
1,2-Dichloroethane	20	19.92	20	20.22	100	101	73-124	2	30
1,1-Dichloroethene	20	20.82	20	20.96	104	105	80-131	1	30
cis-1,2-Dichloroethene	20	21.95	20	21.76	110	109	80-125	1	30
trans-1,2-Dichloroethene	20	20.45	20	20.51	102	103	80-126	0	30
1,2-Dichloropropane	20	21.4	20	21.55	107	108	80-120	1	30
cis-1,3-Dichloropropene	20	19.59	20	20.07	98	100	75-120	2	30
trans-1,3-Dichloropropene	20	18.23	20	18.41	91	92	67-120	1	30
1,4-Dioxane	500	574.71	500	584.38	115	117	63-146	2	30
Ethyl Acetate	20	20.46	20	20	102	100	67-131	2	30
Ethyl ether	20	20.75	20	20.64	104	103	59-141	1	30
Ethylbenzene	20	21.12	20	21.05	106	105	80-120	0	30
Freon 113	20	18.32	20	18.27	92	91	73-139	0	30
n-Heptane	20	18.58	20	18.63	93	93	56-133	0	30
n-Hexane	20	18.81	20	19.19	94	96	61-138	2	30
2-Hexanone	100	89.09	100	89.25	89	89	56-135	0	30
Isobutyl Alcohol	500	489.8	500	483.66	98	97	61-136	1	30
Isopropylbenzene	20	21.47	20	21.34	107	107	80-120	1	30
p-Isopropyltoluene	20	21.17	20	21.29	106	106	76-120	1	30
Methyl Acetate	20	18.58	20	18.75	93	94	54-136	1	30
Methyl Tertiary Butyl Ether	20	17.09	20	17.32	85	87	69-122	1	30
4-Methyl-2-pentanone	100	91.01	100	91.74	91	92	62-133	1	30
Methylcyclohexane	20	19.6	20	19.61	98	98	67-121	0	30
Methylene Chloride	20	21.27	20	21.28	106	106	80-120	0	30
Naphthalene	20	19.6	20	19.68	98	98	53-124	0	30
2-Nitropropane	20	12.73	20	13.38	64	67	19-144	5	30
Styrene	20	21.19	20	20.99	106	105	80-120	1	30
1,1,2,2-Tetrachloroethane	20	20.33	20	19.88	102	99	72-120	2	30
Tetrachloroethene	20	20.9	20	21.01	104	105	80-120	1	30
Tetrahydrofuran	100	113.12	100	115.25	113	115	54-144	2	30
Toluene	20	21.13	20	21.17	106	106	80-120	0	30
1,2,3-Trichlorobenzene	20	18.8	20	19.18	94	96	66-120	2	30
1,2,4-Trichlorobenzene	20	18.85	20	19.19	94	96	63-120	2	30
1,1,1-Trichloroethane	20	19.87	20	20.25	99	101	67-126	2	30
1,1,2-Trichloroethane	20	20.86	20	21.07	104	105	80-120	1	30
Trichloroethene	20	21.41	20	21.36	107	107	80-120	0	30

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Quality Control Summary

Client Name: ARCADIS U.S., Inc. Group Number: 2072391
Reported: 11/15/2019 14:47

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Trichlorofluoromethane	20	18.57	20	18.96	93	95	55-135	2	30
1,2,4-Trimethylbenzene	20	20.75	20	20.74	104	104	75-120	0	30
1,3,5-Trimethylbenzene	20	21.19	20	21.3	106	107	75-120	1	30
Vinyl Chloride	20	18.18	20	18.12	91	91	56-120	0	30
m+p-Xylene	40	42.75	40	42.77	107	107	80-120	0	30
o-Xylene	20	21.08	20	20.78	105	104	80-120	1	30
Xylene (Total)	60	63.83	60	63.56	106	106	80-120	0	30
Batch number: Y193171AA	Sample number(s): 1191061-1191064								
Acetone	150	200.94	150	200.24	134	133	54-157	0	30
Acetonitrile	150	187.78	150	191.33	125	128	66-149	2	30
Benzene	20	22.93	20	22.98	115	115	80-120	0	30
Bromochloromethane	20	18.86	20	18.71	94	94	80-120	1	30
Bromodichloromethane	20	20.61	20	20.75	103	104	71-120	1	30
Bromoform	20	18.85	20	19.04	94	95	51-120	1	30
Bromomethane	20	11.17	20	11.11	56	56	53-128	1	30
n-Butanol	1000	1287.85	1000	1285.18	129	129	57-130	0	30
2-Butanone	150	148.68	150	149.72	99	100	59-135	1	30
t-Butyl alcohol	200	211.16	200	214.9	106	107	60-130	2	30
n-Butylbenzene	20	24.08	20	23.95	120	120	76-120	1	30
sec-Butylbenzene	20	24.28	20	24.16	121*	121*	77-120	0	30
tert-Butylbenzene	20	22.35	20	22.51	112	113	78-120	1	30
Carbon Disulfide	20	20.09	20	20.15	100	101	65-128	0	30
Carbon Tetrachloride	20	17.71	20	17.61	89	88	64-134	1	30
Chlorobenzene	20	22.05	20	22.12	110	111	80-120	0	30
Chlorodifluoromethane	20	18.85	20	18.7	94	93	45-149	1	30
Chloroethane	20	12.19	20	12.24	61	61	55-123	0	30
Chloroform	20	21.17	20	21.05	106	105	80-120	1	30
Chloromethane	20	12.37	20	12.29	62	61	56-121	1	30
Cyclohexane	20	21.15	20	21.16	106	106	68-126	0	30
Cyclohexanone	500	482.47	500	478.56	96	96	27-141	1	30
1,2-Dibromo-3-chloropropane	20	19.51	20	19.63	98	98	47-131	1	30
Dibromochloromethane	20	20.23	20	20.26	101	101	71-120	0	30
1,2-Dibromoethane	20	22.2	20	22.22	111	111	77-120	0	30
1,2-Dichlorobenzene	20	22.72	20	22.76	114	114	80-120	0	30
1,3-Dichlorobenzene	20	23.02	20	23.21	115	116	80-120	1	30
1,4-Dichlorobenzene	20	23.2	20	23.11	116	116	80-120	0	30
Dichlorodifluoromethane	20	8.85	20	8.95	44	45	41-127	1	30
1,1-Dichloroethane	20	22.08	20	22.11	110	111	80-120	0	30
1,2-Dichloroethane	20	19.39	20	19.52	97	98	73-124	1	30
1,1-Dichloroethene	20	22.89	20	22.67	114	113	80-131	1	30
cis-1,2-Dichloroethene	20	23.24	20	23.39	116	117	80-125	1	30
trans-1,2-Dichloroethene	20	22.06	20	22.2	110	111	80-126	1	30
1,2-Dichloropropane	20	23.87	20	24.11	119	121*	80-120	1	30

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Quality Control Summary

Client Name: ARCADIS U.S., Inc.
Reported: 11/15/2019 14:47

Group Number: 2072391

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
cis-1,3-Dichloropropene	20	21.4	20	21.66	107	108	75-120	1	30
trans-1,3-Dichloropropene	20	20.83	20	20.99	104	105	67-120	1	30
1,4-Dioxane	500	734.42	500	728.3	147*	146	63-146	1	30
Ethyl Acetate	20	21.67	20	20.9	108	104	67-131	4	30
Ethyl ether	20	20.14	20	20.11	101	101	59-141	0	30
Ethylbenzene	20	23.21	20	23.21	116	116	80-120	0	30
Freon 113	20	19.84	20	19.75	99	99	73-139	0	30
n-Heptane	20	21.43	20	21.53	107	108	56-133	0	30
n-Hexane	20	22.36	20	22.42	112	112	61-138	0	30
2-Hexanone	100	104.56	100	105.87	105	106	56-135	1	30
Isobutyl Alcohol	500	653	500	652.18	131	130	61-136	0	30
Isopropylbenzene	20	22.37	20	22.37	112	112	80-120	0	30
p-Isopropyltoluene	20	23.35	20	23.33	117	117	76-120	0	30
Methyl Acetate	20	20.5	20	20.81	103	104	54-136	1	30
Methyl Tertiary Butyl Ether	20	16.84	20	16.87	84	84	69-122	0	30
4-Methyl-2-pentanone	100	100.47	100	101.68	100	102	62-133	1	30
Methylcyclohexane	20	20.26	20	20.27	101	101	67-121	0	30
Methylene Chloride	20	23.53	20	23.56	118	118	80-120	0	30
Naphthalene	20	22.08	20	22.14	110	111	53-124	0	30
2-Nitropropane	20	14.01	20	14.23	70	71	19-144	2	30
Styrene	20	23.34	20	23.28	117	116	80-120	0	30
1,1,2,2-Tetrachloroethane	20	24.5	20	24.45	122*	122*	72-120	0	30
Tetrachloroethene	20	21.02	20	20.87	105	104	80-120	1	30
Tetrahydrofuran	100	129.34	100	129.25	129	129	54-144	0	30
Toluene	20	23.29	20	23.31	116	117	80-120	0	30
1,2,3-Trichlorobenzene	20	21.24	20	21.19	106	106	66-120	0	30
1,2,4-Trichlorobenzene	20	21.38	20	21.2	107	106	63-120	1	30
1,1,1-Trichloroethane	20	18.83	20	18.78	94	94	67-126	0	30
1,1,2-Trichloroethane	20	23.71	20	23.53	119	118	80-120	1	30
Trichloroethene	20	21.32	20	21.44	107	107	80-120	1	30
Trichlorofluoromethane	20	12.17	20	12.05	61	60	55-135	1	30
1,2,4-Trimethylbenzene	20	23.21	20	23.19	116	116	75-120	0	30
1,3,5-Trimethylbenzene	20	23.65	20	23.59	118	118	75-120	0	30
Vinyl Chloride	20	13.35	20	13.34	67	67	56-120	0	30
m+p-Xylene	40	45.52	40	45.5	114	114	80-120	0	30
o-Xylene	20	22.36	20	22.46	112	112	80-120	0	30
Xylene (Total)	60	67.88	60	67.96	113	113	80-120	0	30
	ug/l	**ug/l**	**ug/l**	**ug/l**					
Batch number: 19311WAK026	Sample number(s): 1191061-1191065								
Acenaphthene	50	40.68			81		52-114		
Acenaphthylene	50	41.46			83		57-121		
Acetophenone	50	38.76			78		61-114		
Aniline	50	30.62			61		35-84		

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: ARCADIS U.S., Inc. Group Number: 2072391
Reported: 11/15/2019 14:47

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Anthracene	50	48.68			97		62-116		
Atrazine	50	48.01			96		71-133		
Benzaldehyde	50	40.5			81		48-118		
Benzo(a)anthracene	50	49.94			100		70-118		
Benzo(a)pyrene	50	47.62			95		71-117		
Benzo(b)fluoranthene	50	47.26			95		71-115		
Benzo(g,h,i)perylene	50	51.51			103		60-119		
Benzo(k)fluoranthene	50	47.64			95		71-116		
Benzyl alcohol	50	41.74			83		58-121		
1,1'-Biphenyl	50	39.33			79		51-112		
4-Bromophenyl-phenylether	50	45.62			91		53-117		
Butylbenzylphthalate	50	36.85			74		44-124		
Di-n-butylphthalate	50	41.52			83		62-118		
Caprolactam	50	11.96			24		10-57		
Carbazole	50	45.67			91		64-127		
4-Chloro-3-methylphenol	50	44.2			88		60-118		
4-Chloroaniline	50	35.35			71		35-108		
bis(2-Chloroethoxy)methane	50	41.73			83		53-119		
bis(2-Chloroethyl)ether	50	37.81			76		49-110		
bis(2-Chloroisopropyl)ether	50	38.3			77		33-119		
2-Chloronaphthalene	50	38.69			77		42-111		
2-Chlorophenol	50	39.76			80		52-109		
4-Chlorophenyl-phenylether	50	42.78			86		46-113		
Chrysene	50	46.09			92		69-116		
Dibenz(a,h)anthracene	50	51.75			103		68-121		
Dibenzofuran	50	42.3			85		53-114		
3,3'-Dichlorobenzidine	50	31.66			63		42-107		
2,4-Dichlorophenol	50	43.74			87		58-114		
Dicyclohexylamine	50	38.73	50	33.52	77*	67	22-75	14	30
Diethylphthalate	50	34.81			70		48-113		
N,N-Dimethylaniline	25	20.82	25	18.58	83	74	59-114	11	30
2,4-Dimethylphenol	50	34.33			69		48-91		
Dimethylphthalate	50	22.68			45		14-123		
4,6-Dinitro-2-methylphenol	50	63.51			127		63-129		
2,4-Dinitrophenol	100	106.44			106		44-134		
2,4-Dinitrotoluene	50	45.26			91		69-117		
2,6-Dinitrotoluene	50	44.84			90		63-122		
bis(2-Ethylhexyl)phthalate	50	46.86			94		68-120		
Fluoranthene	50	46.82			94		63-122		
Fluorene	50	42.84			86		56-115		
Hexachlorobenzene	50	49.18			98		60-117		
Hexachlorobutadiene	50	31.71			63		20-108		
Hexachlorocyclopentadiene	100	45.23			45		10-91		
Hexachloroethane	50	27.99			56		23-95		

*- Outside of specification
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(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: ARCADIS U.S., Inc. Group Number: 2072391
Reported: 11/15/2019 14:47

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Indeno(1,2,3-cd)pyrene	50	49.52			99		63-114		
Isophorone	50	40.91			82		56-120		
2-Methylnaphthalene	50	39.48			79		44-111		
2-Methylphenol	50	39.13			78		53-107		
4-Methylphenol	50	38.45			77		49-108		
Naphthalene	50	39.35			79		45-105		
2-Nitroaniline	50	44.96			90		66-126		
3-Nitroaniline	50	39.9			80		47-119		
4-Nitroaniline	50	38.05			76		45-107		
Nitrobenzene	50	40.65			81		49-113		
2-Nitrophenol	50	46.86			94		57-116		
4-Nitrophenol	50	26.27			53		23-89		
N-Nitroso-di-n-propylamine	50	39.79			80		51-122		
N-Nitrosodiphenylamine	50	43.47			87		63-119		
Di-n-octylphthalate	50	45.89			92		67-120		
Pentachlorophenol	50	55.12			110		54-131		
Phenanthrene	50	48.13			96		65-113		
Phenol	50	23.36			47		19-79		
Pyrene	50	44.94			90		65-115		
Pyridine	50	20.24			40		13-83		
1,2,4,5-Tetrachlorobenzene	50	36.03			72		33-105		
2,3,4,6-Tetrachlorophenol	50	51.81			104		68-118		
2,4,5-Trichlorophenol	50	47.22			94		66-118		
2,4,6-Trichlorophenol	50	46.96			94		69-122		
Triethylamine	50	17.47	50	12.94	35	26	10-88	30	30
	ug/l	**ug/l**	**ug/l**	**ug/l**					
Batch number: 193080009A	Sample number(s): 1191061-1191064								
Acetaldehyde	500	399.05	500	398.21	80	80	76-119	0	30
Formaldehyde	500	504.08	500	505.62	101	101	77-122	0	30
	ug/l	**ug/l**	**ug/l**	**ug/l**					
Batch number: 193080008A	Sample number(s): 1191061-1191064								
Ethanol	2501	2251.83			90		80-115		
Isopropanol	2505	2434.08			97		85-115		
Methanol	2503	2363.84			94		79-120		
Batch number: 193100032A	Sample number(s): 1191061-1191064								
Ethylene glycol	102783.4	98750.18			96		69-118		
Propylene glycol	98902.99	94680.98			96		60-121		

*- Outside of specification
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(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: ARCADIS U.S., Inc. Group Number: 2072391
Reported: 11/15/2019 14:47

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs- 5ml Water by 8260C/D
Batch number: L193183AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
1191065	95	99	98	97
Blank	93	99	97	97
LCS	95	100	99	99
LCSD	95	101	98	98
Limits:	80-120	80-120	80-120	80-120

Analysis Name: VOCs- 5ml Water by 8260C/D
Batch number: Y193171AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
1191061	89	97	98	96
1191062	89	96	98	95
1191063	89	98	98	95
1191064	89	95	97	95
Blank	88	95	98	95
LCS	89	96	99	98
LCSD	89	98	99	99
Limits:	80-120	80-120	80-120	80-120

Analysis Name: Semi-annual Groundwater BMS
Batch number: 19311WAK026

	Phenol-d6	2-Fluorophenol	2,4,6-Tribromophenol	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14
1191061	35	51	70	77	74	81
1191062	33	46	71	72	70	82
1191063	34	48	90	77	75	84
1191064	35	48	78	82	86	89
1191065	34	50	88	79	77	84
Blank	34	51	95	82	83	93
LCS	41	57	96	79	79	90
LCSD	44	59	87	75	71	84
Limits:	10-67	10-84	23-135	33-113	44-102	39-125

Analysis Name: Short List Aldehydes- W 8315A
Batch number: 193080009A

	Butyraldehyde
1191061	104
1191062	98
1191063	99

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: ARCADIS U.S., Inc. Group Number: 2072391
Reported: 11/15/2019 14:47

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: Short List Aldehydes- W 8315A
Batch number: 193080009A

	Butyraldehyde
1191064	101
Blank	95
LCS	102
LCSD	101
Limits:	39-153

Analysis Name: Alcohols in Water
Batch number: 193080008A

	Acetone-D1	Acetone-D2
1191061	90	93
1191062	91	95
1191063	90	95
1191064	98	94
Blank	100	102
LCS	102	101
Limits:	58-149	58-149

Analysis Name: Glycols in Water by 8015C/D
Batch number: 193100032A

	Tetramethylene glycol
1191061	33
1191062	27
1191063	32
1191064	24
Blank	54
LCS	90
Limits:	22-129

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Environmental Analysis Request/Chain of Custody

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For Eurofins Lancaster Laboratories Environmental use only

Acct. # 3074 Group # 2072391 Sample # 191061-65

COC # 594283

Client Information

Client: Arcadis

Acct. #:

Project Name/#: B/S Syracuse / 30033896

PWSID #:

Project Manager: Bill McCune

P.O. #:

Sampler: A. George, J. Sinay, E. Green

Quote #:

State where samples were collected: NY

For Compliance: Yes ☐ No ☐

Matrix

Soil ☐ Sediment ☐ Tissue ☐ Water ☒ Potable ☐ Ground ☐ NPDES ☐ Surface ☐ Other: ____

Analysis Requested

Preservation and Filtration Codes

For Lab Use Only

FSC:

SCR#: 250997

Preservation Codes

H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 P=H_3PO_4
F=Field Filtered O=Other

Remarks

Syracuse #225

Sample Identification	Collected Date	Collected Time	Grab	Composite	Total # of Containers	VOCs 8260C	SVOCs 8270D	Calvels 8015C	Alcohols	Methylos 8315A
BDA-12RX	11/1/19	1020	X		10	X	X	X	X	X
BDA-12T	11/1/19	1140	X		10	X	X	X	X	X
BDA-8WT	11/1/19	1000	X		10	X	X	X	X	X
BDA-8RX	11/1/19	1140	X		10	X	X	X	X	X
CHP-43RX	11/1/19	1027	X		5	X	X			
Trip blank	10/23/19		X		4	X		X	X	
RE 11-1-19										

Turnaround Time (TAT) Requested (please circle)

Standard Rush

(Rush TAT is subject to laboratory approval and surcharge.)

Requested TAT in business days: ____

E-mail address: William.McCune@arcadis.com

Data Package Options (circle if required)

Type I (EPA Level 3 Equivalent/non-CLP) Type VI (Raw Data Only)

Type III (Reduced non-CLP) NJ DKQP TX TRRP-13

NYSDEC Category A or B MA MCP CT RCP

Relinquished by	Date	Time	Received by	Date	Time
[signature]	10-23-19	1050			
Josh Sinay	11/1/19	1400	R. English EDF Sys	11-1-19	14:00
R. English	11-1-19	19:00			
			[signature]	11/2/19	09:59

EDD Required? Yes No

If yes, format: Arcadis

Site-Specific QC (MS/MSD/Dup)? Yes No

(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier: UPS ____ FedEx X Other ____

Temperature upon receipt 3.8 °C

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Sample Administration Receipt Documentation Log

Doc Log ID: 265001

Group Number(s): 2072391

Client: ARCADIS

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Date:	11/02/2019
Number of Packages:	1	Number of Projects:	1
State/Province of Origin:	New York		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	No	Sample Date/Times match COC:	Yes
Samples Chilled:	Yes	Total Trip Blank Qty:	0
Paperwork Enclosed:	Yes	Air Quality Samples Present:	No
Samples Intact:	Yes		
Missing Samples:	Yes		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Julissa Rivera-Santa

Samples Chilled Details

Thermometer Types: *DT = Digital (Temp. Bottle)* *IR = Infrared (Surface Temp)* *All Temperatures in °C.*

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	192050133	3.8	IR	Wet	Y	Loose	N

Missing Sample Details

Sample ID on COC	Comments
TRIPBLANK	

2425 New Holland Pike
Lancaster, PA 17605-2425
T | 717-656-2300
F | 717-656-2681
www.LancasterLabs.com

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mL**	milliliter(s)
C	degrees Celsius	**MPN**	Most Probable Number
cfu	colony forming units	**N.D.**	non-detect
CP Units	cobalt-chloroplatinate units	**ng**	nanogram(s)
F	degrees Fahrenheit	**NTU**	nephelometric turbidity units
g	gram(s)	**pg/L**	picogram/liter
IU	International Units	**RL**	Reporting Limit
kg	kilogram(s)	**TNTC**	Too Numerous To Count
L	liter(s)	**µg**	microgram(s)
lb.	pound(s)	**µL**	microliter(s)
m3	cubic meter(s)	**umhos/cm**	micromhos/cm
meq	milliequivalents	**MCL**	Maximum Contamination Limit
mg	milligram(s)		

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

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Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
P^	Concentration difference between the primary and confirmation column > 40%. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

Pace Analytical Energy Services LLC
220 William Pitt Way
Pittsburgh, PA 15238
Phone: (412) 826-5245
Fax: (412) 826-3433

November 11, 2019

Clint Catania
Arcadis
110 W Fayette St
Suite 300
Syracuse, NY 13202

RE: **BMS SYRACUSE / 30033396**

Pace Workorder: 32006

Dear Clint Catania:

Enclosed are the analytical results for sample(s) received by the laboratory on Monday, November 04, 2019. Results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Emma Louis 11/11/2019
Emma.Louis@pacelabs.com

Customer Service Representative

Enclosures

As a valued client we would appreciate your comments on our service.
Please email PAESfeedback@pacelabs.com.

Total Number of Pages 19

CERTIFICATE OF ANALYSIS

This report shall not be reproduced, except in full,
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Pace Analytical Energy Services LLC
220 William Pitt Way
Pittsburgh, PA 15238
Phone: (412) 826-5245
Fax: (412) 826-3433

LABORATORY ACCREDITATIONS & CERTIFICATIONS

Accreditor:	Pennsylvania Department of Environmental Protection, Bureau of Laboratories
Accreditation ID:	02-00538
Scope:	NELAP Non-Potable Water
Accreditor:	West Virginia Department of Environmental Protection, Division of Water and Waste Management
Accreditation ID:	395
Scope:	Non-Potable Water
Accreditor:	South Carolina Department of Health and Environmental Control, Office of Environmental Laboratory Certification
Accreditation ID:	89009003
Scope:	Clean Water Act (CWA); Resource Conservation and Recovery Act (RCRA)
Accreditor:	State of Virginia
Accreditation ID:	460201
Scope:	Non-Potable Water
Accreditor:	NELAP: New Jersey, Department of Environmental Protection
Accreditation ID:	PA026
Scope:	Non-Potable Water
Accreditor:	NELAP: New York, Department of Health Wadsworth Center
Accreditation ID:	11815
Scope:	Non-Potable Water
Accreditor:	State of Connecticut, Department of Public Health, Division of Environmental Health
Accreditation ID:	PH-0263
Scope:	Clean Water Act (CWA) Resource Conservation and Recovery Act (RCRA)
Accreditor:	NELAP: Texas, Commission on Environmental Quality
Accreditation ID:	T104704453-09-TX
Scope:	Non-Potable Water
Accreditor:	State of New Hampshire
Accreditation ID:	299409
Scope:	Non-potable water
Accreditor:	State of Georgia
Accreditation ID:	Chapter 391-3-26
Scope:	As per the Georgia EPD Rules and Regulations for Commercial Laboratories, PAES is accredited by the Pennsylvania Department of Environmental Protection Bureau of Laboratories under the National Environmental Laboratory Approval Program (NELAC).

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220 William Pitt Way
Pittsburgh, PA 15238
Phone: (412) 826-5245
Fax: (412) 826-3433

SAMPLE SUMMARY

Workorder: 32006 BMS SYRACUSE / 30033396

Lab ID	Sample ID	Matrix	Date Collected	Date Received
320060001	BDA-14RX	Water	10/29/2019 11:05	11/4/2019 13:35
320060002	BDA-17RX	Water	10/29/2019 14:45	11/4/2019 13:35
320060003	BDA-17T	Water	10/29/2019 11:10	11/4/2019 13:35
320060004	BDA-17WT	Water	10/29/2019 11:48	11/4/2019 13:35
320060005	BDA-17WT MS	Water	10/29/2019 11:48	11/4/2019 13:35
320060006	BDA-17WT MSD	Water	10/29/2019 11:48	11/4/2019 13:35
320060007	BDA-17WR	Water	10/29/2019 15:40	11/4/2019 13:35
320060008	DUP-102919	Water	10/29/2019 00:00	11/4/2019 13:35

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Pace Analytical Energy Services LLC
220 William Pitt Way
Pittsburgh, PA 15238
Phone: (412) 826-5245
Fax: (412) 826-3433

PROJECT SUMMARY

Workorder: 32006 BMS SYRACUSE / 30033396

Batch Comments

Batch: DISG/7901 - AM20GAX Water QC

The matrix spike and/or spike duplicate, recovery or relative percent difference; accuracy influenced by the reference sample 320060004. Analyte Methane. Batch acceptance based on laboratory control sample recovery.

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ANALYTICAL RESULTS

Workorder: 32006 BMS SYRACUSE / 30033396

Lab ID: **320060001** Date Received: 11/4/2019 13:35 Matrix: Water

Sample ID: **BDA-14RX** Date Collected: 10/29/2019 11:05

Parameters	Results	Units	PQL	MDL	DF	Analyzed	By	Qualifiers
RISK - PAES								
Analysis Desc: AM20GAX		Analytical Method: AM20GAX						
Methane	**38**	ug/l	0.50	0.046	1	11/8/2019 09:33	BW	n,M5
Ethane	**0.12**	ug/l	0.10	0.0050	1	11/8/2019 09:33	BW	n
Ethene	**0.068J**	ug/l	0.10	0.0040	1	11/8/2019 09:33	BW	n
Acetylene	**0.50 U**	ug/l	0.50	0.019	1	11/8/2019 09:33	BW	n

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ANALYTICAL RESULTS

Workorder: 32006 BMS SYRACUSE / 30033396

Lab ID: **320060002** Date Received: 11/4/2019 13:35 Matrix: Water

Sample ID: **BDA-17RX** Date Collected: 10/29/2019 14:45

Parameters	Results	Units	PQL	MDL	DF	Analyzed	By	Qualifiers
RISK - PAES								
Analysis Desc: AM20GAX		Analytical Method: AM20GAX						
Methane	**180**	ug/l	0.50	0.046	1	11/8/2019 09:46	BW	n,M5
Ethane	**1.7**	ug/l	0.10	0.0050	1	11/8/2019 09:46	BW	n
Ethene	**0.029J**	ug/l	0.10	0.0040	1	11/8/2019 09:46	BW	n
Acetylene	**0.50 U**	ug/l	0.50	0.019	1	11/8/2019 09:46	BW	n

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ANALYTICAL RESULTS

Workorder: 32006 BMS SYRACUSE / 30033396

Lab ID: **320060003** Date Received: 11/4/2019 13:35 Matrix: Water

Sample ID: **BDA-17T** Date Collected: 10/29/2019 11:10

Parameters	Results	Units	PQL	MDL	DF	Analyzed	By	Qualifiers
RISK - PAES								
Analysis Desc: AM20GAX		Analytical Method: AM20GAX						
Methane	**5.1**	ug/l	0.50	0.046	1	11/8/2019 10:57	BW	n,M5
Ethane	**0.65**	ug/l	0.10	0.0050	1	11/8/2019 10:57	BW	n
Ethene	**0.24**	ug/l	0.10	0.0040	1	11/8/2019 10:57	BW	n
Acetylene	**0.50 U**	ug/l	0.50	0.019	1	11/8/2019 10:57	BW	n

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ANALYTICAL RESULTS

Workorder: 32006 BMS SYRACUSE / 30033396

Lab ID: **320060004** Date Received: 11/4/2019 13:35 Matrix: Water

Sample ID: **BDA-17WT** Date Collected: 10/29/2019 11:48

Parameters	Results	Units	PQL	MDL	DF	Analyzed	By	Qualifiers
RISK - PAES								
Analysis Desc: AM20GAX		Analytical Method: AM20GAX						
Methane	**29**	ug/l	0.50	0.046	1	11/8/2019 11:10	BW	n,M5
Ethane	**0.48**	ug/l	0.10	0.0050	1	11/8/2019 11:10	BW	n
Ethene	**0.23**	ug/l	0.10	0.0040	1	11/8/2019 11:10	BW	n
Acetylene	**0.50 U**	ug/l	0.50	0.019	1	11/8/2019 11:10	BW	n

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ANALYTICAL RESULTS

Workorder: 32006 BMS SYRACUSE / 30033396

Lab ID: **320060005** Date Received: 11/4/2019 13:35 Matrix: Water

Sample ID: **BDA-17WT MS** Date Collected: 10/29/2019 11:48

Parameters	Results	Units	PQL	MDL	DF	Analyzed	By	Qualifiers
RISK - PAES								
Analysis Desc: AM20GAX		Analytical Method: AM20GAX						
Methane	**79**	ug/l	0.50	0.046	1	11/8/2019 11:23	BW	M5,n
Ethane	**80**	ug/l	0.10	0.0050	1	11/8/2019 11:23	BW	n
Ethene	**74**	ug/l	0.10	0.0040	1	11/8/2019 11:23	BW	n
Acetylene	**37**	ug/l	0.50	0.019	1	11/8/2019 11:23	BW	n

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ANALYTICAL RESULTS

Workorder: 32006 BMS SYRACUSE / 30033396

Lab ID: **320060006** Date Received: 11/4/2019 13:35 Matrix: Water

Sample ID: **BDA-17WT MSD** Date Collected: 10/29/2019 11:48

Parameters	Results	Units	PQL	MDL	DF	Analyzed	By	Qualifiers
RISK - PAES								
Analysis Desc: AM20GAX		Analytical Method: AM20GAX						
Methane	**85**	ug/l	0.50	0.046	1	11/8/2019 11:37	BW	M5,n
Ethane	**78**	ug/l	0.10	0.0050	1	11/8/2019 11:37	BW	n
Ethene	**71**	ug/l	0.10	0.0040	1	11/8/2019 11:37	BW	n
Acetylene	**35**	ug/l	0.50	0.019	1	11/8/2019 11:37	BW	n

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ANALYTICAL RESULTS

Workorder: 32006 BMS SYRACUSE / 30033396

Lab ID: **320060007** Date Received: 11/4/2019 13:35 Matrix: Water

Sample ID: **BDA-17WR** Date Collected: 10/29/2019 15:40

Parameters	Results	Units	PQL	MDL	DF	Analyzed	By	Qualifiers
RISK - PAES								
Analysis Desc: AM20GAX		Analytical Method: AM20GAX						
Methane	**9.3**	ug/l	0.50	0.046	1	11/8/2019 11:51	BW	M5,n
Ethane	**1.5**	ug/l	0.10	0.0050	1	11/8/2019 11:51	BW	n
Ethene	**1.0**	ug/l	0.10	0.0040	1	11/8/2019 11:51	BW	n
Acetylene	**0.50 U**	ug/l	0.50	0.019	1	11/8/2019 11:51	BW	n

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ANALYTICAL RESULTS

Workorder: 32006 BMS SYRACUSE / 30033396

Lab ID: **320060008** Date Received: 11/4/2019 13:35 Matrix: Water

Sample ID: **DUP-102919** Date Collected: 10/29/2019 00:00

Parameters	Results	Units	PQL	MDL	DF	Analyzed	By	Qualifiers
RISK - PAES								
Analysis Desc: AM20GAX		Analytical Method: AM20GAX						
Methane	**5.2**	ug/l	0.50	0.046	1	11/8/2019 12:05	BW	M5,n
Ethane	**0.64**	ug/l	0.10	0.0050	1	11/8/2019 12:05	BW	n
Ethene	**0.24**	ug/l	0.10	0.0040	1	11/8/2019 12:05	BW	n
Acetylene	**0.50 U**	ug/l	0.50	0.019	1	11/8/2019 12:05	BW	n

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ANALYTICAL RESULTS QUALIFIERS

Workorder: 32006 BMS SYRACUSE / 30033396

DEFINITIONS/QUALIFIERS

MDL	Method Detection Limit. Can be used synonymously with LOD; Limit Of Detection.
PQL	Practical Quanitation Limit. Can be used synonymously with LOQ; Limit Of Quantitation.
ND	Not detected at or above reporting limit.
DF	Dilution Factor.
S	Surrogate.
RPD	Relative Percent Difference.
% Rec	Percent Recovery.
U	Indicates the compound was analyzed for, but not detected at or above the noted concentration.
J	Estimated concentration greater than the set method detection limit (MDL) and less than the set reporting limit (PQL).
n	The laboratory does not hold NELAP/TNI accreditation for this method or analyte.
M5	The matrix spike duplicate sample recovery was outside laboratory control limits.

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QUALITY CONTROL DATA

Workorder: 32006 BMS SYRACUSE / 30033396

QC Batch: DISG/7901 Analysis Method: AM20GAX

QC Batch Method: AM20GAX

Associated Lab Samples: 320060001, 320060002, 320060003, 320060004, 320060005, 320060006, 320060007, 320060008

METHOD BLANK: 64221

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
RISK				
Methane	ug/l	0.50 U	0.50	n,M5
Ethane	ug/l	0.10 U	0.10	n
Ethene	ug/l	0.10 U	0.10	n
Acetylene	ug/l	0.50 U	0.50	n

LABORATORY CONTROL SAMPLE & LCSD: 64223 64225

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
Methane	ug/l	750	780	760	105	102	80-120	2.2	20	M5,n
Ethane	ug/l	38	40	39	106	103	80-120	2.8	20	n
Ethene	ug/l	35	38	36	106	103	80-120	2.9	20	n
Acetylene	ug/l	33	34	32	102	98	80-120	4.6	20	n

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 64251 64252 Original: 320060004

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
RISK											
Methane	ug/l	29	40	79	85	122	138	70-130	7.7	20	n,M5
Ethane	ug/l	0.48	76	80	78	105	102	70-130	3.4	20	n
Ethene	ug/l	0.23	71	74	71	105	101	70-130	4.2	20	n
Acetylene	ug/l	0	33	37	35	114	106	70-130	7	20	n

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QUALITY CONTROL DATA QUALIFIERS

Workorder: 32006 BMS SYRACUSE / 30033396

QUALITY CONTROL PARAMETER QUALIFIERS

M5	The matrix spike duplicate sample recovery was outside laboratory control limits.
n	The laboratory does not hold NELAP/TNI accreditation for this method or analyte.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Workorder: 32006 BMS SYRACUSE / 30033396

Lab ID	Sample ID	Prep Method	Prep Batch	Analysis Method	Analysis Batch
320060001	BDA-14RX			AM20GAX	DISG/7901
320060002	BDA-17RX			AM20GAX	DISG/7901
320060003	BDA-17T			AM20GAX	DISG/7901
320060004	BDA-17WT			AM20GAX	DISG/7901
320060005	BDA-17WT MS			AM20GAX	DISG/7901
320060006	BDA-17WT MSD			AM20GAX	DISG/7901
320060007	BDA-17WR			AM20GAX	DISG/7901
320060008	DUP-102919			AM20GAX	DISG/7901

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CHAIN-OF-CUSTODY Analytical Request Document

Pace Analytical®

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevent fields

LAB USE ONLY- Affix Workorder/Login Label Here or List Pace Workorder Number or MTJL Log-in Number Here

32006

ALL SHADED AREAS are for LAB USE ONLY

Company: Arcadis	Billing Information:
Address: 110 W Fayette St. Suite 300 Syracuse NY	
Report To: William.McCune@arcadis.com	Email To:
Copy To:	Site Collection Info/Address:
Customer Project Name/Number: BMS Syracuse / 30033396	State: NY County/City: Syracuse Time Zone Collected: [ ] PT [ ] MT [ ] CT [X] ET
Phone: Email:	Site/Facility ID #: Compliance Monitoring? [ ] Yes [ ] No
Collected By (print): Ashia George	Purchase Order #: Quote #: DW PWS ID #: DW Location Code:
Collected By (signature):	Turnaround Date Required: Immediately Packed on Ice: [X] Yes [ ] No
Sample Disposal: [ ] Dispose as appropriate [ ] Return [ ] Archive: [ ] Hold:	Rush: [ ] Same Day [ ] Next Day [ ] 2 Day [ ] 3 Day [ ] 4 Day [X] 5 Day (Expedite Charges Apply)
	Field Filtered (if applicable): [ ] Yes [X] No Analysis:

Container Preservative Type **: O

Lab Project Manager:

** Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other Benzalkonium Chloride

Analyses: Methane, Ethane, Ethene, Acetylene

Lab Profile/Line:

Lab Sample Receipt Checklist:

Custody Seals Present/Intact	Y N NA
Custody Signatures Present	Y N NA
Collector Signature Present	Y N NA
Bottles Intact	Y N NA
Correct Bottles	Y N NA
Sufficient Volume	Y N NA
Samples Received on Ice	Y N NA
VOA - Headspace Acceptable	Y N NA
USDA Regulated Soils	Y N NA
Samples in Holding Time	Y N NA
Residual Chlorine Present	Y N NA
Cl Strips:	
Sample pH Acceptable	Y N NA
pH Strips:	
Sulfide Present	Y N NA
Lead Acetate Strips:	

LAB USE ONLY:
Lab Sample # / Comments:

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start) Date	Collected (or Composite Start) Time	Composite End Date	Composite End Time	Res Cl	# of Ctns	Methane, Ethane, Ethene, Acetylene								Lab Sample # / Comments
30A-14RX	GW	G	10/29/19	1105	/	/		2	X								01 ug/mg
BOA-17RX	GW	G	10/29/19	1445	/	/		2	X								02
BOA-17T	GW	G	10/29/19	1110	/	/		2	X								03
BOA-17WT	GW	G	10/29/19	1148	/	/		2	X								04
BOA-17WT MS	GW	G	10/29/19	1148	/	/		2	X								05
BOA-17WT MSD	GW	G	10/29/19	1148	/	/		2	X								06
BOA-17WR	GW	G	10/29/19	1540	/	/		2	X								07
DUP-102919	GW	G	10/29/19	/	/	/		2	X								08
																	09

Customer Remarks / Special Conditions / Possible Hazards:

Type of Ice Used: (Wet) Blue Dry None

Packing Material Used: Bubble wrap / ice

Radchem sample(s) screened (<500 cpm): Y N (NA)

SHORT HOLDS PRESENT (<72 hours): Y (N) N/A

Lab Tracking #: 2324406

Samples received via: (FEDEX) UPS Client Courier Pace Courier 7768 4814 0213

Lab Sample Temperature Info:
Temp Blank Received: Y N NA
Therm ID#: #9
Cooler 1 Temp Upon Receipt: 5.4 oC
Cooler 1 Therm Corr. Factor: 0.0 oC
Cooler 1 Corrected Temp: 5.4 oC
Comments: WS 10/30/19

Relinquished by/Company: (Signature) Arcadis	Date/Time: 10/29/19	Received by/Company: (Signature)	Date/Time: 10/29/19 1700	MTJL LAB USE ONLY
Relinquished by/Company: (Signature)	Date/Time: 10/29/19 1720	Received by/Company: (Signature) Pace	Date/Time: 10/30/19 930	Table #: Acctnum: Template: Prelogin: PM: PB:
Relinquished by/Company: (Signature) PACE	Date/Time: 11-1-19 1000	Received by/Company: (Signature) PACE	Date/Time: 11.4.19 0730	

Trip Blank Received: Y (N) NA
HCL MeOH TSP Other

Non Conformance(s): YES / NO

Page: of:

NON-CONFORMANCE FORM

PAES Work Order #: 32026

Date: [illegible] Time of Receipt: [illegible] Receiver: [illegible]

Client: [illegible]

REASON FOR NON-CONFORMANCE:

[illegible]

ACTION TAKEN:

Client name: [illegible] Date: 11/7/19 Time: 13.30

[illegible]

Customer Service Initials: [illegible] Date: 11/7/19

Emma Louis - BMS Syracuse Samples Received

From: Emma Louis
To: McCune William
Subject: BMS Syracuse Samples Received

Hi William,

Sample receiving noted we received 2 unlabeled vials. We did not receive DUP-102919. Please advise.

Thank you

Emma Louis
Project Coordinator
Pace Analytical Energy Services, LLC
220 William Pitt Way
Pittsburgh, PA 15238
Emma.Louis@pacelabs.com
412-826-2378 (Direct) | 412-826-5245 (Main)
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ATTACHMENT 10

Data Usability Summary Reports

ARCADIS Design & Consultancy for natural and built assets

Bristol-Myers Squibb

Thompson Road Investigation

Data Usability Summary Report

Syracuse, NY

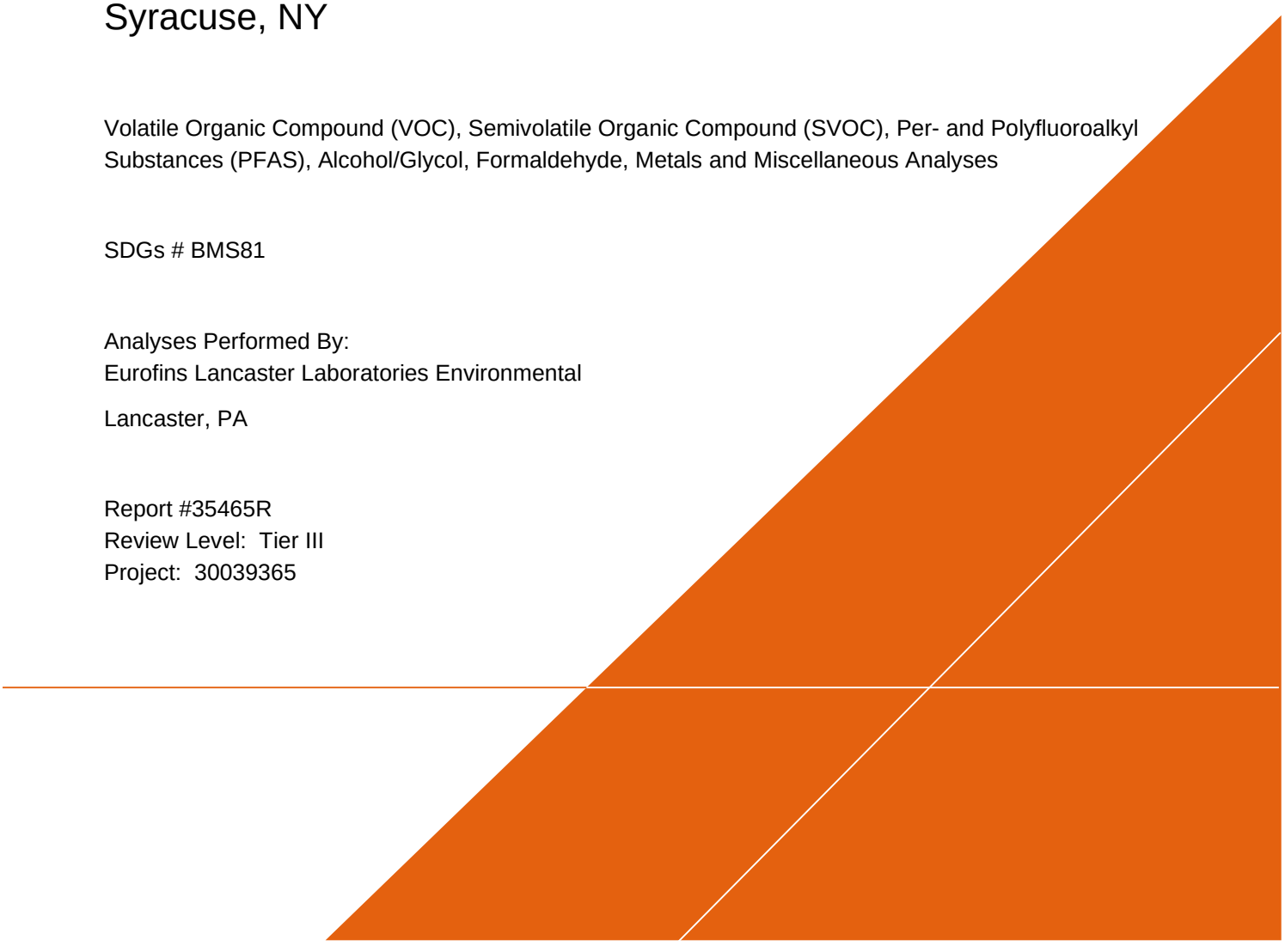
Volatile Organic Compound (VOC), Semivolatile Organic Compound (SVOC), Per- and Polyfluoroalkyl Substances (PFAS), Alcohol/Glycol, Formaldehyde, Metals and Miscellaneous Analyses

SDGs # BMS81

Analyses Performed By:
Eurofins Lancaster Laboratories Environmental

Lancaster, PA

Report #35465R
Review Level: Tier III
Project: 30039365



SUMMARY

This data quality assessment summarizes the review of Sample Delivery Groups (SDGs) # BMS81 for samples collected in association with the with the Bristol-Myers Squibb Thompson Road Site. The review was conducted as a Tier III evaluation and included review of data package completeness. Only analytical data associated with constituents of concern were reviewed for this validation. Field documentation was not included in this review. Included with this assessment are the validation annotated sample result sheets, and chain of custody. Analyses were performed on the following samples:

SDG Number	Sample ID	Lab ID	Matrix	Sample Collection Date	Parent Sample	Analysis				
						VOC	SVOC	PFAS	MET	MISC
	PW-6T 10282019	1186458	Water	10/28/2019		X	X			X[2]
	PW-6L 10282019	1186459	Water	10/28/2019		X	X			X[2]
	PW-3MD 10282019	1186460	Water	10/28/2019		X	X			X[2]
	PW-3 10282019	1186461	Water	10/28/2019		X	X			X[2]
	PW-3T 10282019	1186462	Water	10/28/2019		X	X			X[2]
	PW-4LD 10282019	1186463	Water	10/28/2019		X	X			X[2]
	PW-4F 10282019	1186464	Water	10/28/2019		X	X			X[2]
	PW-4LS 10282019	1186465	Water	10/28/2019		X	X			X[2]
	TRIP BLANK 10232019	1186466	Water	10/23/2019		X				
BMS81	BDA-14RX 10292019	1187623	Water	10/29/2019		X	X	X	X[1]	X[3]
	BDA-17RX 10292019	1187625	Water	10/29/2019		X	X	X	X[1]	X[3]
	BDA-17T 10292019	1187627	Water	10/29/2019		X	X	X	X[1]	X[3]
	BDA-17WT 10292019	1187629	Water	10/29/2019		X	X	X	X[1]	X[3]
	BDA-17WR 10292019	1187637	Water	10/29/2019		X	X	X	X[1]	X[3]
	DUP-102919FD	1187639	Water	10/29/2019	BDA-17T	X		X	X[1]	X[3]
	TRIP BLANK 10292019	1187641	Water	10/29/2019		X				
	DUP-102919-02FD	1187642	Water	10/29/2019	BDA-17WR		X			X[4]
	FB-102919	1187643	Water	10/29/2019				X		
	EB-102919	1187644	Water	10/29/2019				X		

Notes:
[1] Filtered and unfiltered Metals included
[2] Miscellaneous analyses include Aldehydes, Alcohols and Glycols
[3]Miscellaneous analyses include Aldehydes, Alcohols, Glycols, Chloride, Fluoride, Nitrate, Nitrite, Sulfate, ammonia Nitrogen, Total Phosphorus, Total Organic Carbon (TOC), Chemical Oxygen Demand (COD), Total Alkalinity and Biochemical Oxygen Demand (BOD).
[4] Miscellaneous analyses include ammonia Nitrogen analysis.

ANALYTICAL DATA PACKAGE DOCUMENTATION

The table below is the evaluation of the data package completeness.

Items Reviewed	Reported		Performance Acceptable		Not Required
	No	Yes	No	Yes	
1. Sample receipt condition		X		X	
2. Requested analyses and sample results		X		X	
3. Master tracking list		X		X	
4. Methods of analysis		X		X	
5. Reporting limits		X		X	
6. Sample collection date		X		X	
7. Laboratory sample received date		X		X	
8. Sample preservation verification (as applicable)		X		X	
9. Sample preparation/extraction/analysis dates		X		X	
10. Fully executed Chain-of-Custody (COC) form		X		X	
11. Narrative summary of QA or sample problems provided		X		X	
12. Data Package Completeness and Compliance		X		X	

Note:
QA - Quality Assurance

List of Acronyms

%D: Percent Difference

%R: Percent Recovery

AC: Acceptable

ALC/GLY: Alcohols/Glycols

BAL: Blank Action Level

CCV: Continuing Calibration Verification

CRDL: Contract Required Detection Limit

D: Dilution

EIS: Extractable Internal Standard

FB: Field Blank

FD: Field Duplicate

ALD: Aldehydes

GC/ECD: Gas Chromatograph/Electron Capture Detector

GC/MS: Gas Chromatograph/Mass spectrometer

HT: Holding Time

ICP: Inductively Coupled Plasma

ICS: Interference Control Sample

ICV: Initial Calibration Verification

ISTD: Internal Standards

LabDup: Laboratory Duplicate

LCS: Lab Control Sample

LCSD: Lab Control Sample Duplicate

LL: Lower Control Limit

MB: Method Blank

MDL: Method Detection Limit

MET: Metals

MS: Matrix Spike

MSD: Matrix Spike Duplicate

N/A: Not Applicable

NC: Not Compliant

List of Acronyms, Continued

PAH: Polyaromatic Hydrocarbon

PCB: Polychlorinated Biphenyl

PEST: Pesticide

PFAS: Per- and Polyfluoroalkyl Substances

QA: Quality Assurance

QC: Quality Control

RB: Rinse Blank

RL: Reporting Limit

RPD: Relative Percent Difference

RRF: Relative Response Factor

RSD: Relative Standard Deviation

RT: Retention Time

SDG: Sample Delivery Group

SerDil: Serial Dilution

SIM: Single Ion Monitoring

SOP: Standard Operating Procedure

SSTD: Surrogate Standards

SVOC: Semivolatile Organic Compound

TB: Trip Blank

TIC: Tentatively Identified Compound

TOC: Total Organic Carbon

TOTDIS: Total and Dissolved

UL: Upper Control Limit

USEPA: United States Environmental Protection Agency

VOC: Volatile Organic Compound

ORGANIC ANALYSIS INTRODUCTION

Analyses were performed according to United States Environmental Protection Agency (USEPA) SW846 methods 8260C, 8270D, 8270D-SIM, 8015D, 8315A and 537 Modified for Per- and Polyfluoroalkyl Substances (PFAS). Data were reviewed in accordance with USEPA National Functional Guidelines of October 1999 and applicable EPA Region 2 SOPs.

The data review process is an evaluation of data on a technical basis rather than a determination of contract compliance. As such, the standards against which the data are being weighed may differ from those specified in the analytical method. It is assumed that the data package represents the best efforts of the laboratory and had already been subjected to adequate and sufficient quality review prior to submission.

During the review process, laboratory qualified and unqualified data are verified against the supporting documentation. Based on this evaluation, qualifier codes may be added, deleted, or modified by the data reviewer. Results are qualified with the following codes in accordance with USEPA National Functional Guidelines:

- Concentration (C) Qualifiers
  - U The compound was analyzed for but not detected. The associated value is the compound quantitation limit.
  - B The compound has been found in the sample as well as its associated blank, its presence in the sample may be suspect.
- Quantitation (Q) Qualifiers
  - E The compound was quantitated above the calibration range.
  - D Concentration is based on a diluted sample analysis.

- Validation Qualifiers
  - J The compound was positively identified; however, the associated numerical value is an estimated concentration only.
  - UJ The compound was not detected above the reported sample quantitation limit. However, the reported limit is approximate and may or may not represent the actual limit of quantitation.
  - JN The analysis indicates the presence of a compound for which there is presumptive evidence to make a tentative identification. The associated numerical value is an estimated concentration only.
  - UB Compound considered non-detect at the listed value due to associated blank contamination.
  - N The analysis indicates the presence of a compound for which there is presumptive evidence to make a tentative identification.
  - R The sample results are rejected.

Two facts should be noted by all data users. First, the "R" flag means that the associated value is unusable. In other words, due to significant quality control (QC) problems, the analysis is invalid and provides no information as to whether the compound is present or not. "R" values should not appear on data tables because they cannot be relied upon, even as a last resort. The second fact to keep in mind is

that no compound concentration, even if it has passed all QC tests, is guaranteed to be accurate. Strict QC serves to increase confidence in data but any value potentially contains error.

VOLATILE ORGANIC COMPOUND (VOC) ANALYSES

1. Holding Times

The specified holding times for the following methods are presented in the following table.

Method	Matrix	Holding Time	Preservation
SW-846 8260C	Water	14 days from collection to analysis (preserved) 7 days from collection to analysis (non-preserved)	Cool to <6 °C; preserved to a pH of less than 2 s.u.
	Soil	48 hours from collection to extraction and 14 days from extraction to analysis	Cool to <6 °C.

Note:

s.u. Standard units

All samples were analyzed within the specified holding time criteria.

2. Blank Contamination

Quality assurance (QA) blanks (i.e., method and rinse blanks) are prepared to identify any contamination which may have been introduced into the samples during sample preparation or field activity. Method blanks measure laboratory contamination. Rinse blanks measure contamination of samples during field operations.

A blank action level (BAL) of five times the concentration of a detected compound in an associated blank (common laboratory contaminant compounds are calculated at ten times) is calculated for QA blanks containing concentrations greater than the method detection limit (MDL). The BAL is compared to the associated sample results to determine the appropriate qualification of the sample results, if needed.

Compounds were not detected above the MDL in the associated blanks; therefore, detected sample results were not associated with blank contamination.

3. Mass Spectrometer Tuning

Mass spectrometer performance was acceptable, and all analyses were performed within a 12-hour tune clock.

System performance and column resolution were acceptable.

4. Calibration

Satisfactory instrument calibration is established to ensure that the instrument is capable of producing acceptable quantitative data. An initial calibration demonstrates that the instrument is capable of acceptable performance at the beginning of an experimental sequence. The continuing calibration verifies that the instrument daily performance is satisfactory.

4.1 Initial Calibration

The method specifies percent relative standard deviation (%RSD) and relative response factor (RRF) limits for select compounds only. A technical review of the data applies limits to all compounds with no exceptions.

All target compounds associated with the initial calibration standards must exhibit a %RSD less than the control limit (15%) or a correlation coefficient greater than 0.99 and an RRF value greater than control limit (0.05).

4.2 Continuing Calibration

All target compounds associated with the continuing calibration standard must exhibit a percent difference (%D) less than the control limit (20%) and RRF value greater than control limit (0.05).

All compounds associated with the calibrations were within the specified control limits, with the exception of the compounds presented in the following table.

Sample Locations	Initial/Continuing	Compound	Criteria
BDA-14RX 10292019 BDA-17RX 10292019 BDA-17T 10292019 BDA-17WT 10292019 BDA-17WR 10292019 DUP-102919FD TRIP BLANK 10292019	CCV %D	Dichlorodifluoromethane	-23%
		Bromomethane	-22%
		Isobutyl Alcohol	36%
		n-Butanol	27%
		Acetonitrile	26%
		1,4-Dioxane	38%
PW-6T 10282019 PW-6L 10282019 PW-3MD 10282019 PW-3 10282019 PW-3T 10282019 PW-4LD 10282019 PW-4F 10282019 PW-4LS 10282019 TRIP BLANK 10232019	CCV %D	1,4-Dioxane	34%

The criteria used to evaluate the initial and continuing calibration are presented in the following table. In the case of a calibration deviation, the sample results are qualified.

Initial/Continuing	Criteria	Sample Result	Qualification
Initial and Continuing Calibration	RRF <0.05	Non-detect	R
		Detect	J
	RRF <0.01[1]	Non-detect	R

Initial/Continuing	Criteria	Sample Result	Qualification
		Detect	J
	RRF >0.05 or RRF >0.01[1]	Non-detect	No Action
		Detect	
Initial Calibration	%RSD > 15% or a correlation coefficient <0.99	Non-detect	UJ
		Detect	J
	%RSD >90%	Non-detect	R
		Detect	J
Continuing Calibration	%D >20% (increase in sensitivity)	Non-detect	No Action
		Detect	J
	%D >20% (decrease in sensitivity)	Non-detect	UJ
		Detect	J
	%D >90% (increase/decrease in sensitivity)	Non-detect	R
		Detect	J

5. Surrogates/System Monitoring Compounds

All samples to be analyzed for organic compounds are spiked with surrogate compounds prior to sample preparation to evaluate overall laboratory performance and efficiency of the analytical technique. VOC analysis requires that all surrogates associated with the analysis exhibit recoveries within the laboratory-established acceptance limits.

All surrogate recoveries were within control limits.

6. Internal Standard Performance

Internal standard performance criteria insure that the GC/MS sensitivity and response are stable during every sample analysis. The criteria require the internal standard compounds associated with the VOC exhibit area counts that are not greater than two times (+100%) or less than one-half (-50%) of the area counts of the associated continuing calibration standard.

All internal standard responses were within control limits.

7. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Analysis

MS/MSD data are used to assess the precision and accuracy of the analytical method. The compounds used to perform the MS/MSD analysis must exhibit a percent recovery within the laboratory-established acceptance limits. The relative percent difference (RPD) between the MS/MSD recoveries must exhibit an RPD within the laboratory-established acceptance limits.

Note: The MS/MSD recovery control limits do not apply for MS/MSD performed on sample locations where the compound concentration detected in the parent sample exceeds the MS/MSD concentration by a factor of four or greater.

The MS/MSD exhibited acceptable recoveries and RPD between the MS/MSD recoveries.

8. Laboratory Control Sample/Laboratory Control Sample Duplicate (LCS/LCSD) Analysis

The LCS/LCSD analysis is used to assess the precision and accuracy of the analytical method independent of matrix interferences. The compounds associated with the LCS/LCSD analysis must exhibit a percent recovery within the laboratory-established acceptance limits.

All compounds associated with the LCS/LCSD analysis exhibited recoveries within the control limits.

9. Field Duplicate Analysis

Field duplicate analysis is used to assess the overall precision of the field sampling procedures and analytical method. A control limit of 50% for water matrices and 100% for soil matrices is applied to the RPD between the parent sample and the field duplicate. In the instance when the parent and/or duplicate sample concentrations are less than or equal to 5 times the RL, a control limit of two times the RL is applied for water matrices or three times the RL is applied for soil matrices.

Results for duplicate samples are summarized in the following table.

Sample ID/Duplicate ID	Compound	Sample Result	Duplicate Result	RPD
BDA-17T 10292019/ DUP-102919FD	Bromodichloromethane	1	3	AC
	Chloroform	7	14	66.7%
	Dibromochloromethane	1 U	0.5 J	AC

Notes:

AC Acceptable

The compound Chloroform associated with samples BDA-17T 10292019 and DUP-102919FD exhibited a field duplicate RPD greater than the control limit. The associated sample result from these sample locations were qualified as estimated.

10. Compound Identification

Compounds are identified on the GC/MS by using the analytes relative retention time and ion spectra.

All identified compounds met the specified criteria.

Tentatively identified compounds (TICs) were identified in all sample locations associated with this SDG. VOC analysis requires that TICs be qualified as estimated (JN).

11. System Performance and Overall Assessment

Overall system performance was acceptable. Other than for those deviations specifically mentioned in this review, the overall data quality is within the guidelines specified in the method.

DATA VALIDATION CHECKLIST FOR VOCs

VOCs: SW-846 8260C	Reported		Performance Acceptable		Not Required
	No	Yes	No	Yes	
GAS CHROMATOGRAPHY/MASS SPECTROMETRY (GC/MS)					
Tier II Validation					
Holding times		X		X	
Reporting limits (units)		X		X	
Blanks					
A. Method blanks		X		X	
B. Equipment blanks		X		X	
C. Trip blanks		X		X	
Laboratory Control Sample (LCS)		X		X	
Laboratory Control Sample Duplicate(LCSD)		X		X	
LCS/LCSD Precision (RPD)		X		X	
Matrix Spike (MS)		X		X	
Matrix Spike Duplicate(MSD)		X		X	
MS/MSD Precision (RPD)		X		X	
Field/Lab Duplicate (RPD)		X	X		
Surrogate Spike Recoveries		X		X	
Dilution Factor		X		X	
Moisture Content		X		X	
Tier III Validation					
System performance and column resolution		X		X	
Initial calibration %RSDs		X		X	
Continuing calibration RRFs		X		X	
Continuing calibration %Ds		X	X		
Instrument tune and performance check		X		X	
Ion abundance criteria for each instrument used		X		X	
Internal standard		X		X	
Compound identification and quantitation					
A. Reconstructed ion chromatograms		X		X	
B. Quantitation Reports		X		X	

VOCs: SW-846 8260C	Reported		Performance Acceptable		Not Required
	No	Yes	No	Yes	
GAS CHROMATOGRAPHY/MASS SPECTROMETRY (GC/MS)					
C. RT of sample compounds within the established RT windows		X		X	
D. Transcription/calculation errors present		X		X	
E. Reporting limits adjusted to reflect sample dilutions		X		X	

Notes:

%RSD Relative standard deviation

%R Percent recovery

RPD Relative percent difference

%D Percent difference

SEMI-VOLATILE ORGANIC COMPOUND (SVOC) ANALYSIS

1. Holding Times

The specified holding times for the following methods are presented in the following table.

Method	Matrix	Holding Time	Preservation
SW-846 8270D and 8270D-SIM	Water	7 days from collection to extraction and 40 days from extraction to analysis	Cool to <6°C
	Soil	14 days from collection to extraction and 40 days from extraction to analysis	Cool to <6°C

The analyses that exceeded the holding are presented in the following table.

Sample Locations	Holding Time	Criteria
BDA-14RX 10292019	Extraction Completed in 10 Days	7 Days

Sample results associated with sample locations analyzed by analytical method SW-846 8270 were qualified, as specified in the table below. All other holding times were met.

Criteria	Qualification	
	Detected Analytes	Non-detect Analytes
Analysis completed less than two times holding time	J	UJ

The original analysis for sample BDA-14RX 10292019 exhibited surrogate recoveries below 10%. The re-extraction, which occurred outside the holding time, exhibited acceptable surrogate recoveries. The re-analysis is reported and qualified as estimated (J).

2. Blank Contamination

Quality assurance (QA) blanks (i.e., method and rinse blanks) are prepared to identify any contamination which may have been introduced into the samples during sample preparation or field activity. Method blanks measure laboratory contamination. Rinse blanks measure contamination of samples during field operations.

A blank action level (BAL) of five times the concentration of a detected compound in an associated blank (common laboratory contaminant compounds are calculated at ten times) is calculated for QA blanks containing concentrations greater than the method detection limit (MDL). The BAL is compared to the associated sample results to determine the appropriate qualification of the sample results, if needed.

Compounds were not detected above the MDL in the associated blanks; therefore, detected sample results were not associated with blank contamination.

3. Mass Spectrometer Tuning

Mass spectrometer performance was acceptable, and all analyses were performed within a 12-hour tune clock.

System performance and column resolution were acceptable.

4. Calibration

Satisfactory instrument calibration is established to ensure that the instrument is capable of producing acceptable quantitative data. An initial calibration demonstrates that the instrument is capable of acceptable performance at the beginning of an experimental sequence. The continuing calibration verifies that the instrument daily performance is satisfactory.

4.1 Initial Calibration

The method specifies percent relative standard deviation (%RSD) and relative response factor (RRF) limits for select compounds only. A technical review of the data applies limits to all compounds with no exceptions.

All target compounds associated with the initial calibration standards must exhibit a %RSD less than the control limit (20%) or a correlation coefficient greater than 0.99 and an RRF value greater than control limit (0.05).

4.2 Continuing Calibration

All target compounds associated with the continuing calibration standard must exhibit a percent difference (%D) less than the control limit (20%) and RRF value greater than control limit (0.05).

All compounds associated with the calibrations were within the specified control limits, with the exception of the compounds presented in the following table.

Sample Locations	Initial/Continuing	Compound	Criteria
BDA-14RX 10292019 BDA-17RX 10292019 BDA-17T 10292019 BDA-17WT 10292019 BDA-17WR 10292019 DUP-102919-02FD	CCV %D	2,4-Dinitrophenol	31%
		4,6-Dinitro-2-methylphenol	24%
PW-6T 10282019 PW-6L 10282019 PW-3MD 10282019 PW-3 10282019 PW-3T 10282019	CCV %D	Benzaldehyde	-23%
		2,4-Dinitrophenol	29%

Sample Locations	Initial/Continuing	Compound	Criteria
PW-4LD 10282019 PW-4F 10282019 PW-4LS 10282019		4,6-Dinitro-2-methylphenol	23%

The criteria used to evaluate the initial and continuing calibration are presented in the following table. In the case of a calibration deviation, the sample results are qualified.

Initial/Continuing	Criteria	Sample Result	Qualification
Initial and Continuing Calibration	RRF <0.05	Non-detect	R
		Detect	J
	RRF <0.01[1]	Non-detect	R
		Detect	J
	RRF >0.05 or RRF >0.01[1]	Non-detect	No Action
		Detect	
Initial Calibration	%RSD > 15% or a correlation coefficient <0.99	Non-detect	UJ
		Detect	J
	%RSD >90%	Non-detect	R
		Detect	J
Continuing Calibration	%D >20% (increase in sensitivity)	Non-detect	No Action
		Detect	J
	%D >20% (decrease in sensitivity)	Non-detect	UJ
		Detect	J
	%D >90% (increase/decrease in sensitivity)	Non-detect	R
		Detect	J

5. Surrogates/System Monitoring Compounds

All samples to be analyzed for organic compounds are spiked with surrogate compounds prior to sample preparation to evaluate overall laboratory performance and efficiency of the analytical technique. SVOC analysis requires that two of the three SVOC surrogate compounds within each fraction exhibit recoveries within the laboratory-established acceptance limits.

Sample locations associated with surrogates exhibiting recoveries outside of the control limits presented in the following table.

Sample Locations	Surrogate	Recovery
BDA-17WT 10292019	Phenol-d6	< 10%

Sample Locations	Surrogate	Recovery
	2-Fluorophenol	< 10%
	2,4,6-Tribromophenol	<LL but > 10%
	Nitrobenzene-d5	AC
	2-Fluorobiphenyl	AC
	Terphenyl-d14	AC

Notes:

LL Lower control limit

AC Acceptable

The criteria used to evaluate the surrogate recoveries are presented in the following table. In the case of a surrogate deviation, the sample results associated with the deviant fraction are qualified as documented in the table below.

Control Limit	Sample Result	Qualification
> UL	Non-detect	No Action
	Detect	J
< LL but > 10%	Non-detect	UJ
	Detect	J
< 10%	Non-detect	R
	Detect	J

6. Internal Standard Performance

Internal standard performance criteria insure that the GC/MS sensitivity and response are stable during every sample analysis. The criteria requires the internal standard compounds associated with the SVOC exhibit area counts that are not greater than two times (+100%) or less than one-half (-50%) of the area counts of the associated continuing calibration standard.

All internal standard responses were within control limits.

7. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Analysis

MS/MSD data are used to assess the precision and accuracy of the analytical method. The compounds used to perform the MS/MSD analysis must exhibit a percent recovery within the laboratory-established acceptance limits. The relative percent difference (RPD) between the MS/MSD recoveries must exhibit an RPD within the laboratory-established acceptance limits.

Note: The MS/MSD recovery control limits do not apply for MS/MSD performed on sample locations where the compound concentration detected in the parent sample exceeds the MS/MSD concentration by a factor of four or greater.

Sample locations associated with the MS/MSD exhibiting recoveries outside of the control limits are presented in the following table.

Sample Locations	Compound	MS Recovery	MSD Recovery
BDA-17WT 10292019	Benzo(a)pyrene	<LL but >10%	AC
	Benzo(b)fluoranthene	<LL but >10%	AC
	Benzo(k)fluoranthene	<LL but >10%	AC
	4-Chloro-3-methylphenol	<LL but >10%	AC
	2-Chlorophenol	AC	<LL but >10%
	2,4-Dichlorophenol	AC	<LL but >10%
	2-Methylphenol	<LL but >10%	AC
	4-Methylphenol	<LL but >10%	AC
	2,3,4,6-Tetrachlorophenol	AC	<LL but >10%
	2,4,5-Trichlorophenol	AC	<LL but >10%
	2,4,6-Trichlorophenol	AC	<LL but >10%

Note:

AC Acceptable

The criteria used to evaluate the MS/MSD recoveries are presented in the following table. In the case of an MS/MSD deviation, the sample results are qualified as documented in the table below.

Control Limit	Sample Result	Qualification
> the upper control limit (UL)	Non-detect	No Action
	Detect	J
< the lower control limit (LL) but > 10%	Non-detect	UJ
	Detect	J
< 10%	Non-detect	R
	Detect	J
Parent sample concentration > four times the MS/MSD spiking solution concentration.	Detect	No Action
	Non-detect	

Sample locations associated with MS/MSD recoveries exhibiting an RPD greater than the control limit are presented in the following table.

Sample Locations	Compound
BDA-17WT 10292019	2,4-Dichlorophenol
	Dimethylphthalate

The criteria used to evaluate the RPD between the MS/MSD recoveries are presented in the following table. In the case of an RPD deviation, the sample results are qualified as documented in the table below.

Control Limit	Sample Result	Qualification
> UL	Non-detect	UJ
	Detect	J

8. Laboratory Control Sample/Laboratory Control Sample Duplicate (LCS/LCSD) Analysis

The LCS/LCSD analysis is used to assess the precision and accuracy of the analytical method independent of matrix interferences. The compounds associated with the LCS/LCSD analysis must exhibit a percent recovery within the laboratory-established acceptance limits.

Sample locations associated with LCS/LCSD analysis exhibiting recoveries outside of the control limits presented in the following table.

Sample Locations	Compound	LCS Recovery	LCSD Recovery
PW-6T 10282019 PW-6L 10282019 PW-3MD 10282019 PW-3 10282019 PW-3T 10282019 PW-4LD 10282019 PW-4F 10282019 PW-4LS 10282019	Benzo(k)fluoranthene	<LL but >10%	AC
BDA-17WT 10292019RE	1,4-Dioxane (SIM)	0%	NA

The criteria used to evaluate the LCS/LCSD recoveries are presented in the following table. In the case of an LCS/LCSD deviation, the sample results are qualified as documented in the table below.

Control Limit	Sample Result	Qualification
> the upper control limit (UL)	Non-detect	No Action
	Detect	J
< the lower control limit (LL) but > 10%	Non-detect	UJ
	Detect	J
< 10%	Non-detect	R
	Detect	J

Sample locations associated with LCS/LCSD recoveries exhibiting an RPD greater than of the control limit presented in the following table.

Sample Locations	Compound
BDA-14RX 10292019 BDA-17RX 10292019 BDA-17T 10292019 BDA-17WT 10292019 BDA-17WR 10292019 DUP-102919-02FD	Triethylamine

The criteria used to evaluate the RPD between the LCS/LCSD recoveries are presented in the following table. In the case of an RPD deviation, the sample results are qualified as documented in the table below.

Control Limit	Sample Result	Qualification
> UL	Non-detect	UJ
	Detect	J

The initial analysis for sample BDA-17WT 10292019 exhibited surrogate recovery below acceptance limits; this sample was re-extracted and the associated LCS exhibited 0% recovery. Both analyses are non-detect for 1,4-Dioxane; results are qualified as estimated (UJ).

9. Field Duplicate Analysis

Field duplicate analysis is used to assess the overall precision of the field sampling procedures and analytical method. A control limit of 50% for water matrices and 100% for soil matrices is applied to the RPD between the parent sample and the field duplicate. In the instance when the parent and/or duplicate sample concentrations are less than or equal to 5 times the RL, a control limit of two times the RL is applied for water matrices or three times the RL is applied for soil matrices.

Results for duplicate samples are summarized in the following table.

Sample ID/Duplicate ID	Compound	Sample Result	Duplicate Result	RPD
BDA-17WR 10292019/ DUP-102919-02FD	All Compounds	U	U	AC

Notes:

AC Acceptable

The calculated RPDs between the parent sample and field duplicate were acceptable.

10. Compound Identification

Compounds are identified on the GC/MS by using the analytes relative retention time and ion spectra.

All identified compounds met the specified criteria.

Tentatively identified compounds (TICs) were identified in all sample locations associated with this SDG. SVOC analysis requires that TICs be qualified as estimated (JN).

11. System Performance and Overall Assessment

Overall system performance was acceptable. Other than for those deviations specifically mentioned in this review, the overall data quality is within the guidelines specified in the method.

DATA VALIDATION CHECKLIST FOR SVOCs

SVOCs: SW-846 8270D and 8270D-SIM	Reported		Performance Acceptable		Not Required
	No	Yes	No	Yes	
GAS CHROMATOGRAPHY/MASS SPECTROMETRY (GC/MS)					
Tier II Validation					
Holding times		X		X	
Reporting limits (units)		X		X	
Blanks					
D. Method blanks		X		X	
E. Equipment blanks					X
Laboratory Control Sample (LCS) %R		X	X		
Laboratory Control Sample Duplicate (LCSD) %R		X		X	
LCS/LCSD Precision (RPD)		X		X	
Matrix Spike (MS) %R		X	X		
Matrix Spike Duplicate (MSD) %R		X	X		
MS/MSD Precision (RPD)		X	X		
Field/Lab Duplicate (RPD)		X		X	
Surrogate Spike Recoveries		X	X		
Dilution Factor		X		X	
Moisture Content					X
Tier III Validation					
System performance and column resolution		X		X	
Initial calibration %RSDs		X		X	
Continuing calibration RRFs		X		X	
Continuing calibration %Ds		X	X		
Instrument tune and performance check		X		X	
Ion abundance criteria for each instrument used		X		X	
Internal standard		X		X	
Compound identification and quantitation					
F. Reconstructed ion chromatograms		X		X	
G. Quantitation Reports		X		X	
H. RT of sample compounds within the established RT windows		X		X	

SVOCs: SW-846 8270D and 8270D-SIM		Reported		Performance Acceptable		Not Required
		No	Yes	No	Yes	
GAS CHROMATOGRAPHY/MASS SPECTROMETRY (GC/MS)						
I.	Quantitation transcriptions/calculations		X		X	
J.	Reporting limits adjusted to reflect sample dilutions		X		X	

Notes:

%RSD Relative standard deviation

%R Percent recovery

RPD Relative percent difference

%D Percent difference

PER- and POLYFLUOROALKYL SUBSTANCES (PFAS) ANALYSES

1. Holding Times

The specified holding times for the following methods are presented in the following table.

Method	Matrix	Holding Time	Preservation
EPA 537 Modified	Water	14 days from collection to extraction and 28 days from extraction to analysis	Cool to <6 °C; Extracts must be stored at room temperature until analysis.

All samples were analyzed within the specified holding time criteria.

2. Blank Contamination

Quality assurance (QA) blanks (i.e., method and rinse blanks) are prepared to identify any contamination which may have been introduced into the samples during sample preparation or field activity. Method blanks measure laboratory contamination. Rinse blanks measure contamination of samples during field operations.

A blank action level (BAL) of five times the concentration of a detected compound in an associated blank (common laboratory contaminant compounds are calculated at ten times) is calculated for QA blanks containing concentrations greater than the method detection limit (MDL). The BAL is compared to the associated sample results to determine the appropriate qualification of the sample results, if needed.

Compounds were not detected above the MDL in the associated blanks; therefore, detected sample results were not associated with blank contamination.

3. Calibration

Satisfactory instrument calibration is established to ensure that the instrument is capable of producing acceptable quantitative data. An initial calibration demonstrates that the instrument is capable of acceptable performance at the beginning of an experimental sequence. The continuing calibration verifies that the instrument daily performance is satisfactory.

3.1 Initial Calibration

The method specifies the initial calibration standards exhibit a relative standard deviation (%RSD) less than the control limit (20%) or correlation coefficient greater than or equal to 0.995 for each target compound. All calibration points must be within a percent difference (%D) of ± 70%-130% of its true value. The lowest level calibration point for each compound must be within a %D of ± 50%-150% of its true value. A technical review of the data applies limits to all compounds with no exceptions.

3.2 Continuing Calibration

All target compounds associated with the continuing calibration verification (CCV) standard must exhibit a percent difference (%D) less than the control limit (30%).

All compounds associated with the calibrations were within the specified control limits.

4. Extracted Internal Standard (EIS)

Labeled standards must be added to all field samples and QC samples prior to extraction. For aqueous samples prepared by serial dilution instead of solid phase extraction (SPE), they must be added to

samples prior to analysis. EIS recoveries must be within DoD QSM 5.1 specified limits of 50% to150%. The DOD guidance is currently the only guidance available for the evaluation of EIS.

Sample locations associated with EIS exhibiting recoveries outside of the control limits are presented in the following table.

Sample Locations	Extracted Internal Standard	Associated PFASs Compounds	CAS #	Recovery
BDA-17WR 10292019	13C4-PFBA	Perfluorobutanoic acid	375-22-4	< 10%
BDA-17RX 10292019	3C8-PFOSA	Perfluorooctanesulfonamide	754-91-6	<LL but >10%
BDA-17T 10292019	d5-NEtFOSAA	NMeFOSAA	2355-31-9	>UL

The criteria used to evaluate the EIS recoveries are presented in the following table. In the case of an EIS deviation, the sample results associated with the EIS are qualified as documented in the table below.

Control Limit	Sample Result	Qualification
> 150%	Non-detect	No Action
	Detect	
< 50% but > 25%	Non-detect	
	Detect	
< 25% but>10%	Non-detect	UJ
	Detect	J
< 10%	Non-detect	R
	Detect	J

As part of the isotope dilution analysis, the EIS are used for quantitation of the sample results, therefore the calculation of sample concentrations is adjusted for EIS recoveries. The data will not be qualified unless EIS recoveries are less than 25%.

5. Internal Standard Performance

Internal standards must be added to the aliquot of sample dilutions, QC samples, and standards just prior to analysis. Peak areas must be within -50% to +50% of the area measured in the ICAL midpoint standard. When an ICAL is not performed, the peak areas must be within 50% to 150% of the peak area measured in daily CCV.

All internal standard responses were within control limits.

6. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Analysis

MS/MSD data are used to assess the precision and accuracy of the analytical method. The compounds used to perform the MS/MSD analysis must exhibit a percent recovery within 50-150%. The relative percent difference (RPD) between the MS/MSD recoveries must exhibit an RPD within 30%.

Note: The MS/MSD recovery control limits do not apply for MS/MSD performed on sample locations where the compound concentration detected in the parent sample exceeds the MS/MSD concentration by a factor of four or greater.

The MS/MSD exhibited acceptable recoveries and RPD between the MS/MSD recoveries.

7. Laboratory Control Sample/Laboratory Control Sample Duplicate (LCS/LCSD) Analysis

The LCS/LCSD analysis is used to assess the precision and accuracy of the analytical method independent of matrix interferences. The compounds associated with the LCS/LCSD analysis must exhibit a percent recovery within the laboratory-established acceptance limits.

All compounds associated with the LCS/LCSD analysis exhibited recoveries within the control limits.

8. Field Duplicate Analysis

Field duplicate analysis is used to assess the overall precision of the field sampling procedures and analytical method. A control limit of 50% for water matrices is applied to the RPD between the parent sample and field duplicate. In the instance when the parent and/or duplicate sample concentrations are less than or equal to 5 times the RL, a control limit of two times the RL is applied for water matrices.

Results for duplicate samples are summarized in the following table.

Sample ID/Duplicate ID	Compound	Sample Result	Duplicate Result	RPD
BDA-17T 10292019/ DUP-102919FD	6:2-Fluorotelomersulfonic acid	110	34	105.6 %
	Perfluorobutanoic acid	2.3 J	2.0 J	AC
	Perfluoroheptanoic acid	1.6 J	0.55 J	AC
	Perfluorohexanoic acid	8.5	1.6 J	NC
	Perfluorooctanesulfonic acid	0.63 J	1.8 U	AC
	Perfluorooctanoic acid	0.62 J	0.49 J	AC
	Perfluoropentanoic acid	1.4 J	0.60 J	AC

Notes:

AC Acceptable

NC Not Compliant

The compounds 6:2-Fluorotelomersulfonic acid and Perfluorohexanoic acid associated with samples BDA-17T 10292019 and DUP-102919FD exhibited a field duplicate RPD greater than the control limit. The associated sample result from these sample locations were qualified as estimated.

9. Compound Identification

Compounds are identified on the LC/MS by using the analytes relative retention time and ion spectra.

All identified compounds met the specified criteria.

10. System Performance and Overall Assessment

Overall system performance was acceptable. Other than for those deviations specifically mentioned in this review, the overall data quality is within the guidelines specified in the method.

DATA VALIDATION CHECKLIST FOR PFAS

SVOCs: EPA 537 Modified	Reported		Performance Acceptable		Not Required
	No	Yes	No	Yes	
Liquid Chromatography/Tandem Mass Spectrometry (LC/MS/MS)					
Tier II Validation					
Holding times		X		X	
Reporting limits (units)		X		X	
Blanks					
A. Method blanks		X		X	
B. Equipment/Field blanks		X		X	
Laboratory Control Sample (LCS) %R		X		X	
Laboratory Control Sample Duplicate(LCSD) %R		X		X	
LCS/LCSD Precision (RPD)		X		X	
Matrix Spike (MS) %R		X		X	
Matrix Spike Duplicate(MSD) %R		X		X	
MS/MSD Precision (RPD)		X		X	
Field/Lab Duplicate (RPD)		X	X		
Surrogate Spike Recoveries/Isotope Dilutions		X	X		
Dilution Factor		X		X	
Moisture Content					X
Tier III Validation					
System performance and column resolution		X		X	
Initial calibration %RSDs		X		X	
Continuing calibration %Ds		X		X	
Internal standard		X		X	
Compound identification and quantitation					
C. Reconstructed ion chromatograms		X		X	
D. Quantitation Reports		X		X	
E. RT of sample compounds within the established RT windows		X		X	
F. Quantitation transcriptions/calculations		X		X	
G. Reporting limits adjusted to reflect sample dilutions		X		X	

Notes:

%RSD	Relative standard deviation
%R	Percent recovery
RPD	Relative percent difference
%D	Percent difference

GLYCOL & ALCOHOL GC ANALYSES

1. Holding Times

The specified holding times for the following methods are presented in the following table.

Method	Matrix	Holding Time	Preservation
SW-846 8015	Water	14 days from collection to analysis	Cool to <6°C
	Soil		

All samples were analyzed within the specified holding time criteria.

2. Blank Contamination

Quality assurance (QA) blanks (i.e., method and rinse blanks) are prepared to identify any contamination which may have been introduced into the samples during sample preparation or field activity. Method blanks measure laboratory contamination. Rinse blanks measure contamination of samples during field operations.

A blank action level (BAL) of five times the concentration of a detected compound in an associated blank (common laboratory contaminant compounds are calculated at ten times) is calculated for QA blanks containing concentrations greater than the method detection limit (MDL). The BAL is compared to the associated sample results to determine the appropriate qualification of the sample results, if needed.

Compounds were not detected above the MDL in the associated blanks; therefore, detected sample results were not associated with blank contamination.

3. System Performance

System performance and column resolution were acceptable.

4. Calibration

Satisfactory instrument calibration is established to ensure that the instrument is capable of producing acceptable quantitative data. An initial calibration demonstrates that the instrument is capable of acceptable performance at the beginning of an experimental sequence. The continuing calibration verifies that the instrument daily performance is satisfactory.

4.1 Initial Calibration

A maximum RSD of 20% is allowed or a correlation coefficient greater than 0.99.

4.2 Continuing Calibration

All target compounds associated with the continuing calibration standard must exhibit a percent difference (%D) less than the control limit (20%).

All compounds associated with the calibrations were within the specified control limits.

5. Surrogates/System Monitoring Compounds

All samples to be analyzed for organic compounds are spiked with surrogate compounds prior to sample preparation to evaluate overall laboratory performance and efficiency of the analytical technique. The analysis requires that the surrogate compound exhibits recovery within the laboratory-established acceptance limits.

Sample locations associated with surrogates exhibiting recoveries outside of the control limits presented in the following table.

Sample Locations	Surrogate	Recovery
PW-4LD 10282019 BDA-17RX 10292019 BDA-17T 10292019 BDA-17WT 10292019 DUP-102919FD TRIP BLANK 10292019 PW-6T 10282019	Tetramethylene glycol	< 10%
PW-3MD 10282019 PW-3 10282019 BDA-17WR 10292019 PW-3T 10282019 PW-4F 10282019 PW-4LS 10282019	Tetramethylene glycol	< LL but > 10%

Notes:

LL Lower control limit

The criteria used to evaluate the surrogate recoveries are presented in the following table. In the case of a surrogate deviation, the sample results are qualified as documented in the table below.

Control Limit	Sample Result	Qualification
> UL	Non-detect	No Action
	Detect	J
< LL but > 10%	Non-detect	UJ
	Detect	J
< 10%	Non-detect	R
	Detect	J

6. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Analysis

MS/MSD data are used to assess the precision and accuracy of the analytical method. The compounds used to perform the MS/MSD analysis must exhibit a percent recovery within the laboratory-established acceptance limits. The relative percent difference (RPD) between the MS/MSD recoveries must exhibit an RPD within the laboratory-established acceptance limits.

Note: The MS/MSD recovery control limits do not apply for MS/MSD performed on sample locations where the compound concentration detected in the parent sample exceeds the MS/MSD concentration by a factor of four or greater.

Sample locations associated with the MS/MSD exhibiting recoveries outside of the control limits are presented in the following table.

Sample Locations	Compound	MS Recovery	MSD Recovery
BDA-17WT 10292019	Ethylene glycol	<LL but >10%	AC
	Propylene glycol	<LL but >10%	AC

Note:

AC Acceptable

The criteria used to evaluate the MS/MSD recoveries are presented in the following table. In the case of an MS/MSD deviation, the sample results are qualified as documented in the table below.

Control Limit	Sample Result	Qualification
> the upper control limit (UL)	Non-detect	No Action
	Detect	J
< the lower control limit (LL) but > 10%	Non-detect	UJ
	Detect	J
< 10%	Non-detect	R
	Detect	J
Parent sample concentration > four times the MS/MSD spiking solution concentration.	Detect	No Action
	Non-detect	

Sample locations associated with MS/MSD recoveries exhibiting an RPD greater than the control limit are presented in the following table.

Sample Locations	Compound
BDA-17WT 10292019	Ethylene glycol
	Propylene glycol

The criteria used to evaluate the RPD between the MS/MSD recoveries are presented in the following table. In the case of an RPD deviation, the sample results are qualified as documented in the table below.

Control Limit	Sample Result	Qualification
> UL	Non-detect	UJ
	Detect	J

7. Laboratory Control Sample/Laboratory Control Sample Duplicate (LCS/LCSD) Analysis

The LCS/LCSD analysis is used to assess the precision and accuracy of the analytical method independent of matrix interferences. The compounds associated with the LCS/LCSD analysis must exhibit a percent recovery within the laboratory-established acceptance limits.

All compounds associated with the LCS/LCSD analysis exhibited recoveries within the control limits.

8. Field Duplicate Analysis

Field duplicate analysis is used to assess the overall precision of the field sampling procedures and analytical method. A control limit of 50% for water matrices and 100% for soil matrices is applied to the RPD between the parent sample and the field duplicate. In the instance when the parent and/or duplicate sample concentrations are less than or equal to 5 times the RL, a control limit of two times the RL is applied for water matrices or three times the RL is applied for soil matrices.

Results for duplicate samples are summarized in the following table.

Sample ID/Duplicate ID	Compound	Sample Result	Duplicate Result	RPD
BDA-17WT 10292019/ DUP-102919FD	All compounds	U	U	AC

The calculated RPDs between the parent sample and field duplicate were acceptable.

9. Compound Identification

The retention times of all quantitated peaks must fall within the calculated retention time windows.

All identified compounds met the specified criteria.

10. System Performance and Overall Assessment

Overall system performance was acceptable. Other than for those deviations specifically mentioned in this review, the overall data quality is within the guidelines specified in the method.

DATA VALIDATION CHECKLIST FOR GENERAL GC

ALC/GLY: SW846 8015	Reported		Performance Acceptable		Not Required
	No	Yes	No	Yes	
GAS CHROMATOGRAPHY (GC/FID)					
Tier II Validation					
Holding times		X		X	
Reporting limits (units)		X		X	
Blanks					
H. Method blanks		X		X	
I. Trip blanks		X		X	
Laboratory Control Sample (LCS) %R		X		X	
Laboratory Control Sample Duplicate(LCSD) %R		X		X	
LCS/LCSD Precision (RPD)		X		X	
Matrix Spike (MS) %R		X	X		
Matrix Spike Duplicate(MSD) %R		X		X	
MS/MSD Precision (RPD)		X	X		
Field/Lab Duplicate (RPD)		X		X	
Surrogate Spike Recoveries		X	X		
Dilution Factor		X		X	
Moisture Content					X
Tier III Validation					
Initial calibration %RSDs		X		X	
Continuing calibration %Ds		X		X	
System performance and column resolution		X		X	
Compound identification and quantitation					
A. Quantitation Reports		X		X	
J. RT of sample compounds within the established RT windows		X		X	
C. Pattern identification		X		X	
D. Transcription/calculation errors present		X		X	
E. Reporting limits adjusted to reflect sample dilutions		X		X	

Notes:

%RSD – relative standard deviation
%R - percent recovery
RPD - relative percent difference
%D – difference

ALDEHYDES ANALYSES

1. Holding Times

The specified holding times for the following methods are presented in the following table.

Method	Matrix	Holding Time	Preservation
SW-846 8315A	Water	3 days until extraction; 3 days from extraction to analysis	Cool to <6 °C

All samples were analyzed within the specified holding time criteria.

2. Blank Contamination

Quality assurance (QA) blanks (i.e., method and rinse blanks) are prepared to identify any contamination which may have been introduced into the samples during sample preparation or field activity. Method blanks measure laboratory contamination. Rinse blanks measure contamination of samples during field operations.

A blank action level (BAL) of five times the concentration of a detected compound in an associated blank (common laboratory contaminant compounds are calculated at ten times) is calculated for QA blanks containing concentrations greater than the method detection limit (MDL). The BAL is compared to the associated sample results to determine the appropriate qualification of the sample results, if needed.

Compounds were not detected above the MDL in the associated blanks; therefore, detected sample results were not associated with blank contamination.

3. System Performance

System performance and column resolution were acceptable.

4. Calibration

Satisfactory instrument calibration is established to ensure that the instrument is capable of producing acceptable quantitative data. An initial calibration demonstrates that the instrument is capable of acceptable performance at the beginning of an experimental sequence. The continuing calibration verifies that the instrument daily performance is satisfactory.

4.1 Initial Calibration

A maximum RSD of 20% is allowed or a correlation coefficient greater than 0.99.

4.2 Continuing Calibration

All target compounds associated with the continuing calibration standard must exhibit a percent difference (%D) less than the control limit (20%).

All compounds associated with the calibrations were within the specified control limits.

5. Surrogates/System Monitoring Compounds

All samples to be analyzed for organic compounds are spiked with surrogate compounds prior to sample preparation to evaluate overall laboratory performance and efficiency of the analytical technique. The

analysis requires that the surrogate compound exhibits recovery within the laboratory-established acceptance limits.

All surrogate recoveries were within control limits.

6. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Analysis

MS/MSD data are used to assess the precision and accuracy of the analytical method. The compounds used to perform the MS/MSD analysis must exhibit a percent recovery within the laboratory-established acceptance limits. The relative percent difference (RPD) between the MS/MSD recoveries must exhibit an RPD within the laboratory-established acceptance limits.

Note: The MS/MSD recovery control limits do not apply for MS/MSD performed on sample locations where the compound concentration detected in the parent sample exceeds the MS/MSD concentration by a factor of four or greater.

The MS/MSD exhibited acceptable recoveries and RPD between the MS/MSD recoveries.

7. Laboratory Control Sample/Laboratory Control Sample Duplicate (LCS/LCSD) Analysis

The LCS analysis is used to assess the precision and accuracy of the analytical method independent of matrix interferences. The compounds associated with the LCS analysis must exhibit a percent recovery within the laboratory-established acceptance limits.

All compounds associated with the LCS/LCSD analysis exhibited recoveries within the control limits.

8. Field Duplicate Analysis

Field duplicate analysis is used to assess the overall precision of the field sampling procedures and analytical method. A control limit of 50% for water matrices and 100% for soil matrices is applied to the RPD between the parent sample and the field duplicate. In the instance when the parent and/or duplicate sample concentrations are less than or equal to 5 times the RL, a control limit of two times the RL is applied for water matrices or three times the RL is applied for soil matrices.

Results for duplicate samples are summarized in the following table.

Sample ID/Duplicate ID	Compound	Sample Result	Duplicate Result	RPD
BDA-17WT 10292019/	Acetaldehyde	60 U	60 U	AC
DUP-102919FD	Formaldehyde	20 J	29 J	AC

Notes:

AC Acceptable

U Not Detected

The calculated RPDs between the parent sample and field duplicate were acceptable.

9. Compound Identification

The retention times of all quantitated peaks must fall within the calculated retention time windows.

All identified compounds met the specified criteria.

10. System Performance and Overall Assessment

Overall system performance was acceptable. Other than for those deviations specifically mentioned in this review, the overall data quality is within the guidelines specified in the method.

DATA VALIDATION CHECKLIST FOR GENERAL GC

Aldehyde: SW846 8315A	Reported		Performance Acceptable		Not Required
	No	Yes	No	Yes	
GAS CHROMATOGRAPHY (GC/FID)					
Tier II Validation					
Holding times		X		X	
Reporting limits (units)		X		X	
Blanks					
A. Method blanks		X		X	
B. Equipment blanks					X
Laboratory Control Sample (LCS) %R		X		X	
Laboratory Control Sample Duplicate(LCSD) %R		X		X	
LCS/LCSD Precision (RPD)		X		X	
Matrix Spike (MS) %R		X		X	
Matrix Spike Duplicate(MSD) %R		X		X	
MS/MSD Precision (RPD)		X		X	
Field/Lab Duplicate (RPD)		X		X	
Surrogate Spike Recoveries		X		X	
Dilution Factor		X		X	
Moisture Content					X
Tier III Validation					
Initial calibration %RSDs		X		X	
Continuing calibration %Ds		X		X	
System performance and column resolution		X		X	
Compound identification and quantitation					
A. Quantitation Reports		X		X	
C. RT of sample compounds within the established RT windows		X		X	
C. Pattern identification		X		X	
D. Transcription/calculation errors present		X		X	
E. Reporting limits adjusted to reflect sample dilutions		X		X	

INORGANIC ANALYSIS INTRODUCTION

Analyses were performed according to United States Environmental Protection Agency (USEPA) SW-846 Methods 6010C, 7470A, EPA 300.0, 350.1, 410.4, and SM 4500 NO2 B, SM4500 P F, SM5310 C, SM2320 B and SM5210 B. Data were reviewed in accordance with USEPA National Functional Guidelines of October 2004.

The data review process is an evaluation of data on a technical basis rather than a determination of contract compliance. As such, the standards against which the data are being weighed may differ from those specified in the analytical method. It is assumed that the data package represents the best efforts of the laboratory and that it was already subjected to adequate and sufficient quality review prior to submission.

During the review process, laboratory qualified and unqualified data are verified against the supporting documentation. Based on this evaluation, qualifier codes may be added, deleted, or modified by the data reviewer. Results are qualified with the following codes in accordance with the USEPA National Functional Guidelines:

- Concentration (C) Qualifiers

  U The analyte was analyzed for but not detected. The associated value is the analyte instrument detection limit.

  J The reported value was obtained from a reading less than the reporting limit (RL), but greater than or equal to the method detection limit (MDL).

- Quantitation (Q) Qualifiers

  E The reported value is estimated due to the presence of interference.

  N Spiked sample recovery is not within control limits.

  * Duplicate analysis is not within control limits.

- Validation Qualifiers

  J The analyte was positively identified; however, the associated numerical value is an estimated concentration only.

  UJ The analyte was not detected above the reporting limit. However, the reported limit is approximate and may or may not represent the actual limit of detection.

  UB Analyte considered non-detect at the listed value due to associated blank contamination.

  R The sample results are rejected.

Two facts should be noted by all data users. First, the "R" flag means that the associated value is unusable. In other words, due to significant quality control (QC) problems, the analysis is invalid and provides no information as to whether the compound is present or not. "R" values should not appear on data tables because they cannot be relied upon, even as a last resort. The second fact to keep in mind is that no compound concentration, even if it has passed all QC tests, is guaranteed to be accurate. Strict QC serves to increase confidence in data but any value potentially contains error.

METALS ANALYSIS

1. Holding Times

The specified holding times for the following methods are presented in the following table.

Method	Matrix	Holding Time	Preservation
SW-846 6020A	Water	180 days from collection to analysis	Preserved to a pH of less than 2 s.u.
	Soil	180 days from collection to analysis	Cool to <6°C
SW-846 7470A	Water	28 days from collection to analysis	Cool to <6°C; preserved to a pH of less than 2 s.u.
SW-846 7471B	Soil	28 days from collection to analysis	Cool to <6°C

Note:

s.u. Standard units

All samples were analyzed within the specified holding times.

2. Blank Contamination

Quality assurance (QA) blanks (i.e., method and rinse blanks) are prepared to identify any contamination which may have been introduced into the samples during sample preparation or field activity. Method blanks measure laboratory contamination. Rinse blanks measure contamination of samples during field operations.

A blank action level (BAL) of five times the concentration of a detected compound in an associated blank is calculated for QA blanks containing concentrations greater than the method detection limit (MDL). The BAL is compared to the associated sample results to determine the appropriate qualification of the sample results, if needed.

Compounds were detected in the associated QA blanks; however, the associated sample results were greater than the BAL and/or were non-detect. No qualification of the sample results was required.

3. Calibration

Satisfactory instrument calibration is established to provide that the instrument is capable of producing acceptable quantitative data. An initial calibration demonstrates that the instrument is capable of acceptable performance at the beginning of an experimental sequence. The continuing calibration verifies that the instrument's continuing performance is satisfactory.

3.1 Initial Calibration and Continuing Calibration

The correct number and type of standards were analyzed. The correlation coefficient of the initial calibration was greater than 0.995 for all analytes and all initial calibration verification standard recoveries were within control limits.

All initial and continuing calibration verification standard recoveries were within the control limit.

3.2 RL Check Standard

The RL check standard serves to verify the linearity of calibration of the analysis at the reporting limit. The RL standard is not required for the analysis of aluminum (Al), barium (Ba), calcium (Ca), iron (Fe), magnesium (Mg), sodium (Na), and potassium (K). The criteria used to evaluate the RL standard analysis are presented below in the RL standards evaluation table (if applicable).

All RL standard recoveries were within control limits.

3.3 ICP Interference Control Sample (ICS)

The ICS verifies the laboratories interelement and background correction factors.

All ICS exhibited recoveries within the control limits.

4. Matrix Spike/Matrix Spike Duplicate (MS/MSD)/Laboratory Duplicate Analysis

MS/MSD and laboratory duplicate data are used to assess the precision and accuracy of the analytical method.

4.1 MS/MSD Analysis

All metal analytes must exhibit a percent recovery within the established acceptance limits of 75% to 125%. The MS/MSD recovery control limits do not apply for MS/MSD performed on sample locations where the analyte's concentration detected in the parent sample exceeds the MS/MSD concentration by a factor of four or greater. In instances where this is true, the data will not be qualified even if the percent recovery does not meet the control limits and the laboratory flag will be removed.

Sample locations associated with the MS/MSD exhibiting recoveries outside of the control limits are presented in the following table.

Sample Locations	Compound	MS Recovery	MSD Recovery
BDA-17WT 10292019	Mercury	AC	<LL but >10%
	Arsenic	AC	>UL
	Chromium	<LL but >30%	<LL but >30%
	Cobalt	<30%	<30%
	Copper	<30%	<30%
	Lead	<LL but >30%	<LL but >30%
	Vanadium	<LL but >30%	<LL but >30%
BDA-17WT 10292019	Iron-Dissolved	>UL	<LL but >30%

Note:

AC Acceptable

The criteria used to evaluate the MS/MSD recoveries are presented in the following table. In the case of an MS/MSD deviation, the sample results are qualified as documented in the table below.

Control Limit	Sample Result	Qualification
> the upper control limit (UL)	Non-detect	No Action
	Detect	J
< the lower control limit (LL) but > 30%	Non-detect	UJ
	Detect	J
< 30%	Non-detect	R
	Detect	J
Parent sample concentration > four times the MS/MSD spiking solution concentration.	Detect	No Action
	Non-detect	

A post spike (PS) was performed as required when matrix spike recoveries are outside control limits. The post spike results were evaluated as presented in the table below.

Sample Location	Analyte	MS Recovery	PS Recovery
BDA-17WT 10292019	Cobalt	19%	95%
	Copper	0%	102%

The sample results will be qualified as presented in the following table. The qualifications are applied to all sample results associated with this SDG.

Control limit	Post Spike	Sample Result	Qualification
MS/MSD percent recovery <30%	PS percent recovery >75%	Non-detect	UJ
		Detect	J
	PS percent recovery <75%	Non-detect	R
		Detect	J

4.2 Laboratory Duplicate Analysis

The laboratory duplicate relative percent difference (RPD) criterion is applied when parent and duplicate sample concentrations are greater than or equal to 5 times the RL. A control limit of 20% for water matrices and 35% for soil matrices is applied when the criteria above is true. In the instance when the parent and/or duplicate sample concentrations are less than or equal to 5 times the RL, a control limit of one times the RL is applied for water matrices and two times the RL for soil matrices.

A laboratory duplicate analysis was not performed on a sample location within this SDG.

5. Field Duplicate Analysis

Field duplicate analysis is used to assess the overall precision of the field sampling procedures and analytical method. A control limit of 50% for water matrices is applied to the RPD between the parent sample and field duplicate. In the instance when the parent and/or duplicate sample concentrations are less than or equal to 5 times the RL, a control limit of two times the RL is applied for water matrices.

Results for duplicate samples are summarized in the following table.

Sample ID/Duplicate ID	Compound	Sample Result	Duplicate Result	RPD
BDA-17T 10292019/ DUP-102919FD	Barium	0.0359	0.0538	39.9%
	Calcium	138	482	111.0%
	Chromium	0.0023 J	0.0051 J	AC
	Cobalt	0.005 U	0.0030 J	AC
	Iron	0.0727 J	2.35	NC
	Magnesium	25.8	89.2	110.3%
	Manganese	0.0525	0.372	150.5%
	Nickel	0.0060 J	0.0538	NC
	Potassium	7.18	10.1	33.8%
	Sodium	70.2	193	93.3%
	Zinc	3.9 J	11.5 J	AC
	Aluminum	55.9	8760	197.5%
	Barium-Dissolved	0.0531	0.0538	1.3%
	Calcium-Dissolved	476	474	0.4%
	Chromium-Dissolved	0.0034 J	0.0034	AC
	Cobalt-Dissolved	0.0041 J	0.0031	AC
	Iron-Dissolved	0.317	0.318	AC
	Magnesium-Dissolved	83.0	80.8	2.7%
	Manganese-Dissolved	0.284	0.264	7.3%
	Nickel-Dissolved	0.0419	0.0337	AC
	Potassium-Dissolved	10.3	9.78	5.2%
	Sodium-Dissolved	207	205	1.0%
	Zinc-Dissolved	5.6 J	4.9 J	AC
	Aluminum-Dissolved	624	466	29.0%

Notes:

AC Acceptable

NC Not Compliant

The analytes Calcium, Iron, Magnesium, Manganese, Nickel, Sodium and Aluminum associated with samples BDA-17T 10292019 and DUP-102919FD exhibited a field duplicate RPD greater than the control limit. The associated sample result from these sample locations were qualified as estimated.

6. Laboratory Control Sample (LCS) Analysis

The LCS analysis is used to assess the accuracy of the analytical method independent of matrix interferences. The analytes associated with the LCS analysis must exhibit a percent recovery between the control limits of 80% and 120%.

The LCS analysis exhibited recoveries within the control limits.

7. Serial Dilution

The serial dilution analysis is used to assess if a significant physical or chemical interference exists due to sample matrix. Analytes exhibiting concentrations greater than 50 times the MDL in the undiluted sample are evaluated to determine if matrix interference exists. These analytes are required to have less than a 10% difference (%D) between sample results from the undiluted (parent) sample and results associated with the same sample analyzed with a five-fold dilution.

A serial dilution analysis was not performed on a sample location within this SDG.

8. General Assessment – Total vs. Dissolved

When the dissolved concentration exceeded the associated total concentration, and both results were five times greater than the LOQ, then the %D between the total and dissolved concentrations must be less than 20%.

The calculated %D between the total and the dissolved sample results were within the control limit, with the exception of the analytes presented in the following table.

Sample Location	Analytes	Result Total	Result Dissolved	%D
BDA-17T 10292019	Barium	0.0359	0.0531	47.9%
	Calcium	138	476	245%
	Magnesium	25.8	83.0	222%
	Manganese	0.0525	0.284	441%
	Potassium	7.18	10.3	43.5%
	Sodium	70.2	207	194.9%
	Aluminum	55.9	624	1016.3%
BDA-17WR 10292019	Magnesium	46.4	58.7	26.5%

The criteria used to evaluate total and dissolved %D are presented in the following table. In the case of a total and dissolved %D deviation, the sample results are qualified. The qualifications are applied to the associated total and dissolved sample results associated with the sample location referenced above.

Sample Concentration	Control Limit	Sample Result	Qualification
Dissolved sample concentration > total sample concentration and > 5x RL	>20%	Non-detect	UJ
		Detect	J
Dissolved sample concentration > total sample concentration and > 5x RL	>50%	Non-detect	R
		Detect	R

9. System Performance and Overall Assessment

Overall system performance was acceptable. Other than for those deviations specifically mentioned in this review, the overall data quality is within the guidelines specified in the method.

DATA VALIDATION CHECKLIST FOR METALS

METALS: SW-846 6010C/7470	Reported		Performance Acceptable		Not Required
	No	Yes	No	Yes	
Inductively Coupled Plasma-Atomic Emission Spectrometry (ICP-AES)					
Atomic Absorption – Manual Cold Vapor (CV)					
Tier II Validation					
Holding Times		X		X	
Reporting limits (units)		X		X	
Blanks					
A. Instrument Blanks		X		X	
B. Method Blanks		X		X	
C. Equipment/Field Blanks		X		X	
Laboratory Control Sample (LCS)		X		X	
Matrix Spike (MS) %R		X	X		
Matrix Spike Duplicate (MSD) %R		X	X		
MS/MSD Precision (RPD)		X	X		
Field/Lab Duplicate (RPD)		X	X		
ICP Serial Dilution %D		X		X	
Total vs. Dissolved		X	X		
Reporting Limit Verification		X		X	
Tier III Validation					
Initial Calibration Verification		X		X	
Continuing Calibration Verification		X		X	
CRDL Standard Recovery		X		X	
ICP Interference Check		X		X	
ICP-MS Internal Standards		X		X	
Transcription/calculations acceptable		X		X	
Raw Data		X		X	
Reporting limits adjusted to reflect sample dilutions		X		X	

Notes:

%R Percent recovery

RPD Relative percent difference

%D Percent difference

GENERAL CHEMISTRY ANALYSES

1. Holding Times

The specified holding times for the following methods are presented in the following table.

Method	Matrix	Holding Time	Preservation
Total Phosphorus By SM4500-P F	Water	28 days from collection to analysis	Cool to <6 °C; preserved to a pH of less than 2.
Ammonia-N by EPA 350.1	Water	28 days from collection to analysis	Cool to <6 °C; preserved to a pH of less than 2.
Alkalinity by SM2320 B	Water	14 days from collection to analysis	Cool to <6 °C.
Total Organic Carbon (TOC) by SM 5310 C	Water	28 days from collection to analysis	Cool to <6 °C; preserved to a pH of less than 2.
Biological Oxygen Demand (BOD) by SM5210B	Water	48 hours from collection to analysis	Cool to <6 °C.
Chemical Oxygen Demand (COD) by EPA 410.4	Water	28 days from collection to analysis	Cool to <6 °C; preserved to a pH of less than 2.
Chloride, Fluoride, Sulfate by EPA 300.0	Water	28 days from collection to analysis	Cool to <6 °C.
Nitrite-N by EPA 300.0	Water	48 hours from collection to analysis	Cool to <6 °C.
Nitrate-N by EPA 300.0	Water	28 days from collection to analysis	Cool to <6 °C; preserved to a pH of less than 2.

Note:

s.u. Standard units

The analyses that exceeded the holding are presented in the following table.

Sample Locations	Holding Time	Criteria
BDA-14RX 10292019 BDA-17T 10292019 BDA-17WT 10292019 DUP-102919FD	Nitrite Analysis completed >2 Days but <3 Days	48 Hours

Sample results associated with sample locations analyzed by analytical method EPA 353.2 were qualified, as specified in the table below. All other holding times were met.

Criteria	Qualification	
	Detected Analytes	Non-detect Analytes
Analysis completed less than two times holding time	J	UJ
Analysis completed greater than two times holding time	J	R

2. Blank Contamination

Quality assurance (QA) blanks (i.e., method and rinse blanks) are prepared to identify any contamination which may have been introduced into the samples during sample preparation or field activity. Method blanks measure laboratory contamination. Rinse blanks measure contamination of samples during field operations.

A blank action level (BAL) of five times the concentration of a detected compound in an associated blank is calculated for QA blanks containing concentrations greater than the method detection limit (MDL). The BAL is compared to the associated sample results to determine the appropriate qualification of the sample results, if needed.

Analytes were not detected above the MDL in the associated blanks; therefore, detected sample results were not associated with blank contamination.

3. Calibration

Satisfactory instrument calibration is established to ensure that the instrument is capable of producing acceptable quantitative data. An initial calibration demonstrates that the instrument is capable of acceptable performance at the beginning of an experimental sequence. The continuing calibration verifies that the instrument daily performance is satisfactory.

The correct number and type of standards were analyzed. The correlation coefficient of the initial calibration was greater than 0.995 and all initial calibration verification standard recoveries were within control limits.

All calibration standard recoveries were within the control limit.

4. Matrix Spike (MS)/Laboratory Duplicate Analysis

MS and laboratory duplicate data are used to assess the precision and accuracy of the analytical method.

4.1 MS/MSD Analysis

All analytes must exhibit a percent recovery within the established acceptance limits of 75% to 125%. The MS recovery control limits do not apply for MS performed on sample locations where the analyte's concentration detected in the parent sample exceeds the MS concentration by a factor of four or greater. In instance where this is true, the data will not be qualified even if the percent recovery does not meet the control limits and the laboratory flag will be removed.

Sample locations associated with the MS/MSD exhibiting recoveries outside of the control limits are presented in the following table.

Sample Locations	Compound	MS Recovery	MSD Recovery
BDA-17WT 10292019	Total Alkalinity	<LL but >10%	<LL but >10%

Note:

AC Acceptable

The criteria used to evaluate the MS/MSD recoveries are presented in the following table. In the case of an MS/MSD deviation, the sample results are qualified as documented in the table below.

Control Limit	Sample Result	Qualification
> the upper control limit (UL)	Non-detect	No Action
	Detect	J
< the lower control limit (LL) but > 10%	Non-detect	UJ
	Detect	J
< 10%	Non-detect	R
	Detect	J
Parent sample concentration > four times the MS/MSD spiking solution concentration.	Detect	No Action
	Non-detect	

4.2 Laboratory Duplicate Analysis

The laboratory duplicate relative percent difference (RPD) criterion is applied when parent and duplicate sample concentrations are greater than or equal to 5 times the RL. A control limit of 20% for water matrices is applied when the criteria above is true. In the instance when the parent and/or duplicate sample concentrations are less than or equal to 5 times the RL, a control limit of one times the RL is applied for water matrices.

All analytes associated with laboratory duplicate RPD were within the control limit, with the exception of the analytes presented in the following table.

Sample Location	Analytes	Laboratory RPD
BDA-17WT 10292019	BOD	62%

The criteria used to evaluate laboratory duplicate RPD are presented in the following table. In the case of a laboratory duplicate RPD deviation, the sample results are qualified. The qualifications are applied to the parent sample result associated with this SDG.

Sample Concentration	Control Limit	Sample Result	Qualification
Parent sample and laboratory sample concentration >5 times RL	Water 20% or Soil 35%	Non-detect	UJ
		Detect	J
Parent sample and/or laboratory duplicate sample result ≤ five times the RL and difference between samples >RL	Water one times RL or Soil two times RL	Non-detect	UJ
		Detect	J

5. Field Duplicate Analysis

Field duplicate analysis is used to assess the overall precision of the field sampling procedures and analytical method. A control limit of 50% for water matrices is applied to the RPD between the parent sample and field duplicate. In the instance when the parent and/or duplicate sample concentrations are less than or equal to 5 times the RL, a control limit of two times the RL is applied for water matrices.

Results for duplicate samples are summarized in the following table.

Sample ID/Duplicate ID	Compound	Sample Result	Duplicate Result	RPD
BDA-17T 10292019/ DUP-102919FD	Chloride	77500	91400	16.5%
	Fluoride	340 J	520	AC
	Sulfate	354000	675000	62.4%
	Nitrate Nitrogen	0.44	0.44	AC
	Total Phosphorus	120	160	AC
	TOC	1500	1600	AC
	COD	50000 U	145000	AC
	Total Alkalinity	99.1	111	11.3%
	BOD	2000 U	2200	AC
BDA-17WR 10292019/ DUP-102919-02FD	Ammonia Nitrogen	11500	14900	25.8%

Notes:

AC Acceptable

The compound Sulfate associated with samples BDA-17T 10292019 and DUP-102919FD exhibited a field duplicate RPD greater than the control limit. The associated sample result from these sample locations were qualified as estimated.

6. Laboratory Control Sample (LCS) Analysis

The LCS analysis is used to assess the accuracy of the analytical method independent of matrix interferences. The analytes associated with the LCS analysis must exhibit a percent recovery between the control limits of 80% and 120%.

All compounds associated with the LCS/LCSD analysis exhibited recoveries within the control limits.

7. System Performance and Overall Assessment

Overall system performance was acceptable. Other than for those deviations specifically mentioned in this review, the overall data quality is within the guidelines specified in the method.

DATA VALIDATION CHECKLIST FOR GENERAL CHEMISTRY

General Chemistry: EPA 300.0, 350.1, 410.4, and SM 4500 NO2 B, SM4500 P F, SM5310 C, SM2320 B and SM5210 B	Reported		Performance Acceptable		Not Required
	No	Yes	No	Yes	
MISCELLANEOUS INSTRUMENTATION					
Tier II Validation					
Holding times		X	X		
Reporting limits (units)		X		X	
Blanks					
A. Instrument Blanks		X		X	
B. Method Blanks		X		X	
C. Equipment blanks		X		X	
Laboratory Control Sample (LCS) %R		X		X	
Laboratory Control Sample Duplicate(LCSD) %R		X		X	
LCS/LCSD Precision (RPD)		X		X	
Matrix Spike (MS) %R		X	X		
Matrix Spike Duplicate(MSD) %R		X	X		
MS/MSD Precision (RPD)		X		X	
Field/Lab Duplicate (RPD)		X	X		
Dilution Factor		X		X	
Moisture Content					X
Tier III Validation					
Initial calibration %RSD or correlation coefficient		X		X	
Continuing calibration %R		X		X	
Raw Data					
Transcription/calculation errors present		X		X	
Reporting limits adjusted to reflect sample dilutions		X		X	

Notes:

%RSD Relative standard deviation

%R Percent recovery

RPD Relative percent difference

%D Percent difference

SAMPLE COMPLIANCE REPORT

Sample Delivery Group (SDG)	Sampling Date	Protocol	Sample ID	Matrix	Compliancy[1]					Noncompliance
					VOC	SVOC	ALC/ GLY/ ALD	PFAS	MET/ MISC	
BMS81	10/28/2019	SW846	PW-6T 10282019	Water	Yes	No	No	-	-	SVOC: CCV %D, LCS %R GLY: SSTD %R
	10/28/2019	SW846	PW-6L 10282019	Water	Yes	No	Yes	-	-	SVOC: CCV %D, LCS %R
	10/28/2019	SW846	PW-3MD 10282019	Water	Yes	No	No	-	-	SVOC: CCV %D, LCS %R GLY: SSTD %R
	10/28/2019	SW846	PW-3 10282019	Water	Yes	No	No	-	-	SVOC: CCV %D, LCS %R GLY: SSTD %R
	10/28/2019	SW846	PW-3T 10282019	Water	Yes	No	No	-	-	SVOC: CCV %D, LCS %R GLY: SSTD %R
	10/28/2019	SW846	PW-4LD 10282019	Water	Yes	No	No	-	-	SVOC: CCV %D, LCS %R GLY: SSTD %R
	10/28/2019	SW846	PW-4F 10282019	Water	Yes	No	No	-	-	SVOC: CCV %D, LCS %R GLY: SSTD %R
	10/28/2019	SW846	PW-4LS 10282019	Water	Yes	No	No	-	-	SVOC: CCV %D, LCS %R GLY: SSTD %R
	10/23/2019	SW846	TRIP BLANK 10232019	Water	Yes		Yes	-	-	
	10/29/2019	SW846	BDA-14RX 10292019	Water	No	No		Yes	No	VOC: CCV %D SVOC: LCS/LCSD %R/RPD MET: MS/MSD %R, FD RPD MISC: HT
	10/29/2019	SW846	BDA-17RX 10292019	Water	No	No	No	No	No	VOC: CCV %D SVOC: LCS/LCSD %R/RPD PFAS: SSTD %R GLY: SSTD %R MET: MS/MSD %R, FD RPD
	10/29/2019	SW846	BDA-17T 10292019	Water	No	No	No	Yes	No	VOC: CCV %D, FD RPD SVOC: LCS/LCSD %R/RPD PFAS: FD RPD

Sample Delivery Group (SDG)	Sampling Date	Protocol	Sample ID	Matrix	Compliancy[1]					Noncompliance
					VOC	SVOC	ALC/ GLY/ ALD	PFAS	MET/ MISC	
										GLY: SSTD %R MET: MS/MSD %R, FD RPD MISC: HT, FD RPD
	10/29/2019	SW846	BDA-17WT 10292019	Water	No	No	No	Yes	No	VOC: CCV %D SVOC: SSTD %R, MS/MSD %R/RPD, LCS/LCSD %R/RPD GLY: SSTD %R, MS/MSD %R/RPD MET: MS/MSD %R, FD RPD, TOTDIS %D MISC: HT, MS/MSD %R, LabDup RPD
	10/29/2019	SW846	BDA-17WR 10292019	Water	No	No	No	No	No	VOC: CCV %D SVOC: LCS/LCSD %R/RPD PFAS: SSTD %R GLY: SSTD %R MET: MS/MSD %R, FD RPD, TOTDIS %D
	10/29/2019	SW846	DUP-102919FD	Water	No	-	No	Yes	No	VOC: CCV %D, FD RPD PFAS: FD RPD GLY: SSTD %R MET: MS/MSD %R, FD RPD MISC: HT, FD RPD
	10/29/2019	SW846	TRIP BLANK 10292019	Water	No	-	No	-	-	VOC: CCV %D GLY: SSTD %R
	10/29/2019	SW846	DUP-102919-02FD	Water	-	No	-	-	-	SVOC: LCS/LCSD %R/RPD
	10/29/2019	SW846	FB-102919	Water	-	-	-	Yes	-	
	10/29/2019	SW846	EB-102919	Water	-	-	-	Yes	-	

Note:

1 Samples which are compliant with no added validation qualifiers are listed as "yes". Samples which are non-compliant or which have added qualifiers are listed as "no". A "no" designation does not necessarily indicate that the data have been rejected or are otherwise unusable.

VALIDATION PERFORMED BY: Jeffrey L. Davin

SIGNATURE: 

DATE: January 8, 2020

PEER REVIEW: Dennis K. Capria

DATE: January 22, 2020

CHAIN OF CUSTODY

CORRECTED SAMPLE ANALYSIS DATA SHEETS

Environmental Analysis Request/Chain of Custody

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Acct. # 3074 Group # 2071526 Sample # 1186458-66

Client: Arcadis			
Project Name/#: BMS Syracuse	Site ID #:		
Project Manager: Bill McCune	P.O. #: 30033396		
Sampler: Austin George, Josh Miller, Evan Green	PWSID #:		
Phone #: 315 671 6712	Quote #:		
State where samples were collected: NY	For Compliance: Yes ☐ No ☐		

Sample Identification	Collection Date	Collection Time	Grab	Composite	Matrix: Soil ☐ Sediment ☐ Tissue	Water ☑ Ground ☐ Surface ☐ Potable ☐ NPDES	Other:	Total # of Containers	VOCs 8260C	SVOCs 8270D	Glycols 8015C	Alcohols	Aldehydes 8315A			Remarks
									H			H				
PW-6T	10/28/19	1355	X			X		10	X	X	X	X	X			
PW-6L	10/28/19	1510	X			X		10	X	X	X	X	X			
PW-3MD	10/28/19	1355	X			X		10	X	X	X	X	X			
PW-3MS	10/28/19	1505	X			X		10	X	X	X	X	X			
PW-3T	10/28/19	1125	X			X		10	X	X	X	X	X			
PW-4LD	10/28/19	1436	X			X		10	X	X	X	X	X			
PW-4F	10/28/19	1131	X			X		10	X	X	X	X	X			
PW-4LS	10/28/19	1327	X			X		10	X	X	X	X	X			
Trip blank	10/23/19	/	X			X		2	X							
	RS															

Analyses Requested — Preservation and Filtration Codes

For Lab Use Only
SF #: _____
SCR #: _____

Preservation Codes
H = HCl; T = Thiosulfate; N = HNO_3; B = NaOH; S = H_2SO_4; P = H_3PO_4; F = Field Filtered; O = Other

Turnaround Time Requested (TAT) (please check): Standard ☑ Rush ☐
(Rush TAT is subject to laboratory approval and surcharges.)

Date results are needed:

Rush results requested by (please check): E-Mail ☐ Phone ☐

E-mail Address: William.McCune@arcadis.com

Phone: 315 671 6712

Data Package Options (please check if required)

Type I (Validation/non-CLP)	☐	MA MCP	☐
Type III (Reduced non-CLP)	☐	CT RCP	☐
Type VI (Raw Data Only)	☐	TX TRRP-13	☐
NJ DKQP	☐	NYSDEC Category	☐ A or ☐ B

EDD Required? Yes ☑ No ☐ If yes, format:

Relinquished by:	Date	Time		Date	Time
Josh Sinn	10/28/19	1615	Received by:	10.28.19	16:15
Relinquished by:	Date	Time		Date	Time
	10.28.19	19:00			
Relinquished by:	Date	Time		Date	Time
Relinquished by:	Date	Time		Date	Time
Relinquished by:	Date	Time	CM Wells	Date 10/29/19	Time 11:13

Relinquished by Commercial Carrier:
UPS _____ FedEx X Other _____

Syracuse

#225

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
P^	Concentration difference between the primary and confirmation column > 40%. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

Sample Description: **PW-6T Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/29/2019 11:13
Collection Date/Time: 10/28/2019 13:55
SDG#: BMS81-01

ARCADIS U.S., Inc.
ELLE Sample #: GW 1186458
ELLE Group #: 2071526
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	20	0.7	1
11997	Acetonitrile	75-05-8	N.D.	100	16	1
11997	Benzene	71-43-2	N.D.	1	0.2	1
11997	Bromochloromethane	74-97-5	N.D.	5	0.2	1
11997	Bromodichloromethane	75-27-4	N.D.	1	0.2	1
11997	Bromoform	75-25-2	N.D.	4	1	1
11997	Bromomethane	74-83-9	N.D.	1	0.3	1
11997	n-Butanol	71-36-3	N.D.	250	61	1
11997	2-Butanone	78-93-3	N.D.	10	0.3	1
11997	t-Butyl alcohol	75-65-0	N.D.	50	12	1
11997	n-Butylbenzene	104-51-8	N.D.	5	0.2	1
11997	sec-Butylbenzene	135-98-8	N.D.	5	0.2	1
11997	tert-Butylbenzene	98-06-6	N.D.	5	0.3	1
11997	Carbon Disulfide	75-15-0	N.D.	5	0.2	1
11997	Carbon Tetrachloride	56-23-5	N.D.	1	0.2	1
11997	Chlorobenzene	108-90-7	N.D.	1	0.2	1
11997	Chlorodifluoromethane[1]	75-45-6	N.D.	5	2	1
11997	Chloroethane	75-00-3	N.D.	1	0.2	1
11997	Chloroform	67-66-3	0.3 J	1	0.2	1
11997	Chloromethane	74-87-3	N.D.	1	0.2	1
11997	Cyclohexane	110-82-7	N.D.	5	1	1
11997	Cyclohexanone[1]	108-94-1	N.D.	100	25	1
11997	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	5	0.3	1
11997	Dibromochloromethane	124-48-1	N.D.	1	0.2	1
11997	1,2-Dibromoethane	106-93-4	N.D.	1	0.2	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	5	0.2	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	5	0.2	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	5	0.2	1
11997	Dichlorodifluoromethane	75-71-8	N.D.	1	0.2	1
11997	1,1-Dichloroethane	75-34-3	N.D.	1	0.2	1
11997	1,2-Dichloroethane	107-06-2	N.D.	1	0.3	1
11997	1,1-Dichloroethene	75-35-4	N.D.	1	0.2	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	1	0.2	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	1	0.2	1
11997	1,2-Dichloropropane	78-87-5	N.D.	1	0.2	1
11997	cis-1,3-Dichloropropene	10061-01-5	N.D.	1	0.2	1
11997	trans-1,3-Dichloropropene	10061-02-6	N.D.	1	0.2	1
11997	1,4-Dioxane	123-91-1	N.D.	250	29	1
11997	Ethyl Acetate	141-78-6	N.D.	5	0.7	1
11997	Ethyl ether	60-29-7	N.D.	5	0.2	1
11997	Ethylbenzene	100-41-4	N.D.	1	0.4	1

*=This limit was used in the evaluation of the final result

Sample Description: **PW-6T Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/29/2019 11:13
Collection Date/Time: 10/28/2019 13:55
SDG#: BMS81-01

ARCADIS U.S., Inc.
ELLE Sample #: GW 1186458
ELLE Group #: 2071526
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Freon 113	76-13-1	N.D.	10	0.2	1
11997	n-Heptane[1]	142-82-5	N.D.	5	2	1
11997	n-Hexane[1]	110-54-3	N.D.	5	2	1
11997	2-Hexanone	591-78-6	N.D.	10	0.3	1
11997	Isobutyl Alcohol	78-83-1	N.D.	250	36	1
11997	Isopropylbenzene	98-82-8	N.D.	5	0.2	1
11997	p-Isopropyltoluene	99-87-6	N.D.	5	0.2	1
11997	Methyl Acetate	79-20-9	N.D.	5	0.2	1
11997	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	1	0.2	1
11997	4-Methyl-2-pentanone	108-10-1	N.D.	10	0.5	1
11997	Methylcyclohexane	108-87-2	N.D.	5	0.5	1
11997	Methylene Chloride	75-09-2	N.D.	1	0.3	1
11997	Naphthalene	91-20-3	N.D.	5	1	1
11997	2-Nitropropane	79-46-9	N.D.	10	0.8	1
11997	Styrene	100-42-5	N.D.	5	0.2	1
11997	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	1	0.2	1
11997	Tetrachloroethene	127-18-4	N.D.	1	0.2	1
11997	Tetrahydrofuran	109-99-9	N.D.	10	0.7	1
11997	Toluene	108-88-3	N.D.	1	0.2	1
11997	1,2,3-Trichlorobenzene	87-61-6	N.D.	5	0.4	1
11997	1,2,4-Trichlorobenzene	120-82-1	N.D.	5	0.3	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	1	0.3	1
11997	1,1,2-Trichloroethane	79-00-5	N.D.	1	0.2	1
11997	Trichloroethene	79-01-6	N.D.	1	0.2	1
11997	Trichlorofluoromethane	75-69-4	N.D.	1	0.2	1
11997	1,2,4-Trimethylbenzene	95-63-6	N.D.	5	1	1
11997	1,3,5-Trimethylbenzene	108-67-8	N.D.	5	0.3	1
11997	Vinyl Chloride	75-01-4	N.D.	1	0.2	1
11997	m+p-Xylene	179601-23-1	N.D.	5	1	1
11997	o-Xylene	95-47-6	N.D.	1	0.4	1
11997	Xylene (Total)	1330-20-7	N.D.	6	1	1

12027 VOA Interp. Library Search-20
The results from the volatile library search are listed on the attached FORM 1 - VOA-TIC. The qualifiers appearing in the "Q" column are defined at the end of the report.

GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	Acenaphthene	83-32-9	N.D.	0.51	0.10	1
14241	Acenaphthylene	208-96-8	N.D.	0.51	0.10	1
14241	Acetophenone	98-86-2	N.D.	10	4.1	1
14241	Aniline	62-53-3	N.D.	10	3.1	1

*=This limit was used in the evaluation of the final result

Sample Description: **PW-6T Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/29/2019 11:13
Collection Date/Time: 10/28/2019 13:55
SDG#: BMS81-01

ARCADIS U.S., Inc.
ELLE Sample #: GW 1186458
ELLE Group #: 2071526
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	Anthracene	120-12-7	N.D.	0.51	0.10	1
14241	Atrazine	1912-24-9	N.D.	5.1	2.0	1
14241	Benzaldehyde	100-52-7	N.D. J	10	3.1	1
14241	Benzo(a)anthracene	56-55-3	N.D.	0.51	0.10	1
14241	Benzo(a)pyrene	50-32-8	N.D.	0.51	0.10	1
14241	Benzo(b)fluoranthene	205-99-2	N.D.	0.51	0.10	1
14241	Benzo(g,h,i)perylene	191-24-2	N.D.	0.51	0.10	1
14241	Benzo(k)fluoranthene	207-08-9	N.D. J	0.51	0.10	1
14241	Benzyl alcohol	100-51-6	N.D.	31	10	1
14241	1,1'-Biphenyl	92-52-4	N.D.	10	3.1	1
14241	4-Bromophenyl-phenylether	101-55-3	N.D.	2.0	0.51	1
14241	Butylbenzylphthalate	85-68-7	N.D.	5.1	2.0	1
14241	Di-n-butylphthalate	84-74-2	N.D.	5.1	2.0	1
14241	Caprolactam	105-60-2	N.D.	11	5.1	1
14241	Carbazole	86-74-8	N.D.	2.0	0.51	1
14241	4-Chloro-3-methylphenol	59-50-7	N.D.	2.0	0.51	1
14241	4-Chloroaniline	106-47-8	N.D.	10	4.1	1
14241	bis(2-Chloroethoxy)methane	111-91-1	N.D.	2.0	0.51	1
14241	bis(2-Chloroethyl)ether	111-44-4	N.D.	2.0	0.51	1
14241	bis(2-Chloroisopropyl)ether[1]	39638-32-9	N.D.	2.0	0.51	1
	Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.					
14241	2-Chloronaphthalene	91-58-7	N.D.	1.0	0.41	1
14241	2-Chlorophenol	95-57-8	N.D.	2.0	0.51	1
14241	4-Chlorophenyl-phenylether	7005-72-3	N.D.	2.0	0.51	1
14241	Chrysene	218-01-9	N.D.	0.51	0.10	1
14241	Dibenz(a,h)anthracene	53-70-3	N.D.	0.51	0.10	1
14241	Dibenzofuran	132-64-9	N.D.	2.0	0.51	1
14241	3,3'-Dichlorobenzidine	91-94-1	N.D.	10	3.1	1
14241	2,4-Dichlorophenol	120-83-2	N.D.	2.0	0.51	1
14241	Dicyclohexylamine[1]	101-83-7	N.D.	10	10	1
14241	Diethylphthalate	84-66-2	N.D.	5.1	2.0	1
14241	N,N-Dimethylaniline[1]	121-69-7	N.D.	1.0	0.51	1
14241	2,4-Dimethylphenol	105-67-9	N.D.	10	3.1	1
14241	Dimethylphthalate	131-11-3	N.D.	5.1	2.0	1
14241	4,6-Dinitro-2-methylphenol	534-52-1	N.D.	22	8.2	1
14241	2,4-Dinitrophenol	51-28-5	N.D.	31	14	1
14241	2,4-Dinitrotoluene	121-14-2	N.D.	5.1	1.0	1
14241	2,6-Dinitrotoluene	606-20-2	N.D.	2.0	0.51	1
14241	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	11	5.1	1

*=This limit was used in the evaluation of the final result

Sample Description: **PW-6T Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/29/2019 11:13
Collection Date/Time: 10/28/2019 13:55
SDG#: BMS81-01

ARCADIS U.S., Inc.
ELLE Sample #: GW 1186458
ELLE Group #: 2071526
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	Fluoranthene	206-44-0	N.D.	0.51	0.10	1
14241	Fluorene	86-73-7	N.D.	0.51	0.10	1
14241	Hexachlorobenzene	118-74-1	N.D.	0.51	0.10	1
14241	Hexachlorobutadiene	87-68-3	N.D.	2.0	0.51	1
14241	Hexachlorocyclopentadiene	77-47-4	N.D.	11	5.1	1
14241	Hexachloroethane	67-72-1	N.D.	5.1	1.0	1
14241	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.51	0.10	1
14241	Isophorone	78-59-1	N.D.	2.0	0.51	1
14241	2-Methylnaphthalene	91-57-6	N.D.	0.51	0.10	1
14241	2-Methylphenol	95-48-7	N.D.	2.0	0.51	1
14241	4-Methylphenol	65794-96-9	N.D.	2.0	0.51	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
14241	Naphthalene	91-20-3	N.D.	0.51	0.10	1
14241	2-Nitroaniline	88-74-4	N.D.	7.2	2.0	1
14241	3-Nitroaniline	99-09-2	N.D.	7.2	3.1	1
14241	4-Nitroaniline	100-01-6	N.D.	3.1	0.92	1
14241	Nitrobenzene	98-95-3	N.D.	2.0	0.51	1
14241	2-Nitrophenol	88-75-5	N.D.	10	3.1	1
14241	4-Nitrophenol	100-02-7	N.D.	31	10	1
14241	N-Nitroso-di-n-propylamine	621-64-7	N.D.	3.1	0.72	1
14241	N-Nitrosodiphenylamine	86-30-6	N.D.	3.1	0.72	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.					
14241	Di-n-octylphthalate	117-84-0	N.D.	11	5.1	1
14241	Pentachlorophenol	87-86-5	N.D.	5.1	1.0	1
14241	Phenanthrene	85-01-8	N.D.	0.51	0.10	1
14241	Phenol	108-95-2	N.D.	2.0	0.51	1
14241	Pyrene	129-00-0	N.D.	0.51	0.10	1
14241	Pyridine	110-86-1	N.D.	5.1	2.0	1
14241	1,2,4,5-Tetrachlorobenzene	95-94-3	N.D.	2.0	0.51	1
14241	2,3,4,6-Tetrachlorophenol	58-90-2	N.D.	10	4.1	1
14241	2,4,5-Trichlorophenol	95-95-4	N.D.	2.0	0.51	1
14241	2,4,6-Trichlorophenol	88-06-2	N.D.	2.0	0.51	1
14241	Triethylamine[1]	121-44-8	N.D.	10	10	1

The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the TNI/DoD Standards. The following analytes are accepted based on this allowance: Benzo(k)fluoranthene

00886 SVOA TIC Interpretive(25)

*=This limit was used in the evaluation of the final result

Sample Description: **PW-6T Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/29/2019 11:13
Collection Date/Time: 10/28/2019 13:55
SDG#: BMS81-01

ARCADIS U.S., Inc.
ELLE Sample #: GW 1186458
ELLE Group #: 2071526
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result		Limit of Quantitation*	Method Detection Limit	Dilution Factor
	The results from the semivolatile library search are listed on the attached FORM 1 - SV-TIC. The qualifiers appearing in the "Q" column are defined at the end of the report.						
Aldehydes & Ketones	**SW-846 8315A**		**ug/l**		**ug/l**	**ug/l**	
13022	Acetaldehyde[1]	75-07-0	N.D.		60	35	1
13022	Formaldehyde	50-00-0	33	J	50	20	1
	The response for a target analyte(s) in the initial calibration verification standard is outside the QC acceptance limits.						
GC Miscellaneous	**SW-846 8015C Feb 2007 Rev 3**		**mg/l**		**mg/l**	**mg/l**	
12926	Ethylene glycol	107-21-1	N.D.	R	10	5.0	1
12926	Propylene glycol[1]	57-55-6	N.D.	R	10	2.0	1
	The response for tetramethylene glycol in the continuing calibration verification standard is outside the QC acceptance limits low. The following action was taken: The analysis was repeated and the continuing calibration verification standard bracketing the sample on the second trial is also outside the acceptance limits. This effect is attributed to the sample matrix and the data is reported.						
GC Miscellaneous	**SW-846 8015D Rev.4, June 2003**		**ug/l**		**ug/l**	**ug/l**	
10603	Ethanol	64-17-5	N.D.	D2	1,000	150	1
10603	Isopropanol[1]	67-63-0	N.D.	D2	1,000	110	1
10603	Methanol	67-56-1	N.D.	D2	1,000	220	1

Sample Comments

State of New York Certification No. 10670

[1] = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	Y193112AA	11/07/2019 17:41	Linda C Pape	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	Y193112AA	11/07/2019 17:40	Linda C Pape	1
14241	Semi-annual Groundwater BMS	SW-846 8270D	1	19305WAF026	11/08/2019 14:40	Holly B Ziegler	1
11010	8270D BNA Extraction	SW-846 3510C	1	19305WAF026	11/01/2019 16:35	Osvaldo R Sanchez	1
13022	Short List Aldehydes- W 8315A	SW-846 8315A	1	193030019A	10/31/2019 17:15	Jessica L Miller	1
01013	Formaldehyde Extraction	SW-846 8315A	1	193030019A	10/31/2019 09:23	Alison Moll	1
12926	Glycols in Water by 8015C/D	SW-846 8015C Feb 2007 Rev 3	1	193080027A	11/05/2019 22:10	Donald Brown	1
10603	Alcohols in Water	SW-846 8015D Rev.4, June 2003	1	193080007A	11/04/2019 18:00	Johanna C Kennedy	1

*=This limit was used in the evaluation of the final result

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
BMS01

Lab Name: Lancaster Laboratories Contract:_____
Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____
Matrix: (soil/water) WATER Lab Sample ID: 1186458
Sample wt/vol: 5.0 (g/mL)mL Lab File ID:HP09355.i/19nov07a.b/yn07s41.d
Level: (low/med) LOW Date Received: 10/29/19
% Moisture: not dec. Date Analyzed: 11/07/19
Column: (pack/cap) CAP Dilution Factor: 1.0
CONCENTRATION UNITS:
Number TICs found: 0 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	VOCTIC	Total VOC TICs		0	U
2.					
3.					
4.					
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page 1 of 1

FORM I VOA-TIC

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
BMS01

Lab Name: Lancaster Laboratories Contract:
Lab Code: LANCAS Case No.: SAS No.: SDG No.:
Matrix: (soil/water) WATER Lab Sample ID: 1186458
Sample wt/vol: 244 (g/mL) mL Lab File ID: lk0339.d
Level: (low/med) LOW Date Received: 10/29/19
% Moisture: Decanted: (Y/N) Date Extracted: 11/01/19
Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/08/19
Injection Volume: 1 (uL) Dilution Factor: 1
GPC Cleanup: N pH: Extraction: Sepf
CONCENTRATION UNITS:
Number TICs found: 1 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		Unknown	5.716	8	J N
2.					
3.	SVOCTIC	Total SVOC TICs		8	J N
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page 1 of 1

FORM I SV-1

Sample Description: **PW-6L Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/29/2019 11:13
Collection Date/Time: 10/28/2019 15:10
SDG#: BMS81-02

ARCADIS U.S., Inc.
ELLE Sample #: GW 1186459
ELLE Group #: 2071526
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	20	0.7	1
11997	Acetonitrile	75-05-8	N.D.	100	16	1
11997	Benzene	71-43-2	N.D.	1	0.2	1
11997	Bromochloromethane	74-97-5	N.D.	5	0.2	1
11997	Bromodichloromethane	75-27-4	N.D.	1	0.2	1
11997	Bromoform	75-25-2	N.D.	4	1	1
11997	Bromomethane	74-83-9	N.D.	1	0.3	1
11997	n-Butanol	71-36-3	N.D.	250	61	1
11997	2-Butanone	78-93-3	N.D.	10	0.3	1
11997	t-Butyl alcohol	75-65-0	N.D.	50	12	1
11997	n-Butylbenzene	104-51-8	N.D.	5	0.2	1
11997	sec-Butylbenzene	135-98-8	N.D.	5	0.2	1
11997	tert-Butylbenzene	98-06-6	N.D.	5	0.3	1
11997	Carbon Disulfide	75-15-0	N.D.	5	0.2	1
11997	Carbon Tetrachloride	56-23-5	N.D.	1	0.2	1
11997	Chlorobenzene	108-90-7	N.D.	1	0.2	1
11997	Chlorodifluoromethane[1]	75-45-6	N.D.	5	2	1
11997	Chloroethane	75-00-3	N.D.	1	0.2	1
11997	Chloroform	67-66-3	N.D.	1	0.2	1
11997	Chloromethane	74-87-3	N.D.	1	0.2	1
11997	Cyclohexane	110-82-7	N.D.	5	1	1
11997	Cyclohexanone[1]	108-94-1	N.D.	100	25	1
11997	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	5	0.3	1
11997	Dibromochloromethane	124-48-1	N.D.	1	0.2	1
11997	1,2-Dibromoethane	106-93-4	N.D.	1	0.2	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	5	0.2	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	5	0.2	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	5	0.2	1
11997	Dichlorodifluoromethane	75-71-8	N.D.	1	0.2	1
11997	1,1-Dichloroethane	75-34-3	N.D.	1	0.2	1
11997	1,2-Dichloroethane	107-06-2	N.D.	1	0.3	1
11997	1,1-Dichloroethene	75-35-4	N.D.	1	0.2	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	1	0.2	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	1	0.2	1
11997	1,2-Dichloropropane	78-87-5	N.D.	1	0.2	1
11997	cis-1,3-Dichloropropene	10061-01-5	N.D.	1	0.2	1
11997	trans-1,3-Dichloropropene	10061-02-6	N.D.	1	0.2	1
11997	1,4-Dioxane	123-91-1	N.D.	250	29	1
11997	Ethyl Acetate	141-78-6	N.D.	5	0.7	1
11997	Ethyl ether	60-29-7	0.3 J	5	0.2	1
11997	Ethylbenzene	100-41-4	N.D.	1	0.4	1

*=This limit was used in the evaluation of the final result

Sample Description: **PW-6L Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/29/2019 11:13
Collection Date/Time: 10/28/2019 15:10
SDG#: BMS81-02

ARCADIS U.S., Inc.
ELLE Sample #: GW 1186459
ELLE Group #: 2071526
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Freon 113	76-13-1	N.D.	10	0.2	1
11997	n-Heptane[1]	142-82-5	N.D.	5	2	1
11997	n-Hexane[1]	110-54-3	N.D.	5	2	1
11997	2-Hexanone	591-78-6	N.D.	10	0.3	1
11997	Isobutyl Alcohol	78-83-1	N.D.	250	36	1
11997	Isopropylbenzene	98-82-8	N.D.	5	0.2	1
11997	p-Isopropyltoluene	99-87-6	N.D.	5	0.2	1
11997	Methyl Acetate	79-20-9	N.D.	5	0.2	1
11997	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	1	0.2	1
11997	4-Methyl-2-pentanone	108-10-1	N.D.	10	0.5	1
11997	Methylcyclohexane	108-87-2	N.D.	5	0.5	1
11997	Methylene Chloride	75-09-2	N.D.	1	0.3	1
11997	Naphthalene	91-20-3	N.D.	5	1	1
11997	2-Nitropropane	79-46-9	N.D.	10	0.8	1
11997	Styrene	100-42-5	N.D.	5	0.2	1
11997	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	1	0.2	1
11997	Tetrachloroethene	127-18-4	N.D.	1	0.2	1
11997	Tetrahydrofuran	109-99-9	N.D.	10	0.7	1
11997	Toluene	108-88-3	N.D.	1	0.2	1
11997	1,2,3-Trichlorobenzene	87-61-6	N.D.	5	0.4	1
11997	1,2,4-Trichlorobenzene	120-82-1	N.D.	5	0.3	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	1	0.3	1
11997	1,1,2-Trichloroethane	79-00-5	N.D.	1	0.2	1
11997	Trichloroethene	79-01-6	N.D.	1	0.2	1
11997	Trichlorofluoromethane	75-69-4	N.D.	1	0.2	1
11997	1,2,4-Trimethylbenzene	95-63-6	N.D.	5	1	1
11997	1,3,5-Trimethylbenzene	108-67-8	N.D.	5	0.3	1
11997	Vinyl Chloride	75-01-4	N.D.	1	0.2	1
11997	m+p-Xylene	179601-23-1	N.D.	5	1	1
11997	o-Xylene	95-47-6	N.D.	1	0.4	1
11997	Xylene (Total)	1330-20-7	N.D.	6	1	1

12027 VOA Interp. Library Search-20
The results from the volatile library search are listed on the attached FORM 1 - VOA-TIC. The qualifiers appearing in the "Q" column are defined at the end of the report.

GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	Acenaphthene	83-32-9	N.D.	0.50	0.10	1
14241	Acenaphthylene	208-96-8	N.D.	0.50	0.10	1
14241	Acetophenone	98-86-2	N.D.	10	4.0	1
14241	Aniline	62-53-3	N.D.	10	3.0	1

*=This limit was used in the evaluation of the final result

Sample Description: **PW-6L Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/29/2019 11:13
Collection Date/Time: 10/28/2019 15:10
SDG#: BMS81-02

ARCADIS U.S., Inc.
ELLE Sample #: GW 1186459
ELLE Group #: 2071526
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	Anthracene	120-12-7	N.D.	0.50	0.10	1
14241	Atrazine	1912-24-9	N.D.	5.0	2.0	1
14241	Benzaldehyde	100-52-7	N.D. J	10	3.0	1
14241	Benzo(a)anthracene	56-55-3	N.D.	0.50	0.10	1
14241	Benzo(a)pyrene	50-32-8	N.D.	0.50	0.10	1
14241	Benzo(b)fluoranthene	205-99-2	N.D.	0.50	0.10	1
14241	Benzo(g,h,i)perylene	191-24-2	N.D.	0.50	0.10	1
14241	Benzo(k)fluoranthene	207-08-9	N.D. J	0.50	0.10	1
14241	Benzyl alcohol	100-51-6	N.D.	30	10	1
14241	1,1'-Biphenyl	92-52-4	N.D.	10	3.0	1
14241	4-Bromophenyl-phenylether	101-55-3	N.D.	2.0	0.50	1
14241	Butylbenzylphthalate	85-68-7	N.D.	5.0	2.0	1
14241	Di-n-butylphthalate	84-74-2	N.D.	5.0	2.0	1
14241	Caprolactam	105-60-2	N.D.	11	5.0	1
14241	Carbazole	86-74-8	N.D.	2.0	0.50	1
14241	4-Chloro-3-methylphenol	59-50-7	N.D.	2.0	0.50	1
14241	4-Chloroaniline	106-47-8	N.D.	10	4.0	1
14241	bis(2-Chloroethoxy)methane	111-91-1	N.D.	2.0	0.50	1
14241	bis(2-Chloroethyl)ether	111-44-4	N.D.	2.0	0.50	1
14241	bis(2-Chloroisopropyl)ether[1]	39638-32-9	N.D.	2.0	0.50	1
	Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.					
14241	2-Chloronaphthalene	91-58-7	N.D.	1.0	0.40	1
14241	2-Chlorophenol	95-57-8	N.D.	2.0	0.50	1
14241	4-Chlorophenyl-phenylether	7005-72-3	N.D.	2.0	0.50	1
14241	Chrysene	218-01-9	N.D.	0.50	0.10	1
14241	Dibenz(a,h)anthracene	53-70-3	N.D.	0.50	0.10	1
14241	Dibenzofuran	132-64-9	N.D.	2.0	0.50	1
14241	3,3'-Dichlorobenzidine	91-94-1	N.D.	10	3.0	1
14241	2,4-Dichlorophenol	120-83-2	N.D.	2.0	0.50	1
14241	Dicyclohexylamine[1]	101-83-7	N.D.	10	10	1
14241	Diethylphthalate	84-66-2	N.D.	5.0	2.0	1
14241	N,N-Dimethylaniline[1]	121-69-7	N.D.	1.0	0.50	1
14241	2,4-Dimethylphenol	105-67-9	N.D.	10	3.0	1
14241	Dimethylphthalate	131-11-3	N.D.	5.0	2.0	1
14241	4,6-Dinitro-2-methylphenol	534-52-1	N.D.	21	8.0	1
14241	2,4-Dinitrophenol	51-28-5	N.D.	30	14	1
14241	2,4-Dinitrotoluene	121-14-2	N.D.	5.0	1.0	1
14241	2,6-Dinitrotoluene	606-20-2	N.D.	2.0	0.50	1
14241	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	11	5.0	1

*=This limit was used in the evaluation of the final result

Sample Description: **PW-6L Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/29/2019 11:13
Collection Date/Time: 10/28/2019 15:10
SDG#: BMS81-02

ARCADIS U.S., Inc.
ELLE Sample #: GW 1186459
ELLE Group #: 2071526
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	Fluoranthene	206-44-0	N.D.	0.50	0.10	1
14241	Fluorene	86-73-7	N.D.	0.50	0.10	1
14241	Hexachlorobenzene	118-74-1	N.D.	0.50	0.10	1
14241	Hexachlorobutadiene	87-68-3	N.D.	2.0	0.50	1
14241	Hexachlorocyclopentadiene	77-47-4	N.D.	11	5.0	1
14241	Hexachloroethane	67-72-1	N.D.	5.0	1.0	1
14241	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.50	0.10	1
14241	Isophorone	78-59-1	N.D.	2.0	0.50	1
14241	2-Methylnaphthalene	91-57-6	N.D.	0.50	0.10	1
14241	2-Methylphenol	95-48-7	N.D.	2.0	0.50	1
14241	4-Methylphenol	65794-96-9	N.D.	2.0	0.50	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
14241	Naphthalene	91-20-3	N.D.	0.50	0.10	1
14241	2-Nitroaniline	88-74-4	N.D.	7.0	2.0	1
14241	3-Nitroaniline	99-09-2	N.D.	7.0	3.0	1
14241	4-Nitroaniline	100-01-6	N.D.	3.0	0.90	1
14241	Nitrobenzene	98-95-3	N.D.	2.0	0.50	1
14241	2-Nitrophenol	88-75-5	N.D.	10	3.0	1
14241	4-Nitrophenol	100-02-7	N.D.	30	10	1
14241	N-Nitroso-di-n-propylamine	621-64-7	N.D.	3.0	0.70	1
14241	N-Nitrosodiphenylamine	86-30-6	N.D.	3.0	0.70	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.					
14241	Di-n-octylphthalate	117-84-0	N.D.	11	5.0	1
14241	Pentachlorophenol	87-86-5	N.D.	5.0	1.0	1
14241	Phenanthrene	85-01-8	N.D.	0.50	0.10	1
14241	Phenol	108-95-2	N.D.	2.0	0.50	1
14241	Pyrene	129-00-0	N.D.	0.50	0.10	1
14241	Pyridine	110-86-1	N.D.	5.0	2.0	1
14241	1,2,4,5-Tetrachlorobenzene	95-94-3	N.D.	2.0	0.50	1
14241	2,3,4,6-Tetrachlorophenol	58-90-2	N.D.	10	4.0	1
14241	2,4,5-Trichlorophenol	95-95-4	N.D.	2.0	0.50	1
14241	2,4,6-Trichlorophenol	88-06-2	N.D.	2.0	0.50	1
14241	Triethylamine[1]	121-44-8	N.D.	10	10	1

The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the TNI/DoD Standards. The following analytes are accepted based on this allowance: Benzo(k)fluoranthene

00886 SVOA TIC Interpretive(25)

*=This limit was used in the evaluation of the final result

Sample Description: **PW-6L Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/29/2019 11:13
Collection Date/Time: 10/28/2019 15:10
SDG#: BMS81-02

ARCADIS U.S., Inc.
ELLE Sample #: GW 1186459
ELLE Group #: 2071526
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result		Limit of Quantitation*	Method Detection Limit	Dilution Factor
	The results from the semivolatile library search are listed on the attached FORM 1 - SV-TIC. The qualifiers appearing in the "Q" column are defined at the end of the report.						
Aldehydes & Ketones	**SW-846 8315A**		**ug/l**		**ug/l**	**ug/l**	
13022	Acetaldehyde[1]	75-07-0	N.D.		60	35	1
13022	Formaldehyde	50-00-0	34	J	50	20	1
	The response for a target analyte(s) in the initial calibration verification standard is outside the QC acceptance limits.						
GC Miscellaneous	**SW-846 8015C Feb 2007 Rev 3**		**mg/l**		**mg/l**	**mg/l**	
12926	Ethylene glycol	107-21-1	N.D.		10	5.0	1
12926	Propylene glycol[1]	57-55-6	N.D.		10	2.0	1
	The response for tetramethylene glycol in the continuing calibration verification standard is outside the QC acceptance limits low. The following action was taken: The analysis was repeated and the continuing calibration verification standard bracketing the sample on the second trial is also outside the acceptance limits. This effect is attributed to the sample matrix and the data is reported.						
GC Miscellaneous	**SW-846 8015D Rev.4, June 2003**		**ug/l**		**ug/l**	**ug/l**	
10603	Ethanol	64-17-5	N.D.	D2	1,000	150	1
10603	Isopropanol[1]	67-63-0	N.D.	D2	1,000	110	1
10603	Methanol	67-56-1	N.D.	D2	1,000	220	1

Sample Comments

State of New York Certification No. 10670

[1] = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	Y193112AA	11/07/2019 18:03	Linda C Pape	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	Y193112AA	11/07/2019 18:02	Linda C Pape	1
14241	Semi-annual Groundwater BMS	SW-846 8270D	1	19305WAF026	11/08/2019 15:09	Holly B Ziegler	1
11010	8270D BNA Extraction	SW-846 3510C	1	19305WAF026	11/01/2019 16:35	Osvaldo R Sanchez	1
13022	Short List Aldehydes- W 8315A	SW-846 8315A	1	193030019A	10/31/2019 17:25	Jessica L Miller	1
01013	Formaldehyde Extraction	SW-846 8315A	1	193030019A	10/31/2019 09:23	Alison Moll	1
12926	Glycols in Water by 8015C/D	SW-846 8015C Feb 2007 Rev 3	1	193100032A	11/06/2019 22:31	Donald Brown	1
10603	Alcohols in Water	SW-846 8015D Rev.4, June 2003	1	193080007A	11/04/2019 18:16	Johanna C Kennedy	1

*=This limit was used in the evaluation of the final result

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
BMS02

Lab Name: Lancaster Laboratories Contract:_____
Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____
Matrix: (soil/water) WATER Lab Sample ID: 1186459
Sample wt/vol: 5.0 (g/mL)mL Lab File ID:HP09355.i/19nov07a.b/yn07s42.d
Level: (low/med) LOW Date Received: 10/29/19
% Moisture: not dec. Date Analyzed: 11/07/19
Column: (pack/cap) CAP Dilution Factor: 1.0
CONCENTRATION UNITS:
Number TICs found: 0 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	VOCTIC	Total VOC TICs		0	U
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3.					
4.					
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page 1 of 1

FORM I VOA-TIC

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
BMS02

Lab Name: Lancaster Laboratories Contract:
Lab Code: LANCAS Case No.: SAS No.: SDG No.:
Matrix: (soil/water) WATER Lab Sample ID: 1186459
Sample wt/vol: 249 (g/mL) mL Lab File ID: lk0340.d
Level: (low/med) LOW Date Received: 10/29/19
% Moisture: Decanted: (Y/N) Date Extracted: 11/01/19
Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/08/19
Injection Volume: 1 (uL) Dilution Factor: 1
GPC Cleanup: N pH: Extraction: Sepf
CONCENTRATION UNITS:
Number TICs found: 1 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		Unknown	2.373	6	J N
2.					
3.	SVOCTIC	Total SVOC TICs		6	J N
4.					
5.					
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page 1 of 1

FORM I SV-1

Sample Description: **PW-3MD Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/29/2019 11:13
Collection Date/Time: 10/28/2019 13:55
SDG#: BMS81-03

ARCADIS U.S., Inc.
ELLE Sample #: GW 1186460
ELLE Group #: 2071526
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	20	0.7	1
11997	Acetonitrile	75-05-8	N.D.	100	16	1
11997	Benzene	71-43-2	N.D.	1	0.2	1
11997	Bromochloromethane	74-97-5	N.D.	5	0.2	1
11997	Bromodichloromethane	75-27-4	N.D.	1	0.2	1
11997	Bromoform	75-25-2	N.D.	4	1	1
11997	Bromomethane	74-83-9	N.D.	1	0.3	1
11997	n-Butanol	71-36-3	N.D.	250	61	1
11997	2-Butanone	78-93-3	N.D.	10	0.3	1
11997	t-Butyl alcohol	75-65-0	N.D.	50	12	1
11997	n-Butylbenzene	104-51-8	N.D.	5	0.2	1
11997	sec-Butylbenzene	135-98-8	N.D.	5	0.2	1
11997	tert-Butylbenzene	98-06-6	N.D.	5	0.3	1
11997	Carbon Disulfide	75-15-0	N.D.	5	0.2	1
11997	Carbon Tetrachloride	56-23-5	N.D.	1	0.2	1
11997	Chlorobenzene	108-90-7	N.D.	1	0.2	1
11997	Chlorodifluoromethane[1]	75-45-6	N.D.	5	2	1
11997	Chloroethane	75-00-3	N.D.	1	0.2	1
11997	Chloroform	67-66-3	N.D.	1	0.2	1
11997	Chloromethane	74-87-3	N.D.	1	0.2	1
11997	Cyclohexane	110-82-7	N.D.	5	1	1
11997	Cyclohexanone[1]	108-94-1	N.D.	100	25	1
11997	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	5	0.3	1
11997	Dibromochloromethane	124-48-1	N.D.	1	0.2	1
11997	1,2-Dibromoethane	106-93-4	N.D.	1	0.2	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	5	0.2	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	5	0.2	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	5	0.2	1
11997	Dichlorodifluoromethane	75-71-8	N.D.	1	0.2	1
11997	1,1-Dichloroethane	75-34-3	N.D.	1	0.2	1
11997	1,2-Dichloroethane	107-06-2	N.D.	1	0.3	1
11997	1,1-Dichloroethene	75-35-4	N.D.	1	0.2	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	1	0.2	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	1	0.2	1
11997	1,2-Dichloropropane	78-87-5	N.D.	1	0.2	1
11997	cis-1,3-Dichloropropene	10061-01-5	N.D.	1	0.2	1
11997	trans-1,3-Dichloropropene	10061-02-6	N.D.	1	0.2	1
11997	1,4-Dioxane	123-91-1	N.D.	250	29	1
11997	Ethyl Acetate	141-78-6	N.D.	5	0.7	1
11997	Ethyl ether	60-29-7	N.D.	5	0.2	1
11997	Ethylbenzene	100-41-4	N.D.	1	0.4	1

*=This limit was used in the evaluation of the final result

Sample Description: **PW-3MD Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/29/2019 11:13
Collection Date/Time: 10/28/2019 13:55
SDG#: BMS81-03

ARCADIS U.S., Inc.
ELLE Sample #: GW 1186460
ELLE Group #: 2071526
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Freon 113	76-13-1	N.D.	10	0.2	1
11997	n-Heptane[1]	142-82-5	N.D.	5	2	1
11997	n-Hexane[1]	110-54-3	N.D.	5	2	1
11997	2-Hexanone	591-78-6	N.D.	10	0.3	1
11997	Isobutyl Alcohol	78-83-1	N.D.	250	36	1
11997	Isopropylbenzene	98-82-8	N.D.	5	0.2	1
11997	p-Isopropyltoluene	99-87-6	N.D.	5	0.2	1
11997	Methyl Acetate	79-20-9	N.D.	5	0.2	1
11997	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	1	0.2	1
11997	4-Methyl-2-pentanone	108-10-1	N.D.	10	0.5	1
11997	Methylcyclohexane	108-87-2	N.D.	5	0.5	1
11997	Methylene Chloride	75-09-2	N.D.	1	0.3	1
11997	Naphthalene	91-20-3	N.D.	5	1	1
11997	2-Nitropropane	79-46-9	N.D.	10	0.8	1
11997	Styrene	100-42-5	N.D.	5	0.2	1
11997	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	1	0.2	1
11997	Tetrachloroethene	127-18-4	N.D.	1	0.2	1
11997	Tetrahydrofuran	109-99-9	N.D.	10	0.7	1
11997	Toluene	108-88-3	N.D.	1	0.2	1
11997	1,2,3-Trichlorobenzene	87-61-6	N.D.	5	0.4	1
11997	1,2,4-Trichlorobenzene	120-82-1	N.D.	5	0.3	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	1	0.3	1
11997	1,1,2-Trichloroethane	79-00-5	N.D.	1	0.2	1
11997	Trichloroethene	79-01-6	N.D.	1	0.2	1
11997	Trichlorofluoromethane	75-69-4	N.D.	1	0.2	1
11997	1,2,4-Trimethylbenzene	95-63-6	N.D.	5	1	1
11997	1,3,5-Trimethylbenzene	108-67-8	N.D.	5	0.3	1
11997	Vinyl Chloride	75-01-4	N.D.	1	0.2	1
11997	m+p-Xylene	179601-23-1	N.D.	5	1	1
11997	o-Xylene	95-47-6	N.D.	1	0.4	1
11997	Xylene (Total)	1330-20-7	N.D.	6	1	1
12027	**VOA Interp. Library Search-20**					
	The results from the volatile library search are listed on the attached FORM 1 - VOA-TIC. The qualifiers appearing in the "Q" column are defined at the end of the report.					
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	Acenaphthene	83-32-9	N.D.	0.51	0.10	1
14241	Acenaphthylene	208-96-8	N.D.	0.51	0.10	1
14241	Acetophenone	98-86-2	N.D.	10	4.0	1
14241	Aniline	62-53-3	N.D.	10	3.0	1

*=This limit was used in the evaluation of the final result

Sample Description: **PW-3MD Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/29/2019 11:13
Collection Date/Time: 10/28/2019 13:55
SDG#: BMS81-03

ARCADIS U.S., Inc.
ELLE Sample #: GW 1186460
ELLE Group #: 2071526
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	Anthracene	120-12-7	N.D.	0.51	0.10	1
14241	Atrazine	1912-24-9	N.D.	5.1	2.0	1
14241	Benzaldehyde	100-52-7	N.D. J	10	3.0	1
14241	Benzo(a)anthracene	56-55-3	N.D.	0.51	0.10	1
14241	Benzo(a)pyrene	50-32-8	N.D.	0.51	0.10	1
14241	Benzo(b)fluoranthene	205-99-2	N.D.	0.51	0.10	1
14241	Benzo(g,h,i)perylene	191-24-2	N.D.	0.51	0.10	1
14241	Benzo(k)fluoranthene	207-08-9	N.D. J	0.51	0.10	1
14241	Benzyl alcohol	100-51-6	N.D.	30	10	1
14241	1,1'-Biphenyl	92-52-4	N.D.	10	3.0	1
14241	4-Bromophenyl-phenylether	101-55-3	N.D.	2.0	0.51	1
14241	Butylbenzylphthalate	85-68-7	N.D.	5.1	2.0	1
14241	Di-n-butylphthalate	84-74-2	N.D.	5.1	2.0	1
14241	Caprolactam	105-60-2	N.D.	11	5.1	1
14241	Carbazole	86-74-8	N.D.	2.0	0.51	1
14241	4-Chloro-3-methylphenol	59-50-7	N.D.	2.0	0.51	1
14241	4-Chloroaniline	106-47-8	N.D.	10	4.0	1
14241	bis(2-Chloroethoxy)methane	111-91-1	N.D.	2.0	0.51	1
14241	bis(2-Chloroethyl)ether	111-44-4	N.D.	2.0	0.51	1
14241	bis(2-Chloroisopropyl)ether[1]	39638-32-9	N.D.	2.0	0.51	1
	Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.					
14241	2-Chloronaphthalene	91-58-7	N.D.	1.0	0.40	1
14241	2-Chlorophenol	95-57-8	N.D.	2.0	0.51	1
14241	4-Chlorophenyl-phenylether	7005-72-3	N.D.	2.0	0.51	1
14241	Chrysene	218-01-9	N.D.	0.51	0.10	1
14241	Dibenz(a,h)anthracene	53-70-3	N.D.	0.51	0.10	1
14241	Dibenzofuran	132-64-9	N.D.	2.0	0.51	1
14241	3,3'-Dichlorobenzidine	91-94-1	N.D.	10	3.0	1
14241	2,4-Dichlorophenol	120-83-2	N.D.	2.0	0.51	1
14241	Dicyclohexylamine[1]	101-83-7	N.D.	10	10	1
14241	Diethylphthalate	84-66-2	N.D.	5.1	2.0	1
14241	N,N-Dimethylaniline[1]	121-69-7	N.D.	1.0	0.51	1
14241	2,4-Dimethylphenol	105-67-9	N.D.	10	3.0	1
14241	Dimethylphthalate	131-11-3	N.D.	5.1	2.0	1
14241	4,6-Dinitro-2-methylphenol	534-52-1	N.D.	21	8.1	1
14241	2,4-Dinitrophenol	51-28-5	N.D.	30	14	1
14241	2,4-Dinitrotoluene	121-14-2	N.D.	5.1	1.0	1
14241	2,6-Dinitrotoluene	606-20-2	N.D.	2.0	0.51	1
14241	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	11	5.1	1

*=This limit was used in the evaluation of the final result

Sample Description: **PW-3MD Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/29/2019 11:13
Collection Date/Time: 10/28/2019 13:55
SDG#: BMS81-03

ARCADIS U.S., Inc.
ELLE Sample #: GW 1186460
ELLE Group #: 2071526
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	Fluoranthene	206-44-0	N.D.	0.51	0.10	1
14241	Fluorene	86-73-7	N.D.	0.51	0.10	1
14241	Hexachlorobenzene	118-74-1	N.D.	0.51	0.10	1
14241	Hexachlorobutadiene	87-68-3	N.D.	2.0	0.51	1
14241	Hexachlorocyclopentadiene	77-47-4	N.D.	11	5.1	1
14241	Hexachloroethane	67-72-1	N.D.	5.1	1.0	1
14241	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.51	0.10	1
14241	Isophorone	78-59-1	N.D.	2.0	0.51	1
14241	2-Methylnaphthalene	91-57-6	N.D.	0.51	0.10	1
14241	2-Methylphenol	95-48-7	N.D.	2.0	0.51	1
14241	4-Methylphenol	65794-96-9	N.D.	2.0	0.51	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
14241	Naphthalene	91-20-3	N.D.	0.51	0.10	1
14241	2-Nitroaniline	88-74-4	N.D.	7.1	2.0	1
14241	3-Nitroaniline	99-09-2	N.D.	7.1	3.0	1
14241	4-Nitroaniline	100-01-6	N.D.	3.0	0.91	1
14241	Nitrobenzene	98-95-3	N.D.	2.0	0.51	1
14241	2-Nitrophenol	88-75-5	N.D.	10	3.0	1
14241	4-Nitrophenol	100-02-7	N.D.	30	10	1
14241	N-Nitroso-di-n-propylamine	621-64-7	N.D.	3.0	0.71	1
14241	N-Nitrosodiphenylamine	86-30-6	N.D.	3.0	0.71	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.					
14241	Di-n-octylphthalate	117-84-0	N.D.	11	5.1	1
14241	Pentachlorophenol	87-86-5	N.D.	5.1	1.0	1
14241	Phenanthrene	85-01-8	N.D.	0.51	0.10	1
14241	Phenol	108-95-2	N.D.	2.0	0.51	1
14241	Pyrene	129-00-0	N.D.	0.51	0.10	1
14241	Pyridine	110-86-1	N.D.	5.1	2.0	1
14241	1,2,4,5-Tetrachlorobenzene	95-94-3	N.D.	2.0	0.51	1
14241	2,3,4,6-Tetrachlorophenol	58-90-2	N.D.	10	4.0	1
14241	2,4,5-Trichlorophenol	95-95-4	N.D.	2.0	0.51	1
14241	2,4,6-Trichlorophenol	88-06-2	N.D.	2.0	0.51	1
14241	Triethylamine[1]	121-44-8	N.D.	10	10	1

The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the TNI/DoD Standards. The following analytes are accepted based on this allowance: Benzo(k)fluoranthene

00886 SVOA TIC Interpretive(25)

*=This limit was used in the evaluation of the final result

Sample Description: **PW-3MD Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/29/2019 11:13
Collection Date/Time: 10/28/2019 13:55
SDG#: BMS81-03

ARCADIS U.S., Inc.
ELLE Sample #: GW 1186460
ELLE Group #: 2071526
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result		Limit of Quantitation*	Method Detection Limit	Dilution Factor
	The results from the semivolatile library search are listed on the attached FORM 1 - SV-TIC. The qualifiers appearing in the "Q" column are defined at the end of the report.						
Aldehydes & Ketones	**SW-846 8315A**		**ug/l**		**ug/l**	**ug/l**	
13022	Acetaldehyde[1]	75-07-0	N.D.		60	35	1
13022	Formaldehyde	50-00-0	23	J	50	20	1
	The response for a target analyte(s) in the initial calibration verification standard is outside the QC acceptance limits.						
GC Miscellaneous	**SW-846 8015C Feb 2007 Rev 3**		**mg/l**		**mg/l**	**mg/l**	
12926	Ethylene glycol	107-21-1	N.D.	J	10	5.0	1
12926	Propylene glycol[1]	57-55-6	N.D.	J	10	2.0	1
	The response for tetramethylene glycol in the continuing calibration verification standard is outside the QC acceptance limits low. The following action was taken: The analysis was repeated and the continuing calibration verification standard bracketing the sample on the second trial is also outside the acceptance limits. This effect is attributed to the sample matrix and the data is reported.						
GC Miscellaneous	**SW-846 8015D Rev.4, June 2003**		**ug/l**		**ug/l**	**ug/l**	
10603	Ethanol	64-17-5	N.D.	D2	1,000	150	1
10603	Isopropanol[1]	67-63-0	N.D.	D2	1,000	110	1
10603	Methanol	67-56-1	N.D.	D2	1,000	220	1

Sample Comments

State of New York Certification No. 10670

[1] = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	Y193112AA	11/07/2019 18:24	Linda C Pape	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	Y193112AA	11/07/2019 18:23	Linda C Pape	1
14241	Semi-annual Groundwater BMS	SW-846 8270D	1	19305WAF026	11/08/2019 15:38	Holly B Ziegler	1
11010	8270D BNA Extraction	SW-846 3510C	1	19305WAF026	11/01/2019 16:35	Osvaldo R Sanchez	1
13022	Short List Aldehydes- W 8315A	SW-846 8315A	1	193030019A	10/31/2019 17:36	Jessica L Miller	1
01013	Formaldehyde Extraction	SW-846 8315A	1	193030019A	10/31/2019 09:23	Alison Moll	1
12926	Glycols in Water by 8015C/D	SW-846 8015C Feb 2007 Rev 3	1	193100032A	11/06/2019 22:44	Donald Brown	1
10603	Alcohols in Water	SW-846 8015D Rev.4, June 2003	1	193080007A	11/04/2019 18:33	Johanna C Kennedy	1

*=This limit was used in the evaluation of the final result

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
BMS03

Lab Name: Lancaster Laboratories Contract:_____
Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____
Matrix: (soil/water) WATER Lab Sample ID: 1186460
Sample wt/vol: 5.0 (g/mL)mL Lab File ID:HP09355.i/19nov07a.b/yn07s43.d
Level: (low/med) LOW Date Received: 10/29/19
% Moisture: not dec. Date Analyzed: 11/07/19
Column: (pack/cap) CAP Dilution Factor: 1.0
CONCENTRATION UNITS:
Number TICs found: 1 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	420-56-4	Trimethylsilyl fluoride	2.48	8	J N
2.					
3.	VOCTIC	Total VOC TICs		8	J N
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page 1 of 1

FORM I VOA-TIC

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

1F

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

BMS03

Lab Name: Lancaster Laboratories Contract:
Lab Code: LANCAS Case No.: SAS No.: SDG No.:
Matrix: (soil/water) WATER Lab Sample ID: 1186460
Sample wt/vol: 247 (g/mL) mL Lab File ID: lk0341.d
Level: (low/med) LOW Date Received: 10/29/19
% Moisture: Decanted: (Y/N) Date Extracted: 11/01/19
Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/08/19
Injection Volume: 1 (uL) Dilution Factor: 1
GPC Cleanup: N pH: Extraction: Sepf
CONCENTRATION UNITS:
Number TICs found: 1 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		Unknown	5.711	4	J N
2.					
3.	SVOCTIC	Total SVOC TICs		4	J N
4.					
5.					
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page 1 of 1

FORM I SV-1

Sample Description: **PW-3MS Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/29/2019 11:13
Collection Date/Time: 10/28/2019 15:05
SDG#: BMS81-04

ARCADIS U.S., Inc.
ELLE Sample #: GW 1186461
ELLE Group #: 2071526
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	20	0.7	1
11997	Acetonitrile	75-05-8	N.D.	100	16	1
11997	Benzene	71-43-2	N.D.	1	0.2	1
11997	Bromochloromethane	74-97-5	N.D.	5	0.2	1
11997	Bromodichloromethane	75-27-4	N.D.	1	0.2	1
11997	Bromoform	75-25-2	N.D.	4	1	1
11997	Bromomethane	74-83-9	N.D.	1	0.3	1
11997	n-Butanol	71-36-3	N.D.	250	61	1
11997	2-Butanone	78-93-3	N.D.	10	0.3	1
11997	t-Butyl alcohol	75-65-0	N.D.	50	12	1
11997	n-Butylbenzene	104-51-8	N.D.	5	0.2	1
11997	sec-Butylbenzene	135-98-8	N.D.	5	0.2	1
11997	tert-Butylbenzene	98-06-6	N.D.	5	0.3	1
11997	Carbon Disulfide	75-15-0	N.D.	5	0.2	1
11997	Carbon Tetrachloride	56-23-5	N.D.	1	0.2	1
11997	Chlorobenzene	108-90-7	N.D.	1	0.2	1
11997	Chlorodifluoromethane[1]	75-45-6	N.D.	5	2	1
11997	Chloroethane	75-00-3	N.D.	1	0.2	1
11997	Chloroform	67-66-3	N.D.	1	0.2	1
11997	Chloromethane	74-87-3	N.D.	1	0.2	1
11997	Cyclohexane	110-82-7	N.D.	5	1	1
11997	Cyclohexanone[1]	108-94-1	N.D.	100	25	1
11997	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	5	0.3	1
11997	Dibromochloromethane	124-48-1	N.D.	1	0.2	1
11997	1,2-Dibromoethane	106-93-4	N.D.	1	0.2	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	5	0.2	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	5	0.2	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	5	0.2	1
11997	Dichlorodifluoromethane	75-71-8	N.D.	1	0.2	1
11997	1,1-Dichloroethane	75-34-3	N.D.	1	0.2	1
11997	1,2-Dichloroethane	107-06-2	N.D.	1	0.3	1
11997	1,1-Dichloroethene	75-35-4	N.D.	1	0.2	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	1	0.2	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	1	0.2	1
11997	1,2-Dichloropropane	78-87-5	N.D.	1	0.2	1
11997	cis-1,3-Dichloropropene	10061-01-5	N.D.	1	0.2	1
11997	trans-1,3-Dichloropropene	10061-02-6	N.D.	1	0.2	1
11997	1,4-Dioxane	123-91-1	N.D.	250	29	1
11997	Ethyl Acetate	141-78-6	N.D.	5	0.7	1
11997	Ethyl ether	60-29-7	N.D.	5	0.2	1
11997	Ethylbenzene	100-41-4	N.D.	1	0.4	1

*=This limit was used in the evaluation of the final result

Sample Description: **PW-3MS Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/29/2019 11:13
Collection Date/Time: 10/28/2019 15:05
SDG#: BMS81-04

ARCADIS U.S., Inc.
ELLE Sample #: GW 1186461
ELLE Group #: 2071526
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Freon 113	76-13-1	N.D.	10	0.2	1
11997	n-Heptane[1]	142-82-5	N.D.	5	2	1
11997	n-Hexane[1]	110-54-3	N.D.	5	2	1
11997	2-Hexanone	591-78-6	N.D.	10	0.3	1
11997	Isobutyl Alcohol	78-83-1	N.D.	250	36	1
11997	Isopropylbenzene	98-82-8	N.D.	5	0.2	1
11997	p-Isopropyltoluene	99-87-6	N.D.	5	0.2	1
11997	Methyl Acetate	79-20-9	N.D.	5	0.2	1
11997	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	1	0.2	1
11997	4-Methyl-2-pentanone	108-10-1	N.D.	10	0.5	1
11997	Methylcyclohexane	108-87-2	N.D.	5	0.5	1
11997	Methylene Chloride	75-09-2	N.D.	1	0.3	1
11997	Naphthalene	91-20-3	N.D.	5	1	1
11997	2-Nitropropane	79-46-9	N.D.	10	0.8	1
11997	Styrene	100-42-5	N.D.	5	0.2	1
11997	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	1	0.2	1
11997	Tetrachloroethene	127-18-4	N.D.	1	0.2	1
11997	Tetrahydrofuran	109-99-9	N.D.	10	0.7	1
11997	Toluene	108-88-3	N.D.	1	0.2	1
11997	1,2,3-Trichlorobenzene	87-61-6	N.D.	5	0.4	1
11997	1,2,4-Trichlorobenzene	120-82-1	N.D.	5	0.3	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	1	0.3	1
11997	1,1,2-Trichloroethane	79-00-5	N.D.	1	0.2	1
11997	Trichloroethene	79-01-6	N.D.	1	0.2	1
11997	Trichlorofluoromethane	75-69-4	N.D.	1	0.2	1
11997	1,2,4-Trimethylbenzene	95-63-6	N.D.	5	1	1
11997	1,3,5-Trimethylbenzene	108-67-8	N.D.	5	0.3	1
11997	Vinyl Chloride	75-01-4	N.D.	1	0.2	1
11997	m+p-Xylene	179601-23-1	N.D.	5	1	1
11997	o-Xylene	95-47-6	N.D.	1	0.4	1
11997	Xylene (Total)	1330-20-7	N.D.	6	1	1

12027 VOA Interp. Library Search-20
The results from the volatile library search are listed on the attached FORM 1 - VOA-TIC. The qualifiers appearing in the "Q" column are defined at the end of the report.

GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	Acenaphthene	83-32-9	N.D.	0.50	0.10	1
14241	Acenaphthylene	208-96-8	N.D.	0.50	0.10	1
14241	Acetophenone	98-86-2	N.D.	10	4.0	1
14241	Aniline	62-53-3	N.D.	10	3.0	1

*=This limit was used in the evaluation of the final result

Sample Description: **PW-3MS Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/29/2019 11:13
Collection Date/Time: 10/28/2019 15:05
SDG#: BMS81-04

ARCADIS U.S., Inc.
ELLE Sample #: GW 1186461
ELLE Group #: 2071526
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	Anthracene	120-12-7	N.D.	0.50	0.10	1
14241	Atrazine	1912-24-9	N.D.	5.0	2.0	1
14241	Benzaldehyde	100-52-7	N.D. J	10	3.0	1
14241	Benzo(a)anthracene	56-55-3	N.D.	0.50	0.10	1
14241	Benzo(a)pyrene	50-32-8	N.D.	0.50	0.10	1
14241	Benzo(b)fluoranthene	205-99-2	N.D.	0.50	0.10	1
14241	Benzo(g,h,i)perylene	191-24-2	N.D.	0.50	0.10	1
14241	Benzo(k)fluoranthene	207-08-9	N.D. J	0.50	0.10	1
14241	Benzyl alcohol	100-51-6	N.D.	30	10	1
14241	1,1'-Biphenyl	92-52-4	N.D.	10	3.0	1
14241	4-Bromophenyl-phenylether	101-55-3	N.D.	2.0	0.50	1
14241	Butylbenzylphthalate	85-68-7	N.D.	5.0	2.0	1
14241	Di-n-butylphthalate	84-74-2	N.D.	5.0	2.0	1
14241	Caprolactam	105-60-2	N.D.	11	5.0	1
14241	Carbazole	86-74-8	N.D.	2.0	0.50	1
14241	4-Chloro-3-methylphenol	59-50-7	N.D.	2.0	0.50	1
14241	4-Chloroaniline	106-47-8	N.D.	10	4.0	1
14241	bis(2-Chloroethoxy)methane	111-91-1	N.D.	2.0	0.50	1
14241	bis(2-Chloroethyl)ether	111-44-4	N.D.	2.0	0.50	1
14241	bis(2-Chloroisopropyl)ether[1]	39638-32-9	N.D.	2.0	0.50	1
	Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.					
14241	2-Chloronaphthalene	91-58-7	N.D.	1.0	0.40	1
14241	2-Chlorophenol	95-57-8	N.D.	2.0	0.50	1
14241	4-Chlorophenyl-phenylether	7005-72-3	N.D.	2.0	0.50	1
14241	Chrysene	218-01-9	N.D.	0.50	0.10	1
14241	Dibenz(a,h)anthracene	53-70-3	N.D.	0.50	0.10	1
14241	Dibenzofuran	132-64-9	N.D.	2.0	0.50	1
14241	3,3'-Dichlorobenzidine	91-94-1	N.D.	10	3.0	1
14241	2,4-Dichlorophenol	120-83-2	N.D.	2.0	0.50	1
14241	Dicyclohexylamine[1]	101-83-7	N.D.	10	10	1
14241	Diethylphthalate	84-66-2	N.D.	5.0	2.0	1
14241	N,N-Dimethylaniline[1]	121-69-7	N.D.	1.0	0.50	1
14241	2,4-Dimethylphenol	105-67-9	N.D.	10	3.0	1
14241	Dimethylphthalate	131-11-3	N.D.	5.0	2.0	1
14241	4,6-Dinitro-2-methylphenol	534-52-1	N.D.	21	8.1	1
14241	2,4-Dinitrophenol	51-28-5	N.D.	30	14	1
14241	2,4-Dinitrotoluene	121-14-2	N.D.	5.0	1.0	1
14241	2,6-Dinitrotoluene	606-20-2	N.D.	2.0	0.50	1
14241	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	11	5.0	1

*=This limit was used in the evaluation of the final result

Sample Description: **PW-3MS Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/29/2019 11:13
Collection Date/Time: 10/28/2019 15:05
SDG#: BMS81-04

ARCADIS U.S., Inc.
ELLE Sample #: GW 1186461
ELLE Group #: 2071526
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	Fluoranthene	206-44-0	N.D.	0.50	0.10	1
14241	Fluorene	86-73-7	N.D.	0.50	0.10	1
14241	Hexachlorobenzene	118-74-1	N.D.	0.50	0.10	1
14241	Hexachlorobutadiene	87-68-3	N.D.	2.0	0.50	1
14241	Hexachlorocyclopentadiene	77-47-4	N.D.	11	5.0	1
14241	Hexachloroethane	67-72-1	N.D.	5.0	1.0	1
14241	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.50	0.10	1
14241	Isophorone	78-59-1	N.D.	2.0	0.50	1
14241	2-Methylnaphthalene	91-57-6	N.D.	0.50	0.10	1
14241	2-Methylphenol	95-48-7	N.D.	2.0	0.50	1
14241	4-Methylphenol	65794-96-9	N.D.	2.0	0.50	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
14241	Naphthalene	91-20-3	N.D.	0.50	0.10	1
14241	2-Nitroaniline	88-74-4	N.D.	7.1	2.0	1
14241	3-Nitroaniline	99-09-2	N.D.	7.1	3.0	1
14241	4-Nitroaniline	100-01-6	N.D.	3.0	0.91	1
14241	Nitrobenzene	98-95-3	N.D.	2.0	0.50	1
14241	2-Nitrophenol	88-75-5	N.D.	10	3.0	1
14241	4-Nitrophenol	100-02-7	N.D.	30	10	1
14241	N-Nitroso-di-n-propylamine	621-64-7	N.D.	3.0	0.71	1
14241	N-Nitrosodiphenylamine	86-30-6	N.D.	3.0	0.71	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.					
14241	Di-n-octylphthalate	117-84-0	N.D.	11	5.0	1
14241	Pentachlorophenol	87-86-5	N.D.	5.0	1.0	1
14241	Phenanthrene	85-01-8	N.D.	0.50	0.10	1
14241	Phenol	108-95-2	N.D.	2.0	0.50	1
14241	Pyrene	129-00-0	N.D.	0.50	0.10	1
14241	Pyridine	110-86-1	N.D.	5.0	2.0	1
14241	1,2,4,5-Tetrachlorobenzene	95-94-3	N.D.	2.0	0.50	1
14241	2,3,4,6-Tetrachlorophenol	58-90-2	N.D.	10	4.0	1
14241	2,4,5-Trichlorophenol	95-95-4	N.D.	2.0	0.50	1
14241	2,4,6-Trichlorophenol	88-06-2	N.D.	2.0	0.50	1
14241	Triethylamine[1]	121-44-8	N.D.	10	10	1

The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the TNI/DoD Standards. The following analytes are accepted based on this allowance: Benzo(k)fluoranthene

00886 SVOA TIC Interpretive(25)

*=This limit was used in the evaluation of the final result

Sample Description: **PW-3MS Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/29/2019 11:13
Collection Date/Time: 10/28/2019 15:05
SDG#: BMS81-04

ARCADIS U.S., Inc.
ELLE Sample #: GW 1186461
ELLE Group #: 2071526
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result		Limit of Quantitation*	Method Detection Limit	Dilution Factor
	The results from the semivolatile library search are listed on the attached FORM 1 - SV-TIC. The qualifiers appearing in the "Q" column are defined at the end of the report.						
Aldehydes & Ketones	**SW-846 8315A**		**ug/l**		**ug/l**	**ug/l**	
13022	Acetaldehyde[1]	75-07-0	N.D.		60	35	1
13022	Formaldehyde	50-00-0	23	J	50	20	1
	The response for a target analyte(s) in the initial calibration verification standard is outside the QC acceptance limits.						
GC Miscellaneous	**SW-846 8015C Feb 2007 Rev 3**		**mg/l**		**mg/l**	**mg/l**	
12926	Ethylene glycol	107-21-1	N.D.	J	10	5.0	1
12926	Propylene glycol[1]	57-55-6	N.D.	J	10	2.0	1
	The response for tetramethylene glycol in the continuing calibration verification standard is outside the QC acceptance limits low. The following action was taken: The analysis was repeated and the continuing calibration verification standard bracketing the sample on the second trial is also outside the acceptance limits. This effect is attributed to the sample matrix and the data is reported.						
GC Miscellaneous	**SW-846 8015D Rev.4, June 2003**		**ug/l**		**ug/l**	**ug/l**	
10603	Ethanol	64-17-5	N.D.	D2	1,000	150	1
10603	Isopropanol[1]	67-63-0	N.D.	D2	1,000	110	1
10603	Methanol	67-56-1	N.D.	D2	1,000	220	1

Sample Comments

State of New York Certification No. 10670

[1] = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	Y193112AA	11/07/2019 18:47	Linda C Pape	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	Y193112AA	11/07/2019 18:46	Linda C Pape	1
14241	Semi-annual Groundwater BMS	SW-846 8270D	1	19305WAF026	11/08/2019 16:06	Holly B Ziegler	1
11010	8270D BNA Extraction	SW-846 3510C	1	19305WAF026	11/01/2019 16:35	Osvaldo R Sanchez	1
13022	Short List Aldehydes- W 8315A	SW-846 8315A	1	193030019A	10/31/2019 17:46	Jessica L Miller	1
01013	Formaldehyde Extraction	SW-846 8315A	1	193030019A	10/31/2019 09:23	Alison Moll	1
12926	Glycols in Water by 8015C/D	SW-846 8015C Feb 2007 Rev 3	1	193100032A	11/06/2019 22:57	Donald Brown	1
10603	Alcohols in Water	SW-846 8015D Rev.4, June 2003	1	193080007A	11/04/2019 18:49	Johanna C Kennedy	1

*=This limit was used in the evaluation of the final result

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
BMS04

Lab Name: Lancaster Laboratories Contract:_____
Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____
Matrix: (soil/water) WATER Lab Sample ID: 1186461
Sample wt/vol: 5.0 (g/mL)mL Lab File ID:HP09355.i/19nov07a.b/yn07s44.d
Level: (low/med) LOW Date Received: 10/29/19
% Moisture: not dec. Date Analyzed: 11/07/19
Column: (pack/cap) CAP Dilution Factor: 1.0
CONCENTRATION UNITS:
Number TICs found: 1 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	420-56-4	Trimethylsilyl fluoride	2.48	7	J N
2.					
3.	VOCTIC	Total VOC TICs		7	J N
4.					
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page 1 of 1

FORM I VOA-TIC

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
BMS04

Lab Name: Lancaster Laboratories Contract:
Lab Code: LANCAS Case No.: SAS No.: SDG No.:
Matrix: (soil/water) WATER Lab Sample ID: 1186461
Sample wt/vol: 248 (g/mL) mL Lab File ID: lk0342.d
Level: (low/med) LOW Date Received: 10/29/19
% Moisture: Decanted: (Y/N) Date Extracted: 11/01/19
Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/08/19
Injection Volume: 1 (uL) Dilution Factor: 1
GPC Cleanup: N pH: Extraction: Sepf
CONCENTRATION UNITS:
Number TICs found: 2 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		Unknown	5.711	17	J N
2.		Unknown	6.567	8	J N
3.					
4.	SVOCTIC	Total SVOC TICs		26	J N
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page 1 of 1

FORM I SV-1

Sample Description: **PW-3T Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/29/2019 11:13
Collection Date/Time: 10/28/2019 11:25
SDG#: BMS81-05

ARCADIS U.S., Inc.
ELLE Sample #: GW 1186462
ELLE Group #: 2071526
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	20	0.7	1
11997	Acetonitrile	75-05-8	N.D.	100	16	1
11997	Benzene	71-43-2	N.D.	1	0.2	1
11997	Bromochloromethane	74-97-5	N.D.	5	0.2	1
11997	Bromodichloromethane	75-27-4	N.D.	1	0.2	1
11997	Bromoform	75-25-2	N.D.	4	1	1
11997	Bromomethane	74-83-9	N.D.	1	0.3	1
11997	n-Butanol	71-36-3	N.D.	250	61	1
11997	2-Butanone	78-93-3	N.D.	10	0.3	1
11997	t-Butyl alcohol	75-65-0	N.D.	50	12	1
11997	n-Butylbenzene	104-51-8	N.D.	5	0.2	1
11997	sec-Butylbenzene	135-98-8	N.D.	5	0.2	1
11997	tert-Butylbenzene	98-06-6	N.D.	5	0.3	1
11997	Carbon Disulfide	75-15-0	N.D.	5	0.2	1
11997	Carbon Tetrachloride	56-23-5	N.D.	1	0.2	1
11997	Chlorobenzene	108-90-7	N.D.	1	0.2	1
11997	Chlorodifluoromethane[1]	75-45-6	N.D.	5	2	1
11997	Chloroethane	75-00-3	N.D.	1	0.2	1
11997	Chloroform	67-66-3	N.D.	1	0.2	1
11997	Chloromethane	74-87-3	N.D.	1	0.2	1
11997	Cyclohexane	110-82-7	N.D.	5	1	1
11997	Cyclohexanone[1]	108-94-1	N.D.	100	25	1
11997	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	5	0.3	1
11997	Dibromochloromethane	124-48-1	N.D.	1	0.2	1
11997	1,2-Dibromoethane	106-93-4	N.D.	1	0.2	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	5	0.2	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	5	0.2	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	5	0.2	1
11997	Dichlorodifluoromethane	75-71-8	N.D.	1	0.2	1
11997	1,1-Dichloroethane	75-34-3	N.D.	1	0.2	1
11997	1,2-Dichloroethane	107-06-2	N.D.	1	0.3	1
11997	1,1-Dichloroethene	75-35-4	N.D.	1	0.2	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	1	0.2	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	1	0.2	1
11997	1,2-Dichloropropane	78-87-5	N.D.	1	0.2	1
11997	cis-1,3-Dichloropropene	10061-01-5	N.D.	1	0.2	1
11997	trans-1,3-Dichloropropene	10061-02-6	N.D.	1	0.2	1
11997	1,4-Dioxane	123-91-1	N.D.	250	29	1
11997	Ethyl Acetate	141-78-6	N.D.	5	0.7	1
11997	Ethyl ether	60-29-7	N.D.	5	0.2	1
11997	Ethylbenzene	100-41-4	N.D.	1	0.4	1

*=This limit was used in the evaluation of the final result

Sample Description: **PW-3T Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/29/2019 11:13
Collection Date/Time: 10/28/2019 11:25
SDG#: BMS81-05

ARCADIS U.S., Inc.
ELLE Sample #: GW 1186462
ELLE Group #: 2071526
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Freon 113	76-13-1	N.D.	10	0.2	1
11997	n-Heptane[1]	142-82-5	N.D.	5	2	1
11997	n-Hexane[1]	110-54-3	N.D.	5	2	1
11997	2-Hexanone	591-78-6	N.D.	10	0.3	1
11997	Isobutyl Alcohol	78-83-1	N.D.	250	36	1
11997	Isopropylbenzene	98-82-8	N.D.	5	0.2	1
11997	p-Isopropyltoluene	99-87-6	N.D.	5	0.2	1
11997	Methyl Acetate	79-20-9	N.D.	5	0.2	1
11997	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	1	0.2	1
11997	4-Methyl-2-pentanone	108-10-1	N.D.	10	0.5	1
11997	Methylcyclohexane	108-87-2	N.D.	5	0.5	1
11997	Methylene Chloride	75-09-2	N.D.	1	0.3	1
11997	Naphthalene	91-20-3	N.D.	5	1	1
11997	2-Nitropropane	79-46-9	N.D.	10	0.8	1
11997	Styrene	100-42-5	N.D.	5	0.2	1
11997	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	1	0.2	1
11997	Tetrachloroethene	127-18-4	N.D.	1	0.2	1
11997	Tetrahydrofuran	109-99-9	N.D.	10	0.7	1
11997	Toluene	108-88-3	N.D.	1	0.2	1
11997	1,2,3-Trichlorobenzene	87-61-6	N.D.	5	0.4	1
11997	1,2,4-Trichlorobenzene	120-82-1	N.D.	5	0.3	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	1	0.3	1
11997	1,1,2-Trichloroethane	79-00-5	N.D.	1	0.2	1
11997	Trichloroethene	79-01-6	N.D.	1	0.2	1
11997	Trichlorofluoromethane	75-69-4	N.D.	1	0.2	1
11997	1,2,4-Trimethylbenzene	95-63-6	N.D.	5	1	1
11997	1,3,5-Trimethylbenzene	108-67-8	N.D.	5	0.3	1
11997	Vinyl Chloride	75-01-4	N.D.	1	0.2	1
11997	m+p-Xylene	179601-23-1	N.D.	5	1	1
11997	o-Xylene	95-47-6	N.D.	1	0.4	1
11997	Xylene (Total)	1330-20-7	N.D.	6	1	1

12027 VOA Interp. Library Search-20
The results from the volatile library search are listed on the attached FORM 1 - VOA-TIC. The qualifiers appearing in the "Q" column are defined at the end of the report.

GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	Acenaphthene	83-32-9	N.D.	0.50	0.10	1
14241	Acenaphthylene	208-96-8	N.D.	0.50	0.10	1
14241	Acetophenone	98-86-2	N.D.	10	4.0	1
14241	Aniline	62-53-3	N.D.	10	3.0	1

*=This limit was used in the evaluation of the final result

Sample Description: **PW-3T Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/29/2019 11:13
Collection Date/Time: 10/28/2019 11:25
SDG#: BMS81-05

ARCADIS U.S., Inc.
ELLE Sample #: GW 1186462
ELLE Group #: 2071526
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	Anthracene	120-12-7	N.D.	0.50	0.10	1
14241	Atrazine	1912-24-9	N.D.	5.0	2.0	1
14241	Benzaldehyde	100-52-7	N.D. J	10	3.0	1
14241	Benzo(a)anthracene	56-55-3	N.D.	0.50	0.10	1
14241	Benzo(a)pyrene	50-32-8	N.D.	0.50	0.10	1
14241	Benzo(b)fluoranthene	205-99-2	N.D.	0.50	0.10	1
14241	Benzo(g,h,i)perylene	191-24-2	N.D.	0.50	0.10	1
14241	Benzo(k)fluoranthene	207-08-9	N.D. J	0.50	0.10	1
14241	Benzyl alcohol	100-51-6	N.D.	30	10	1
14241	1,1'-Biphenyl	92-52-4	N.D.	10	3.0	1
14241	4-Bromophenyl-phenylether	101-55-3	N.D.	2.0	0.50	1
14241	Butylbenzylphthalate	85-68-7	N.D.	5.0	2.0	1
14241	Di-n-butylphthalate	84-74-2	N.D.	5.0	2.0	1
14241	Caprolactam	105-60-2	N.D.	11	5.0	1
14241	Carbazole	86-74-8	N.D.	2.0	0.50	1
14241	4-Chloro-3-methylphenol	59-50-7	N.D.	2.0	0.50	1
14241	4-Chloroaniline	106-47-8	N.D.	10	4.0	1
14241	bis(2-Chloroethoxy)methane	111-91-1	N.D.	2.0	0.50	1
14241	bis(2-Chloroethyl)ether	111-44-4	N.D.	2.0	0.50	1
14241	bis(2-Chloroisopropyl)ether[1]	39638-32-9	N.D.	2.0	0.50	1
	Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.					
14241	2-Chloronaphthalene	91-58-7	N.D.	1.0	0.40	1
14241	2-Chlorophenol	95-57-8	N.D.	2.0	0.50	1
14241	4-Chlorophenyl-phenylether	7005-72-3	N.D.	2.0	0.50	1
14241	Chrysene	218-01-9	N.D.	0.50	0.10	1
14241	Dibenz(a,h)anthracene	53-70-3	N.D.	0.50	0.10	1
14241	Dibenzofuran	132-64-9	N.D.	2.0	0.50	1
14241	3,3'-Dichlorobenzidine	91-94-1	N.D.	10	3.0	1
14241	2,4-Dichlorophenol	120-83-2	N.D.	2.0	0.50	1
14241	Dicyclohexylamine[1]	101-83-7	N.D.	10	10	1
14241	Diethylphthalate	84-66-2	N.D.	5.0	2.0	1
14241	N,N-Dimethylaniline[1]	121-69-7	N.D.	1.0	0.50	1
14241	2,4-Dimethylphenol	105-67-9	N.D.	10	3.0	1
14241	Dimethylphthalate	131-11-3	N.D.	5.0	2.0	1
14241	4,6-Dinitro-2-methylphenol	534-52-1	N.D.	21	8.0	1
14241	2,4-Dinitrophenol	51-28-5	N.D.	30	14	1
14241	2,4-Dinitrotoluene	121-14-2	N.D.	5.0	1.0	1
14241	2,6-Dinitrotoluene	606-20-2	N.D.	2.0	0.50	1
14241	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	11	5.0	1

*=This limit was used in the evaluation of the final result

Sample Description: **PW-3T Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/29/2019 11:13
Collection Date/Time: 10/28/2019 11:25
SDG#: BMS81-05

ARCADIS U.S., Inc.
ELLE Sample #: GW 1186462
ELLE Group #: 2071526
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	Fluoranthene	206-44-0	N.D.	0.50	0.10	1
14241	Fluorene	86-73-7	N.D.	0.50	0.10	1
14241	Hexachlorobenzene	118-74-1	N.D.	0.50	0.10	1
14241	Hexachlorobutadiene	87-68-3	N.D.	2.0	0.50	1
14241	Hexachlorocyclopentadiene	77-47-4	N.D.	11	5.0	1
14241	Hexachloroethane	67-72-1	N.D.	5.0	1.0	1
14241	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.50	0.10	1
14241	Isophorone	78-59-1	N.D.	2.0	0.50	1
14241	2-Methylnaphthalene	91-57-6	N.D.	0.50	0.10	1
14241	2-Methylphenol	95-48-7	N.D.	2.0	0.50	1
14241	4-Methylphenol	65794-96-9	N.D.	2.0	0.50	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
14241	Naphthalene	91-20-3	N.D.	0.50	0.10	1
14241	2-Nitroaniline	88-74-4	N.D.	7.0	2.0	1
14241	3-Nitroaniline	99-09-2	N.D.	7.0	3.0	1
14241	4-Nitroaniline	100-01-6	N.D.	3.0	0.90	1
14241	Nitrobenzene	98-95-3	N.D.	2.0	0.50	1
14241	2-Nitrophenol	88-75-5	N.D.	10	3.0	1
14241	4-Nitrophenol	100-02-7	N.D.	30	10	1
14241	N-Nitroso-di-n-propylamine	621-64-7	N.D.	3.0	0.70	1
14241	N-Nitrosodiphenylamine	86-30-6	N.D.	3.0	0.70	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.					
14241	Di-n-octylphthalate	117-84-0	N.D.	11	5.0	1
14241	Pentachlorophenol	87-86-5	N.D.	5.0	1.0	1
14241	Phenanthrene	85-01-8	N.D.	0.50	0.10	1
14241	Phenol	108-95-2	N.D.	2.0	0.50	1
14241	Pyrene	129-00-0	N.D.	0.50	0.10	1
14241	Pyridine	110-86-1	N.D.	5.0	2.0	1
14241	1,2,4,5-Tetrachlorobenzene	95-94-3	N.D.	2.0	0.50	1
14241	2,3,4,6-Tetrachlorophenol	58-90-2	N.D.	10	4.0	1
14241	2,4,5-Trichlorophenol	95-95-4	N.D.	2.0	0.50	1
14241	2,4,6-Trichlorophenol	88-06-2	N.D.	2.0	0.50	1
14241	Triethylamine[1]	121-44-8	N.D.	10	10	1

The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the TNI/DoD Standards. The following analytes are accepted based on this allowance: Benzo(k)fluoranthene

00886 SVOA TIC Interpretive(25)

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **PW-3T Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/29/2019 11:13
Collection Date/Time: 10/28/2019 11:25
SDG#: BMS81-05

ARCADIS U.S., Inc.
ELLE Sample #: GW 1186462
ELLE Group #: 2071526
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
	The results from the semivolatile library search are listed on the attached FORM 1 - SV-TIC. The qualifiers appearing in the "Q" column are defined at the end of the report.					
Aldehydes & Ketones	**SW-846 8315A**		**ug/l**	**ug/l**	**ug/l**	
13022	Acetaldehyde[1]	75-07-0	N.D.	60	35	1
13022	Formaldehyde	50-00-0	N.D.	50	20	1
	The response for a target analyte(s) in the initial calibration verification standard is outside the QC acceptance limits.					
GC Miscellaneous	**SW-846 8015C Feb 2007 Rev 3**		**mg/l**	**mg/l**	**mg/l**	
12926	Ethylene glycol	107-21-1	N.D. J	10	5.0	1
12926	Propylene glycol[1]	57-55-6	N.D. J	10	2.0	1
	The response for tetramethylene glycol in the continuing calibration verification standard is outside the QC acceptance limits low. The following action was taken: The analysis was repeated and the continuing calibration verification standard bracketing the sample on the second trial is also outside the acceptance limits. This effect is attributed to the sample matrix and the data is reported.					
GC Miscellaneous	**SW-846 8015D Rev.4, June 2003**		**ug/l**	**ug/l**	**ug/l**	
10603	Ethanol	64-17-5	N.D. D2	1,000	150	1
10603	Isopropanol[1]	67-63-0	N.D. D2	1,000	110	1
10603	Methanol	67-56-1	N.D. D2	1,000	220	1

Sample Comments

State of New York Certification No. 10670

[1] = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	Y193112AA	11/07/2019 19:09	Linda C Pape	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	Y193112AA	11/07/2019 19:08	Linda C Pape	1
14241	Semi-annual Groundwater BMS	SW-846 8270D	1	19305WAF026	11/08/2019 16:35	Holly B Ziegler	1
11010	8270D BNA Extraction	SW-846 3510C	1	19305WAF026	11/01/2019 16:35	Osvaldo R Sanchez	1
13022	Short List Aldehydes- W 8315A	SW-846 8315A	1	193030019A	10/31/2019 17:56	Jessica L Miller	1
01013	Formaldehyde Extraction	SW-846 8315A	1	193030019A	10/31/2019 09:23	Alison Moll	1
12926	Glycols in Water by 8015C/D	SW-846 8015C Feb 2007 Rev 3	1	193080027A	11/05/2019 23:02	Donald Brown	1
10603	Alcohols in Water	SW-846 8015D Rev.4, June 2003	1	193080007A	11/04/2019 19:06	Johanna C Kennedy	1

*=This limit was used in the evaluation of the final result

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
BMS05

Lab Name: Lancaster Laboratories Contract:_____
Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____
Matrix: (soil/water) WATER Lab Sample ID: 1186462
Sample wt/vol: 5.0 (g/mL)mL Lab File ID:HP09355.i/19nov07a.b/yn07s45.d
Level: (low/med) LOW Date Received: 10/29/19
% Moisture: not dec. Date Analyzed: 11/07/19
Column: (pack/cap) CAP Dilution Factor: 1.0
CONCENTRATION UNITS:
Number TICs found: 0 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	VOCTIC	Total VOC TICs		0	U
2.					
3.					
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page 1 of 1

FORM I VOA-TIC

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

1F

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

BMS05

Lab Name: Lancaster Laboratories Contract:
Lab Code: LANCAS Case No.: SAS No.: SDG No.:
Matrix: (soil/water) WATER Lab Sample ID: 1186462
Sample wt/vol: 249 (g/mL) mL Lab File ID: lk0343.d
Level: (low/med) LOW Date Received: 10/29/19
% Moisture: Decanted: (Y/N) Date Extracted: 11/01/19
Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/08/19
Injection Volume: 1 (uL) Dilution Factor: 1
GPC Cleanup: N pH: Extraction: Sepf
CONCENTRATION UNITS:
Number TICs found: 0 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	SVOCTIC	Total SVOC TICs		0	U
2.					
3.					
4.					
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page 1 of 1

FORM I SV-1

Sample Description: **PW-4LD Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/29/2019 11:13
Collection Date/Time: 10/28/2019 14:36
SDG#: BMS81-06

ARCADIS U.S., Inc.
ELLE Sample #: GW 1186463
ELLE Group #: 2071526
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	20	0.7	1
11997	Acetonitrile	75-05-8	N.D.	100	16	1
11997	Benzene	71-43-2	N.D.	1	0.2	1
11997	Bromochloromethane	74-97-5	N.D.	5	0.2	1
11997	Bromodichloromethane	75-27-4	N.D.	1	0.2	1
11997	Bromoform	75-25-2	N.D.	4	1	1
11997	Bromomethane	74-83-9	N.D.	1	0.3	1
11997	n-Butanol	71-36-3	N.D.	250	61	1
11997	2-Butanone	78-93-3	N.D.	10	0.3	1
11997	t-Butyl alcohol	75-65-0	N.D.	50	12	1
11997	n-Butylbenzene	104-51-8	N.D.	5	0.2	1
11997	sec-Butylbenzene	135-98-8	N.D.	5	0.2	1
11997	tert-Butylbenzene	98-06-6	N.D.	5	0.3	1
11997	Carbon Disulfide	75-15-0	N.D.	5	0.2	1
11997	Carbon Tetrachloride	56-23-5	N.D.	1	0.2	1
11997	Chlorobenzene	108-90-7	N.D.	1	0.2	1
11997	Chlorodifluoromethane[1]	75-45-6	N.D.	5	2	1
11997	Chloroethane	75-00-3	N.D.	1	0.2	1
11997	Chloroform	67-66-3	N.D.	1	0.2	1
11997	Chloromethane	74-87-3	N.D.	1	0.2	1
11997	Cyclohexane	110-82-7	N.D.	5	1	1
11997	Cyclohexanone[1]	108-94-1	N.D.	100	25	1
11997	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	5	0.3	1
11997	Dibromochloromethane	124-48-1	N.D.	1	0.2	1
11997	1,2-Dibromoethane	106-93-4	N.D.	1	0.2	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	5	0.2	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	5	0.2	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	5	0.2	1
11997	Dichlorodifluoromethane	75-71-8	N.D.	1	0.2	1
11997	1,1-Dichloroethane	75-34-3	N.D.	1	0.2	1
11997	1,2-Dichloroethane	107-06-2	N.D.	1	0.3	1
11997	1,1-Dichloroethene	75-35-4	N.D.	1	0.2	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	1	0.2	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	1	0.2	1
11997	1,2-Dichloropropane	78-87-5	N.D.	1	0.2	1
11997	cis-1,3-Dichloropropene	10061-01-5	N.D.	1	0.2	1
11997	trans-1,3-Dichloropropene	10061-02-6	N.D.	1	0.2	1
11997	1,4-Dioxane	123-91-1	N.D.	250	29	1
11997	Ethyl Acetate	141-78-6	N.D.	5	0.7	1
11997	Ethyl ether	60-29-7	3 J	5	0.2	1
11997	Ethylbenzene	100-41-4	N.D.	1	0.4	1

*=This limit was used in the evaluation of the final result

Sample Description: **PW-4LD Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/29/2019 11:13
Collection Date/Time: 10/28/2019 14:36
SDG#: BMS81-06

ARCADIS U.S., Inc.
ELLE Sample #: GW 1186463
ELLE Group #: 2071526
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Freon 113	76-13-1	N.D.	10	0.2	1
11997	n-Heptane[1]	142-82-5	N.D.	5	2	1
11997	n-Hexane[1]	110-54-3	N.D.	5	2	1
11997	2-Hexanone	591-78-6	N.D.	10	0.3	1
11997	Isobutyl Alcohol	78-83-1	N.D.	250	36	1
11997	Isopropylbenzene	98-82-8	N.D.	5	0.2	1
11997	p-Isopropyltoluene	99-87-6	N.D.	5	0.2	1
11997	Methyl Acetate	79-20-9	N.D.	5	0.2	1
11997	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	1	0.2	1
11997	4-Methyl-2-pentanone	108-10-1	N.D.	10	0.5	1
11997	Methylcyclohexane	108-87-2	N.D.	5	0.5	1
11997	Methylene Chloride	75-09-2	N.D.	1	0.3	1
11997	Naphthalene	91-20-3	N.D.	5	1	1
11997	2-Nitropropane	79-46-9	N.D.	10	0.8	1
11997	Styrene	100-42-5	N.D.	5	0.2	1
11997	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	1	0.2	1
11997	Tetrachloroethene	127-18-4	N.D.	1	0.2	1
11997	Tetrahydrofuran	109-99-9	N.D.	10	0.7	1
11997	Toluene	108-88-3	N.D.	1	0.2	1
11997	1,2,3-Trichlorobenzene	87-61-6	N.D.	5	0.4	1
11997	1,2,4-Trichlorobenzene	120-82-1	N.D.	5	0.3	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	1	0.3	1
11997	1,1,2-Trichloroethane	79-00-5	N.D.	1	0.2	1
11997	Trichloroethene	79-01-6	N.D.	1	0.2	1
11997	Trichlorofluoromethane	75-69-4	N.D.	1	0.2	1
11997	1,2,4-Trimethylbenzene	95-63-6	N.D.	5	1	1
11997	1,3,5-Trimethylbenzene	108-67-8	N.D.	5	0.3	1
11997	Vinyl Chloride	75-01-4	N.D.	1	0.2	1
11997	m+p-Xylene	179601-23-1	N.D.	5	1	1
11997	o-Xylene	95-47-6	N.D.	1	0.4	1
11997	Xylene (Total)	1330-20-7	N.D.	6	1	1

12027 VOA Interp. Library Search-20
The results from the volatile library search are listed on the attached FORM 1 - VOA-TIC. The qualifiers appearing in the "Q" column are defined at the end of the report.

GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	Acenaphthene	83-32-9	N.D.	0.51	0.10	1
14241	Acenaphthylene	208-96-8	N.D.	0.51	0.10	1
14241	Acetophenone	98-86-2	N.D.	10	4.0	1
14241	Aniline	62-53-3	N.D.	10	3.0	1

*=This limit was used in the evaluation of the final result

Sample Description: **PW-4LD Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/29/2019 11:13
Collection Date/Time: 10/28/2019 14:36
SDG#: BMS81-06

ARCADIS U.S., Inc.
ELLE Sample #: GW 1186463
ELLE Group #: 2071526
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	Anthracene	120-12-7	N.D.	0.51	0.10	1
14241	Atrazine	1912-24-9	N.D.	5.1	2.0	1
14241	Benzaldehyde	100-52-7	N.D. J	10	3.0	1
14241	Benzo(a)anthracene	56-55-3	N.D.	0.51	0.10	1
14241	Benzo(a)pyrene	50-32-8	N.D.	0.51	0.10	1
14241	Benzo(b)fluoranthene	205-99-2	N.D.	0.51	0.10	1
14241	Benzo(g,h,i)perylene	191-24-2	N.D.	0.51	0.10	1
14241	Benzo(k)fluoranthene	207-08-9	N.D. J	0.51	0.10	1
14241	Benzyl alcohol	100-51-6	N.D.	30	10	1
14241	1,1'-Biphenyl	92-52-4	N.D.	10	3.0	1
14241	4-Bromophenyl-phenylether	101-55-3	N.D.	2.0	0.51	1
14241	Butylbenzylphthalate	85-68-7	N.D.	5.1	2.0	1
14241	Di-n-butylphthalate	84-74-2	N.D.	5.1	2.0	1
14241	Caprolactam	105-60-2	N.D.	11	5.1	1
14241	Carbazole	86-74-8	N.D.	2.0	0.51	1
14241	4-Chloro-3-methylphenol	59-50-7	N.D.	2.0	0.51	1
14241	4-Chloroaniline	106-47-8	N.D.	10	4.0	1
14241	bis(2-Chloroethoxy)methane	111-91-1	N.D.	2.0	0.51	1
14241	bis(2-Chloroethyl)ether	111-44-4	N.D.	2.0	0.51	1
14241	bis(2-Chloroisopropyl)ether[1]	39638-32-9	N.D.	2.0	0.51	1
	Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.					
14241	2-Chloronaphthalene	91-58-7	N.D.	1.0	0.40	1
14241	2-Chlorophenol	95-57-8	N.D.	2.0	0.51	1
14241	4-Chlorophenyl-phenylether	7005-72-3	N.D.	2.0	0.51	1
14241	Chrysene	218-01-9	N.D.	0.51	0.10	1
14241	Dibenz(a,h)anthracene	53-70-3	N.D.	0.51	0.10	1
14241	Dibenzofuran	132-64-9	N.D.	2.0	0.51	1
14241	3,3'-Dichlorobenzidine	91-94-1	N.D.	10	3.0	1
14241	2,4-Dichlorophenol	120-83-2	N.D.	2.0	0.51	1
14241	Dicyclohexylamine[1]	101-83-7	N.D.	10	10	1
14241	Diethylphthalate	84-66-2	N.D.	5.1	2.0	1
14241	N,N-Dimethylaniline[1]	121-69-7	N.D.	1.0	0.51	1
14241	2,4-Dimethylphenol	105-67-9	N.D.	10	3.0	1
14241	Dimethylphthalate	131-11-3	N.D.	5.1	2.0	1
14241	4,6-Dinitro-2-methylphenol	534-52-1	N.D.	21	8.1	1
14241	2,4-Dinitrophenol	51-28-5	N.D.	30	14	1
14241	2,4-Dinitrotoluene	121-14-2	N.D.	5.1	1.0	1
14241	2,6-Dinitrotoluene	606-20-2	N.D.	2.0	0.51	1
14241	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	11	5.1	1

*=This limit was used in the evaluation of the final result

Sample Description: **PW-4LD Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/29/2019 11:13
Collection Date/Time: 10/28/2019 14:36
SDG#: BMS81-06

ARCADIS U.S., Inc.
ELLE Sample #: GW 1186463
ELLE Group #: 2071526
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	Fluoranthene	206-44-0	N.D.	0.51	0.10	1
14241	Fluorene	86-73-7	N.D.	0.51	0.10	1
14241	Hexachlorobenzene	118-74-1	N.D.	0.51	0.10	1
14241	Hexachlorobutadiene	87-68-3	N.D.	2.0	0.51	1
14241	Hexachlorocyclopentadiene	77-47-4	N.D.	11	5.1	1
14241	Hexachloroethane	67-72-1	N.D.	5.1	1.0	1
14241	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.51	0.10	1
14241	Isophorone	78-59-1	N.D.	2.0	0.51	1
14241	2-Methylnaphthalene	91-57-6	N.D.	0.51	0.10	1
14241	2-Methylphenol	95-48-7	N.D.	2.0	0.51	1
14241	4-Methylphenol	65794-96-9	N.D.	2.0	0.51	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
14241	Naphthalene	91-20-3	N.D.	0.51	0.10	1
14241	2-Nitroaniline	88-74-4	N.D.	7.1	2.0	1
14241	3-Nitroaniline	99-09-2	N.D.	7.1	3.0	1
14241	4-Nitroaniline	100-01-6	N.D.	3.0	0.91	1
14241	Nitrobenzene	98-95-3	N.D.	2.0	0.51	1
14241	2-Nitrophenol	88-75-5	N.D.	10	3.0	1
14241	4-Nitrophenol	100-02-7	N.D.	30	10	1
14241	N-Nitroso-di-n-propylamine	621-64-7	N.D.	3.0	0.71	1
14241	N-Nitrosodiphenylamine	86-30-6	N.D.	3.0	0.71	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.					
14241	Di-n-octylphthalate	117-84-0	N.D.	11	5.1	1
14241	Pentachlorophenol	87-86-5	N.D.	5.1	1.0	1
14241	Phenanthrene	85-01-8	N.D.	0.51	0.10	1
14241	Phenol	108-95-2	N.D.	2.0	0.51	1
14241	Pyrene	129-00-0	N.D.	0.51	0.10	1
14241	Pyridine	110-86-1	N.D.	5.1	2.0	1
14241	1,2,4,5-Tetrachlorobenzene	95-94-3	N.D.	2.0	0.51	1
14241	2,3,4,6-Tetrachlorophenol	58-90-2	N.D.	10	4.0	1
14241	2,4,5-Trichlorophenol	95-95-4	N.D.	2.0	0.51	1
14241	2,4,6-Trichlorophenol	88-06-2	N.D.	2.0	0.51	1
14241	Triethylamine[1]	121-44-8	N.D.	10	10	1

The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the TNI/DoD Standards. The following analytes are accepted based on this allowance: Benzo(k)fluoranthene

00886 SVOA TIC Interpretive(25)

*=This limit was used in the evaluation of the final result

Sample Description: **PW-4LD Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/29/2019 11:13
Collection Date/Time: 10/28/2019 14:36
SDG#: BMS81-06

ARCADIS U.S., Inc.
ELLE Sample #: GW 1186463
ELLE Group #: 2071526
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
	The results from the semivolatile library search are listed on the attached FORM 1 - SV-TIC. The qualifiers appearing in the "Q" column are defined at the end of the report.					
Aldehydes & Ketones	**SW-846 8315A**		**ug/l**	**ug/l**	**ug/l**	
13022	Acetaldehyde[1]	75-07-0	N.D.	60	35	1
13022	Formaldehyde	50-00-0	N.D.	50	20	1
	The response for a target analyte(s) in the initial calibration verification standard is outside the QC acceptance limits.					
GC Miscellaneous	**SW-846 8015C Feb 2007 Rev 3**		**mg/l**	**mg/l**	**mg/l**	
12926	Ethylene glycol	107-21-1	~~N.D.~~ R	10	5.0	1
12926	Propylene glycol[1]	57-55-6	~~N.D.~~ R	10	2.0	1
	The response for tetramethylene glycol in the continuing calibration verification standard is outside the QC acceptance limits low. The following action was taken: The analysis was repeated and the continuing calibration verification standard bracketing the sample on the second trial is also outside the acceptance limits. This effect is attributed to the sample matrix and the data is reported.					
GC Miscellaneous	**SW-846 8015D Rev.4, June 2003**		**ug/l**	**ug/l**	**ug/l**	
10603	Ethanol	64-17-5	N.D. D2	1,000	150	1
10603	Isopropanol[1]	67-63-0	N.D. D2	1,000	110	1
10603	Methanol	67-56-1	N.D. D2	1,000	220	1

Sample Comments

State of New York Certification No. 10670

[1] = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	Y193112AA	11/07/2019 19:31	Linda C Pape	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	Y193112AA	11/07/2019 19:30	Linda C Pape	1
14241	Semi-annual Groundwater BMS	SW-846 8270D	1	19305WAF026	11/08/2019 17:04	Holly B Ziegler	1
11010	8270D BNA Extraction	SW-846 3510C	1	19305WAF026	11/01/2019 16:35	Osvaldo R Sanchez	1
13022	Short List Aldehydes- W 8315A	SW-846 8315A	1	193030019A	10/31/2019 18:07	Jessica L Miller	1
01013	Formaldehyde Extraction	SW-846 8315A	1	193030019A	10/31/2019 09:23	Alison Moll	1
12926	Glycols in Water by 8015C/D	SW-846 8015C Feb 2007 Rev 3	1	193100032A	11/06/2019 23:22	Donald Brown	1
10603	Alcohols in Water	SW-846 8015D Rev.4, June 2003	1	193080007A	11/04/2019 19:22	Johanna C Kennedy	1

*=This limit was used in the evaluation of the final result

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
BMS06

Lab Name: Lancaster Laboratories Contract:_____
Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____
Matrix: (soil/water) WATER Lab Sample ID: 1186463
Sample wt/vol: 5.0 (g/mL)mL Lab File ID:HP09355.i/19nov07a.b/yn07s46.d
Level: (low/med) LOW Date Received: 10/29/19
% Moisture: not dec. Date Analyzed: 11/07/19
Column: (pack/cap) CAP Dilution Factor: 1.0
CONCENTRATION UNITS:
Number TICs found: 0 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	VOCTIC	Total VOC TICs		0	U
2.					
3.					
4.					
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page 1 of 1

FORM I VOA-TIC

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
BMS06

Lab Name: Lancaster Laboratories Contract:
Lab Code: LANCAS Case No.: SAS No.: SDG No.:
Matrix: (soil/water) WATER Lab Sample ID: 1186463
Sample wt/vol: 247 (g/mL) mL Lab File ID: lk0344.d
Level: (low/med) LOW Date Received: 10/29/19
% Moisture: Decanted: (Y/N) Date Extracted: 11/01/19
Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/08/19
Injection Volume: 1 (uL) Dilution Factor: 1
GPC Cleanup: N pH: Extraction: Sepf
CONCENTRATION UNITS:
Number TICs found: 1 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		Unknown	12.504	5	J N
2.					
3.	SVOCTIC	Total SVOC TICs		5	J N
4.					
5.					
6.					
7.					
8.					
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10.					
11.					
12.					
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page 1 of 1

FORM I SV-1

Sample Description: **PW-4F Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/29/2019 11:13
Collection Date/Time: 10/28/2019 11:31
SDG#: BMS81-07

ARCADIS U.S., Inc.
ELLE Sample #: GW 1186464
ELLE Group #: 2071526
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	0.7 J	20	0.7	1
11997	Acetonitrile	75-05-8	N.D.	100	16	1
11997	Benzene	71-43-2	N.D.	1	0.2	1
11997	Bromochloromethane	74-97-5	N.D.	5	0.2	1
11997	Bromodichloromethane	75-27-4	N.D.	1	0.2	1
11997	Bromoform	75-25-2	N.D.	4	1	1
11997	Bromomethane	74-83-9	N.D.	1	0.3	1
11997	n-Butanol	71-36-3	N.D.	250	61	1
11997	2-Butanone	78-93-3	N.D.	10	0.3	1
11997	t-Butyl alcohol	75-65-0	N.D.	50	12	1
11997	n-Butylbenzene	104-51-8	N.D.	5	0.2	1
11997	sec-Butylbenzene	135-98-8	N.D.	5	0.2	1
11997	tert-Butylbenzene	98-06-6	N.D.	5	0.3	1
11997	Carbon Disulfide	75-15-0	N.D.	5	0.2	1
11997	Carbon Tetrachloride	56-23-5	N.D.	1	0.2	1
11997	Chlorobenzene	108-90-7	N.D.	1	0.2	1
11997	Chlorodifluoromethane[1]	75-45-6	N.D.	5	2	1
11997	Chloroethane	75-00-3	N.D.	1	0.2	1
11997	Chloroform	67-66-3	N.D.	1	0.2	1
11997	Chloromethane	74-87-3	N.D.	1	0.2	1
11997	Cyclohexane	110-82-7	N.D.	5	1	1
11997	Cyclohexanone[1]	108-94-1	N.D.	100	25	1
11997	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	5	0.3	1
11997	Dibromochloromethane	124-48-1	N.D.	1	0.2	1
11997	1,2-Dibromoethane	106-93-4	N.D.	1	0.2	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	5	0.2	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	5	0.2	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	5	0.2	1
11997	Dichlorodifluoromethane	75-71-8	N.D.	1	0.2	1
11997	1,1-Dichloroethane	75-34-3	N.D.	1	0.2	1
11997	1,2-Dichloroethane	107-06-2	N.D.	1	0.3	1
11997	1,1-Dichloroethene	75-35-4	N.D.	1	0.2	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	1	0.2	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	1	0.2	1
11997	1,2-Dichloropropane	78-87-5	N.D.	1	0.2	1
11997	cis-1,3-Dichloropropene	10061-01-5	N.D.	1	0.2	1
11997	trans-1,3-Dichloropropene	10061-02-6	N.D.	1	0.2	1
11997	1,4-Dioxane	123-91-1	N.D.	250	29	1
11997	Ethyl Acetate	141-78-6	N.D.	5	0.7	1
11997	Ethyl ether	60-29-7	1 J	5	0.2	1
11997	Ethylbenzene	100-41-4	N.D.	1	0.4	1

*=This limit was used in the evaluation of the final result

Sample Description: **PW-4F Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/29/2019 11:13
Collection Date/Time: 10/28/2019 11:31
SDG#: BMS81-07

ARCADIS U.S., Inc.
ELLE Sample #: GW 1186464
ELLE Group #: 2071526
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Freon 113	76-13-1	N.D.	10	0.2	1
11997	n-Heptane[1]	142-82-5	N.D.	5	2	1
11997	n-Hexane[1]	110-54-3	N.D.	5	2	1
11997	2-Hexanone	591-78-6	N.D.	10	0.3	1
11997	Isobutyl Alcohol	78-83-1	N.D.	250	36	1
11997	Isopropylbenzene	98-82-8	N.D.	5	0.2	1
11997	p-Isopropyltoluene	99-87-6	N.D.	5	0.2	1
11997	Methyl Acetate	79-20-9	N.D.	5	0.2	1
11997	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	1	0.2	1
11997	4-Methyl-2-pentanone	108-10-1	N.D.	10	0.5	1
11997	Methylcyclohexane	108-87-2	N.D.	5	0.5	1
11997	Methylene Chloride	75-09-2	N.D.	1	0.3	1
11997	Naphthalene	91-20-3	N.D.	5	1	1
11997	2-Nitropropane	79-46-9	N.D.	10	0.8	1
11997	Styrene	100-42-5	N.D.	5	0.2	1
11997	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	1	0.2	1
11997	Tetrachloroethene	127-18-4	N.D.	1	0.2	1
11997	Tetrahydrofuran	109-99-9	N.D.	10	0.7	1
11997	Toluene	108-88-3	N.D.	1	0.2	1
11997	1,2,3-Trichlorobenzene	87-61-6	N.D.	5	0.4	1
11997	1,2,4-Trichlorobenzene	120-82-1	N.D.	5	0.3	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	1	0.3	1
11997	1,1,2-Trichloroethane	79-00-5	N.D.	1	0.2	1
11997	Trichloroethene	79-01-6	N.D.	1	0.2	1
11997	Trichlorofluoromethane	75-69-4	N.D.	1	0.2	1
11997	1,2,4-Trimethylbenzene	95-63-6	N.D.	5	1	1
11997	1,3,5-Trimethylbenzene	108-67-8	N.D.	5	0.3	1
11997	Vinyl Chloride	75-01-4	N.D.	1	0.2	1
11997	m+p-Xylene	179601-23-1	N.D.	5	1	1
11997	o-Xylene	95-47-6	N.D.	1	0.4	1
11997	Xylene (Total)	1330-20-7	N.D.	6	1	1

12027 VOA Interp. Library Search-20
The results from the volatile library search are listed on the attached FORM 1 - VOA-TIC. The qualifiers appearing in the "Q" column are defined at the end of the report.

GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	Acenaphthene	83-32-9	N.D.	0.50	0.10	1
14241	Acenaphthylene	208-96-8	N.D.	0.50	0.10	1
14241	Acetophenone	98-86-2	N.D.	10	4.0	1
14241	Aniline	62-53-3	N.D.	10	3.0	1

*=This limit was used in the evaluation of the final result

Sample Description: **PW-4F Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/29/2019 11:13
Collection Date/Time: 10/28/2019 11:31
SDG#: BMS81-07

ARCADIS U.S., Inc.
ELLE Sample #: GW 1186464
ELLE Group #: 2071526
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	Anthracene	120-12-7	N.D.	0.50	0.10	1
14241	Atrazine	1912-24-9	N.D.	5.0	2.0	1
14241	Benzaldehyde	100-52-7	N.D. J	10	3.0	1
14241	Benzo(a)anthracene	56-55-3	N.D.	0.50	0.10	1
14241	Benzo(a)pyrene	50-32-8	N.D.	0.50	0.10	1
14241	Benzo(b)fluoranthene	205-99-2	N.D.	0.50	0.10	1
14241	Benzo(g,h,i)perylene	191-24-2	N.D.	0.50	0.10	1
14241	Benzo(k)fluoranthene	207-08-9	N.D. J	0.50	0.10	1
14241	Benzyl alcohol	100-51-6	N.D.	30	10	1
14241	1,1'-Biphenyl	92-52-4	N.D.	10	3.0	1
14241	4-Bromophenyl-phenylether	101-55-3	N.D.	2.0	0.50	1
14241	Butylbenzylphthalate	85-68-7	N.D.	5.0	2.0	1
14241	Di-n-butylphthalate	84-74-2	N.D.	5.0	2.0	1
14241	Caprolactam	105-60-2	N.D.	11	5.0	1
14241	Carbazole	86-74-8	N.D.	2.0	0.50	1
14241	4-Chloro-3-methylphenol	59-50-7	N.D.	2.0	0.50	1
14241	4-Chloroaniline	106-47-8	N.D.	10	4.0	1
14241	bis(2-Chloroethoxy)methane	111-91-1	N.D.	2.0	0.50	1
14241	bis(2-Chloroethyl)ether	111-44-4	N.D.	2.0	0.50	1
14241	bis(2-Chloroisopropyl)ether[1]	39638-32-9	N.D.	2.0	0.50	1
	Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.					
14241	2-Chloronaphthalene	91-58-7	N.D.	1.0	0.40	1
14241	2-Chlorophenol	95-57-8	N.D.	2.0	0.50	1
14241	4-Chlorophenyl-phenylether	7005-72-3	N.D.	2.0	0.50	1
14241	Chrysene	218-01-9	N.D.	0.50	0.10	1
14241	Dibenz(a,h)anthracene	53-70-3	N.D.	0.50	0.10	1
14241	Dibenzofuran	132-64-9	N.D.	2.0	0.50	1
14241	3,3'-Dichlorobenzidine	91-94-1	N.D.	10	3.0	1
14241	2,4-Dichlorophenol	120-83-2	N.D.	2.0	0.50	1
14241	Dicyclohexylamine[1]	101-83-7	N.D.	10	10	1
14241	Diethylphthalate	84-66-2	N.D.	5.0	2.0	1
14241	N,N-Dimethylaniline[1]	121-69-7	N.D.	1.0	0.50	1
14241	2,4-Dimethylphenol	105-67-9	N.D.	10	3.0	1
14241	Dimethylphthalate	131-11-3	N.D.	5.0	2.0	1
14241	4,6-Dinitro-2-methylphenol	534-52-1	N.D.	21	8.0	1
14241	2,4-Dinitrophenol	51-28-5	N.D.	30	14	1
14241	2,4-Dinitrotoluene	121-14-2	N.D.	5.0	1.0	1
14241	2,6-Dinitrotoluene	606-20-2	N.D.	2.0	0.50	1
14241	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	11	5.0	1

*=This limit was used in the evaluation of the final result

Sample Description: **PW-4F Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/29/2019 11:13
Collection Date/Time: 10/28/2019 11:31
SDG#: BMS81-07

ARCADIS U.S., Inc.
ELLE Sample #: GW 1186464
ELLE Group #: 2071526
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	Fluoranthene	206-44-0	N.D.	0.50	0.10	1
14241	Fluorene	86-73-7	N.D.	0.50	0.10	1
14241	Hexachlorobenzene	118-74-1	N.D.	0.50	0.10	1
14241	Hexachlorobutadiene	87-68-3	N.D.	2.0	0.50	1
14241	Hexachlorocyclopentadiene	77-47-4	N.D.	11	5.0	1
14241	Hexachloroethane	67-72-1	N.D.	5.0	1.0	1
14241	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.50	0.10	1
14241	Isophorone	78-59-1	N.D.	2.0	0.50	1
14241	2-Methylnaphthalene	91-57-6	N.D.	0.50	0.10	1
14241	2-Methylphenol	95-48-7	N.D.	2.0	0.50	1
14241	4-Methylphenol	65794-96-9	N.D.	2.0	0.50	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
14241	Naphthalene	91-20-3	N.D.	0.50	0.10	1
14241	2-Nitroaniline	88-74-4	N.D.	7.0	2.0	1
14241	3-Nitroaniline	99-09-2	N.D.	7.0	3.0	1
14241	4-Nitroaniline	100-01-6	N.D.	3.0	0.90	1
14241	Nitrobenzene	98-95-3	N.D.	2.0	0.50	1
14241	2-Nitrophenol	88-75-5	N.D.	10	3.0	1
14241	4-Nitrophenol	100-02-7	N.D.	30	10	1
14241	N-Nitroso-di-n-propylamine	621-64-7	N.D.	3.0	0.70	1
14241	N-Nitrosodiphenylamine	86-30-6	N.D.	3.0	0.70	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.					
14241	Di-n-octylphthalate	117-84-0	N.D.	11	5.0	1
14241	Pentachlorophenol	87-86-5	N.D.	5.0	1.0	1
14241	Phenanthrene	85-01-8	N.D.	0.50	0.10	1
14241	Phenol	108-95-2	N.D.	2.0	0.50	1
14241	Pyrene	129-00-0	N.D.	0.50	0.10	1
14241	Pyridine	110-86-1	N.D.	5.0	2.0	1
14241	1,2,4,5-Tetrachlorobenzene	95-94-3	N.D.	2.0	0.50	1
14241	2,3,4,6-Tetrachlorophenol	58-90-2	N.D.	10	4.0	1
14241	2,4,5-Trichlorophenol	95-95-4	N.D.	2.0	0.50	1
14241	2,4,6-Trichlorophenol	88-06-2	N.D.	2.0	0.50	1
14241	Triethylamine[1]	121-44-8	N.D.	10	10	1

The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the TNI/DoD Standards. The following analytes are accepted based on this allowance: Benzo(k)fluoranthene

00886 SVOA TIC Interpretive(25)

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **PW-4F Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/29/2019 11:13
Collection Date/Time: 10/28/2019 11:31
SDG#: BMS81-07

ARCADIS U.S., Inc.
ELLE Sample #: GW 1186464
ELLE Group #: 2071526
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
	The results from the semivolatile library search are listed on the attached FORM 1 - SV-TIC. The qualifiers appearing in the "Q" column are defined at the end of the report.					
Aldehydes & Ketones	**SW-846 8315A**		**ug/l**	**ug/l**	**ug/l**	
13022	Acetaldehyde[1]	75-07-0	N.D.	60	35	1
13022	Formaldehyde	50-00-0	24 J	50	20	1
	The response for a target analyte(s) in the initial calibration verification standard is outside the QC acceptance limits.					
GC Miscellaneous	**SW-846 8015C Feb 2007 Rev 3**		**mg/l**	**mg/l**	**mg/l**	
12926	Ethylene glycol	107-21-1	N.D. J	10	5.0	1
12926	Propylene glycol[1]	57-55-6	N.D. J	10	2.0	1
	The response for tetramethylene glycol in the continuing calibration verification standard is outside the QC acceptance limits low. The following action was taken: The analysis was repeated and the continuing calibration verification standard bracketing the sample on the second trial is also outside the acceptance limits. This effect is attributed to the sample matrix and the data is reported.					
GC Miscellaneous	**SW-846 8015D Rev.4, June 2003**		**ug/l**	**ug/l**	**ug/l**	
10603	Ethanol	64-17-5	N.D. D2	1,000	150	1
10603	Isopropanol[1]	67-63-0	N.D. D2	1,000	110	1
10603	Methanol	67-56-1	N.D. D2	1,000	220	1

Sample Comments

State of New York Certification No. 10670

[1] = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	Y193112AA	11/07/2019 19:53	Linda C Pape	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	Y193112AA	11/07/2019 19:52	Linda C Pape	1
14241	Semi-annual Groundwater BMS	SW-846 8270D	1	19305WAF026	11/08/2019 17:33	Holly B Ziegler	1
11010	8270D BNA Extraction	SW-846 3510C	1	19305WAF026	11/01/2019 16:35	Osvaldo R Sanchez	1
13022	Short List Aldehydes- W 8315A	SW-846 8315A	1	193030019A	10/31/2019 18:17	Jessica L Miller	1
01013	Formaldehyde Extraction	SW-846 8315A	1	193030019A	10/31/2019 09:23	Alison Moll	1
12926	Glycols in Water by 8015C/D	SW-846 8015C Feb 2007 Rev 3	1	193080027A	11/05/2019 23:28	Donald Brown	1
10603	Alcohols in Water	SW-846 8015D Rev.4, June 2003	1	193080007A	11/04/2019 19:39	Johanna C Kennedy	1

*=This limit was used in the evaluation of the final result

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
BMS07

Lab Name: Lancaster Laboratories Contract:_____
Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____
Matrix: (soil/water) WATER Lab Sample ID: 1186464
Sample wt/vol: 5.0 (g/mL)mL Lab File ID:HP09355.i/19nov07a.b/yn07s47.d
Level: (low/med) LOW Date Received: 10/29/19
% Moisture: not dec. Date Analyzed: 11/07/19
Column: (pack/cap) CAP Dilution Factor: 1.0
CONCENTRATION UNITS:
Number TICs found: 1 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		Unknown	5.51	10	J N
2.					
3.	VOCTIC	Total VOC TICs		10	J N
4.					
5.					
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page 1 of 1

FORM I VOA-TIC

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
BMS07

Lab Name: Lancaster Laboratories Contract:
Lab Code: LANCAS Case No.: SAS No.: SDG No.:
Matrix: (soil/water) WATER Lab Sample ID: 1186464
Sample wt/vol: 249 (g/mL) mL Lab File ID: lk0345.d
Level: (low/med) LOW Date Received: 10/29/19
% Moisture: Decanted: (Y/N) Date Extracted: 11/01/19
Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/08/19
Injection Volume: 1 (uL) Dilution Factor: 1
GPC Cleanup: N pH: Extraction: Sepf
CONCENTRATION UNITS:
Number TICs found: 0 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	SVOCTIC	Total SVOC TICs		0	U
2.					
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page 1 of 1

FORM I SV-1

Sample Description: **PW-4LS Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/29/2019 11:13
Collection Date/Time: 10/28/2019 13:27
SDG#: BMS81-08

ARCADIS U.S., Inc.
ELLE Sample #: GW 1186465
ELLE Group #: 2071526
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	2 J	20	0.7	1
11997	Acetonitrile	75-05-8	N.D.	100	16	1
11997	Benzene	71-43-2	N.D.	1	0.2	1
11997	Bromochloromethane	74-97-5	N.D.	5	0.2	1
11997	Bromodichloromethane	75-27-4	N.D.	1	0.2	1
11997	Bromoform	75-25-2	N.D.	4	1	1
11997	Bromomethane	74-83-9	N.D.	1	0.3	1
11997	n-Butanol	71-36-3	N.D.	250	61	1
11997	2-Butanone	78-93-3	N.D.	10	0.3	1
11997	t-Butyl alcohol	75-65-0	N.D.	50	12	1
11997	n-Butylbenzene	104-51-8	N.D.	5	0.2	1
11997	sec-Butylbenzene	135-98-8	N.D.	5	0.2	1
11997	tert-Butylbenzene	98-06-6	N.D.	5	0.3	1
11997	Carbon Disulfide	75-15-0	N.D.	5	0.2	1
11997	Carbon Tetrachloride	56-23-5	N.D.	1	0.2	1
11997	Chlorobenzene	108-90-7	N.D.	1	0.2	1
11997	Chlorodifluoromethane[1]	75-45-6	N.D.	5	2	1
11997	Chloroethane	75-00-3	N.D.	1	0.2	1
11997	Chloroform	67-66-3	N.D.	1	0.2	1
11997	Chloromethane	74-87-3	N.D.	1	0.2	1
11997	Cyclohexane	110-82-7	N.D.	5	1	1
11997	Cyclohexanone[1]	108-94-1	N.D.	100	25	1
11997	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	5	0.3	1
11997	Dibromochloromethane	124-48-1	N.D.	1	0.2	1
11997	1,2-Dibromoethane	106-93-4	N.D.	1	0.2	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	5	0.2	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	5	0.2	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	5	0.2	1
11997	Dichlorodifluoromethane	75-71-8	N.D.	1	0.2	1
11997	1,1-Dichloroethane	75-34-3	N.D.	1	0.2	1
11997	1,2-Dichloroethane	107-06-2	N.D.	1	0.3	1
11997	1,1-Dichloroethene	75-35-4	N.D.	1	0.2	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	1	0.2	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	1	0.2	1
11997	1,2-Dichloropropane	78-87-5	N.D.	1	0.2	1
11997	cis-1,3-Dichloropropene	10061-01-5	N.D.	1	0.2	1
11997	trans-1,3-Dichloropropene	10061-02-6	N.D.	1	0.2	1
11997	1,4-Dioxane	123-91-1	N.D.	250	29	1
11997	Ethyl Acetate	141-78-6	N.D.	5	0.7	1
11997	Ethyl ether	60-29-7	0.8 J	5	0.2	1
11997	Ethylbenzene	100-41-4	N.D.	1	0.4	1

*=This limit was used in the evaluation of the final result

Sample Description: **PW-4LS Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/29/2019 11:13
Collection Date/Time: 10/28/2019 13:27
SDG#: BMS81-08

ARCADIS U.S., Inc.
ELLE Sample #: GW 1186465
ELLE Group #: 2071526
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Freon 113	76-13-1	N.D.	10	0.2	1
11997	n-Heptane[1]	142-82-5	N.D.	5	2	1
11997	n-Hexane[1]	110-54-3	N.D.	5	2	1
11997	2-Hexanone	591-78-6	N.D.	10	0.3	1
11997	Isobutyl Alcohol	78-83-1	N.D.	250	36	1
11997	Isopropylbenzene	98-82-8	N.D.	5	0.2	1
11997	p-Isopropyltoluene	99-87-6	N.D.	5	0.2	1
11997	Methyl Acetate	79-20-9	N.D.	5	0.2	1
11997	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	1	0.2	1
11997	4-Methyl-2-pentanone	108-10-1	N.D.	10	0.5	1
11997	Methylcyclohexane	108-87-2	N.D.	5	0.5	1
11997	Methylene Chloride	75-09-2	N.D.	1	0.3	1
11997	Naphthalene	91-20-3	N.D.	5	1	1
11997	2-Nitropropane	79-46-9	N.D.	10	0.8	1
11997	Styrene	100-42-5	N.D.	5	0.2	1
11997	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	1	0.2	1
11997	Tetrachloroethene	127-18-4	N.D.	1	0.2	1
11997	Tetrahydrofuran	109-99-9	N.D.	10	0.7	1
11997	Toluene	108-88-3	N.D.	1	0.2	1
11997	1,2,3-Trichlorobenzene	87-61-6	N.D.	5	0.4	1
11997	1,2,4-Trichlorobenzene	120-82-1	N.D.	5	0.3	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	1	0.3	1
11997	1,1,2-Trichloroethane	79-00-5	N.D.	1	0.2	1
11997	Trichloroethene	79-01-6	N.D.	1	0.2	1
11997	Trichlorofluoromethane	75-69-4	N.D.	1	0.2	1
11997	1,2,4-Trimethylbenzene	95-63-6	N.D.	5	1	1
11997	1,3,5-Trimethylbenzene	108-67-8	N.D.	5	0.3	1
11997	Vinyl Chloride	75-01-4	N.D.	1	0.2	1
11997	m+p-Xylene	179601-23-1	N.D.	5	1	1
11997	o-Xylene	95-47-6	N.D.	1	0.4	1
11997	Xylene (Total)	1330-20-7	N.D.	6	1	1

12027 VOA Interp. Library Search-20
The results from the volatile library search are listed on the attached FORM 1 - VOA-TIC. The qualifiers appearing in the "Q" column are defined at the end of the report.

GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	Acenaphthene	83-32-9	N.D.	0.51	0.10	1
14241	Acenaphthylene	208-96-8	N.D.	0.51	0.10	1
14241	Acetophenone	98-86-2	N.D.	10	4.1	1
14241	Aniline	62-53-3	N.D.	10	3.0	1

*=This limit was used in the evaluation of the final result

Sample Description: **PW-4LS Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/29/2019 11:13
Collection Date/Time: 10/28/2019 13:27
SDG#: BMS81-08

ARCADIS U.S., Inc.
ELLE Sample #: GW 1186465
ELLE Group #: 2071526
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	Anthracene	120-12-7	N.D.	0.51	0.10	1
14241	Atrazine	1912-24-9	N.D.	5.1	2.0	1
14241	Benzaldehyde	100-52-7	N.D. J	10	3.0	1
14241	Benzo(a)anthracene	56-55-3	N.D.	0.51	0.10	1
14241	Benzo(a)pyrene	50-32-8	N.D.	0.51	0.10	1
14241	Benzo(b)fluoranthene	205-99-2	N.D.	0.51	0.10	1
14241	Benzo(g,h,i)perylene	191-24-2	N.D.	0.51	0.10	1
14241	Benzo(k)fluoranthene	207-08-9	N.D. J	0.51	0.10	1
14241	Benzyl alcohol	100-51-6	N.D.	30	10	1
14241	1,1'-Biphenyl	92-52-4	N.D.	10	3.0	1
14241	4-Bromophenyl-phenylether	101-55-3	N.D.	2.0	0.51	1
14241	Butylbenzylphthalate	85-68-7	N.D.	5.1	2.0	1
14241	Di-n-butylphthalate	84-74-2	N.D.	5.1	2.0	1
14241	Caprolactam	105-60-2	N.D.	11	5.1	1
14241	Carbazole	86-74-8	N.D.	2.0	0.51	1
14241	4-Chloro-3-methylphenol	59-50-7	N.D.	2.0	0.51	1
14241	4-Chloroaniline	106-47-8	N.D.	10	4.1	1
14241	bis(2-Chloroethoxy)methane	111-91-1	N.D.	2.0	0.51	1
14241	bis(2-Chloroethyl)ether	111-44-4	N.D.	2.0	0.51	1
14241	bis(2-Chloroisopropyl)ether[1]	39638-32-9	N.D.	2.0	0.51	1
	Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.					
14241	2-Chloronaphthalene	91-58-7	N.D.	1.0	0.41	1
14241	2-Chlorophenol	95-57-8	N.D.	2.0	0.51	1
14241	4-Chlorophenyl-phenylether	7005-72-3	N.D.	2.0	0.51	1
14241	Chrysene	218-01-9	N.D.	0.51	0.10	1
14241	Dibenz(a,h)anthracene	53-70-3	N.D.	0.51	0.10	1
14241	Dibenzofuran	132-64-9	N.D.	2.0	0.51	1
14241	3,3'-Dichlorobenzidine	91-94-1	N.D.	10	3.0	1
14241	2,4-Dichlorophenol	120-83-2	N.D.	2.0	0.51	1
14241	Dicyclohexylamine[1]	101-83-7	N.D.	10	10	1
14241	Diethylphthalate	84-66-2	N.D.	5.1	2.0	1
14241	N,N-Dimethylaniline[1]	121-69-7	N.D.	1.0	0.51	1
14241	2,4-Dimethylphenol	105-67-9	N.D.	10	3.0	1
14241	Dimethylphthalate	131-11-3	N.D.	5.1	2.0	1
14241	4,6-Dinitro-2-methylphenol	534-52-1	N.D.	21	8.1	1
14241	2,4-Dinitrophenol	51-28-5	N.D.	30	14	1
14241	2,4-Dinitrotoluene	121-14-2	N.D.	5.1	1.0	1
14241	2,6-Dinitrotoluene	606-20-2	N.D.	2.0	0.51	1
14241	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	11	5.1	1

*=This limit was used in the evaluation of the final result

Sample Description: **PW-4LS Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/29/2019 11:13
Collection Date/Time: 10/28/2019 13:27
SDG#: BMS81-08

ARCADIS U.S., Inc.
ELLE Sample #: GW 1186465
ELLE Group #: 2071526
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	Fluoranthene	206-44-0	N.D.	0.51	0.10	1
14241	Fluorene	86-73-7	N.D.	0.51	0.10	1
14241	Hexachlorobenzene	118-74-1	N.D.	0.51	0.10	1
14241	Hexachlorobutadiene	87-68-3	N.D.	2.0	0.51	1
14241	Hexachlorocyclopentadiene	77-47-4	N.D.	11	5.1	1
14241	Hexachloroethane	67-72-1	N.D.	5.1	1.0	1
14241	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.51	0.10	1
14241	Isophorone	78-59-1	N.D.	2.0	0.51	1
14241	2-Methylnaphthalene	91-57-6	N.D.	0.51	0.10	1
14241	2-Methylphenol	95-48-7	N.D.	2.0	0.51	1
14241	4-Methylphenol	65794-96-9	N.D.	2.0	0.51	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
14241	Naphthalene	91-20-3	N.D.	0.51	0.10	1
14241	2-Nitroaniline	88-74-4	N.D.	7.1	2.0	1
14241	3-Nitroaniline	99-09-2	N.D.	7.1	3.0	1
14241	4-Nitroaniline	100-01-6	N.D.	3.0	0.91	1
14241	Nitrobenzene	98-95-3	N.D.	2.0	0.51	1
14241	2-Nitrophenol	88-75-5	N.D.	10	3.0	1
14241	4-Nitrophenol	100-02-7	N.D.	30	10	1
14241	N-Nitroso-di-n-propylamine	621-64-7	N.D.	3.0	0.71	1
14241	N-Nitrosodiphenylamine	86-30-6	N.D.	3.0	0.71	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.					
14241	Di-n-octylphthalate	117-84-0	N.D.	11	5.1	1
14241	Pentachlorophenol	87-86-5	N.D.	5.1	1.0	1
14241	Phenanthrene	85-01-8	N.D.	0.51	0.10	1
14241	Phenol	108-95-2	N.D.	2.0	0.51	1
14241	Pyrene	129-00-0	N.D.	0.51	0.10	1
14241	Pyridine	110-86-1	N.D.	5.1	2.0	1
14241	1,2,4,5-Tetrachlorobenzene	95-94-3	N.D.	2.0	0.51	1
14241	2,3,4,6-Tetrachlorophenol	58-90-2	N.D.	10	4.1	1
14241	2,4,5-Trichlorophenol	95-95-4	N.D.	2.0	0.51	1
14241	2,4,6-Trichlorophenol	88-06-2	N.D.	2.0	0.51	1
14241	Triethylamine[1]	121-44-8	N.D.	10	10	1

The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the TNI/DoD Standards. The following analytes are accepted based on this allowance: Benzo(k)fluoranthene

00886 SVOA TIC Interpretive(25)

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **PW-4LS Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/29/2019 11:13
Collection Date/Time: 10/28/2019 13:27
SDG#: BMS81-08

ARCADIS U.S., Inc.
ELLE Sample #: GW 1186465
ELLE Group #: 2071526
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
	The results from the semivolatile library search are listed on the attached FORM 1 - SV-TIC. The qualifiers appearing in the "Q" column are defined at the end of the report.					
Aldehydes & Ketones	**SW-846 8315A**		**ug/l**	**ug/l**	**ug/l**	
13022	Acetaldehyde[1]	75-07-0	N.D.	60	35	1
13022	Formaldehyde	50-00-0	62	50	20	1
	The response for a target analyte(s) in the initial calibration verification standard is outside the QC acceptance limits.					
GC Miscellaneous	**SW-846 8015C Feb 2007 Rev 3**		**mg/l**	**mg/l**	**mg/l**	
12926	Ethylene glycol	107-21-1	N.D. J	10	5.0	1
12926	Propylene glycol[1]	57-55-6	N.D. J	10	2.0	1
	The response for tetramethylene glycol in the continuing calibration verification standard is outside the QC acceptance limits low. The following action was taken: The analysis was repeated and the continuing calibration verification standard bracketing the sample on the second trial is also outside the acceptance limits. This effect is attributed to the sample matrix and the data is reported.					
GC Miscellaneous	**SW-846 8015D Rev.4, June 2003**		**ug/l**	**ug/l**	**ug/l**	
10603	Ethanol	64-17-5	N.D. D2	1,000	150	1
10603	Isopropanol[1]	67-63-0	N.D. D2	1,000	110	1
10603	Methanol	67-56-1	N.D. D2	1,000	220	1

Sample Comments

State of New York Certification No. 10670

[1] = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	Y193112AA	11/07/2019 20:15	Linda C Pape	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	Y193112AA	11/07/2019 20:14	Linda C Pape	1
14241	Semi-annual Groundwater BMS	SW-846 8270D	1	19305WAF026	11/08/2019 18:02	Holly B Ziegler	1
11010	8270D BNA Extraction	SW-846 3510C	1	19305WAF026	11/01/2019 16:35	Osvaldo R Sanchez	1
13022	Short List Aldehydes- W 8315A	SW-846 8315A	1	193030019A	10/31/2019 18:27	Jessica L Miller	1
01013	Formaldehyde Extraction	SW-846 8315A	1	193030019A	10/31/2019 09:23	Alison Moll	1
12926	Glycols in Water by 8015C/D	SW-846 8015C Feb 2007 Rev 3	1	193080027A	11/05/2019 23:41	Donald Brown	1
10603	Alcohols in Water	SW-846 8015D Rev.4, June 2003	1	193080007A	11/04/2019 19:56	Johanna C Kennedy	1

*=This limit was used in the evaluation of the final result

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
BMS08

Lab Name: Lancaster Laboratories Contract:_____
Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____
Matrix: (soil/water) WATER Lab Sample ID: 1186465
Sample wt/vol: 5.0 (g/mL)mL Lab File ID:HP09355.i/19nov07a.b/yn07s48.d
Level: (low/med) LOW Date Received: 10/29/19
% Moisture: not dec. Date Analyzed: 11/07/19
Column: (pack/cap) CAP Dilution Factor: 1.0
CONCENTRATION UNITS:
Number TICs found: 1 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	108-20-3	Diisopropyl ether	5.51	7	JN
2.					
3.	VOCTIC	Total VOC TICs		7	JN
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page 1 of 1

FORM I VOA-TIC

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
BMS08

Lab Name: Lancaster Laboratories Contract:
Lab Code: LANCAS Case No.: SAS No.: SDG No.:
Matrix: (soil/water) WATER Lab Sample ID: 1186465
Sample wt/vol: 246 (g/mL) mL Lab File ID: lk0346.d
Level: (low/med) LOW Date Received: 10/29/19
% Moisture: Decanted: (Y/N) Date Extracted: 11/01/19
Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/08/19
Injection Volume: 1 (uL) Dilution Factor: 1
GPC Cleanup: N pH: Extraction: Sepf
CONCENTRATION UNITS:
Number TICs found: 0 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	SVOCTIC	Total SVOC TICs		0	U
2.					
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page 1 of 1

FORM I SV-1

Sample Description: **Trip Blank Water**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/29/2019 11:13
Collection Date/Time: 10/23/2019
SDG#: BMS81-09TB

ARCADIS U.S., Inc.
ELLE Sample #: GW 1186466
ELLE Group #: 2071526
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	20	0.7	1
11997	Acetonitrile	75-05-8	N.D.	100	16	1
11997	Benzene	71-43-2	N.D.	1	0.2	1
11997	Bromochloromethane	74-97-5	N.D.	5	0.2	1
11997	Bromodichloromethane	75-27-4	N.D.	1	0.2	1
11997	Bromoform	75-25-2	N.D.	4	1	1
11997	Bromomethane	74-83-9	N.D.	1	0.3	1
11997	n-Butanol	71-36-3	N.D.	250	61	1
11997	2-Butanone	78-93-3	N.D.	10	0.3	1
11997	t-Butyl alcohol	75-65-0	N.D.	50	12	1
11997	n-Butylbenzene	104-51-8	N.D.	5	0.2	1
11997	sec-Butylbenzene	135-98-8	N.D.	5	0.2	1
11997	tert-Butylbenzene	98-06-6	N.D.	5	0.3	1
11997	Carbon Disulfide	75-15-0	N.D.	5	0.2	1
11997	Carbon Tetrachloride	56-23-5	N.D.	1	0.2	1
11997	Chlorobenzene	108-90-7	N.D.	1	0.2	1
11997	Chlorodifluoromethane[1]	75-45-6	N.D.	5	2	1
11997	Chloroethane	75-00-3	N.D.	1	0.2	1
11997	Chloroform	67-66-3	N.D.	1	0.2	1
11997	Chloromethane	74-87-3	N.D.	1	0.2	1
11997	Cyclohexane	110-82-7	N.D.	5	1	1
11997	Cyclohexanone[1]	108-94-1	N.D.	100	25	1
11997	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	5	0.3	1
11997	Dibromochloromethane	124-48-1	N.D.	1	0.2	1
11997	1,2-Dibromoethane	106-93-4	N.D.	1	0.2	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	5	0.2	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	5	0.2	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	5	0.2	1
11997	Dichlorodifluoromethane	75-71-8	N.D.	1	0.2	1
11997	1,1-Dichloroethane	75-34-3	N.D.	1	0.2	1
11997	1,2-Dichloroethane	107-06-2	N.D.	1	0.3	1
11997	1,1-Dichloroethene	75-35-4	N.D.	1	0.2	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	1	0.2	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	1	0.2	1
11997	1,2-Dichloropropane	78-87-5	N.D.	1	0.2	1
11997	cis-1,3-Dichloropropene	10061-01-5	N.D.	1	0.2	1
11997	trans-1,3-Dichloropropene	10061-02-6	N.D.	1	0.2	1
11997	1,4-Dioxane	123-91-1	N.D.	250	29	1
11997	Ethyl Acetate	141-78-6	N.D.	5	0.7	1
11997	Ethyl ether	60-29-7	N.D.	5	0.2	1
11997	Ethylbenzene	100-41-4	N.D.	1	0.4	1

*=This limit was used in the evaluation of the final result

Sample Description: **Trip Blank Water**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/29/2019 11:13
Collection Date/Time: 10/23/2019
SDG#: BMS81-09TB

ARCADIS U.S., Inc.
ELLE Sample #: GW 1186466
ELLE Group #: 2071526
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Freon 113	76-13-1	N.D.	10	0.2	1
11997	n-Heptane[1]	142-82-5	N.D.	5	2	1
11997	n-Hexane[1]	110-54-3	N.D.	5	2	1
11997	2-Hexanone	591-78-6	N.D.	10	0.3	1
11997	Isobutyl Alcohol	78-83-1	N.D.	250	36	1
11997	Isopropylbenzene	98-82-8	N.D.	5	0.2	1
11997	p-Isopropyltoluene	99-87-6	N.D.	5	0.2	1
11997	Methyl Acetate	79-20-9	N.D.	5	0.2	1
11997	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	1	0.2	1
11997	4-Methyl-2-pentanone	108-10-1	N.D.	10	0.5	1
11997	Methylcyclohexane	108-87-2	N.D.	5	0.5	1
11997	Methylene Chloride	75-09-2	N.D.	1	0.3	1
11997	Naphthalene	91-20-3	N.D.	5	1	1
11997	2-Nitropropane	79-46-9	N.D.	10	0.8	1
11997	Styrene	100-42-5	N.D.	5	0.2	1
11997	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	1	0.2	1
11997	Tetrachloroethene	127-18-4	N.D.	1	0.2	1
11997	Tetrahydrofuran	109-99-9	N.D.	10	0.7	1
11997	Toluene	108-88-3	N.D.	1	0.2	1
11997	1,2,3-Trichlorobenzene	87-61-6	N.D.	5	0.4	1
11997	1,2,4-Trichlorobenzene	120-82-1	N.D.	5	0.3	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	1	0.3	1
11997	1,1,2-Trichloroethane	79-00-5	N.D.	1	0.2	1
11997	Trichloroethene	79-01-6	N.D.	1	0.2	1
11997	Trichlorofluoromethane	75-69-4	N.D.	1	0.2	1
11997	1,2,4-Trimethylbenzene	95-63-6	N.D.	5	1	1
11997	1,3,5-Trimethylbenzene	108-67-8	N.D.	5	0.3	1
11997	Vinyl Chloride	75-01-4	N.D.	1	0.2	1
11997	m+p-Xylene	179601-23-1	N.D.	5	1	1
11997	o-Xylene	95-47-6	N.D.	1	0.4	1
11997	Xylene (Total)	1330-20-7	N.D.	6	1	1

12027 VOA Interp. Library Search-20
The results from the volatile library search are listed on the attached FORM 1 - VOA-TIC. The qualifiers appearing in the "Q" column are defined at the end of the report.

Sample Comments

State of New York Certification No. 10670

[1] = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

*=This limit was used in the evaluation of the final result

Sample Description: **Trip Blank Water**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/29/2019 11:13
Collection Date/Time: 10/23/2019
SDG#: BMS81-09TB

ARCADIS U.S., Inc.
ELLE Sample #: GW 1186466
ELLE Group #: 2071526
Matrix: Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	Y193112AA	11/07/2019 16:12	Linda C Pape	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	Y193112AA	11/07/2019 16:11	Linda C Pape	1

*=This limit was used in the evaluation of the final result

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
BMS09

Lab Name: Lancaster Laboratories Contract:_____
Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____
Matrix: (soil/water) WATER Lab Sample ID: 1186466
Sample wt/vol: 5.0 (g/mL)mL Lab File ID:HP09355.i/19nov07a.b/yn07s35.d
Level: (low/med) LOW Date Received: 10/29/19
% Moisture: not dec. Date Analyzed: 11/07/19
Column: (pack/cap) CAP Dilution Factor: 1.0
CONCENTRATION UNITS:
Number TICs found: 0 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	VOCTIC	Total VOC TICs		0	U
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page 1 of 1

FORM I VOA-TIC

Environmental Analysis Request/Chain of Custody

eurofins | Lancaster Laboratories Environmental

Acct. # 3074 Group # 2071744 Sample # 1187623-44

Client: Arcadis			
Project Name/#: BMS Syracuse	Site ID #:		
Project Manager: Bill McCune	P.O. #: 30033396		
Sampler: Austin George, Josh Miller, Evan Green	PWSID #:		
Phone #: 315 671 6712	Quote #:		
State where samples were collected: NY	For Compliance: Yes ☐ No ☐		

Sample Identification	Collection Date	Collection Time	Grab	Composite	Matrix: Soil ☐ Sediment ☐ Tissue ☐	Water: Potable ☐ Ground ☑ Surface ☐ NPDES ☐	Other:	Total # of Containers	VOCs 8260C	SVOCs 8270D	Glycols 8015C	Alcohols	Aldehydes 8315A			Remarks
									Preservation and Filtration Codes: H			H				
BOA-14RX	10/29/19	1105	X			GW		28	X	X	X	X	X			
BOA-17RX	10/29/19	1445	X			GW		28	X	X	X	X	X			
BOA-17T	10/29/19	1110	X			GW		28	X	X	X	X	X			
BOA-17WT	10/29/19	1148	X			GW		26	X	X	X	X	X			
BOA-17WT MS	10/29/19	1148	X			GW		26	X	X	X	X	X			
BOA-17WT MSD	10/29/19	1148	X			GW		26	X	X	X	X	X			
BOA-17WIR	10/29/19	1540	X			GW		28	X	X	X	X	X			
DUP-102919	10/29/19		X			GW		23	X		X	X	X			
Trip blank	10/23/19		X			W		25	X		X	X				
DUP-102919-02	10/29/19		X			GW		5		X						

For Lab Use Only

SF #: _____

SCR #: _____

Preservation Codes

H = HCl | T = Thiosulfate

N = HNO_3 | B = NaOH

S = H_2SO_4 | P = H_3PO_4

F = Field Filtered | O = Other

Turnaround Time Requested (TAT) (please check): Standard ☑ Rush ☒

(Rush TAT is subject to laboratory approval and surcharges.)

Date results are needed: 5-day TAT (or ASAP)

Rush results requested by (please check): E-Mail ☒ Phone ☐

E-mail Address: William.McCune@arcadis.com

Phone: 315 671 6712

Data Package Options (please check if required)

Type I (Validation/non-CLP) ☐ MA MCP ☐

Type III (Reduced non-CLP) ☐ CT RCP ☐

Type VI (Raw Data Only) ☐ TX TRRP-13 ☐

NJ DKQP ☐ NYSDEC Category ☐ A or ☐ B

EDD Required? Yes ☑ No ☐ If yes, format:

Relinquished by:	Date	Time		Date	Time
Josh Sinay	10/29/19	1730	Relinquished	10.29.19	17:30
Relinquished	10-29-19	19:00			
Relinquished by:	Date	Time		Date	Time
Relinquished by:	Date	Time		Date	Time
Relinquished by:	Date	Time	CH Wells	Date 10/30/19	Time 11:22

Relinquished by Commercial Carrier:

UPS _____ FedEx X Other _____

Syracuse #225

Environmental Analysis Request/Chain of Custody

eurofins | Lancaster Laboratories Environmental

Acct. # 3074 Group # 2071744 Sample # 1187623-44

Client: Arcadis			
Project Name/#: BMS Syracuse	Site ID #:		
Project Manager: Bill McCune	P.O. #: 30033396		
Sampler: Austin George, Josh Miller, Evan Green	PWSID #:		
Phone #: 315 671 6712	Quote #:		
State where samples were collected: NY	For Compliance: Yes ☐ No ☐		

Sample Identification	Collection Date	Collection Time	Grab	Composite	Matrix: Soil ☐ Sediment ☐ Tissue ☐	Water: Potable ☐ Ground ☑ NPDES ☐ Surface ☐	Other:	Total # of Containers	1,4-Dioxane	PFAS	Nitrogen as Ammonia (S)	Nitrate & Nitrite, Chloride, Fluoride, Sulfate (N, F)	TAL Metals Total / TAL Metals Dissolved	Total Alkalinity	Total Organic Carbon (P)	Total Phosphorus / Chemical Oxygen Demand (S)	Biological Oxygen Demand	Remarks
BOA-14RX	10/29/19	1105	X			GW		28	X	X	X	X	X	X	X	X	X	
BOA-17RX	10/29/19	1445	X			GW		28	X	X	X	X	X	X	X	X	X	
BOA-17T	10/29/19	1110	X			GW		28	X	X	X	X	X	X	X	X	X	
BOA-17WT	10/29/19	1148	X			GW		26	X	X		X	X	X	X		X	
BOA-17WT MS	10/29/19	1148	X			GW		26	X	X		X	X	X	X		X	
BOA-17WT MSD	10/29/19	1148	X			GW		26	X	X		X	X	X	X		X	
BOA-17WR	10/29/19	1540	X			GW		28	X	X	X	X	X	X	X	X	X	
DUP-102919	10/29/19	/	X			GW		23		X		X	X	X	X	X	X	
DUP-102919-02	10/29/19	/	X			GW		5	X		X							
FB-102919	10/29/19	1620	X			W		2		X								

Turnaround Time Requested (TAT) (please check): Standard ☑ Rush ☒

(Rush TAT is subject to laboratory approval and surcharges.)

Date results are needed: 5-day TAT (or ASAP)

Rush results requested by (please check): E-Mail ☐ Phone ☐

E-mail Address: William.McCune@arcadis.com

Phone: 315 671 6712

Data Package Options (please check if required)

Type I (Validation/non-CLP) ☐ MA MCP ☐

Type III (Reduced non-CLP) ☐ CT RCP ☐

Type VI (Raw Data Only) ☐ TX TRRP-13 ☐

NJ DKQP ☐ NYSDEC Category ☐ A or ☐ B

EDD Required? Yes ☑ No ☐ If yes, format:

Relinquished by:	Date	Time	Received by:	Date	Time
Josh Sinay	10/29/19	1730	[illegible]	10.29.19	17:30
[illegible]	10-29-19	19:00			
			CH Wells	10/30/19	11:22

Relinquished by Commercial Carrier: UPS ____ FedEx X Other ____

Syracuse #225

For Lab Use Only

SF #: ____

SCR #: ____

Preservation Codes

H = HCl T = Thiosulfate

N = HNO_3 B = NaOH

S = H_2SO_4 P = H_3PO_4

F = Field Filtered O = Other

Environmental Analysis Request/Chain of Custody

eurofins | Lancaster Laboratories Environmental

Acct. # 3074 Group # 2071744 Sample # 1187623-44

Client: Arcadis			
Project Name/#: BMS Syracuse	Site ID #:		
Project Manager: Bill McCune	P.O. #: 30033396		
Sampler: Austin George, Josh Miller, Evan Green	PWSID #:		
Phone #: 315 671 6712	Quote #:		
State where samples were collected: NY	For Compliance: Yes ☐ No ☐		

Sample Identification	Collection Date	Collection Time	Grab	Composite	Matrix: Soil ☐ Sediment ☐ Tissue ☐	Water: Potable ☐ Ground ☑ Surface ☐ NPDES ☐	Other:	Total # of Containers	1,4-Dioxane	PFAS	Nitrogen as Ammonia (S)	Nitrate & Nitrite, Chloride, Fluoride, Sulfate	TAL Metals Total / TAL Metals Dissolved (N, F)	Total Alkalinity	Total Organic Carbon (P)	Total Phosphorus / Chemical Oxygen Demand (S)	Biological Oxygen Demand	Remarks
EB-102919	10/29/19	1630	X			W		2		X								
Metals QC	10/29/19	1445	X			GW		2					X					

Preservation Codes: H = HCl; T = Thiosulfate; N = HNO_3; B = NaOH; S = H_2SO_4; P = H_3PO_4; F = Field Filtered; O = Other

For Lab Use Only: SF #: ____ SCR #: ____

Turnaround Time Requested (TAT) (please check): Standard ☑ Rush ☑

(Rush TAT is subject to laboratory approval and surcharges.)

Date results are needed: 5-day TAT (or ASAP)

Rush results requested by (please check): E-Mail ☐ Phone ☐

E-mail Address: William.McCune@arcadis.com

Phone: 315 671 6712

Data Package Options (please check if required)

Type I (Validation/non-CLP) ☐ MA MCP ☐

Type III (Reduced non-CLP) ☐ CT RCP ☐

Type VI (Raw Data Only) ☐ TX TRRP-13 ☐

NJ DKQP ☐ NYSDEC Category ☐ A or ☐ B

EDD Required? Yes ☑ No ☐ If yes, format:

Relinquished by:	Date	Time	Received by:	Date	Time
Josh Smay	10.29.19	17:30	R Englund	10.29.19	17:30
R Englund	10.29.19	19:00			
			Chi Wells	10/30/19	11:22

Relinquished by Commercial Carrier: UPS ____ FedEx X Other ____

Syracuse #225

eurofins | Lancaster Laboratories Environmental

Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
P^	Concentration difference between the primary and confirmation column > 40%. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

Sample Description: **BDA-14RX Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/30/2019 11:22
Collection Date/Time: 10/29/2019 11:05
SDG#: BMS81-10

ARCADIS U.S., Inc.
ELLE Sample #: GW 1187623
ELLE Group #: 2071744
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	20	0.7	1
11997	Acetonitrile	75-05-8	N.D.	100	16	1
11997	Benzene	71-43-2	N.D.	1	0.2	1
11997	Bromochloromethane	74-97-5	N.D.	5	0.2	1
11997	Bromodichloromethane	75-27-4	N.D.	1	0.2	1
11997	Bromoform	75-25-2	N.D.	4	1	1
11997	Bromomethane	74-83-9	N.D. J	1	0.3	1
11997	n-Butanol	71-36-3	N.D.	250	61	1
11997	2-Butanone	78-93-3	N.D.	10	0.3	1
11997	t-Butyl alcohol	75-65-0	N.D.	50	12	1
11997	n-Butylbenzene	104-51-8	N.D.	5	0.2	1
11997	sec-Butylbenzene	135-98-8	N.D.	5	0.2	1
11997	tert-Butylbenzene	98-06-6	N.D.	5	0.3	1
11997	Carbon Disulfide	75-15-0	N.D.	5	0.2	1
11997	Carbon Tetrachloride	56-23-5	N.D.	1	0.2	1
11997	Chlorobenzene	108-90-7	N.D.	1	0.2	1
11997	Chlorodifluoromethane[1]	75-45-6	N.D.	5	2	1
11997	Chloroethane	75-00-3	N.D.	1	0.2	1
11997	Chloroform	67-66-3	N.D.	1	0.2	1
11997	Chloromethane	74-87-3	N.D.	1	0.2	1
11997	Cyclohexane	110-82-7	N.D.	5	1	1
11997	Cyclohexanone[1]	108-94-1	N.D.	100	25	1
11997	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	5	0.3	1
11997	Dibromochloromethane	124-48-1	N.D.	1	0.2	1
11997	1,2-Dibromoethane	106-93-4	N.D.	1	0.2	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	5	0.2	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	5	0.2	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	5	0.2	1
11997	Dichlorodifluoromethane	75-71-8	N.D. J	1	0.2	1
11997	1,1-Dichloroethane	75-34-3	N.D.	1	0.2	1
11997	1,2-Dichloroethane	107-06-2	N.D.	1	0.3	1
11997	1,1-Dichloroethene	75-35-4	N.D.	1	0.2	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	1	0.2	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	1	0.2	1
11997	1,2-Dichloropropane	78-87-5	N.D.	1	0.2	1
11997	cis-1,3-Dichloropropene	10061-01-5	N.D.	1	0.2	1
11997	trans-1,3-Dichloropropene	10061-02-6	N.D.	1	0.2	1
11997	1,4-Dioxane	123-91-1	N.D.	250	29	1
11997	Ethyl Acetate	141-78-6	N.D.	5	0.7	1
11997	Ethyl ether	60-29-7	N.D.	5	0.2	1
11997	Ethylbenzene	100-41-4	N.D.	1	0.4	1

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-14RX Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/30/2019 11:22
Collection Date/Time: 10/29/2019 11:05
SDG#: BMS81-10

ARCADIS U.S., Inc.
ELLE Sample #: GW 1187623
ELLE Group #: 2071744
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Freon 113	76-13-1	N.D.	10	0.2	1
11997	n-Heptane[1]	142-82-5	N.D.	5	2	1
11997	n-Hexane[1]	110-54-3	N.D.	5	2	1
11997	2-Hexanone	591-78-6	N.D.	10	0.3	1
11997	Isobutyl Alcohol	78-83-1	N.D.	250	36	1
11997	Isopropylbenzene	98-82-8	N.D.	5	0.2	1
11997	p-Isopropyltoluene	99-87-6	N.D.	5	0.2	1
11997	Methyl Acetate	79-20-9	N.D.	5	0.2	1
11997	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	1	0.2	1
11997	4-Methyl-2-pentanone	108-10-1	N.D.	10	0.5	1
11997	Methylcyclohexane	108-87-2	N.D.	5	0.5	1
11997	Methylene Chloride	75-09-2	N.D.	1	0.3	1
11997	Naphthalene	91-20-3	N.D.	5	1	1
11997	2-Nitropropane	79-46-9	N.D.	10	0.8	1
11997	Styrene	100-42-5	N.D.	5	0.2	1
11997	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	1	0.2	1
11997	Tetrachloroethene	127-18-4	N.D.	1	0.2	1
11997	Tetrahydrofuran	109-99-9	N.D.	10	0.7	1
11997	Toluene	108-88-3	0.7 J	1	0.2	1
11997	1,2,3-Trichlorobenzene	87-61-6	N.D.	5	0.4	1
11997	1,2,4-Trichlorobenzene	120-82-1	N.D.	5	0.3	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	1	0.3	1
11997	1,1,2-Trichloroethane	79-00-5	N.D.	1	0.2	1
11997	Trichloroethene	79-01-6	N.D.	1	0.2	1
11997	Trichlorofluoromethane	75-69-4	N.D.	1	0.2	1
11997	1,2,4-Trimethylbenzene	95-63-6	N.D.	5	1	1
11997	1,3,5-Trimethylbenzene	108-67-8	N.D.	5	0.3	1
11997	Vinyl Chloride	75-01-4	N.D.	1	0.2	1
11997	m+p-Xylene	179601-23-1	N.D.	5	1	1
11997	o-Xylene	95-47-6	N.D.	1	0.4	1
11997	Xylene (Total)	1330-20-7	N.D.	6	1	1

Project defined calibration criteria are not met. The calibration is compliant with the method defined criteria.

A Report Limit Verification (RLV) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The RLV standard shows adequate sensitivity at or below the reporting limit.

00882 VOA Interp. Library Search-10

The results from the volatile library search are listed on the attached FORM 1 - VOA-TIC. The qualifiers appearing in the "Q" column are defined at the end of the report.

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **BDA-14RX Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/30/2019 11:22
Collection Date/Time: 10/29/2019 11:05
SDG#: BMS81-10

ARCADIS U.S., Inc.
ELLE Sample #: GW 1187623
ELLE Group #: 2071744
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	Acenaphthene	83-32-9	N.D. J	0.51	0.10	1
14241	Acenaphthylene	208-96-8	N.D.	0.51	0.10	1
14241	Acetophenone	98-86-2	N.D.	10	4.1	1
14241	Aniline	62-53-3	N.D.	10	3.0	1
14241	Anthracene	120-12-7	N.D.	0.51	0.10	1
14241	Atrazine	1912-24-9	N.D.	5.1	2.0	1
14241	Benzaldehyde	100-52-7	N.D.	10	3.0	1
14241	Benzo(a)anthracene	56-55-3	N.D.	0.51	0.10	1
14241	Benzo(a)pyrene	50-32-8	N.D.	0.51	0.10	1
14241	Benzo(b)fluoranthene	205-99-2	N.D.	0.51	0.10	1
14241	Benzo(g,h,i)perylene	191-24-2	N.D.	0.51	0.10	1
14241	Benzo(k)fluoranthene	207-08-9	N.D.	0.51	0.10	1
14241	Benzyl alcohol	100-51-6	N.D.	30	10	1
14241	1,1'-Biphenyl	92-52-4	N.D.	10	3.0	1
14241	4-Bromophenyl-phenylether	101-55-3	N.D.	2.0	0.51	1
14241	Butylbenzylphthalate	85-68-7	N.D.	5.1	2.0	1
14241	Di-n-butylphthalate	84-74-2	N.D.	5.1	2.0	1
14241	Caprolactam	105-60-2	N.D.	11	5.1	1
14241	Carbazole	86-74-8	N.D.	2.0	0.51	1
14241	4-Chloro-3-methylphenol	59-50-7	N.D.	2.0	0.51	1
14241	4-Chloroaniline	106-47-8	N.D.	10	4.1	1
14241	bis(2-Chloroethoxy)methane	111-91-1	N.D.	2.0	0.51	1
14241	bis(2-Chloroethyl)ether	111-44-4	N.D.	2.0	0.51	1
14241	bis(2-Chloroisopropyl)ether[1]	39638-32-9	N.D.	2.0	0.51	1
	Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.					
14241	2-Chloronaphthalene	91-58-7	N.D.	1.0	0.41	1
14241	2-Chlorophenol	95-57-8	N.D.	2.0	0.51	1
14241	4-Chlorophenyl-phenylether	7005-72-3	N.D.	2.0	0.51	1
14241	Chrysene	218-01-9	N.D.	0.51	0.10	1
14241	Dibenz(a,h)anthracene	53-70-3	N.D.	0.51	0.10	1
14241	Dibenzofuran	132-64-9	N.D.	2.0	0.51	1
14241	3,3'-Dichlorobenzidine	91-94-1	N.D.	10	3.0	1
14241	2,4-Dichlorophenol	120-83-2	N.D.	2.0	0.51	1
14241	Dicyclohexylamine[1]	101-83-7	N.D.	10	10	1
14241	Diethylphthalate	84-66-2	N.D.	5.1	2.0	1
14241	N,N-Dimethylaniline[1]	121-69-7	N.D.	1.0	0.51	1
14241	2,4-Dimethylphenol	105-67-9	N.D.	10	3.0	1
14241	Dimethylphthalate	131-11-3	N.D.	5.1	2.0	1
14241	4,6-Dinitro-2-methylphenol	534-52-1	N.D.	21	8.1	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **BDA-14RX Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/30/2019 11:22
Collection Date/Time: 10/29/2019 11:05
SDG#: BMS81-10

ARCADIS U.S., Inc.
ELLE Sample #: GW 1187623
ELLE Group #: 2071744
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	2,4-Dinitrophenol	51-28-5	N.D. J	30	14	1
14241	2,4-Dinitrotoluene	121-14-2	N.D.	5.1	1.0	1
14241	2,6-Dinitrotoluene	606-20-2	N.D.	2.0	0.51	1
14241	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	11	5.1	1
14241	Fluoranthene	206-44-0	N.D.	0.51	0.10	1
14241	Fluorene	86-73-7	N.D.	0.51	0.10	1
14241	Hexachlorobenzene	118-74-1	N.D.	0.51	0.10	1
14241	Hexachlorobutadiene	87-68-3	N.D.	2.0	0.51	1
14241	Hexachlorocyclopentadiene	77-47-4	N.D.	11	5.1	1
14241	Hexachloroethane	67-72-1	N.D.	5.1	1.0	1
14241	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.51	0.10	1
14241	Isophorone	78-59-1	N.D.	2.0	0.51	1
14241	2-Methylnaphthalene	91-57-6	N.D.	0.51	0.10	1
14241	2-Methylphenol	95-48-7	N.D.	2.0	0.51	1
14241	4-Methylphenol	65794-96-9	N.D.	2.0	0.51	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
14241	Naphthalene	91-20-3	N.D.	0.51	0.10	1
14241	2-Nitroaniline	88-74-4	N.D.	7.1	2.0	1
14241	3-Nitroaniline	99-09-2	N.D.	7.1	3.0	1
14241	4-Nitroaniline	100-01-6	N.D.	3.0	0.91	1
14241	Nitrobenzene	98-95-3	N.D.	2.0	0.51	1
14241	2-Nitrophenol	88-75-5	N.D.	10	3.0	1
14241	4-Nitrophenol	100-02-7	N.D.	30	10	1
14241	N-Nitroso-di-n-propylamine	621-64-7	N.D.	3.0	0.71	1
14241	N-Nitrosodiphenylamine	86-30-6	N.D.	3.0	0.71	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.					
14241	Di-n-octylphthalate	117-84-0	N.D.	11	5.1	1
14241	Pentachlorophenol	87-86-5	N.D.	5.1	1.0	1
14241	Phenanthrene	85-01-8	N.D.	0.51	0.10	1
14241	Phenol	108-95-2	N.D.	2.0	0.51	1
14241	Pyrene	129-00-0	N.D.	0.51	0.10	1
14241	Pyridine	110-86-1	N.D.	5.1	2.0	1
14241	1,2,4,5-Tetrachlorobenzene	95-94-3	N.D.	2.0	0.51	1
14241	2,3,4,6-Tetrachlorophenol	58-90-2	N.D.	10	4.1	1
14241	2,4,5-Trichlorophenol	95-95-4	N.D.	2.0	0.51	1
14241	2,4,6-Trichlorophenol	88-06-2	N.D.	2.0	0.51	1
14241	Triethylamine[1]	121-44-8	N.D.	10	10	1

The holding time was not met.

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **BDA-14RX Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/30/2019 11:22
Collection Date/Time: 10/29/2019 11:05
SDG#: BMS81-10

ARCADIS U.S., Inc.
ELLE Sample #: GW 1187623
ELLE Group #: 2071744
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result		Limit of Quantitation*	Method Detection Limit	Dilution Factor
	The first extraction for this sample was preformed within the method required holding time however the recovery for the sample surrogate(s) is outside the QC acceptance limits. The sample was re-extracted outside the method required holding time and the sample surrogates are compliant. Per client request, the data is reported from the second extraction.						
	The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. Since the recovery is high and the target analyte(s) was not detected in the sample, the data is reported.						
GC/MS Semivolatiles	**SW-846 8270D SIM**		**ug/l**		**ug/l**	**ug/l**	
14244	1,4-Dioxane	123-91-1	N.D.		0.3	0.1	1
00886	**SVOA TIC Interpretive(25)**						
	The results from the semivolatile library search are listed on the attached FORM 1 - SV-TIC. The qualifiers appearing in the "Q" column are defined at the end of the report.						
Aldehydes & Ketones	**SW-846 8315A**		**ug/l**		**ug/l**	**ug/l**	
13022	Acetaldehyde[1]	75-07-0	36	J	60	35	1
13022	Formaldehyde	50-00-0	75		50	20	1
	The response for a target analyte(s) in the initial calibration verification standard is outside the QC acceptance limits.						
GC Miscellaneous	**SW-846 8015D Rev.4, June 2003**		**ug/l**		**ug/l**	**ug/l**	
10603	Ethanol	64-17-5	N.D.	~~D2~~	1,000	150	1
12926	Ethylene glycol[1]	107-21-1	N.D.		10,000	5,000	1
10603	Isopropanol[1]	67-63-0	N.D.	~~D2~~	1,000	110	1
10603	Methanol	67-56-1	N.D.	~~D2~~	1,000	220	1
12926	Propylene glycol[1]	57-55-6	N.D.		10,000	2,000	1
	The response for a target analyte(s) in the continuing calibration verification standard is outside the QC acceptance limits low. The following action was taken: The analysis was repeated and the continuing calibration verification standard bracketing the sample on the second trial is also outside the acceptance limits. This effect is attributed to the sample matrix and the data is reported.						
LC/MS/MS Miscellaneous	**EPA 537 mod QSM 5.1 table B-15**		**ng/l**		**ng/l**	**ng/l**	
14434	6:2-Fluorotelomersulfonic acid[1]	27619-97-2	7.8		4.3	1.7	1
14434	8:2-Fluorotelomersulfonic acid[1]	39108-34-4	N.D.		2.6	0.85	1
14434	NEtFOSAA[1]	2991-50-6	N.D.		2.6	0.43	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.						
14434	NMeFOSAA[1]	2355-31-9	N.D.		1.7	0.51	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.						

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **BDA-14RX Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/30/2019 11:22
Collection Date/Time: 10/29/2019 11:05
SDG#: BMS81-10

ARCADIS U.S., Inc.
ELLE Sample #: GW 1187623
ELLE Group #: 2071744
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
LC/MS/MS Miscellaneous	**EPA 537 mod QSM 5.1 table B-15**		**ng/l**	**ng/l**	**ng/l**	
14434	Perfluorobutanesulfonic acid[1]	375-73-5	N.D.	1.7	0.43	1
14434	Perfluorobutanoic acid[1]	375-22-4	N.D.	4.3	1.7	1
14434	Perfluorodecanesulfonic acid[1]	335-77-3	N.D.	1.7	0.43	1
14434	Perfluorodecanoic acid[1]	335-76-2	N.D.	1.7	0.43	1
14434	Perfluorododecanoic acid[1]	307-55-1	N.D.	1.7	0.43	1
14434	Perfluoroheptanesulfonic acid[1]	375-92-8	N.D.	1.7	0.43	1
14434	Perfluoroheptanoic acid[1]	375-85-9	N.D.	1.7	0.43	1
14434	Perfluorohexanesulfonic acid[1]	355-46-4	N.D.	1.7	0.43	1
14434	Perfluorohexanoic acid[1]	307-24-4	N.D.	1.7	0.43	1
14434	Perfluorononanoic acid[1]	375-95-1	N.D.	1.7	0.43	1
14434	Perfluorooctanesulfonamide[1]	754-91-6	N.D.	1.7	0.43	1
14434	Perfluorooctanesulfonic acid[1]	1763-23-1	N.D.	1.7	0.43	1
14434	Perfluorooctanoic acid[1]	335-67-1	N.D.	1.7	0.43	1
14434	Perfluoropentanoic acid[1]	2706-90-3	N.D.	1.7	0.43	1
14434	Perfluorotetradecanoic acid[1]	376-06-7	N.D.	1.7	0.43	1
14434	Perfluorotridecanoic acid[1]	72629-94-8	N.D.	1.7	0.43	1
14434	Perfluoroundecanoic acid[1]	2058-94-8	N.D.	1.7	0.43	1
Metals	**SW-846 6010D Rev.4, July 2014**		**mg/l**	**mg/l**	**mg/l**	
07044	Antimony	7440-36-0	N.D.	0.0500	0.0160	1
07035	Arsenic	7440-38-2	N.D.	0.0300	0.0160	1
07046	Barium	7440-39-3	0.0198	0.0050	0.0010	1
07047	Beryllium	7440-41-7	N.D.	0.0050	0.0010	1
07049	Cadmium	7440-43-9	N.D.	0.0050	0.0010	1
01750	Calcium	7440-70-2	695 J	1.00	0.480	5
07051	Chromium	7440-47-3	0.0052 J	0.0150	0.0016	1
07052	Cobalt	7440-48-4	0.0027 J	0.0050	0.0015	1
07053	Copper	7440-50-8	N.D. J	0.100	0.0600	5
01754	Iron	7439-89-6	3.96 J	0.200	0.0400	1
07055	Lead	7439-92-1	N.D. J	0.0150	0.0071	1
01757	Magnesium	7439-95-4	116 J	0.100	0.0400	1
07058	Manganese	7439-96-5	0.549 J	0.0100	0.0030	1
07061	Nickel	7440-02-0	0.0901 J	0.0100	0.0021	1
01762	Potassium	7440-09-7	178	0.500	0.204	1
07036	Selenium	7782-49-2	N.D.	0.0500	0.0160	1
07066	Silver	7440-22-4	N.D.	0.0100	0.0050	1
01767	Sodium	7440-23-5	1,550 J	5.00	1.20	5
07022	Thallium[1]	7440-28-0	0.0090 J	0.0300	0.0081	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **BDA-14RX Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/30/2019 11:22
Collection Date/Time: 10/29/2019 11:05
SDG#: BMS81-10

ARCADIS U.S., Inc.
ELLE Sample #: GW 1187623
ELLE Group #: 2071744
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
Metals	**SW-846 6010D Rev.4, July 2014**		**ug/l**	**ug/l**	**ug/l**	
07071	Vanadium	7440-62-2	N.D. J	10.0	1.9	1
07072	Zinc	7440-66-6	6.3 J	20.0	3.7	1
	SW-846 6020B Rev.2, July 2014		**ug/l**	**ug/l**	**ug/l**	
06023	Aluminum	7429-90-5	1,310 J	25.0	19.7	1
	SW-846 7470A		**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	N.D.	0.00020	0.000050	1
Wet Chemistry	**EPA 300.0**		**ug/l**	**ug/l**	**ug/l**	
00224	Chloride	16887-00-6	2,830,000	800,000	400,000	2000
01504	Fluoride	16984-48-8	N.D.	500	250	5
00228	Sulfate	14808-79-8	2,190,000	500,000	150,000	500
	EPA 350.1		**ug/l**	**ug/l**	**ug/l**	
12892	Ammonia Nitrogen	7664-41-7	7,800	2,000	1,000	20
	EPA 353.2		**mg/l**	**mg/l**	**mg/l**	
00220	Nitrate Nitrogen	14797-55-8	N.D.	0.10	0.040	1
00219	Nitrite Nitrogen	14797-65-0	N.D.	0.050	0.015	1
	The holding time was not met.					
	SM 4500-P F-2011		**ug/l**	**ug/l**	**ug/l**	
00227	Total Phosphorus as P (water)	7723-14-0	N.D.	100	50	1
	SM 5310 C-2011		**ug/l**	**ug/l**	**ug/l**	
00273	Total Organic Carbon	n.a.	N.D.	1,000	500	1
	EPA 410.4		**ug/l**	**ug/l**	**ug/l**	
04001	Chemical Oxygen Demand	n.a.	114,000	50,000	12,800	1
	SM 2320 B-2011		**mg/l as CaCO3**	**mg/l as CaCO3**	**mg/l as CaCO3**	
12150	Total Alkalinity to pH 4.5	n.a.	68.4	8.0	2.6	1
	SM 5210 B-2011		**ug/l**	**ug/l**	**ug/l**	
14108	Biochemical Oxygen Demand-BOD	n.a.	N.D.	2,000	2,000	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **BDA-14RX Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/30/2019 11:22
Collection Date/Time: 10/29/2019 11:05
SDG#: BMS81-10

ARCADIS U.S., Inc.
ELLE Sample #: GW 1187623
ELLE Group #: 2071744
Matrix: Groundwater

Sample Comments

State of New York Certification No. 10670

[1] = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	Y193091AA	11/05/2019 18:16	Corie Mellinger	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	Y193091AA	11/05/2019 18:15	Corie Mellinger	1
14241	Semi-annual Groundwater BMS	SW-846 8270D	1	19311WAK026	11/09/2019 00:30	Ashley R Transue	1
14244	SIM SVOAs 8270D MINI	SW-846 8270D SIM	1	19303WAP026	10/31/2019 20:46	Ashley R Transue	1
10466	BNA Water Extraction SIM	SW-846 3510C	1	19303WAP026	10/31/2019 09:30	Joshua S Ruth	1
11010	8270D BNA Extraction	SW-846 3510C	2	19311WAK026	11/08/2019 09:00	Joshua S Ruth	1
13022	Short List Aldehydes- W 8315A	SW-846 8315A	1	193030019A	10/31/2019 18:48	Jessica L Miller	1
01013	Formaldehyde Extraction	SW-846 8315A	1	193030019A	10/31/2019 09:23	Alison Moll	1
10603	Alcohols in Water	SW-846 8015D Rev.4, June 2003	1	193080007A	11/04/2019 14:25	Johanna C Kennedy	1
12926	Glycols in Water by 8015C/D	SW-846 8015D Rev.4, June 2003	1	193040002A	11/01/2019 11:05	Donald Brown	1
14434	PFAS in Water by LC/MS/MS-DoD	EPA 537 mod QSM 5.1 table B-15	1	19304003	11/01/2019 15:48	Devon M Whooley	1
14465	PFAS Water Prep - DoD	EPA 537 mod QSM 5.1 table B-15	1	19304003	10/31/2019 07:00	Toby Barnhart	1
07044	Antimony	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 16:08	Patrick J Engle	1
07035	Arsenic	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 16:08	Patrick J Engle	1
07046	Barium	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 16:08	Patrick J Engle	1
07047	Beryllium	SW-846 6010D Rev.4, July 2014	1	193041404403	11/05/2019 20:03	Cindy M Gehman	1
07049	Cadmium	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 16:08	Patrick J Engle	1
01750	Calcium	SW-846 6010D Rev.4, July 2014	1	193041404403	11/05/2019 10:19	Patrick J Engle	5
07051	Chromium	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 16:08	Patrick J Engle	1
07052	Cobalt	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 16:08	Patrick J Engle	1
07053	Copper	SW-846 6010D Rev.4, July 2014	1	193041404403	11/05/2019 14:18	Patrick J Engle	5
01754	Iron	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 16:08	Patrick J Engle	1
07055	Lead	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 16:08	Patrick J Engle	1
01757	Magnesium	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 16:08	Patrick J Engle	1
07058	Manganese	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 16:08	Patrick J Engle	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **BDA-14RX Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/30/2019 11:22
Collection Date/Time: 10/29/2019 11:05
SDG#: BMS81-10

ARCADIS U.S., Inc.
ELLE Sample #: GW 1187623
ELLE Group #: 2071744
Matrix: Groundwater

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07061	Nickel	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 16:08	Patrick J Engle	1
01762	Potassium	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 16:08	Patrick J Engle	1
07036	Selenium	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 16:08	Patrick J Engle	1
07066	Silver	SW-846 6010D Rev.4, July 2014	1	193041404403	11/05/2019 20:03	Cindy M Gehman	1
01767	Sodium	SW-846 6010D Rev.4, July 2014	1	193041404403	11/05/2019 14:18	Patrick J Engle	5
07022	Thallium	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 16:08	Patrick J Engle	1
07071	Vanadium	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 16:08	Patrick J Engle	1
07072	Zinc	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 16:08	Patrick J Engle	1
06023	Aluminum	SW-846 6020B Rev.2, July 2014	1	193111404701A	11/08/2019 11:14	Janeyah Rivers-Hamilton	1
00259	Mercury	SW-846 7470A	1	193040571302	11/01/2019 08:07	Damary Valentin	1
14044	ICP-WW, 3005A (tot rec) - U345	SW-846 3005A	1	193041404403	10/31/2019 11:21	James L Mertz	1
14047	ICPMS - Water, 3020A - U345	SW-846 3020A	1	193111404701	11/07/2019 14:15	JoElla L Rice	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	193040571302	10/31/2019 15:15	JoElla L Rice	1
00224	Chloride	EPA 300.0	1	19304135213A	11/05/2019 10:50	Samantha Faverio	2000
01504	Fluoride	EPA 300.0	1	19304135213A	10/31/2019 22:33	Kevin Litwa	5
00228	Sulfate	EPA 300.0	1	19304135213A	10/31/2019 22:48	Kevin Litwa	500
12892	Ammonia Nitrogen	EPA 350.1	1	19307107103A	11/03/2019 09:47	Ashlynn M Cornelius	20
00220	Nitrate Nitrogen	EPA 353.2	1	19308106102A	11/04/2019 12:01	Ashlynn M Cornelius	1
00219	Nitrite Nitrogen	EPA 353.2	1	19304105102A	10/31/2019 12:42	Bethany Sandone	1
00227	Total Phosphorus as P (water)	SM 4500-P F-2011	1	19305109101B	11/04/2019 14:27	Jonathan Saul	1
00273	Total Organic Carbon	SM 5310 C-2011	1	19309304504A	11/05/2019 18:46	Bethany Sandone	1
08263	Total Phos as P Prep (water)	SM 4500-P B(5)-2011	1	19305109101B	11/01/2019 20:00	Barbara A Washington	1
04001	Chemical Oxygen Demand	EPA 410.4	1	19304400101A	10/31/2019 09:15	Susan A Engle	1
12150	Total Alkalinity to pH 4.5	SM 2320 B-2011	1	19304007203A	11/01/2019 02:23	Jeremy L Bolf	1
14108	Biochemical Oxygen Demand-BOD	SM 5210 B-2011	1	19304141081A	10/31/2019 10:50	Benjamin M Morrison	1

*=This limit was used in the evaluation of the final result

REVISED

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
S8110

Lab Name: Lancaster Laboratories Contract:_____
Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____
Matrix: (soil/water) WATER Lab Sample ID: 1187623
Sample wt/vol: 5.0 (g/mL)mL Lab File ID:HP09355.i/19nov05a.b/yn05s11.d
Level: (low/med) LOW Date Received: 10/30/19
% Moisture: not dec. Date Analyzed: 11/05/19
Column: (pack/cap) CAP Dilution Factor: 1.0
CONCENTRATION UNITS:
Number TICs found: 0 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	VOCTIC	Total VOC TICs		0	U
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page 1 of 1

FORM I VOA-TIC

REVISED

1F

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

S8110

Lab Name: Lancaster Laboratories Contract:
Lab Code: LANCAS Case No.: SAS No.: SDG No.:
Matrix: (soil/water) WATER Lab Sample ID: 1187623
Sample wt/vol: 246 (g/mL) mL Lab File ID: lk0407.d
Level: (low/med) LOW Date Received: 10/30/19
% Moisture: Decanted: (Y/N) Date Extracted: 11/08/19
Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/09/19
Injection Volume: 1 (uL) Dilution Factor: 1
GPC Cleanup: N pH: Extraction: Sepf
CONCENTRATION UNITS:
Number TICs found: 2 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		Unknown	5.705	12	J N
2.		Unknown	6.561	50	J N
3.					
4.	SVOCTIC	Total SVOC TICs		62	J N
5.					
6.					
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page 1 of 1

FORM I SV-1

Sample Description: **BDA-14RX Filtered Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/30/2019 11:22
Collection Date/Time: 10/29/2019 11:05
SDG#: BMS81-11

ARCADIS U.S., Inc.
ELLE Sample #: GW 1187624
ELLE Group #: 2071744
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
Metals Dissolved	**SW-846 6010D Rev.4, July 2014**		**mg/l**	**mg/l**	**mg/l**	
07044	Antimony	7440-36-0	N.D.	0.0500	0.0160	1
07035	Arsenic	7440-38-2	0.0172 J	0.0300	0.0160	1
07046	Barium	7440-39-3	0.0203	0.0050	0.0010	1
07047	Beryllium	7440-41-7	N.D.	0.0050	0.0010	1
07049	Cadmium	7440-43-9	N.D.	0.0050	0.0010	1
01750	Calcium	7440-70-2	672	1.00	0.480	5
07051	Chromium	7440-47-3	0.0031 J	0.0150	0.0016	1
07052	Cobalt	7440-48-4	0.0048 J	0.0050	0.0015	1
07053	Copper	7440-50-8	N.D.	0.100	0.0600	5
01754	Iron	7439-89-6	3.34 J	0.200	0.0400	1
07055	Lead	7439-92-1	N.D.	0.0150	0.0071	1
01757	Magnesium	7439-95-4	118	0.100	0.0400	1
07058	Manganese	7439-96-5	0.553	0.0100	0.0030	1
07061	Nickel	7440-02-0	0.110	0.0100	0.0021	1
01762	Potassium	7440-09-7	181	0.500	0.204	1
07036	Selenium	7782-49-2	N.D.	0.0500	0.0160	1
07066	Silver	7440-22-4	N.D.	0.0100	0.0050	1
01767	Sodium	7440-23-5	1,430	5.00	1.20	5
07022	Thallium[1]	7440-28-0	N.D.	0.0300	0.0081	1
	SW-846 6010D Rev.4, July 2014		**ug/l**	**ug/l**	**ug/l**	
07071	Vanadium	7440-62-2	N.D.	10.0	1.9	1
07072	Zinc	7440-66-6	5.8 J	20.0	3.7	1
	SW-846 6020B Rev.2, July 2014		**ug/l**	**ug/l**	**ug/l**	
06023	Aluminum	7429-90-5	27.0	25.0	19.7	1
	SW-846 7470A		**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	N.D.	0.00020	0.000050	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals.

[1] = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-14RX Filtered Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/30/2019 11:22
Collection Date/Time: 10/29/2019 11:05
SDG#: BMS81-11

ARCADIS U.S., Inc.
ELLE Sample #: GW 1187624
ELLE Group #: 2071744
Matrix: Groundwater

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07044	Antimony	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:23	Patrick J Engle	1
07035	Arsenic	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:23	Patrick J Engle	1
07046	Barium	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:23	Patrick J Engle	1
07047	Beryllium	SW-846 6010D Rev.4, July 2014	1	193041404402	11/05/2019 23:41	Elaine F Stoltzfus	1
07049	Cadmium	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:23	Patrick J Engle	1
01750	Calcium	SW-846 6010D Rev.4, July 2014	1	193041404402	11/05/2019 08:44	Patrick J Engle	5
07051	Chromium	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:23	Patrick J Engle	1
07052	Cobalt	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:23	Patrick J Engle	1
07053	Copper	SW-846 6010D Rev.4, July 2014	1	193041404402	11/05/2019 17:23	Patrick J Engle	5
01754	Iron	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:23	Patrick J Engle	1
07055	Lead	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:23	Patrick J Engle	1
01757	Magnesium	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:23	Patrick J Engle	1
07058	Manganese	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:23	Patrick J Engle	1
07061	Nickel	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:23	Patrick J Engle	1
01762	Potassium	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:23	Patrick J Engle	1
07036	Selenium	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:23	Patrick J Engle	1
07066	Silver	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:23	Patrick J Engle	1
01767	Sodium	SW-846 6010D Rev.4, July 2014	1	193041404402	11/05/2019 08:44	Patrick J Engle	5
07022	Thallium	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:23	Patrick J Engle	1
07071	Vanadium	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:23	Patrick J Engle	1
07072	Zinc	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:23	Patrick J Engle	1
06023	Aluminum	SW-846 6020B Rev.2, July 2014	1	193111404701A	11/08/2019 14:48	Janeyah Rivers-Hamilton	1
00259	Mercury	SW-846 7470A	1	193040571302	11/01/2019 07:58	Damary Valentin	1
14044	ICP-WW, 3005A (tot rec) - U345	SW-846 3005A	1	193041404402	10/31/2019 11:21	James L Mertz	1
14047	ICPMS - Water, 3020A - U345	SW-846 3020A	1	193111404701	11/07/2019 14:15	JoElla L Rice	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	193040571302	10/31/2019 15:15	JoElla L Rice	1

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-17RX Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/30/2019 11:22
Collection Date/Time: 10/29/2019 14:45
SDG#: BMS81-12

ARCADIS U.S., Inc.
ELLE Sample #: GW 1187625
ELLE Group #: 2071744
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result		Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**		**ug/l**	**ug/l**	
11997	Acetone	67-64-1	14	J	20	0.7	1
11997	Acetonitrile	75-05-8	N.D.		100	16	1
11997	Benzene	71-43-2	N.D.		1	0.2	1
11997	Bromochloromethane	74-97-5	N.D.		5	0.2	1
11997	Bromodichloromethane	75-27-4	4		1	0.2	1
11997	Bromoform	75-25-2	N.D.		4	1	1
11997	Bromomethane	74-83-9	N.D.	J	1	0.3	1
11997	n-Butanol	71-36-3	N.D.		250	61	1
11997	2-Butanone	78-93-3	0.8	J	10	0.3	1
11997	t-Butyl alcohol	75-65-0	N.D.		50	12	1
11997	n-Butylbenzene	104-51-8	N.D.		5	0.2	1
11997	sec-Butylbenzene	135-98-8	N.D.		5	0.2	1
11997	tert-Butylbenzene	98-06-6	N.D.		5	0.3	1
11997	Carbon Disulfide	75-15-0	N.D.		5	0.2	1
11997	Carbon Tetrachloride	56-23-5	N.D.		1	0.2	1
11997	Chlorobenzene	108-90-7	N.D.		1	0.2	1
11997	Chlorodifluoromethane[1]	75-45-6	N.D.		5	2	1
11997	Chloroethane	75-00-3	N.D.		1	0.2	1
11997	Chloroform	67-66-3	21		1	0.2	1
11997	Chloromethane	74-87-3	N.D.		1	0.2	1
11997	Cyclohexane	110-82-7	N.D.		5	1	1
11997	Cyclohexanone[1]	108-94-1	N.D.		100	25	1
11997	1,2-Dibromo-3-chloropropane	96-12-8	N.D.		5	0.3	1
11997	Dibromochloromethane	124-48-1	0.9	J	1	0.2	1
11997	1,2-Dibromoethane	106-93-4	N.D.		1	0.2	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.		5	0.2	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.		5	0.2	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.		5	0.2	1
11997	Dichlorodifluoromethane	75-71-8	N.D.	J	1	0.2	1
11997	1,1-Dichloroethane	75-34-3	N.D.		1	0.2	1
11997	1,2-Dichloroethane	107-06-2	N.D.		1	0.3	1
11997	1,1-Dichloroethene	75-35-4	N.D.		1	0.2	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.		1	0.2	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.		1	0.2	1
11997	1,2-Dichloropropane	78-87-5	N.D.		1	0.2	1
11997	cis-1,3-Dichloropropene	10061-01-5	N.D.		1	0.2	1
11997	trans-1,3-Dichloropropene	10061-02-6	N.D.		1	0.2	1
11997	1,4-Dioxane	123-91-1	N.D.		250	29	1
11997	Ethyl Acetate	141-78-6	N.D.		5	0.7	1
11997	Ethyl ether	60-29-7	N.D.		5	0.2	1
11997	Ethylbenzene	100-41-4	N.D.		1	0.4	1

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-17RX Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/30/2019 11:22
Collection Date/Time: 10/29/2019 14:45
SDG#: BMS81-12

ARCADIS U.S., Inc.
ELLE Sample #: GW 1187625
ELLE Group #: 2071744
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result		Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**		**ug/l**	**ug/l**	
11997	Freon 113	76-13-1	N.D.		10	0.2	1
11997	n-Heptane[1]	142-82-5	N.D.		5	2	1
11997	n-Hexane[1]	110-54-3	N.D.		5	2	1
11997	2-Hexanone	591-78-6	N.D.		10	0.3	1
11997	Isobutyl Alcohol	78-83-1	N.D.		250	36	1
11997	Isopropylbenzene	98-82-8	N.D.		5	0.2	1
11997	p-Isopropyltoluene	99-87-6	N.D.		5	0.2	1
11997	Methyl Acetate	79-20-9	N.D.		5	0.2	1
11997	Methyl Tertiary Butyl Ether	1634-04-4	N.D.		1	0.2	1
11997	4-Methyl-2-pentanone	108-10-1	N.D.		10	0.5	1
11997	Methylcyclohexane	108-87-2	N.D.		5	0.5	1
11997	Methylene Chloride	75-09-2	N.D.		1	0.3	1
11997	Naphthalene	91-20-3	N.D.		5	1	1
11997	2-Nitropropane	79-46-9	N.D.		10	0.8	1
11997	Styrene	100-42-5	N.D.		5	0.2	1
11997	1,1,2,2-Tetrachloroethane	79-34-5	N.D.		1	0.2	1
11997	Tetrachloroethene	127-18-4	N.D.		1	0.2	1
11997	Tetrahydrofuran	109-99-9	N.D.		10	0.7	1
11997	Toluene	108-88-3	0.4	J	1	0.2	1
11997	1,2,3-Trichlorobenzene	87-61-6	N.D.		5	0.4	1
11997	1,2,4-Trichlorobenzene	120-82-1	N.D.		5	0.3	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.		1	0.3	1
11997	1,1,2-Trichloroethane	79-00-5	N.D.		1	0.2	1
11997	Trichloroethene	79-01-6	N.D.		1	0.2	1
11997	Trichlorofluoromethane	75-69-4	N.D.		1	0.2	1
11997	1,2,4-Trimethylbenzene	95-63-6	N.D.		5	1	1
11997	1,3,5-Trimethylbenzene	108-67-8	N.D.		5	0.3	1
11997	Vinyl Chloride	75-01-4	N.D.		1	0.2	1
11997	m+p-Xylene	179601-23-1	N.D.		5	1	1
11997	o-Xylene	95-47-6	N.D.		1	0.4	1
11997	Xylene (Total)	1330-20-7	N.D.		6	1	1

Project defined calibration criteria are not met. The calibration is compliant with the method defined criteria.

A Report Limit Verification (RLV) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The RLV standard shows adequate sensitivity at or below the reporting limit.

00882 VOA Interp. Library Search-10

The results from the volatile library search are listed on the attached FORM 1 - VOA-TIC. The qualifiers appearing in the "Q" column are defined at the end of the report.

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-17RX Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/30/2019 11:22
Collection Date/Time: 10/29/2019 14:45
SDG#: BMS81-12

ARCADIS U.S., Inc.
ELLE Sample #: GW 1187625
ELLE Group #: 2071744
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	Acenaphthene	83-32-9	N.D.	0.50	0.10	1
14241	Acenaphthylene	208-96-8	N.D.	0.50	0.10	1
14241	Acetophenone	98-86-2	N.D.	10	4.0	1
14241	Aniline	62-53-3	N.D.	10	3.0	1
14241	Anthracene	120-12-7	N.D.	0.50	0.10	1
14241	Atrazine	1912-24-9	N.D.	5.0	2.0	1
14241	Benzaldehyde	100-52-7	N.D.	10	3.0	1
14241	Benzo(a)anthracene	56-55-3	N.D.	0.50	0.10	1
14241	Benzo(a)pyrene	50-32-8	N.D.	0.50	0.10	1
14241	Benzo(b)fluoranthene	205-99-2	N.D.	0.50	0.10	1
14241	Benzo(g,h,i)perylene	191-24-2	N.D.	0.50	0.10	1
14241	Benzo(k)fluoranthene	207-08-9	N.D.	0.50	0.10	1
14241	Benzyl alcohol	100-51-6	N.D.	30	10	1
14241	1,1'-Biphenyl	92-52-4	N.D.	10	3.0	1
14241	4-Bromophenyl-phenylether	101-55-3	N.D.	2.0	0.50	1
14241	Butylbenzylphthalate	85-68-7	N.D.	5.0	2.0	1
14241	Di-n-butylphthalate	84-74-2	N.D.	5.0	2.0	1
14241	Caprolactam	105-60-2	N.D.	11	5.0	1
14241	Carbazole	86-74-8	N.D.	2.0	0.50	1
14241	4-Chloro-3-methylphenol	59-50-7	N.D.	2.0	0.50	1
14241	4-Chloroaniline	106-47-8	N.D.	10	4.0	1
14241	bis(2-Chloroethoxy)methane	111-91-1	N.D.	2.0	0.50	1
14241	bis(2-Chloroethyl)ether	111-44-4	N.D.	2.0	0.50	1
14241	bis(2-Chloroisopropyl)ether[1]	39638-32-9	N.D.	2.0	0.50	1
	Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.					
14241	2-Chloronaphthalene	91-58-7	N.D.	1.0	0.40	1
14241	2-Chlorophenol	95-57-8	N.D.	2.0	0.50	1
14241	4-Chlorophenyl-phenylether	7005-72-3	N.D.	2.0	0.50	1
14241	Chrysene	218-01-9	N.D.	0.50	0.10	1
14241	Dibenz(a,h)anthracene	53-70-3	N.D.	0.50	0.10	1
14241	Dibenzofuran	132-64-9	N.D.	2.0	0.50	1
14241	3,3'-Dichlorobenzidine	91-94-1	N.D.	10	3.0	1
14241	2,4-Dichlorophenol	120-83-2	N.D.	2.0	0.50	1
14241	Dicyclohexylamine[1]	101-83-7	N.D.	10	10	1
14241	Diethylphthalate	84-66-2	N.D.	5.0	2.0	1
14241	N,N-Dimethylaniline[1]	121-69-7	N.D.	1.0	0.50	1
14241	2,4-Dimethylphenol	105-67-9	N.D.	10	3.0	1
14241	Dimethylphthalate	131-11-3	N.D.	5.0	2.0	1
14241	4,6-Dinitro-2-methylphenol	534-52-1	N.D.	21	8.1	1

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-17RX Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/30/2019 11:22
Collection Date/Time: 10/29/2019 14:45
SDG#: BMS81-12

ARCADIS U.S., Inc.
ELLE Sample #: GW 1187625
ELLE Group #: 2071744
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	2,4-Dinitrophenol	51-28-5	N.D.	30	14	1
14241	2,4-Dinitrotoluene	121-14-2	N.D.	5.0	1.0	1
14241	2,6-Dinitrotoluene	606-20-2	N.D.	2.0	0.50	1
14241	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	11	5.0	1
14241	Fluoranthene	206-44-0	N.D.	0.50	0.10	1
14241	Fluorene	86-73-7	N.D.	0.50	0.10	1
14241	Hexachlorobenzene	118-74-1	N.D.	0.50	0.10	1
14241	Hexachlorobutadiene	87-68-3	N.D.	2.0	0.50	1
14241	Hexachlorocyclopentadiene	77-47-4	N.D.	11	5.0	1
14241	Hexachloroethane	67-72-1	N.D.	5.0	1.0	1
14241	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.50	0.10	1
14241	Isophorone	78-59-1	N.D.	2.0	0.50	1
14241	2-Methylnaphthalene	91-57-6	N.D.	0.50	0.10	1
14241	2-Methylphenol	95-48-7	N.D.	2.0	0.50	1
14241	4-Methylphenol	65794-96-9	N.D.	2.0	0.50	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
14241	Naphthalene	91-20-3	N.D.	0.50	0.10	1
14241	2-Nitroaniline	88-74-4	N.D.	7.1	2.0	1
14241	3-Nitroaniline	99-09-2	N.D.	7.1	3.0	1
14241	4-Nitroaniline	100-01-6	N.D.	3.0	0.91	1
14241	Nitrobenzene	98-95-3	N.D.	2.0	0.50	1
14241	2-Nitrophenol	88-75-5	N.D.	10	3.0	1
14241	4-Nitrophenol	100-02-7	N.D.	30	10	1
14241	N-Nitroso-di-n-propylamine	621-64-7	N.D.	3.0	0.71	1
14241	N-Nitrosodiphenylamine	86-30-6	N.D.	3.0	0.71	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.					
14241	Di-n-octylphthalate	117-84-0	N.D.	11	5.0	1
14241	Pentachlorophenol	87-86-5	N.D.	5.0	1.0	1
14241	Phenanthrene	85-01-8	N.D.	0.50	0.10	1
14241	Phenol	108-95-2	N.D.	2.0	0.50	1
14241	Pyrene	129-00-0	N.D.	0.50	0.10	1
14241	Pyridine	110-86-1	N.D.	5.0	2.0	1
14241	1,2,4,5-Tetrachlorobenzene	95-94-3	N.D.	2.0	0.50	1
14241	2,3,4,6-Tetrachlorophenol	58-90-2	N.D.	10	4.0	1
14241	2,4,5-Trichlorophenol	95-95-4	N.D.	2.0	0.50	1
14241	2,4,6-Trichlorophenol	88-06-2	N.D.	2.0	0.50	1
14241	Triethylamine[1]	121-44-8	N.D. J	10	10	1

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-17RX Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/30/2019 11:22
Collection Date/Time: 10/29/2019 14:45
SDG#: BMS81-12

ARCADIS U.S., Inc.
ELLE Sample #: GW 1187625
ELLE Group #: 2071744
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D SIM**		**ug/l**	**ug/l**	**ug/l**	
14244	1,4-Dioxane	123-91-1	N.D.	0.3	0.1	1
00886	**SVOA TIC Interpretive(25)**					
	The results from the semivolatile library search are listed on the attached FORM 1 - SV-TIC. The qualifiers appearing in the "Q" column are defined at the end of the report.					
Aldehydes & Ketones	**SW-846 8315A**		**ug/l**	**ug/l**	**ug/l**	
13022	Acetaldehyde[1]	75-07-0	N.D.	60	35	1
13022	Formaldehyde	50-00-0	32 J	50	20	1
	The response for a target analyte(s) in the initial calibration verification standard is outside the QC acceptance limits.					
GC Miscellaneous	**SW-846 8015D Rev.4, June 2003**		**ug/l**	**ug/l**	**ug/l**	
10603	Ethanol	64-17-5	N.D. ~~D2~~	1,000	150	1
12926	Ethylene glycol[1]	107-21-1	~~N.D.~~ R	10,000	5,000	1
10603	Isopropanol[1]	67-63-0	140 J~~D2~~	1,000	110	1
10603	Methanol	67-56-1	N.D. ~~D2~~	1,000	220	1
12926	Propylene glycol[1]	57-55-6	~~N.D.~~ R	10,000	2,000	1
	The response for a target analyte(s) in the continuing calibration verification standard is outside the QC acceptance limits low. The following action was taken: The analysis was repeated and the continuing calibration verification standard bracketing the sample on the second trial is also outside the acceptance limits. This effect is attributed to the sample matrix and the data is reported.					
LC/MS/MS Miscellaneous	**EPA 537 mod QSM 5.1 table B-15**		**ng/l**	**ng/l**	**ng/l**	
14434	6:2-Fluorotelomersulfonic acid[1]	27619-97-2	20	4.5	1.8	1
14434	8:2-Fluorotelomersulfonic acid[1]	39108-34-4	N.D.	2.7	0.90	1
14434	NEtFOSAA[1]	2991-50-6	N.D.	2.7	0.45	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.					
14434	NMeFOSAA[1]	2355-31-9	N.D.	1.8	0.54	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.					
14434	Perfluorobutanesulfonic acid[1]	375-73-5	N.D.	1.8	0.45	1
14434	Perfluorobutanoic acid[1]	375-22-4	3.6 J	4.5	1.8	1
14434	Perfluorodecanesulfonic acid[1]	335-77-3	N.D.	1.8	0.45	1
14434	Perfluorodecanoic acid[1]	335-76-2	N.D.	1.8	0.45	1
14434	Perfluorododecanoic acid[1]	307-55-1	N.D.	1.8	0.45	1
14434	Perfluoroheptanesulfonic acid[1]	375-92-8	N.D.	1.8	0.45	1
14434	Perfluoroheptanoic acid[1]	375-85-9	N.D.	1.8	0.45	1
14434	Perfluorohexanesulfonic acid[1]	355-46-4	N.D.	1.8	0.45	1

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-17RX Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/30/2019 11:22
Collection Date/Time: 10/29/2019 14:45
SDG#: BMS81-12

ARCADIS U.S., Inc.
ELLE Sample #: GW 1187625
ELLE Group #: 2071744
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
LC/MS/MS Miscellaneous	**EPA 537 mod QSM 5.1 table B-15**		**ng/l**	**ng/l**	**ng/l**	
14434	Perfluorohexanoic acid[1]	307-24-4	N.D.	1.8	0.45	1
14434	Perfluorononanoic acid[1]	375-95-1	N.D.	1.8	0.45	1
14434	Perfluorooctanesulfonamide[1]	754-91-6	N.D. J	1.8	0.45	1
14434	Perfluorooctanesulfonic acid[1]	1763-23-1	0.54 J	1.8	0.45	1
14434	Perfluorooctanoic acid[1]	335-67-1	0.49 J	1.8	0.45	1
14434	Perfluoropentanoic acid[1]	2706-90-3	0.55 J	1.8	0.45	1
14434	Perfluorotetradecanoic acid[1]	376-06-7	N.D.	1.8	0.45	1
14434	Perfluorotridecanoic acid[1]	72629-94-8	N.D.	1.8	0.45	1
14434	Perfluoroundecanoic acid[1]	2058-94-8	N.D.	1.8	0.45	1

The recovery for extraction standard 13C8-PFOSA is outside of the QC acceptance limits as noted on the QC Summary. The following action was taken:
The sample was re-extracted within the method holding time and the recovery for extraction standard 13C8-PFOSA was again outside of the QC acceptance limits. The data is reported from the initial trial and both sets of data are included in the data package.

Metals	**SW-846 6010D Rev.4, July 2014**		**mg/l**	**mg/l**	**mg/l**	
07044	Antimony	7440-36-0	N.D.	0.0500	0.0160	1
07035	Arsenic	7440-38-2	N.D.	0.0300	0.0160	1
07046	Barium	7440-39-3	0.622	0.0050	0.0010	1
07047	Beryllium	7440-41-7	N.D.	0.0050	0.0010	1
07049	Cadmium	7440-43-9	N.D.	0.0050	0.0010	1
01750	Calcium	7440-70-2	481 J	1.00	0.480	5
07051	Chromium	7440-47-3	0.0078 J	0.0150	0.0016	1
07052	Cobalt	7440-48-4	0.0015 J	0.0050	0.0015	1
07053	Copper	7440-50-8	N.D. J	0.100	0.0600	5
01754	Iron	7439-89-6	0.0888 J	0.200	0.0400	1
07055	Lead	7439-92-1	N.D. J	0.0150	0.0071	1
01757	Magnesium	7439-95-4	49.1 J	0.100	0.0400	1
07058	Manganese	7439-96-5	0.0581 J	0.0100	0.0030	1
07061	Nickel	7440-02-0	0.0027 J	0.0100	0.0021	1
01762	Potassium	7440-09-7	216	0.500	0.204	1
07036	Selenium	7782-49-2	N.D.	0.0500	0.0160	1
07066	Silver	7440-22-4	N.D.	0.0100	0.0050	1
01767	Sodium	7440-23-5	1,170 J	5.00	1.20	5
07022	Thallium[1]	7440-28-0	N.D.	0.0300	0.0081	1
	SW-846 6010D Rev.4, July 2014		**ug/l**	**ug/l**	**ug/l**	
07071	Vanadium	7440-62-2	N.D. J	10.0	1.9	1

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-17RX Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/30/2019 11:22
Collection Date/Time: 10/29/2019 14:45
SDG#: BMS81-12

ARCADIS U.S., Inc.
ELLE Sample #: GW 1187625
ELLE Group #: 2071744
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
Metals	**SW-846 6010D Rev.4, July 2014**		**ug/l**	**ug/l**	**ug/l**	
07072	Zinc	7440-66-6	10.4 J	20.0	3.7	1
Metals	**SW-846 6020B Rev.2, July 2014**		**ug/l**	**ug/l**	**ug/l**	
06023	Aluminum	7429-90-5	332 J	25.0	19.7	1
	SW-846 7470A		**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	N.D. J	0.00020	0.000050	1
Wet Chemistry	**EPA 300.0**		**ug/l**	**ug/l**	**ug/l**	
00224	Chloride	16887-00-6	3,680,000	800,000	400,000	2000
01504	Fluoride	16984-48-8	N.D.	500	250	5
00228	Sulfate	14808-79-8	1,140,000	500,000	150,000	500
	EPA 350.1		**ug/l**	**ug/l**	**ug/l**	
12892	Ammonia Nitrogen	7664-41-7	9,200	2,000	1,000	20
	EPA 353.2		**mg/l**	**mg/l**	**mg/l**	
00220	Nitrate Nitrogen	14797-55-8	0.35	0.10	0.040	1
00219	Nitrite Nitrogen	14797-65-0	0.061	0.050	0.015	1
	SM 4500-P F-2011		**ug/l**	**ug/l**	**ug/l**	
00227	Total Phosphorus as P (water)	7723-14-0	50 J	100	50	1
	SM 5310 C-2011		**ug/l**	**ug/l**	**ug/l**	
00273	Total Organic Carbon	n.a.	3,100	1,000	500	1
	EPA 410.4		**ug/l**	**ug/l**	**ug/l**	
04001	Chemical Oxygen Demand	n.a.	137,000	50,000	12,800	1
	SM 2320 B-2011		**mg/l as CaCO3**	**mg/l as CaCO3**	**mg/l as CaCO3**	
12150	Total Alkalinity to pH 4.5	n.a.	38.4	8.0	2.6	1
	SM 5210 B-2011		**ug/l**	**ug/l**	**ug/l**	
14108	Biochemical Oxygen Demand-BOD	n.a.	N.D.	2,000	2,000	1

Sample Comments

State of New York Certification No. 10670

[1] = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-17RX Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/30/2019 11:22
Collection Date/Time: 10/29/2019 14:45
SDG#: BMS81-12

ARCADIS U.S., Inc.
ELLE Sample #: GW 1187625
ELLE Group #: 2071744
Matrix: Groundwater

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	Y193091AA	11/05/2019 18:38	Corie Mellinger	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	Y193091AA	11/05/2019 18:37	Corie Mellinger	1
14241	Semi-annual Groundwater BMS	SW-846 8270D	1	19303WAN026	11/06/2019 16:53	Kira N Beck	1
14244	SIM SVOAs 8270D MINI	SW-846 8270D SIM	1	19303WAP026	10/31/2019 21:17	Ashley R Transue	1
10466	BNA Water Extraction SIM	SW-846 3510C	1	19303WAP026	10/31/2019 09:30	Joshua S Ruth	1
11010	8270D BNA Extraction	SW-846 3510C	1	19303WAN026	10/31/2019 09:30	Joshua S Ruth	1
13022	Short List Aldehydes- W 8315A	SW-846 8315A	1	193030019A	10/31/2019 18:58	Jessica L Miller	1
01013	Formaldehyde Extraction	SW-846 8315A	1	193030019A	10/31/2019 09:23	Alison Moll	1
10603	Alcohols in Water	SW-846 8015D Rev.4, June 2003	1	193080007A	11/04/2019 14:42	Johanna C Kennedy	1
12926	Glycols in Water by 8015C/D	SW-846 8015D Rev.4, June 2003	1	193040002A	11/01/2019 11:18	Donald Brown	1
14434	PFAS in Water by LC/MS/MS-DoD	EPA 537 mod QSM 5.1 table B-15	1	19304003	11/01/2019 15:57	Devon M Whooley	1
14465	PFAS Water Prep - DoD	EPA 537 mod QSM 5.1 table B-15	1	19304003	10/31/2019 07:00	Toby Barnhart	1
07044	Antimony	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 15:58	Patrick J Engle	1
07035	Arsenic	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 15:58	Patrick J Engle	1
07046	Barium	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 15:58	Patrick J Engle	1
07047	Beryllium	SW-846 6010D Rev.4, July 2014	1	193041404403	11/05/2019 19:54	Cindy M Gehman	1
07049	Cadmium	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 15:58	Patrick J Engle	1
01750	Calcium	SW-846 6010D Rev.4, July 2014	1	193041404403	11/05/2019 10:12	Patrick J Engle	5
07051	Chromium	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 15:58	Patrick J Engle	1
07052	Cobalt	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 15:58	Patrick J Engle	1
07053	Copper	SW-846 6010D Rev.4, July 2014	1	193041404403	11/05/2019 14:11	Patrick J Engle	5
01754	Iron	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 15:58	Patrick J Engle	1
07055	Lead	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 15:58	Patrick J Engle	1
01757	Magnesium	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 15:58	Patrick J Engle	1
07058	Manganese	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 15:58	Patrick J Engle	1
07061	Nickel	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 15:58	Patrick J Engle	1
01762	Potassium	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 15:58	Patrick J Engle	1
07036	Selenium	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 15:58	Patrick J Engle	1

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-17RX Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/30/2019 11:22
Collection Date/Time: 10/29/2019 14:45
SDG#: BMS81-12

ARCADIS U.S., Inc.
ELLE Sample #: GW 1187625
ELLE Group #: 2071744
Matrix: Groundwater

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07066	Silver	SW-846 6010D Rev.4, July 2014	1	193041404403	11/05/2019 19:54	Cindy M Gehman	1
01767	Sodium	SW-846 6010D Rev.4, July 2014	1	193041404403	11/05/2019 14:11	Patrick J Engle	5
07022	Thallium	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 15:58	Patrick J Engle	1
07071	Vanadium	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 15:58	Patrick J Engle	1
07072	Zinc	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 15:58	Patrick J Engle	1
06023	Aluminum	SW-846 6020B Rev.2, July 2014	1	193111404701A	11/08/2019 11:22	Janeyah Rivers-Hamilton	1
00259	Mercury	SW-846 7470A	1	193040571302	11/01/2019 08:01	Damary Valentin	1
14044	ICP-WW, 3005A (tot rec) - U345	SW-846 3005A	1	193041404403	10/31/2019 11:21	James L Mertz	1
14047	ICPMS - Water, 3020A - U345	SW-846 3020A	1	193111404701	11/07/2019 14:15	JoElla L Rice	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	193040571302	10/31/2019 15:15	JoElla L Rice	1
00224	Chloride	EPA 300.0	1	19304135213A	11/05/2019 11:08	Samantha Faverio	2000
01504	Fluoride	EPA 300.0	1	19304135213A	10/31/2019 23:03	Kevin Litwa	5
00228	Sulfate	EPA 300.0	1	19304135213A	10/31/2019 23:18	Kevin Litwa	500
12892	Ammonia Nitrogen	EPA 350.1	1	19307107103A	11/03/2019 09:48	Ashlynn M Cornelius	20
00220	Nitrate Nitrogen	EPA 353.2	1	19308106102A	11/04/2019 12:03	Ashlynn M Cornelius	1
00219	Nitrite Nitrogen	EPA 353.2	1	19304105102A	10/31/2019 12:45	Bethany Sandone	1
00227	Total Phosphorus as P (water)	SM 4500-P F-2011	1	19305109101B	11/04/2019 14:27	Jonathan Saul	1
00273	Total Organic Carbon	SM 5310 C-2011	1	19309304504A	11/05/2019 19:02	Bethany Sandone	1
08263	Total Phos as P Prep (water)	SM 4500-P B(5)-2011	1	19305109101B	11/01/2019 20:00	Barbara A Washington	1
04001	Chemical Oxygen Demand	EPA 410.4	1	19304400101A	10/31/2019 09:15	Susan A Engle	1
12150	Total Alkalinity to pH 4.5	SM 2320 B-2011	1	19304007203A	11/01/2019 02:29	Jeremy L Bolf	1
14108	Biochemical Oxygen Demand-BOD	SM 5210 B-2011	1	19304141081A	10/31/2019 10:50	Benjamin M Morrison	1

*=This limit was used in the evaluation of the final result

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
S8112

Lab Name: Lancaster Laboratories Contract:_____
Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____
Matrix: (soil/water) WATER Lab Sample ID: 1187625
Sample wt/vol: 5.0 (g/mL)mL Lab File ID:HP09355.i/19nov05a.b/yn05s12.d
Level: (low/med) LOW Date Received: 10/30/19
% Moisture: not dec. Date Analyzed: 11/05/19
Column: (pack/cap) CAP Dilution Factor: 1.0
CONCENTRATION UNITS:
Number TICs found: 0 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	VOCTIC	Total VOC TICs		0	U
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page 1 of 1

FORM I VOA-TIC

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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
S8112

Lab Name: Lancaster Laboratories Contract:
Lab Code: LANCAS Case No.: SAS No.: SDG No.:
Matrix: (soil/water) WATER Lab Sample ID: 1187625
Sample wt/vol: 248 (g/mL) mL Lab File ID: lk0185.d
Level: (low/med) LOW Date Received: 10/30/19
% Moisture: Decanted: (Y/N) Date Extracted: 10/31/19
Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/06/19
Injection Volume: 1 (uL) Dilution Factor: 1
GPC Cleanup: N pH: Extraction: Sepf

CONCENTRATION UNITS:
Number TICs found: 0 (ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. SVOCTIC	Total SVOC TICs		0	U
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Sample Description: **BDA-17RX Filtered Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/30/2019 11:22
Collection Date/Time: 10/29/2019 14:45
SDG#: BMS81-13

ARCADIS U.S., Inc.
ELLE Sample #: GW 1187626
ELLE Group #: 2071744
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
Metals Dissolved	**SW-846 6010D Rev.4, July 2014**		**mg/l**	**mg/l**	**mg/l**	
07044	Antimony	7440-36-0	N.D.	0.0500	0.0160	1
07035	Arsenic	7440-38-2	N.D.	0.0300	0.0160	1
07046	Barium	7440-39-3	0.743	0.0050	0.0010	1
07047	Beryllium	7440-41-7	N.D.	0.0050	0.0010	1
07049	Cadmium	7440-43-9	N.D.	0.0050	0.0010	1
01750	Calcium	7440-70-2	440	1.00	0.480	5
07051	Chromium	7440-47-3	0.0088 J	0.0150	0.0016	1
07052	Cobalt	7440-48-4	N.D.	0.0050	0.0015	1
07053	Copper	7440-50-8	N.D.	0.100	0.0600	5
01754	Iron	7439-89-6	N.D. J	0.200	0.0400	1
07055	Lead	7439-92-1	N.D.	0.0150	0.0071	1
01757	Magnesium	7439-95-4	1.30	0.100	0.0400	1
07058	Manganese	7439-96-5	N.D.	0.0100	0.0030	1
07061	Nickel	7440-02-0	N.D.	0.0100	0.0021	1
01762	Potassium	7440-09-7	233	0.500	0.204	1
07036	Selenium	7782-49-2	N.D.	0.0500	0.0160	1
07066	Silver	7440-22-4	N.D.	0.0100	0.0050	1
01767	Sodium	7440-23-5	994	5.00	1.20	5
07022	Thallium[1]	7440-28-0	N.D.	0.0300	0.0081	1
	SW-846 6010D Rev.4, July 2014		**ug/l**	**ug/l**	**ug/l**	
07071	Vanadium	7440-62-2	N.D.	10.0	1.9	1
07072	Zinc	7440-66-6	3.8 J	20.0	3.7	1
	SW-846 6020B Rev.2, July 2014		**ug/l**	**ug/l**	**ug/l**	
06023	Aluminum	7429-90-5	N.D.	25.0	19.7	1
	SW-846 7470A		**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	N.D.	0.00020	0.000050	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals.

[1] = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-17RX Filtered Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/30/2019 11:22
Collection Date/Time: 10/29/2019 14:45
SDG#: BMS81-13

ARCADIS U.S., Inc.
ELLE Sample #: GW 1187626
ELLE Group #: 2071744
Matrix: Groundwater

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07044	Antimony	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:27	Patrick J Engle	1
07035	Arsenic	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:27	Patrick J Engle	1
07046	Barium	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:27	Patrick J Engle	1
07047	Beryllium	SW-846 6010D Rev.4, July 2014	1	193041404402	11/05/2019 23:44	Elaine F Stoltzfus	1
07049	Cadmium	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:27	Patrick J Engle	1
01750	Calcium	SW-846 6010D Rev.4, July 2014	1	193041404402	11/05/2019 08:58	Patrick J Engle	5
07051	Chromium	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:27	Patrick J Engle	1
07052	Cobalt	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:27	Patrick J Engle	1
07053	Copper	SW-846 6010D Rev.4, July 2014	1	193041404402	11/05/2019 17:30	Patrick J Engle	5
01754	Iron	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:27	Patrick J Engle	1
07055	Lead	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:27	Patrick J Engle	1
01757	Magnesium	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:27	Patrick J Engle	1
07058	Manganese	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:27	Patrick J Engle	1
07061	Nickel	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:27	Patrick J Engle	1
01762	Potassium	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:27	Patrick J Engle	1
07036	Selenium	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:27	Patrick J Engle	1
07066	Silver	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:27	Patrick J Engle	1
01767	Sodium	SW-846 6010D Rev.4, July 2014	1	193041404402	11/05/2019 08:58	Patrick J Engle	5
07022	Thallium	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:27	Patrick J Engle	1
07071	Vanadium	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:27	Patrick J Engle	1
07072	Zinc	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:27	Patrick J Engle	1
06023	Aluminum	SW-846 6020B Rev.2, July 2014	1	193111404701A	11/08/2019 11:24	Janeyah Rivers-Hamilton	1
00259	Mercury	SW-846 7470A	1	193040571302	11/01/2019 07:56	Damary Valentin	1
14044	ICP-WW, 3005A (tot rec) - U345	SW-846 3005A	1	193041404402	10/31/2019 11:21	James L Mertz	1
14047	ICPMS - Water, 3020A - U345	SW-846 3020A	1	193111404701	11/07/2019 14:15	JoElla L Rice	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	193040571302	10/31/2019 15:15	JoElla L Rice	1

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-17T Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/30/2019 11:22
Collection Date/Time: 10/29/2019 11:10
SDG#: BMS81-14

ARCADIS U.S., Inc.
ELLE Sample #: GW 1187627
ELLE Group #: 2071744
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	20	0.7	1
11997	Acetonitrile	75-05-8	N.D.	100	16	1
11997	Benzene	71-43-2	N.D.	1	0.2	1
11997	Bromochloromethane	74-97-5	N.D.	5	0.2	1
11997	Bromodichloromethane	75-27-4	1	1	0.2	1
11997	Bromoform	75-25-2	N.D.	4	1	1
11997	Bromomethane	74-83-9	N.D. J	1	0.3	1
11997	n-Butanol	71-36-3	N.D.	250	61	1
11997	2-Butanone	78-93-3	N.D.	10	0.3	1
11997	t-Butyl alcohol	75-65-0	N.D.	50	12	1
11997	n-Butylbenzene	104-51-8	N.D.	5	0.2	1
11997	sec-Butylbenzene	135-98-8	N.D.	5	0.2	1
11997	tert-Butylbenzene	98-06-6	N.D.	5	0.3	1
11997	Carbon Disulfide	75-15-0	N.D.	5	0.2	1
11997	Carbon Tetrachloride	56-23-5	N.D.	1	0.2	1
11997	Chlorobenzene	108-90-7	N.D.	1	0.2	1
11997	Chlorodifluoromethane[1]	75-45-6	N.D.	5	2	1
11997	Chloroethane	75-00-3	N.D.	1	0.2	1
11997	Chloroform	67-66-3	7 J	1	0.2	1
11997	Chloromethane	74-87-3	N.D.	1	0.2	1
11997	Cyclohexane	110-82-7	N.D.	5	1	1
11997	Cyclohexanone[1]	108-94-1	N.D.	100	25	1
11997	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	5	0.3	1
11997	Dibromochloromethane	124-48-1	N.D.	1	0.2	1
11997	1,2-Dibromoethane	106-93-4	N.D.	1	0.2	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	5	0.2	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	5	0.2	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	5	0.2	1
11997	Dichlorodifluoromethane	75-71-8	N.D. J	1	0.2	1
11997	1,1-Dichloroethane	75-34-3	N.D.	1	0.2	1
11997	1,2-Dichloroethane	107-06-2	N.D.	1	0.3	1
11997	1,1-Dichloroethene	75-35-4	N.D.	1	0.2	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	1	0.2	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	1	0.2	1
11997	1,2-Dichloropropane	78-87-5	N.D.	1	0.2	1
11997	cis-1,3-Dichloropropene	10061-01-5	N.D.	1	0.2	1
11997	trans-1,3-Dichloropropene	10061-02-6	N.D.	1	0.2	1
11997	1,4-Dioxane	123-91-1	N.D.	250	29	1
11997	Ethyl Acetate	141-78-6	N.D.	5	0.7	1
11997	Ethyl ether	60-29-7	N.D.	5	0.2	1
11997	Ethylbenzene	100-41-4	N.D.	1	0.4	1

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-17T Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/30/2019 11:22
Collection Date/Time: 10/29/2019 11:10
SDG#: BMS81-14

ARCADIS U.S., Inc.
ELLE Sample #: GW 1187627
ELLE Group #: 2071744
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Freon 113	76-13-1	N.D.	10	0.2	1
11997	n-Heptane[1]	142-82-5	N.D.	5	2	1
11997	n-Hexane[1]	110-54-3	N.D.	5	2	1
11997	2-Hexanone	591-78-6	N.D.	10	0.3	1
11997	Isobutyl Alcohol	78-83-1	N.D.	250	36	1
11997	Isopropylbenzene	98-82-8	N.D.	5	0.2	1
11997	p-Isopropyltoluene	99-87-6	N.D.	5	0.2	1
11997	Methyl Acetate	79-20-9	N.D.	5	0.2	1
11997	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	1	0.2	1
11997	4-Methyl-2-pentanone	108-10-1	N.D.	10	0.5	1
11997	Methylcyclohexane	108-87-2	N.D.	5	0.5	1
11997	Methylene Chloride	75-09-2	N.D.	1	0.3	1
11997	Naphthalene	91-20-3	N.D.	5	1	1
11997	2-Nitropropane	79-46-9	N.D.	10	0.8	1
11997	Styrene	100-42-5	N.D.	5	0.2	1
11997	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	1	0.2	1
11997	Tetrachloroethene	127-18-4	N.D.	1	0.2	1
11997	Tetrahydrofuran	109-99-9	N.D.	10	0.7	1
11997	Toluene	108-88-3	N.D.	1	0.2	1
11997	1,2,3-Trichlorobenzene	87-61-6	N.D.	5	0.4	1
11997	1,2,4-Trichlorobenzene	120-82-1	N.D.	5	0.3	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	1	0.3	1
11997	1,1,2-Trichloroethane	79-00-5	N.D.	1	0.2	1
11997	Trichloroethene	79-01-6	N.D.	1	0.2	1
11997	Trichlorofluoromethane	75-69-4	N.D.	1	0.2	1
11997	1,2,4-Trimethylbenzene	95-63-6	N.D.	5	1	1
11997	1,3,5-Trimethylbenzene	108-67-8	N.D.	5	0.3	1
11997	Vinyl Chloride	75-01-4	N.D.	1	0.2	1
11997	m+p-Xylene	179601-23-1	N.D.	5	1	1
11997	o-Xylene	95-47-6	N.D.	1	0.4	1
11997	Xylene (Total)	1330-20-7	N.D.	6	1	1

Project defined calibration criteria are not met. The calibration is compliant with the method defined criteria.

A Report Limit Verification (RLV) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The RLV standard shows adequate sensitivity at or below the reporting limit.

00882 VOA Interp. Library Search-10

The results from the volatile library search are listed on the attached FORM 1 - VOA-TIC. The qualifiers appearing in the "Q" column are defined at the end of the report.

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-17T Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/30/2019 11:22
Collection Date/Time: 10/29/2019 11:10
SDG#: BMS81-14

ARCADIS U.S., Inc.
ELLE Sample #: GW 1187627
ELLE Group #: 2071744
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	Acenaphthene	83-32-9	N.D.	0.53	0.11	1
14241	Acenaphthylene	208-96-8	N.D.	0.53	0.11	1
14241	Acetophenone	98-86-2	N.D.	11	4.3	1
14241	Aniline	62-53-3	N.D.	11	3.2	1
14241	Anthracene	120-12-7	N.D.	0.53	0.11	1
14241	Atrazine	1912-24-9	N.D.	5.3	2.1	1
14241	Benzaldehyde	100-52-7	N.D.	11	3.2	1
14241	Benzo(a)anthracene	56-55-3	N.D.	0.53	0.11	1
14241	Benzo(a)pyrene	50-32-8	N.D.	0.53	0.11	1
14241	Benzo(b)fluoranthene	205-99-2	N.D.	0.53	0.11	1
14241	Benzo(g,h,i)perylene	191-24-2	N.D.	0.53	0.11	1
14241	Benzo(k)fluoranthene	207-08-9	N.D.	0.53	0.11	1
14241	Benzyl alcohol	100-51-6	N.D.	32	11	1
14241	1,1'-Biphenyl	92-52-4	N.D.	11	3.2	1
14241	4-Bromophenyl-phenylether	101-55-3	N.D.	2.1	0.53	1
14241	Butylbenzylphthalate	85-68-7	N.D.	5.3	2.1	1
14241	Di-n-butylphthalate	84-74-2	N.D.	5.3	2.1	1
14241	Caprolactam	105-60-2	N.D.	12	5.3	1
14241	Carbazole	86-74-8	N.D.	2.1	0.53	1
14241	4-Chloro-3-methylphenol	59-50-7	N.D.	2.1	0.53	1
14241	4-Chloroaniline	106-47-8	N.D.	11	4.3	1
14241	bis(2-Chloroethoxy)methane	111-91-1	N.D.	2.1	0.53	1
14241	bis(2-Chloroethyl)ether	111-44-4	N.D.	2.1	0.53	1
14241	bis(2-Chloroisopropyl)ether[1]	39638-32-9	N.D.	2.1	0.53	1
	Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.					
14241	2-Chloronaphthalene	91-58-7	N.D.	1.1	0.43	1
14241	2-Chlorophenol	95-57-8	N.D.	2.1	0.53	1
14241	4-Chlorophenyl-phenylether	7005-72-3	N.D.	2.1	0.53	1
14241	Chrysene	218-01-9	N.D.	0.53	0.11	1
14241	Dibenz(a,h)anthracene	53-70-3	N.D.	0.53	0.11	1
14241	Dibenzofuran	132-64-9	N.D.	2.1	0.53	1
14241	3,3'-Dichlorobenzidine	91-94-1	N.D.	11	3.2	1
14241	2,4-Dichlorophenol	120-83-2	N.D.	2.1	0.53	1
14241	Dicyclohexylamine[1]	101-83-7	N.D.	11	11	1
14241	Diethylphthalate	84-66-2	N.D.	5.3	2.1	1
14241	N,N-Dimethylaniline[1]	121-69-7	N.D.	1.1	0.53	1
14241	2,4-Dimethylphenol	105-67-9	N.D.	11	3.2	1
14241	Dimethylphthalate	131-11-3	N.D.	5.3	2.1	1
14241	4,6-Dinitro-2-methylphenol	534-52-1	N.D.	22	8.5	1

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-17T Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/30/2019 11:22
Collection Date/Time: 10/29/2019 11:10
SDG#: BMS81-14

ARCADIS U.S., Inc.
ELLE Sample #: GW 1187627
ELLE Group #: 2071744
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	2,4-Dinitrophenol	51-28-5	N.D.	32	15	1
14241	2,4-Dinitrotoluene	121-14-2	N.D.	5.3	1.1	1
14241	2,6-Dinitrotoluene	606-20-2	N.D.	2.1	0.53	1
14241	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	12	5.3	1
14241	Fluoranthene	206-44-0	N.D.	0.53	0.11	1
14241	Fluorene	86-73-7	N.D.	0.53	0.11	1
14241	Hexachlorobenzene	118-74-1	N.D.	0.53	0.11	1
14241	Hexachlorobutadiene	87-68-3	N.D.	2.1	0.53	1
14241	Hexachlorocyclopentadiene	77-47-4	N.D.	12	5.3	1
14241	Hexachloroethane	67-72-1	N.D.	5.3	1.1	1
14241	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.53	0.11	1
14241	Isophorone	78-59-1	N.D.	2.1	0.53	1
14241	2-Methylnaphthalene	91-57-6	N.D.	0.53	0.11	1
14241	2-Methylphenol	95-48-7	N.D.	2.1	0.53	1
14241	4-Methylphenol	65794-96-9	N.D.	2.1	0.53	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
14241	Naphthalene	91-20-3	N.D.	0.53	0.11	1
14241	2-Nitroaniline	88-74-4	N.D.	7.5	2.1	1
14241	3-Nitroaniline	99-09-2	N.D.	7.5	3.2	1
14241	4-Nitroaniline	100-01-6	N.D.	3.2	0.96	1
14241	Nitrobenzene	98-95-3	N.D.	2.1	0.53	1
14241	2-Nitrophenol	88-75-5	N.D.	11	3.2	1
14241	4-Nitrophenol	100-02-7	N.D.	32	11	1
14241	N-Nitroso-di-n-propylamine	621-64-7	N.D.	3.2	0.75	1
14241	N-Nitrosodiphenylamine	86-30-6	N.D.	3.2	0.75	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.					
14241	Di-n-octylphthalate	117-84-0	N.D.	12	5.3	1
14241	Pentachlorophenol	87-86-5	N.D.	5.3	1.1	1
14241	Phenanthrene	85-01-8	N.D.	0.53	0.11	1
14241	Phenol	108-95-2	N.D.	2.1	0.53	1
14241	Pyrene	129-00-0	N.D.	0.53	0.11	1
14241	Pyridine	110-86-1	N.D.	5.3	2.1	1
14241	1,2,4,5-Tetrachlorobenzene	95-94-3	N.D.	2.1	0.53	1
14241	2,3,4,6-Tetrachlorophenol	58-90-2	N.D.	11	4.3	1
14241	2,4,5-Trichlorophenol	95-95-4	N.D.	2.1	0.53	1
14241	2,4,6-Trichlorophenol	88-06-2	N.D.	2.1	0.53	1
14241	Triethylamine[1]	121-44-8	N.D. J	11	11	1

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-17T Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/30/2019 11:22
Collection Date/Time: 10/29/2019 11:10
SDG#: BMS81-14

ARCADIS U.S., Inc.
ELLE Sample #: GW 1187627
ELLE Group #: 2071744
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D SIM**		**ug/l**	**ug/l**	**ug/l**	
14244	1,4-Dioxane	123-91-1	N.D.	0.3	0.1	1
00886	**SVOA TIC Interpretive(25)**					
	The results from the semivolatile library search are listed on the attached FORM 1 - SV-TIC. The qualifiers appearing in the "Q" column are defined at the end of the report.					
Aldehydes & Ketones	**SW-846 8315A**		**ug/l**	**ug/l**	**ug/l**	
13022	Acetaldehyde[1]	75-07-0	N.D.	60	35	1
13022	Formaldehyde	50-00-0	20 J	50	20	1
	The response for a target analyte(s) in the initial calibration verification standard is outside the QC acceptance limits.					
GC Miscellaneous	**SW-846 8015D Rev.4, June 2003**		**ug/l**	**ug/l**	**ug/l**	
10603	Ethanol	64-17-5	N.D. D2	1,000	150	1
12926	Ethylene glycol[1]	107-21-1	~~N.D.~~ R	10,000	5,000	1
10603	Isopropanol[1]	67-63-0	N.D. D2	1,000	110	1
10603	Methanol	67-56-1	N.D. D2	1,000	220	1
12926	Propylene glycol[1]	57-55-6	~~N.D.~~ R	10,000	2,000	1
	The response for a target analyte(s) in the continuing calibration verification standard is outside the QC acceptance limits low. The following action was taken: The analysis was repeated and the continuing calibration verification standard bracketing the sample on the second trial is also outside the acceptance limits. This effect is attributed to the sample matrix and the data is reported.					
LC/MS/MS Miscellaneous	**EPA 537 mod QSM 5.1 table B-15**		**ng/l**	**ng/l**	**ng/l**	
14434	6:2-Fluorotelomersulfonic acid[1]	27619-97-2	110 J	4.4	1.8	1
14434	8:2-Fluorotelomersulfonic acid[1]	39108-34-4	N.D.	2.6	0.88	1
14434	NEtFOSAA[1]	2991-50-6	N.D.	2.6	0.44	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.					
14434	NMeFOSAA[1]	2355-31-9	N.D.	1.8	0.53	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.					
14434	Perfluorobutanesulfonic acid[1]	375-73-5	N.D.	1.8	0.44	1
14434	Perfluorobutanoic acid[1]	375-22-4	2.3 J	4.4	1.8	1
14434	Perfluorodecanesulfonic acid[1]	335-77-3	N.D.	1.8	0.44	1
14434	Perfluorodecanoic acid[1]	335-76-2	N.D.	1.8	0.44	1
14434	Perfluorododecanoic acid[1]	307-55-1	N.D.	1.8	0.44	1
14434	Perfluoroheptanesulfonic acid[1]	375-92-8	N.D.	1.8	0.44	1
14434	Perfluoroheptanoic acid[1]	375-85-9	1.6 J	1.8	0.44	1
14434	Perfluorohexanesulfonic acid[1]	355-46-4	N.D.	1.8	0.44	1

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-17T Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/30/2019 11:22
Collection Date/Time: 10/29/2019 11:10
SDG#: BMS81-14

ARCADIS U.S., Inc.
ELLE Sample #: GW 1187627
ELLE Group #: 2071744
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
LC/MS/MS Miscellaneous	**EPA 537 mod QSM 5.1 table B-15**		**ng/l**	**ng/l**	**ng/l**	
14434	Perfluorohexanoic acid[1]	307-24-4	8.5 J	1.8	0.44	1
14434	Perfluorononanoic acid[1]	375-95-1	N.D.	1.8	0.44	1
14434	Perfluorooctanesulfonamide[1]	754-91-6	N.D.	1.8	0.44	1
14434	Perfluorooctanesulfonic acid[1]	1763-23-1	0.63 J	1.8	0.44	1
14434	Perfluorooctanoic acid[1]	335-67-1	0.62 J	1.8	0.44	1
14434	Perfluoropentanoic acid[1]	2706-90-3	1.4 J	1.8	0.44	1
14434	Perfluorotetradecanoic acid[1]	376-06-7	N.D.	1.8	0.44	1
14434	Perfluorotridecanoic acid[1]	72629-94-8	N.D.	1.8	0.44	1
14434	Perfluoroundecanoic acid[1]	2058-94-8	N.D.	1.8	0.44	1
	The recovery for extraction standard d5-NEtFOSAA is outside of the QC acceptance limits as noted on the QC Summary.					
Metals	**SW-846 6010D Rev.4, July 2014**		**mg/l**	**mg/l**	**mg/l**	
07044	Antimony	7440-36-0	N.D.	0.0500	0.0160	1
07035	Arsenic	7440-38-2	N.D.	0.0300	0.0160	1
07046	Barium	7440-39-3	0.0359 J	0.0050	0.0010	1
07047	Beryllium	7440-41-7	N.D.	0.0050	0.0010	1
07049	Cadmium	7440-43-9	N.D.	0.0050	0.0010	1
01750	Calcium	7440-70-2	~~138~~ R	0.200	0.0960	1
07051	Chromium	7440-47-3	0.0023 J	0.0150	0.0016	1
07052	Cobalt	7440-48-4	N.D. J	0.0050	0.0015	1
07053	Copper	7440-50-8	N.D. J	0.0200	0.0120	1
01754	Iron	7439-89-6	0.0727 J	0.200	0.0400	1
07055	Lead	7439-92-1	N.D. J	0.0150	0.0071	1
01757	Magnesium	7439-95-4	~~25.8~~ R	0.100	0.0400	1
07058	Manganese	7439-96-5	~~0.0525~~ R	0.0100	0.0030	1
07061	Nickel	7440-02-0	0.0060 J	0.0100	0.0021	1
01762	Potassium	7440-09-7	7.18 J	0.500	0.204	1
07036	Selenium	7782-49-2	N.D.	0.0500	0.0160	1
07066	Silver	7440-22-4	N.D.	0.0100	0.0050	1
01767	Sodium	7440-23-5	~~70.2~~ R	1.00	0.239	1
07022	Thallium[1]	7440-28-0	N.D.	0.0300	0.0081	1
	SW-846 6010D Rev.4, July 2014		**ug/l**	**ug/l**	**ug/l**	
07071	Vanadium	7440-62-2	N.D. J	10.0	1.9	1
07072	Zinc	7440-66-6	3.9 J	20.0	3.7	1
	SW-846 6020B Rev.2, July 2014		**ug/l**	**ug/l**	**ug/l**	

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-17T Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/30/2019 11:22
Collection Date/Time: 10/29/2019 11:10
SDG#: BMS81-14

ARCADIS U.S., Inc.
ELLE Sample #: GW 1187627
ELLE Group #: 2071744
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
Metals	**SW-846 6020B Rev.2, July 2014**		**ug/l**	**ug/l**	**ug/l**	
06023	Aluminum	7429-90-5	~~55.9~~ R	25.0	19.7	1
Metals	**SW-846 7470A**		**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	N.D. J	0.00020	0.000050	1
Wet Chemistry	**EPA 300.0**		**ug/l**	**ug/l**	**ug/l**	
00224	Chloride	16887-00-6	77,500	20,000	10,000	50
01504	Fluoride	16984-48-8	340 J	500	250	5
00228	Sulfate	14808-79-8	354,000 J	50,000	15,000	50
	EPA 350.1		**ug/l**	**ug/l**	**ug/l**	
12892	Ammonia Nitrogen	7664-41-7	75 J	100	50	1
	EPA 353.2		**mg/l**	**mg/l**	**mg/l**	
00220	Nitrate Nitrogen	14797-55-8	0.44 J	0.10	0.040	1
00219	Nitrite Nitrogen	14797-65-0	N.D.	0.050	0.015	1
	The holding time was not met.					
	SM 4500-P F-2011		**ug/l**	**ug/l**	**ug/l**	
00227	Total Phosphorus as P (water)	7723-14-0	120	100	50	1
	SM 5310 C-2011		**ug/l**	**ug/l**	**ug/l**	
00273	Total Organic Carbon	n.a.	1,500	1,000	500	1
	EPA 410.4		**ug/l**	**ug/l**	**ug/l**	
04001	Chemical Oxygen Demand	n.a.	N.D.	50,000	12,800	1
	SM 2320 B-2011		**mg/l as CaCO3**	**mg/l as CaCO3**	**mg/l as CaCO3**	
12150	Total Alkalinity to pH 4.5	n.a.	99.1	8.0	2.6	1
	SM 5210 B-2011		**ug/l**	**ug/l**	**ug/l**	
14108	Biochemical Oxygen Demand-BOD	n.a.	N.D.	2,000	2,000	1

Sample Comments

State of New York Certification No. 10670

[1] = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-17T Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/30/2019 11:22
Collection Date/Time: 10/29/2019 11:10
SDG#: BMS81-14

ARCADIS U.S., Inc.
ELLE Sample #: GW 1187627
ELLE Group #: 2071744
Matrix: Groundwater

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	Y193091AA	11/05/2019 19:00	Corie Mellinger	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	Y193091AA	11/05/2019 18:59	Corie Mellinger	1
14241	Semi-annual Groundwater BMS	SW-846 8270D	1	19303WAN026	11/06/2019 16:24	Kira N Beck	1
14244	SIM SVOAs 8270D MINI	SW-846 8270D SIM	1	19303WAP026	10/31/2019 21:48	Ashley R Transue	1
10466	BNA Water Extraction SIM	SW-846 3510C	1	19303WAP026	10/31/2019 09:30	Joshua S Ruth	1
11010	8270D BNA Extraction	SW-846 3510C	1	19303WAN026	10/31/2019 09:30	Joshua S Ruth	1
13022	Short List Aldehydes- W 8315A	SW-846 8315A	1	193030019A	10/31/2019 19:09	Jessica L Miller	1
01013	Formaldehyde Extraction	SW-846 8315A	1	193030019A	10/31/2019 09:23	Alison Moll	1
10603	Alcohols in Water	SW-846 8015D Rev.4, June 2003	1	193080007A	11/04/2019 14:58	Johanna C Kennedy	1
12926	Glycols in Water by 8015C/D	SW-846 8015D Rev.4, June 2003	1	193040002A	11/01/2019 11:30	Donald Brown	1
14434	PFAS in Water by LC/MS/MS-DoD	EPA 537 mod QSM 5.1 table B-15	1	19304003	11/01/2019 16:06	Devon M Whooley	1
14465	PFAS Water Prep - DoD	EPA 537 mod QSM 5.1 table B-15	1	19304003	10/31/2019 07:00	Toby Barnhart	1
07044	Antimony	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 15:55	Patrick J Engle	1
07035	Arsenic	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 15:55	Patrick J Engle	1
07046	Barium	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 15:55	Patrick J Engle	1
07047	Beryllium	SW-846 6010D Rev.4, July 2014	1	193041404403	11/05/2019 19:51	Cindy M Gehman	1
07049	Cadmium	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 15:55	Patrick J Engle	1
01750	Calcium	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 15:55	Patrick J Engle	1
07051	Chromium	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 15:55	Patrick J Engle	1
07052	Cobalt	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 15:55	Patrick J Engle	1
07053	Copper	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 15:55	Patrick J Engle	1
01754	Iron	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 15:55	Patrick J Engle	1
07055	Lead	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 15:55	Patrick J Engle	1
01757	Magnesium	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 15:55	Patrick J Engle	1
07058	Manganese	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 15:55	Patrick J Engle	1
07061	Nickel	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 15:55	Patrick J Engle	1
01762	Potassium	SW-846 6010D Rev.4, July 2014	1	193041404403	11/05/2019 09:59	Patrick J Engle	1
07036	Selenium	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 15:55	Patrick J Engle	1

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-17T Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/30/2019 11:22
Collection Date/Time: 10/29/2019 11:10
SDG#: BMS81-14

ARCADIS U.S., Inc.
ELLE Sample #: GW 1187627
ELLE Group #: 2071744
Matrix: Groundwater

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07066	Silver	SW-846 6010D Rev.4, July 2014	1	193041404403	11/05/2019 19:51	Cindy M Gehman	1
01767	Sodium	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 15:55	Patrick J Engle	1
07022	Thallium	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 15:55	Patrick J Engle	1
07071	Vanadium	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 15:55	Patrick J Engle	1
07072	Zinc	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 15:55	Patrick J Engle	1
06023	Aluminum	SW-846 6020B Rev.2, July 2014	1	193111404701A	11/08/2019 14:50	Janeyah Rivers-Hamilton	1
00259	Mercury	SW-846 7470A	1	193040571302	11/01/2019 07:54	Damary Valentin	1
14044	ICP-WW, 3005A (tot rec) - U345	SW-846 3005A	1	193041404403	10/31/2019 11:21	James L Mertz	1
14047	ICPMS - Water, 3020A - U345	SW-846 3020A	1	193111404701	11/07/2019 14:15	JoElla L Rice	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	193040571302	10/31/2019 15:15	JoElla L Rice	1
00224	Chloride	EPA 300.0	1	19304135213A	11/01/2019 01:34	Kevin Litwa	50
01504	Fluoride	EPA 300.0	1	19304135213A	11/01/2019 00:48	Kevin Litwa	5
00228	Sulfate	EPA 300.0	1	19304135213A	11/01/2019 01:34	Kevin Litwa	50
12892	Ammonia Nitrogen	EPA 350.1	1	19307107103A	11/03/2019 09:50	Ashlynn M Cornelius	1
00220	Nitrate Nitrogen	EPA 353.2	1	19308106102A	11/04/2019 12:05	Ashlynn M Cornelius	1
00219	Nitrite Nitrogen	EPA 353.2	1	19304105102A	10/31/2019 12:44	Bethany Sandone	1
00227	Total Phosphorus as P (water)	SM 4500-P F-2011	1	19305109101B	11/04/2019 14:28	Jonathan Saul	1
00273	Total Organic Carbon	SM 5310 C-2011	1	19309304504A	11/05/2019 19:16	Bethany Sandone	1
08263	Total Phos as P Prep (water)	SM 4500-P B(5)-2011	1	19305109101B	11/01/2019 20:00	Barbara A Washington	1
04001	Chemical Oxygen Demand	EPA 410.4	1	19304400101A	10/31/2019 09:15	Susan A Engle	1
12150	Total Alkalinity to pH 4.5	SM 2320 B-2011	1	19304002103A	10/31/2019 23:34	Jeremy L Bolf	1
14108	Biochemical Oxygen Demand-BOD	SM 5210 B-2011	1	19304141081A	10/31/2019 10:50	Benjamin M Morrison	1

*=This limit was used in the evaluation of the final result

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
S8114

Lab Name: Lancaster Laboratories Contract:_____
Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____
Matrix: (soil/water) WATER Lab Sample ID: 1187627
Sample wt/vol: 5.0 (g/mL)mL Lab File ID:HP09355.i/19nov05a.b/yn05s13.d
Level: (low/med) LOW Date Received: 10/30/19
% Moisture: not dec. Date Analyzed: 11/05/19
Column: (pack/cap) CAP Dilution Factor: 1.0
CONCENTRATION UNITS:
Number TICs found: 0 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	VOCTIC	Total VOC TICs		0	U
2.					
3.					
4.					
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page 1 of 1

FORM I VOA-TIC

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
S8114

Lab Name: Lancaster Laboratories Contract:
Lab Code: LANCAS Case No.: SAS No.: SDG No.:
Matrix: (soil/water) WATER Lab Sample ID: 1187627
Sample wt/vol: 234 (g/mL) mL Lab File ID: lk0184.d
Level: (low/med) LOW Date Received: 10/30/19
% Moisture: Decanted: (Y/N) Date Extracted: 10/31/19
Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/06/19
Injection Volume: 1 (uL) Dilution Factor: 1
GPC Cleanup: N pH: Extraction: Sepf

CONCENTRATION UNITS:
Number TICs found: 0 (ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. SVOCTIC	Total SVOC TICs		0	U
2.				
3.				
4.				
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page 1 of 1

FORM I SV-1

Sample Description: **BDA-17T Filtered Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/30/2019 11:22
Collection Date/Time: 10/29/2019 11:10
SDG#: BMS81-15

ARCADIS U.S., Inc.
ELLE Sample #: GW 1187628
ELLE Group #: 2071744
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
Metals Dissolved	**SW-846 6010D Rev.4, July 2014**		**mg/l**	**mg/l**	**mg/l**	
07044	Antimony	7440-36-0	N.D.	0.0500	0.0160	1
07035	Arsenic	7440-38-2	N.D.	0.0300	0.0160	1
07046	Barium	7440-39-3	0.0531 J	0.0050	0.0010	1
07047	Beryllium	7440-41-7	N.D.	0.0050	0.0010	1
07049	Cadmium	7440-43-9	N.D.	0.0050	0.0010	1
01750	Calcium	7440-70-2	~~476~~ R	1.00	0.480	5
07051	Chromium	7440-47-3	0.0034 J	0.0150	0.0016	1
07052	Cobalt	7440-48-4	0.0041 J	0.0050	0.0015	1
07053	Copper	7440-50-8	N.D.	0.100	0.0600	5
01754	Iron	7439-89-6	0.317 J	0.200	0.0400	1
07055	Lead	7439-92-1	N.D.	0.0150	0.0071	1
01757	Magnesium	7439-95-4	~~83.0~~ R	0.100	0.0400	1
07058	Manganese	7439-96-5	~~0.284~~ R	0.0100	0.0030	1
07061	Nickel	7440-02-0	0.0419 J	0.0100	0.0021	1
01762	Potassium	7440-09-7	10.3 J	0.500	0.204	1
07036	Selenium	7782-49-2	N.D.	0.0500	0.0160	1
07066	Silver	7440-22-4	N.D.	0.0100	0.0050	1
01767	Sodium	7440-23-5	~~207~~ R	1.00	0.239	1
07022	Thallium[1]	7440-28-0	N.D.	0.0300	0.0081	1
	SW-846 6010D Rev.4, July 2014		**ug/l**	**ug/l**	**ug/l**	
07071	Vanadium	7440-62-2	N.D.	10.0	1.9	1
07072	Zinc	7440-66-6	5.6 J	20.0	3.7	1
	SW-846 6020B Rev.2, July 2014		**ug/l**	**ug/l**	**ug/l**	
06023	Aluminum	7429-90-5	~~624~~ R	25.0	19.7	1
	SW-846 7470A		**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	N.D.	0.00020	0.000050	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals.

[1] = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-17T Filtered Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/30/2019 11:22
Collection Date/Time: 10/29/2019 11:10
SDG#: BMS81-15

ARCADIS U.S., Inc.
ELLE Sample #: GW 1187628
ELLE Group #: 2071744
Matrix: Groundwater

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07044	Antimony	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:37	Patrick J Engle	1
07035	Arsenic	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:37	Patrick J Engle	1
07046	Barium	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:37	Patrick J Engle	1
07047	Beryllium	SW-846 6010D Rev.4, July 2014	1	193041404402	11/05/2019 23:53	Elaine F Stoltzfus	1
07049	Cadmium	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:37	Patrick J Engle	1
01750	Calcium	SW-846 6010D Rev.4, July 2014	1	193041404402	11/05/2019 09:09	Patrick J Engle	5
07051	Chromium	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:37	Patrick J Engle	1
07052	Cobalt	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:37	Patrick J Engle	1
07053	Copper	SW-846 6010D Rev.4, July 2014	1	193041404402	11/05/2019 17:37	Patrick J Engle	5
01754	Iron	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:37	Patrick J Engle	1
07055	Lead	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:37	Patrick J Engle	1
01757	Magnesium	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:37	Patrick J Engle	1
07058	Manganese	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:37	Patrick J Engle	1
07061	Nickel	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:37	Patrick J Engle	1
01762	Potassium	SW-846 6010D Rev.4, July 2014	1	193041404402	11/05/2019 09:01	Patrick J Engle	1
07036	Selenium	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:37	Patrick J Engle	1
07066	Silver	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:37	Patrick J Engle	1
01767	Sodium	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:37	Patrick J Engle	1
07022	Thallium	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:37	Patrick J Engle	1
07071	Vanadium	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:37	Patrick J Engle	1
07072	Zinc	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:37	Patrick J Engle	1
06023	Aluminum	SW-846 6020B Rev.2, July 2014	1	193111404701A	11/08/2019 11:28	Janeyah Rivers-Hamilton	1
00259	Mercury	SW-846 7470A	1	193050571301	11/02/2019 08:06	Damary Valentin	1
14044	ICP-WW, 3005A (tot rec) - U345	SW-846 3005A	1	193041404402	10/31/2019 11:21	James L Mertz	1
14047	ICPMS - Water, 3020A - U345	SW-846 3020A	1	193111404701	11/07/2019 14:15	JoElla L Rice	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	193050571301	11/01/2019 07:30	Annamaria Kuhns	1

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-17WT Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/30/2019 11:22
Collection Date/Time: 10/29/2019 11:48
SDG#: BMS81-16BKG

ARCADIS U.S., Inc.
ELLE Sample #: GW 1187629
ELLE Group #: 2071744
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	2 J	20	0.7	1
11997	Acetonitrile	75-05-8	N.D.	100	16	1
11997	Benzene	71-43-2	N.D.	1	0.2	1
11997	Bromochloromethane	74-97-5	N.D.	5	0.2	1
11997	Bromodichloromethane	75-27-4	N.D.	1	0.2	1
11997	Bromoform	75-25-2	N.D.	4	1	1
11997	Bromomethane	74-83-9	N.D. J	1	0.3	1
11997	n-Butanol	71-36-3	N.D.	250	61	1
11997	2-Butanone	78-93-3	N.D.	10	0.3	1
11997	t-Butyl alcohol	75-65-0	N.D.	50	12	1
11997	n-Butylbenzene	104-51-8	N.D.	5	0.2	1
11997	sec-Butylbenzene	135-98-8	N.D.	5	0.2	1
11997	tert-Butylbenzene	98-06-6	N.D.	5	0.3	1
11997	Carbon Disulfide	75-15-0	N.D.	5	0.2	1
11997	Carbon Tetrachloride	56-23-5	N.D.	1	0.2	1
11997	Chlorobenzene	108-90-7	N.D.	1	0.2	1
11997	Chlorodifluoromethane[1]	75-45-6	N.D.	5	2	1
11997	Chloroethane	75-00-3	N.D.	1	0.2	1
11997	Chloroform	67-66-3	0.4 J	1	0.2	1
11997	Chloromethane	74-87-3	N.D.	1	0.2	1
11997	Cyclohexane	110-82-7	N.D.	5	1	1
11997	Cyclohexanone[1]	108-94-1	N.D.	100	25	1
11997	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	5	0.3	1
11997	Dibromochloromethane	124-48-1	N.D.	1	0.2	1
11997	1,2-Dibromoethane	106-93-4	N.D.	1	0.2	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	5	0.2	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	5	0.2	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	5	0.2	1
11997	Dichlorodifluoromethane	75-71-8	N.D. J	1	0.2	1
11997	1,1-Dichloroethane	75-34-3	N.D.	1	0.2	1
11997	1,2-Dichloroethane	107-06-2	N.D.	1	0.3	1
11997	1,1-Dichloroethene	75-35-4	N.D.	1	0.2	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	1	0.2	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	1	0.2	1
11997	1,2-Dichloropropane	78-87-5	N.D.	1	0.2	1
11997	cis-1,3-Dichloropropene	10061-01-5	N.D.	1	0.2	1
11997	trans-1,3-Dichloropropene	10061-02-6	N.D.	1	0.2	1
11997	1,4-Dioxane	123-91-1	N.D.	250	29	1
11997	Ethyl Acetate	141-78-6	N.D.	5	0.7	1
11997	Ethyl ether	60-29-7	N.D.	5	0.2	1
11997	Ethylbenzene	100-41-4	N.D.	1	0.4	1

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-17WT Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/30/2019 11:22
Collection Date/Time: 10/29/2019 11:48
SDG#: BMS81-16BKG

ARCADIS U.S., Inc.
ELLE Sample #: GW 1187629
ELLE Group #: 2071744
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Freon 113	76-13-1	N.D.	10	0.2	1
11997	n-Heptane[1]	142-82-5	N.D.	5	2	1
11997	n-Hexane[1]	110-54-3	N.D.	5	2	1
11997	2-Hexanone	591-78-6	N.D.	10	0.3	1
11997	Isobutyl Alcohol	78-83-1	N.D.	250	36	1
11997	Isopropylbenzene	98-82-8	N.D.	5	0.2	1
11997	p-Isopropyltoluene	99-87-6	N.D.	5	0.2	1
11997	Methyl Acetate	79-20-9	N.D.	5	0.2	1
11997	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	1	0.2	1
11997	4-Methyl-2-pentanone	108-10-1	N.D.	10	0.5	1
11997	Methylcyclohexane	108-87-2	N.D.	5	0.5	1
11997	Methylene Chloride	75-09-2	N.D.	1	0.3	1
11997	Naphthalene	91-20-3	N.D.	5	1	1
11997	2-Nitropropane	79-46-9	N.D.	10	0.8	1
11997	Styrene	100-42-5	N.D.	5	0.2	1
11997	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	1	0.2	1
11997	Tetrachloroethene	127-18-4	N.D.	1	0.2	1
11997	Tetrahydrofuran	109-99-9	N.D.	10	0.7	1
11997	Toluene	108-88-3	N.D.	1	0.2	1
11997	1,2,3-Trichlorobenzene	87-61-6	N.D.	5	0.4	1
11997	1,2,4-Trichlorobenzene	120-82-1	N.D.	5	0.3	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	1	0.3	1
11997	1,1,2-Trichloroethane	79-00-5	N.D.	1	0.2	1
11997	Trichloroethene	79-01-6	N.D.	1	0.2	1
11997	Trichlorofluoromethane	75-69-4	N.D.	1	0.2	1
11997	1,2,4-Trimethylbenzene	95-63-6	N.D.	5	1	1
11997	1,3,5-Trimethylbenzene	108-67-8	N.D.	5	0.3	1
11997	Vinyl Chloride	75-01-4	N.D.	1	0.2	1
11997	m+p-Xylene	179601-23-1	N.D.	5	1	1
11997	o-Xylene	95-47-6	N.D.	1	0.4	1
11997	Xylene (Total)	1330-20-7	N.D.	6	1	1

Project defined calibration criteria are not met. The calibration is compliant with the method defined criteria.

A Report Limit Verification (RLV) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The RLV standard shows adequate sensitivity at or below the reporting limit.

00882 VOA Interp. Library Search-10

The results from the volatile library search are listed on the attached FORM 1 - VOA-TIC. The qualifiers appearing in the "Q" column are defined at the end of the report.

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-17WT Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/30/2019 11:22
Collection Date/Time: 10/29/2019 11:48
SDG#: BMS81-16BKG

ARCADIS U.S., Inc.
ELLE Sample #: GW 1187629
ELLE Group #: 2071744
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	Acenaphthene	83-32-9	N.D.	0.51	0.10	1
14241	Acenaphthylene	208-96-8	N.D.	0.51	0.10	1
14241	Acetophenone	98-86-2	N.D.	10	4.1	1
14241	Aniline	62-53-3	N.D.	10	3.1	1
14241	Anthracene	120-12-7	N.D.	0.51	0.10	1
14241	Atrazine	1912-24-9	N.D.	5.1	2.0	1
14241	Benzaldehyde	100-52-7	N.D.	10	3.1	1
14241	Benzo(a)anthracene	56-55-3	N.D.	0.51	0.10	1
14241	Benzo(a)pyrene	50-32-8	N.D. J	0.51	0.10	1
14241	Benzo(b)fluoranthene	205-99-2	N.D. J	0.51	0.10	1
14241	Benzo(g,h,i)perylene	191-24-2	N.D.	0.51	0.10	1
14241	Benzo(k)fluoranthene	207-08-9	N.D. J	0.51	0.10	1
14241	Benzyl alcohol	100-51-6	N.D.	31	10	1
14241	1,1'-Biphenyl	92-52-4	N.D.	10	3.1	1
14241	4-Bromophenyl-phenylether	101-55-3	N.D.	2.0	0.51	1
14241	Butylbenzylphthalate	85-68-7	N.D.	5.1	2.0	1
14241	Di-n-butylphthalate	84-74-2	N.D.	5.1	2.0	1
14241	Caprolactam	105-60-2	N.D.	11	5.1	1
14241	Carbazole	86-74-8	N.D.	2.0	0.51	1
14241	4-Chloro-3-methylphenol	59-50-7	~~N.D.~~ R	2.0	0.51	1
14241	4-Chloroaniline	106-47-8	N.D.	10	4.1	1
14241	bis(2-Chloroethoxy)methane	111-91-1	N.D.	2.0	0.51	1
14241	bis(2-Chloroethyl)ether	111-44-4	N.D.	2.0	0.51	1
14241	bis(2-Chloroisopropyl)ether[1]	39638-32-9	N.D.	2.0	0.51	1
	Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.					
14241	2-Chloronaphthalene	91-58-7	N.D.	1.0	0.41	1
14241	2-Chlorophenol	95-57-8	~~N.D.~~ R	2.0	0.51	1
14241	4-Chlorophenyl-phenylether	7005-72-3	N.D.	2.0	0.51	1
14241	Chrysene	218-01-9	N.D.	0.51	0.10	1
14241	Dibenz(a,h)anthracene	53-70-3	N.D.	0.51	0.10	1
14241	Dibenzofuran	132-64-9	N.D.	2.0	0.51	1
14241	3,3'-Dichlorobenzidine	91-94-1	N.D.	10	3.1	1
14241	2,4-Dichlorophenol	120-83-2	~~N.D.~~ R	2.0	0.51	1
14241	Dicyclohexylamine[1]	101-83-7	N.D.	10	10	1
14241	Diethylphthalate	84-66-2	N.D.	5.1	2.0	1
14241	N,N-Dimethylaniline[1]	121-69-7	N.D.	1.0	0.51	1
14241	2,4-Dimethylphenol	105-67-9	~~N.D.~~ R	10	3.1	1
14241	Dimethylphthalate	131-11-3	N.D. J	5.1	2.0	1
14241	4,6-Dinitro-2-methylphenol	534-52-1	~~N.D.~~ R	21	8.2	1

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-17WT Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/30/2019 11:22
Collection Date/Time: 10/29/2019 11:48
SDG#: BMS81-16BKG

ARCADIS U.S., Inc.
ELLE Sample #: GW 1187629
ELLE Group #: 2071744
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	2,4-Dinitrophenol	51-28-5	~~N.D.~~ R	31	14	1
14241	2,4-Dinitrotoluene	121-14-2	N.D.	5.1	1.0	1
14241	2,6-Dinitrotoluene	606-20-2	N.D.	2.0	0.51	1
14241	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	11	5.1	1
14241	Fluoranthene	206-44-0	N.D.	0.51	0.10	1
14241	Fluorene	86-73-7	N.D.	0.51	0.10	1
14241	Hexachlorobenzene	118-74-1	N.D.	0.51	0.10	1
14241	Hexachlorobutadiene	87-68-3	N.D.	2.0	0.51	1
14241	Hexachlorocyclopentadiene	77-47-4	N.D.	11	5.1	1
14241	Hexachloroethane	67-72-1	N.D.	5.1	1.0	1
14241	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.51	0.10	1
14241	Isophorone	78-59-1	N.D.	2.0	0.51	1
14241	2-Methylnaphthalene	91-57-6	N.D.	0.51	0.10	1
14241	2-Methylphenol	95-48-7	~~N.D.~~ R	2.0	0.51	1
14241	4-Methylphenol	65794-96-9	~~N.D.~~ R	2.0	0.51	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
14241	Naphthalene	91-20-3	N.D.	0.51	0.10	1
14241	2-Nitroaniline	88-74-4	N.D.	7.1	2.0	1
14241	3-Nitroaniline	99-09-2	N.D.	7.1	3.1	1
14241	4-Nitroaniline	100-01-6	N.D.	3.1	0.92	1
14241	Nitrobenzene	98-95-3	N.D.	2.0	0.51	1
14241	2-Nitrophenol	88-75-5	~~N.D.~~ R	10	3.1	1
14241	4-Nitrophenol	100-02-7	~~N.D.~~ R	31	10	1
14241	N-Nitroso-di-n-propylamine	621-64-7	N.D.	3.1	0.71	1
14241	N-Nitrosodiphenylamine	86-30-6	N.D.	3.1	0.71	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.					
14241	Di-n-octylphthalate	117-84-0	N.D.	11	5.1	1
14241	Pentachlorophenol	87-86-5	~~N.D.~~ R	5.1	1.0	1
14241	Phenanthrene	85-01-8	N.D.	0.51	0.10	1
14241	Phenol	108-95-2	~~N.D.~~ R	2.0	0.51	1
14241	Pyrene	129-00-0	N.D.	0.51	0.10	1
14241	Pyridine	110-86-1	N.D.	5.1	2.0	1
14241	1,2,4,5-Tetrachlorobenzene	95-94-3	N.D.	2.0	0.51	1
14241	2,3,4,6-Tetrachlorophenol	58-90-2	~~N.D.~~ R	10	4.1	1
14241	2,4,5-Trichlorophenol	95-95-4	~~N.D.~~ R	2.0	0.51	1
14241	2,4,6-Trichlorophenol	88-06-2	~~N.D.~~ R	2.0	0.51	1
14241	Triethylamine[1]	121-44-8	N.D. J	10	10	1

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-17WT Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/30/2019 11:22
Collection Date/Time: 10/29/2019 11:48
SDG#: BMS81-16BKG

ARCADIS U.S., Inc.
ELLE Sample #: GW 1187629
ELLE Group #: 2071744
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result		Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D SIM**		**ug/l**		**ug/l**	**ug/l**	
14244	1,4-Dioxane	123-91-1	N.D.	J	0.3	0.1	1

In the first extraction, the recovery for the sample surrogate(s) is outside the QC acceptance limits. The sample was re-extracted within the method required holding time and the surrogates are compliant.

The recovery for a target analyte(s) in the Laboratory Control Spike(s) from the second extraction is outside the QC acceptance limits as noted on the QC Summary. The recoveries for the target analytes in the Laboratory Control Spike(s) from the first extraction are compliant. All data is reported from the second extraction.

00886 SVOA TIC Interpretive(25)

The results from the semivolatile library search are listed on the attached FORM 1 - SV-TIC. The qualifiers appearing in the "Q" column are defined at the end of the report.

Aldehydes & Ketones	**SW-846 8315A**		**ug/l**		**ug/l**	**ug/l**	
13022	Acetaldehyde[1]	75-07-0	N.D.		60	35	1
13022	Formaldehyde	50-00-0	42	J	50	20	1

The response for a target analyte(s) in the initial calibration verification standard is outside the QC acceptance limits.

GC Miscellaneous	**SW-846 8015D Rev.4, June 2003**		**ug/l**		**ug/l**	**ug/l**	
10603	Ethanol	64-17-5	N.D.	D2	1,000	150	1
12926	Ethylene glycol[1]	107-21-1	~~N.D.~~	R	10,000	5,000	1
10603	Isopropanol[1]	67-63-0	N.D.	D2	1,000	110	1
10603	Methanol	67-56-1	N.D.	D2	1,000	220	1
12926	Propylene glycol[1]	57-55-6	~~N.D.~~	R	10,000	2,000	1

The response for a target analyte(s) in the continuing calibration verification standard is outside the QC acceptance limits low. The following action was taken:
The analysis was repeated and the continuing calibration verification standard bracketing the sample on the second trial is also outside the acceptance limits. This effect is attributed to the sample matrix and the data is reported.

LC/MS/MS Miscellaneous	**EPA 537 mod QSM 5.1 table B-15**		**ng/l**		**ng/l**	**ng/l**	
14434	6:2-Fluorotelomersulfonic acid[1]	27619-97-2	N.D.		4.2	1.7	1
14434	8:2-Fluorotelomersulfonic acid[1]	39108-34-4	N.D.		2.5	0.85	1
14434	NEtFOSAA[1]	2991-50-6	N.D.		2.5	0.42	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.						
14434	NMeFOSAA[1]	2355-31-9	N.D.		1.7	0.51	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.						
14434	Perfluorobutanesulfonic acid[1]	375-73-5	N.D.		1.7	0.42	1

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-17WT Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/30/2019 11:22
Collection Date/Time: 10/29/2019 11:48
SDG#: BMS81-16BKG

ARCADIS U.S., Inc.
ELLE Sample #: GW 1187629
ELLE Group #: 2071744
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
LC/MS/MS Miscellaneous	**EPA 537 mod QSM 5.1 table B-15**		**ng/l**	**ng/l**	**ng/l**	
14434	Perfluorobutanoic acid[1]	375-22-4	9.5	4.2	1.7	1
14434	Perfluorodecanesulfonic acid[1]	335-77-3	N.D.	1.7	0.42	1
14434	Perfluorodecanoic acid[1]	335-76-2	N.D.	1.7	0.42	1
14434	Perfluorododecanoic acid[1]	307-55-1	N.D.	1.7	0.42	1
14434	Perfluoroheptanesulfonic acid[1]	375-92-8	N.D.	1.7	0.42	1
14434	Perfluoroheptanoic acid[1]	375-85-9	0.57 J	1.7	0.42	1
14434	Perfluorohexanesulfonic acid[1]	355-46-4	N.D.	1.7	0.42	1
14434	Perfluorohexanoic acid[1]	307-24-4	1.5 J	1.7	0.42	1
14434	Perfluorononanoic acid[1]	375-95-1	N.D.	1.7	0.42	1
14434	Perfluorooctanesulfonamide[1]	754-91-6	N.D.	1.7	0.42	1
14434	Perfluorooctanesulfonic acid[1]	1763-23-1	N.D.	1.7	0.42	1
14434	Perfluorooctanoic acid[1]	335-67-1	N.D.	1.7	0.42	1
14434	Perfluoropentanoic acid[1]	2706-90-3	2.3	1.7	0.42	1
14434	Perfluorotetradecanoic acid[1]	376-06-7	N.D.	1.7	0.42	1
14434	Perfluorotridecanoic acid[1]	72629-94-8	N.D.	1.7	0.42	1
14434	Perfluoroundecanoic acid[1]	2058-94-8	N.D.	1.7	0.42	1
Metals	**SW-846 6010D Rev.4, July 2014**		**mg/l**	**mg/l**	**mg/l**	
07044	Antimony	7440-36-0	N.D.	0.0500	0.0160	1
07035	Arsenic	7440-38-2	N.D.	0.0300	0.0160	1
07046	Barium	7440-39-3	0.245	0.0050	0.0010	1
07047	Beryllium	7440-41-7	N.D.	0.0050	0.0010	1
07049	Cadmium	7440-43-9	N.D.	0.0050	0.0010	1
01750	Calcium	7440-70-2	280 J	0.200	0.0960	1
07051	Chromium	7440-47-3	0.0258 J	0.0150	0.0016	1
07052	Cobalt	7440-48-4	0.0159 J	0.0050	0.0015	1
07053	Copper	7440-50-8	0.0513 J	0.0200	0.0120	1
01754	Iron	7439-89-6	9.06 J	0.200	0.0400	1
07055	Lead	7439-92-1	0.0126 J	0.0150	0.0071	1
01757	Magnesium	7439-95-4	158 J	0.100	0.0400	1
07058	Manganese	7439-96-5	2.76 J	0.0100	0.0030	1
07061	Nickel	7440-02-0	0.0526 J	0.0100	0.0021	1
01762	Potassium	7440-09-7	6.09 J	0.500	0.204	1
07036	Selenium	7782-49-2	N.D.	0.0500	0.0160	1
07066	Silver	7440-22-4	N.D.	0.0100	0.0050	1
01767	Sodium	7440-23-5	175 J	1.00	0.239	1
07022	Thallium[1]	7440-28-0	N.D.	0.0300	0.0081	1
	SW-846 6010D Rev.4, July 2014		**ug/l**	**ug/l**	**ug/l**	

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-17WT Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/30/2019 11:22
Collection Date/Time: 10/29/2019 11:48
SDG#: BMS81-16BKG

ARCADIS U.S., Inc.
ELLE Sample #: GW 1187629
ELLE Group #: 2071744
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
Metals	**SW-846 6010D Rev.4, July 2014**		**ug/l**	**ug/l**	**ug/l**	
07071	Vanadium	7440-62-2	9.5 J	10.0	1.9	1
07072	Zinc	7440-66-6	35.5	20.0	3.7	1
	SW-846 6020B Rev.2, July 2014		**ug/l**	**ug/l**	**ug/l**	
06023	Aluminum	7429-90-5	52,300 J	50.0	39.4	2
	SW-846 7470A		**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	N.D. J	0.00020	0.000050	1
Wet Chemistry	**EPA 300.0**		**ug/l**	**ug/l**	**ug/l**	
00224	Chloride	16887-00-6	556,000	80,000	40,000	200
01504	Fluoride	16984-48-8	N.D.	500	250	5
00228	Sulfate	14808-79-8	243,000	200,000	60,000	200
	EPA 353.2		**mg/l**	**mg/l**	**mg/l**	
00220	Nitrate Nitrogen	14797-55-8	N.D. J	0.10	0.040	1
00219	Nitrite Nitrogen	14797-65-0	0.038 J	0.050	0.015	1
	The holding time was not met.					
	SM 5310 C-2011		**ug/l**	**ug/l**	**ug/l**	
00273	Total Organic Carbon	n.a.	15,000	1,000	500	1
	SM 2320 B-2011		**mg/l as CaCO3**	**mg/l as CaCO3**	**mg/l as CaCO3**	
12150	Total Alkalinity to pH 4.5	n.a.	297 J	8.0	2.6	1
	SM 5210 B-2011		**ug/l**	**ug/l**	**ug/l**	
14108	Biochemical Oxygen Demand-BOD	n.a.	6,210 J	2,000	2,000	1

Sample Comments

State of New York Certification No. 10670

[1] = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	Y193091AA	11/05/2019 16:26	Corie Mellinger	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	Y193091AA	11/05/2019 16:25	Corie Mellinger	1
14241	Semi-annual Groundwater BMS	SW-846 8270D	1	19303WAN026	11/06/2019 15:56	Kira N Beck	1

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-17WT Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/30/2019 11:22
Collection Date/Time: 10/29/2019 11:48
SDG#: BMS81-16BKG

ARCADIS U.S., Inc.
ELLE Sample #: GW 1187629
ELLE Group #: 2071744
Matrix: Groundwater

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14244	SIM SVOAs 8270D MINI	SW-846 8270D SIM	1	19308WAC026	11/06/2019 13:42	Kira N Beck	1
10466	BNA Water Extraction SIM	SW-846 3510C	2	19308WAC026	11/04/2019 17:30	Laura Duquette	1
11010	8270D BNA Extraction	SW-846 3510C	1	19303WAN026	10/31/2019 09:30	Joshua S Ruth	1
13022	Short List Aldehydes- W 8315A	SW-846 8315A	1	193030019A	10/31/2019 19:19	Jessica L Miller	1
01013	Formaldehyde Extraction	SW-846 8315A	1	193030019A	10/31/2019 09:23	Alison Moll	1
10603	Alcohols in Water	SW-846 8015D Rev.4, June 2003	1	193080007A	11/04/2019 13:36	Johanna C Kennedy	1
12926	Glycols in Water by 8015C/D	SW-846 8015D Rev.4, June 2003	1	193040002A	11/01/2019 11:43	Donald Brown	1
14434	PFAS in Water by LC/MS/MS-DoD	EPA 537 mod QSM 5.1 table B-15	1	19304003	11/01/2019 16:15	Devon M Whooley	1
14465	PFAS Water Prep - DoD	EPA 537 mod QSM 5.1 table B-15	1	19304003	10/31/2019 07:00	Toby Barnhart	1
07044	Antimony	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 15:35	Patrick J Engle	1
07035	Arsenic	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 15:35	Patrick J Engle	1
07046	Barium	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 15:35	Patrick J Engle	1
07047	Beryllium	SW-846 6010D Rev.4, July 2014	1	193041404403	11/05/2019 19:32	Cindy M Gehman	1
07049	Cadmium	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 15:35	Patrick J Engle	1
01750	Calcium	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 15:35	Patrick J Engle	1
07051	Chromium	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 15:35	Patrick J Engle	1
07052	Cobalt	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 15:35	Patrick J Engle	1
07053	Copper	SW-846 6010D Rev.4, July 2014	1	193041404403	11/05/2019 13:38	Patrick J Engle	1
01754	Iron	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 15:35	Patrick J Engle	1
07055	Lead	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 15:35	Patrick J Engle	1
01757	Magnesium	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 15:35	Patrick J Engle	1
07058	Manganese	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 15:35	Patrick J Engle	1
07061	Nickel	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 15:35	Patrick J Engle	1
01762	Potassium	SW-846 6010D Rev.4, July 2014	1	193041404403	11/05/2019 09:39	Patrick J Engle	1
07036	Selenium	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 15:35	Patrick J Engle	1
07066	Silver	SW-846 6010D Rev.4, July 2014	1	193041404403	11/05/2019 19:32	Cindy M Gehman	1
01767	Sodium	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 15:35	Patrick J Engle	1

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-17WT Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/30/2019 11:22
Collection Date/Time: 10/29/2019 11:48
SDG#: BMS81-16BKG

ARCADIS U.S., Inc.
ELLE Sample #: GW 1187629
ELLE Group #: 2071744
Matrix: Groundwater

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07022	Thallium	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 15:35	Patrick J Engle	1
07071	Vanadium	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 15:35	Patrick J Engle	1
07072	Zinc	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 15:35	Patrick J Engle	1
06023	Aluminum	SW-846 6020B Rev.2, July 2014	1	193111404701A	11/08/2019 14:40	Janeyah Rivers-Hamilton	2
00259	Mercury	SW-846 7470A	1	193040571302	11/01/2019 07:42	Damary Valentin	1
14044	ICP-WW, 3005A (tot rec) - U345	SW-846 3005A	1	193041404403	10/31/2019 11:21	James L Mertz	1
14047	ICPMS - Water, 3020A - U345	SW-846 3020A	1	193111404701	11/07/2019 14:15	JoElla L Rice	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	193040571302	10/31/2019 15:15	JoElla L Rice	1
00224	Chloride	EPA 300.0	2	19304135213B	11/01/2019 02:19	Kevin Litwa	200
01504	Fluoride	EPA 300.0	2	19304135213B	11/01/2019 02:04	Kevin Litwa	5
00228	Sulfate	EPA 300.0	2	19304135213B	11/01/2019 02:19	Kevin Litwa	200
00220	Nitrate Nitrogen	EPA 353.2	1	19308106102A	11/04/2019 11:55	Ashlynn M Cornelius	1
00219	Nitrite Nitrogen	EPA 353.2	1	19304105102A	10/31/2019 12:46	Bethany Sandone	1
00273	Total Organic Carbon	SM 5310 C-2011	1	19309304504A	11/05/2019 20:02	Bethany Sandone	1
12150	Total Alkalinity to pH 4.5	SM 2320 B-2011	1	19304002103A	10/31/2019 22:39	Jeremy L Bolf	1
14108	Biochemical Oxygen Demand-BOD	SM 5210 B-2011	1	19304141081A	10/31/2019 10:50	Benjamin M Morrison	1

*=This limit was used in the evaluation of the final result

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
S8116

Lab Name: Lancaster Laboratories Contract:_____
Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____
Matrix: (soil/water) WATER Lab Sample ID: 1187629
Sample wt/vol: 5.0 (g/mL)mL Lab File ID:HP09355.i/19nov05a.b/yn05s06.d
Level: (low/med) LOW Date Received: 10/30/19
% Moisture: not dec. Date Analyzed: 11/05/19
Column: (pack/cap) CAP Dilution Factor: 1.0
CONCENTRATION UNITS:
Number TICs found: 0 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	VOCTIC	Total VOC TICs		0	U
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
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29.					
30.					

page 1 of 1

FORM I VOA-TIC

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
S8116

Lab Name: Lancaster Laboratories Contract:
Lab Code: LANCAS Case No.: SAS No.: SDG No.:
Matrix: (soil/water) WATER Lab Sample ID: 1187629
Sample wt/vol: 245 (g/mL) mL Lab File ID: lk0183.d
Level: (low/med) LOW Date Received: 10/30/19
% Moisture: Decanted: (Y/N) Date Extracted: 10/31/19
Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/06/19
Injection Volume: 1 (uL) Dilution Factor: 1
GPC Cleanup: N pH: Extraction: Sepf
CONCENTRATION UNITS:
Number TICs found: 11 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		Unknown	2.068	17	J N
2.		Unknown	5.770	24	J
3.	556-67-2	Cyclotetrasiloxane, octameth	6.513	9	J
4.		Unknown	6.588	7	J
5.		Unknown	6.620	48	J
6.		Unknown	8.278	5	J
7.		Unknown	8.353	10	J
8.	1526-17-6	2-Fluoro-6-nitrophenol	8.540	4	J
9.		Unknown	8.893	5	J
10.		Unknown	11.241	4	J
11.		Unknown	12.001	6	J
12.					
13.	SVOCTIC	Total SVOC TICs		140	J
14.					
15.					
16.					
17.					
18.					
19.					
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22.					
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25.					
26.					
27.					
28.					
29.					
30.					

page 1 of 1

FORM I SV-1

Sample Description: **BDA-17WT Filtered Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/30/2019 11:22
Collection Date/Time: 10/29/2019 11:48
SDG#: BMS81-17BKG

ARCADIS U.S., Inc.
ELLE Sample #: GW 1187633
ELLE Group #: 2071744
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
Metals Dissolved	**SW-846 6010D Rev.4, July 2014**		**mg/l**	**mg/l**	**mg/l**	
07044	Antimony	7440-36-0	N.D.	0.0500	0.0160	1
07035	Arsenic	7440-38-2	N.D.	0.0300	0.0160	1
07046	Barium	7440-39-3	0.198	0.0050	0.0010	1
07047	Beryllium	7440-41-7	N.D.	0.0050	0.0010	1
07049	Cadmium	7440-43-9	N.D.	0.0050	0.0010	1
01750	Calcium	7440-70-2	158	0.200	0.0960	1
07051	Chromium	7440-47-3	0.0032 J	0.0150	0.0016	1
07052	Cobalt	7440-48-4	0.0044 J	0.0050	0.0015	1
07053	Copper	7440-50-8	N.D.	0.0200	0.0120	1
01754	Iron	7439-89-6	1.07 J	0.200	0.0400	1
07055	Lead	7439-92-1	N.D.	0.0150	0.0071	1
01757	Magnesium	7439-95-4	122	0.100	0.0400	1
07058	Manganese	7439-96-5	1.45	0.0100	0.0030	1
07061	Nickel	7440-02-0	0.0227	0.0100	0.0021	1
01762	Potassium	7440-09-7	5.74	0.500	0.204	1
07036	Selenium	7782-49-2	N.D.	0.0500	0.0160	1
07066	Silver	7440-22-4	N.D.	0.0100	0.0050	1
01767	Sodium	7440-23-5	176	1.00	0.239	1
07022	Thallium[1]	7440-28-0	N.D.	0.0300	0.0081	1
	SW-846 6010D Rev.4, July 2014		**ug/l**	**ug/l**	**ug/l**	
07071	Vanadium	7440-62-2	N.D.	10.0	1.9	1
07072	Zinc	7440-66-6	5.4 J	20.0	3.7	1
	SW-846 6020B Rev.2, July 2014		**ug/l**	**ug/l**	**ug/l**	
06023	Aluminum	7429-90-5	906	25.0	19.7	1
	SW-846 7470A		**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	N.D.	0.00020	0.000050	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals.

[1] = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-17WT Filtered Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/30/2019 11:22
Collection Date/Time: 10/29/2019 11:48
SDG#: BMS81-17BKG

ARCADIS U.S., Inc.
ELLE Sample #: GW 1187633
ELLE Group #: 2071744
Matrix: Groundwater

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07044	Antimony	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:04	Patrick J Engle	1
07035	Arsenic	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:04	Patrick J Engle	1
07046	Barium	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:04	Patrick J Engle	1
07047	Beryllium	SW-846 6010D Rev.4, July 2014	1	193041404402	11/05/2019 23:21	Elaine F Stoltzfus	1
07049	Cadmium	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:04	Patrick J Engle	1
01750	Calcium	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:04	Patrick J Engle	1
07051	Chromium	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:04	Patrick J Engle	1
07052	Cobalt	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:04	Patrick J Engle	1
07053	Copper	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:04	Patrick J Engle	1
01754	Iron	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:04	Patrick J Engle	1
07055	Lead	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:04	Patrick J Engle	1
01757	Magnesium	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:04	Patrick J Engle	1
07058	Manganese	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:04	Patrick J Engle	1
07061	Nickel	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:04	Patrick J Engle	1
01762	Potassium	SW-846 6010D Rev.4, July 2014	1	193041404402	11/05/2019 08:21	Patrick J Engle	1
07036	Selenium	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:04	Patrick J Engle	1
07066	Silver	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:04	Patrick J Engle	1
01767	Sodium	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:04	Patrick J Engle	1
07022	Thallium	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:04	Patrick J Engle	1
07071	Vanadium	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:04	Patrick J Engle	1
07072	Zinc	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:04	Patrick J Engle	1
06023	Aluminum	SW-846 6020B Rev.2, July 2014	1	193111404702A	11/08/2019 09:10	Choon Y Tian	1
00259	Mercury	SW-846 7470A	1	193050571301	11/02/2019 07:58	Damary Valentin	1
14044	ICP-WW, 3005A (tot rec) - U345	SW-846 3005A	1	193041404402	10/31/2019 11:21	James L Mertz	1
14047	ICPMS - Water, 3020A - U345	SW-846 3020A	1	193111404702	11/07/2019 14:15	JoElla L Rice	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	193050571301	11/01/2019 07:30	Annamaria Kuhns	1

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-17WR Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/30/2019 11:22
Collection Date/Time: 10/29/2019 15:40
SDG#: BMS81-18

ARCADIS U.S., Inc.
ELLE Sample #: GW 1187637
ELLE Group #: 2071744
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	4 J	20	0.7	1
11997	Acetonitrile	75-05-8	N.D.	100	16	1
11997	Benzene	71-43-2	N.D.	1	0.2	1
11997	Bromochloromethane	74-97-5	N.D.	5	0.2	1
11997	Bromodichloromethane	75-27-4	N.D.	1	0.2	1
11997	Bromoform	75-25-2	N.D.	4	1	1
11997	Bromomethane	74-83-9	N.D. J	1	0.3	1
11997	n-Butanol	71-36-3	N.D.	250	61	1
11997	2-Butanone	78-93-3	0.7 J	10	0.3	1
11997	t-Butyl alcohol	75-65-0	N.D.	50	12	1
11997	n-Butylbenzene	104-51-8	N.D.	5	0.2	1
11997	sec-Butylbenzene	135-98-8	N.D.	5	0.2	1
11997	tert-Butylbenzene	98-06-6	N.D.	5	0.3	1
11997	Carbon Disulfide	75-15-0	N.D.	5	0.2	1
11997	Carbon Tetrachloride	56-23-5	N.D.	1	0.2	1
11997	Chlorobenzene	108-90-7	N.D.	1	0.2	1
11997	Chlorodifluoromethane[1]	75-45-6	N.D.	5	2	1
11997	Chloroethane	75-00-3	N.D.	1	0.2	1
11997	Chloroform	67-66-3	0.3 J	1	0.2	1
11997	Chloromethane	74-87-3	N.D.	1	0.2	1
11997	Cyclohexane	110-82-7	N.D.	5	1	1
11997	Cyclohexanone[1]	108-94-1	N.D.	100	25	1
11997	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	5	0.3	1
11997	Dibromochloromethane	124-48-1	N.D.	1	0.2	1
11997	1,2-Dibromoethane	106-93-4	N.D.	1	0.2	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	5	0.2	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	5	0.2	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	5	0.2	1
11997	Dichlorodifluoromethane	75-71-8	N.D. J	1	0.2	1
11997	1,1-Dichloroethane	75-34-3	N.D.	1	0.2	1
11997	1,2-Dichloroethane	107-06-2	N.D.	1	0.3	1
11997	1,1-Dichloroethene	75-35-4	N.D.	1	0.2	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	1	0.2	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	1	0.2	1
11997	1,2-Dichloropropane	78-87-5	N.D.	1	0.2	1
11997	cis-1,3-Dichloropropene	10061-01-5	N.D.	1	0.2	1
11997	trans-1,3-Dichloropropene	10061-02-6	N.D.	1	0.2	1
11997	1,4-Dioxane	123-91-1	N.D.	250	29	1
11997	Ethyl Acetate	141-78-6	N.D.	5	0.7	1
11997	Ethyl ether	60-29-7	N.D.	5	0.2	1
11997	Ethylbenzene	100-41-4	N.D.	1	0.4	1

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-17WR Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/30/2019 11:22
Collection Date/Time: 10/29/2019 15:40
SDG#: BMS81-18

ARCADIS U.S., Inc.
ELLE Sample #: GW 1187637
ELLE Group #: 2071744
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Freon 113	76-13-1	N.D.	10	0.2	1
11997	n-Heptane[1]	142-82-5	N.D.	5	2	1
11997	n-Hexane[1]	110-54-3	N.D.	5	2	1
11997	2-Hexanone	591-78-6	N.D.	10	0.3	1
11997	Isobutyl Alcohol	78-83-1	N.D.	250	36	1
11997	Isopropylbenzene	98-82-8	N.D.	5	0.2	1
11997	p-Isopropyltoluene	99-87-6	N.D.	5	0.2	1
11997	Methyl Acetate	79-20-9	N.D.	5	0.2	1
11997	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	1	0.2	1
11997	4-Methyl-2-pentanone	108-10-1	N.D.	10	0.5	1
11997	Methylcyclohexane	108-87-2	N.D.	5	0.5	1
11997	Methylene Chloride	75-09-2	N.D.	1	0.3	1
11997	Naphthalene	91-20-3	N.D.	5	1	1
11997	2-Nitropropane	79-46-9	N.D.	10	0.8	1
11997	Styrene	100-42-5	N.D.	5	0.2	1
11997	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	1	0.2	1
11997	Tetrachloroethene	127-18-4	N.D.	1	0.2	1
11997	Tetrahydrofuran	109-99-9	N.D.	10	0.7	1
11997	Toluene	108-88-3	N.D.	1	0.2	1
11997	1,2,3-Trichlorobenzene	87-61-6	N.D.	5	0.4	1
11997	1,2,4-Trichlorobenzene	120-82-1	N.D.	5	0.3	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	1	0.3	1
11997	1,1,2-Trichloroethane	79-00-5	N.D.	1	0.2	1
11997	Trichloroethene	79-01-6	N.D.	1	0.2	1
11997	Trichlorofluoromethane	75-69-4	N.D.	1	0.2	1
11997	1,2,4-Trimethylbenzene	95-63-6	N.D.	5	1	1
11997	1,3,5-Trimethylbenzene	108-67-8	N.D.	5	0.3	1
11997	Vinyl Chloride	75-01-4	N.D.	1	0.2	1
11997	m+p-Xylene	179601-23-1	N.D.	5	1	1
11997	o-Xylene	95-47-6	N.D.	1	0.4	1
11997	Xylene (Total)	1330-20-7	N.D.	6	1	1

Project defined calibration criteria are not met. The calibration is compliant with the method defined criteria.

A Report Limit Verification (RLV) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The RLV standard shows adequate sensitivity at or below the reporting limit.

00882 VOA Interp. Library Search-10

The results from the volatile library search are listed on the attached FORM 1 - VOA-TIC. The qualifiers appearing in the "Q" column are defined at the end of the report.

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-17WR Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/30/2019 11:22
Collection Date/Time: 10/29/2019 15:40
SDG#: BMS81-18

ARCADIS U.S., Inc.
ELLE Sample #: GW 1187637
ELLE Group #: 2071744
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	Acenaphthene	83-32-9	N.D.	0.50	0.10	1
14241	Acenaphthylene	208-96-8	N.D.	0.50	0.10	1
14241	Acetophenone	98-86-2	N.D.	10	4.0	1
14241	Aniline	62-53-3	N.D.	10	3.0	1
14241	Anthracene	120-12-7	N.D.	0.50	0.10	1
14241	Atrazine	1912-24-9	N.D.	5.0	2.0	1
14241	Benzaldehyde	100-52-7	N.D.	10	3.0	1
14241	Benzo(a)anthracene	56-55-3	N.D.	0.50	0.10	1
14241	Benzo(a)pyrene	50-32-8	N.D.	0.50	0.10	1
14241	Benzo(b)fluoranthene	205-99-2	N.D.	0.50	0.10	1
14241	Benzo(g,h,i)perylene	191-24-2	N.D.	0.50	0.10	1
14241	Benzo(k)fluoranthene	207-08-9	N.D.	0.50	0.10	1
14241	Benzyl alcohol	100-51-6	N.D.	30	10	1
14241	1,1'-Biphenyl	92-52-4	N.D.	10	3.0	1
14241	4-Bromophenyl-phenylether	101-55-3	N.D.	2.0	0.50	1
14241	Butylbenzylphthalate	85-68-7	N.D.	5.0	2.0	1
14241	Di-n-butylphthalate	84-74-2	N.D.	5.0	2.0	1
14241	Caprolactam	105-60-2	N.D.	11	5.0	1
14241	Carbazole	86-74-8	N.D.	2.0	0.50	1
14241	4-Chloro-3-methylphenol	59-50-7	N.D.	2.0	0.50	1
14241	4-Chloroaniline	106-47-8	N.D.	10	4.0	1
14241	bis(2-Chloroethoxy)methane	111-91-1	N.D.	2.0	0.50	1
14241	bis(2-Chloroethyl)ether	111-44-4	N.D.	2.0	0.50	1
14241	bis(2-Chloroisopropyl)ether[1]	39638-32-9	N.D.	2.0	0.50	1
	Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.					
14241	2-Chloronaphthalene	91-58-7	N.D.	1.0	0.40	1
14241	2-Chlorophenol	95-57-8	N.D.	2.0	0.50	1
14241	4-Chlorophenyl-phenylether	7005-72-3	N.D.	2.0	0.50	1
14241	Chrysene	218-01-9	N.D.	0.50	0.10	1
14241	Dibenz(a,h)anthracene	53-70-3	N.D.	0.50	0.10	1
14241	Dibenzofuran	132-64-9	N.D.	2.0	0.50	1
14241	3,3'-Dichlorobenzidine	91-94-1	N.D.	10	3.0	1
14241	2,4-Dichlorophenol	120-83-2	N.D.	2.0	0.50	1
14241	Dicyclohexylamine[1]	101-83-7	N.D.	10	10	1
14241	Diethylphthalate	84-66-2	N.D.	5.0	2.0	1
14241	N,N-Dimethylaniline[1]	121-69-7	N.D.	1.0	0.50	1
14241	2,4-Dimethylphenol	105-67-9	N.D.	10	3.0	1
14241	Dimethylphthalate	131-11-3	N.D.	5.0	2.0	1
14241	4,6-Dinitro-2-methylphenol	534-52-1	N.D.	21	8.0	1

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-17WR Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/30/2019 11:22
Collection Date/Time: 10/29/2019 15:40
SDG#: BMS81-18

ARCADIS U.S., Inc.
ELLE Sample #: GW 1187637
ELLE Group #: 2071744
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	2,4-Dinitrophenol	51-28-5	N.D.	30	14	1
14241	2,4-Dinitrotoluene	121-14-2	N.D.	5.0	1.0	1
14241	2,6-Dinitrotoluene	606-20-2	N.D.	2.0	0.50	1
14241	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	11	5.0	1
14241	Fluoranthene	206-44-0	N.D.	0.50	0.10	1
14241	Fluorene	86-73-7	N.D.	0.50	0.10	1
14241	Hexachlorobenzene	118-74-1	N.D.	0.50	0.10	1
14241	Hexachlorobutadiene	87-68-3	N.D.	2.0	0.50	1
14241	Hexachlorocyclopentadiene	77-47-4	N.D.	11	5.0	1
14241	Hexachloroethane	67-72-1	N.D.	5.0	1.0	1
14241	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.50	0.10	1
14241	Isophorone	78-59-1	N.D.	2.0	0.50	1
14241	2-Methylnaphthalene	91-57-6	N.D.	0.50	0.10	1
14241	2-Methylphenol	95-48-7	N.D.	2.0	0.50	1
14241	4-Methylphenol	65794-96-9	N.D.	2.0	0.50	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
14241	Naphthalene	91-20-3	N.D.	0.50	0.10	1
14241	2-Nitroaniline	88-74-4	N.D.	7.0	2.0	1
14241	3-Nitroaniline	99-09-2	N.D.	7.0	3.0	1
14241	4-Nitroaniline	100-01-6	N.D.	3.0	0.90	1
14241	Nitrobenzene	98-95-3	N.D.	2.0	0.50	1
14241	2-Nitrophenol	88-75-5	N.D.	10	3.0	1
14241	4-Nitrophenol	100-02-7	N.D.	30	10	1
14241	N-Nitroso-di-n-propylamine	621-64-7	N.D.	3.0	0.70	1
14241	N-Nitrosodiphenylamine	86-30-6	N.D.	3.0	0.70	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.					
14241	Di-n-octylphthalate	117-84-0	N.D.	11	5.0	1
14241	Pentachlorophenol	87-86-5	N.D.	5.0	1.0	1
14241	Phenanthrene	85-01-8	N.D.	0.50	0.10	1
14241	Phenol	108-95-2	N.D.	2.0	0.50	1
14241	Pyrene	129-00-0	N.D.	0.50	0.10	1
14241	Pyridine	110-86-1	N.D.	5.0	2.0	1
14241	1,2,4,5-Tetrachlorobenzene	95-94-3	N.D.	2.0	0.50	1
14241	2,3,4,6-Tetrachlorophenol	58-90-2	N.D.	10	4.0	1
14241	2,4,5-Trichlorophenol	95-95-4	N.D.	2.0	0.50	1
14241	2,4,6-Trichlorophenol	88-06-2	N.D.	2.0	0.50	1
14241	Triethylamine[1]	121-44-8	N.D. J	10	10	1

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-17WR Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/30/2019 11:22
Collection Date/Time: 10/29/2019 15:40
SDG#: BMS81-18

ARCADIS U.S., Inc.
ELLE Sample #: GW 1187637
ELLE Group #: 2071744
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D SIM**		**ug/l**	**ug/l**	**ug/l**	
14244	1,4-Dioxane	123-91-1	N.D.	0.3	0.1	1
00886	**SVOA TIC Interpretive(25)**					
	The results from the semivolatile library search are listed on the attached FORM 1 - SV-TIC. The qualifiers appearing in the "Q" column are defined at the end of the report.					
Aldehydes & Ketones	**SW-846 8315A**		**ug/l**	**ug/l**	**ug/l**	
13022	Acetaldehyde[1]	75-07-0	N.D.	60	35	1
13022	Formaldehyde	50-00-0	N.D.	50	20	1
	The response for a target analyte(s) in the initial calibration verification standard is outside the QC acceptance limits.					
GC Miscellaneous	**SW-846 8015D Rev.4, June 2003**		**ug/l**	**ug/l**	**ug/l**	
10603	Ethanol	64-17-5	N.D. D2	1,000	150	1
12926	Ethylene glycol[1]	107-21-1	N.D. J	10,000	5,000	1
10603	Isopropanol[1]	67-63-0	N.D. D2	1,000	110	1
10603	Methanol	67-56-1	N.D. D2	1,000	220	1
12926	Propylene glycol[1]	57-55-6	N.D. J	10,000	2,000	1
	The response for a target analyte(s) in the continuing calibration verification standard is outside the QC acceptance limits low. The following action was taken: The analysis was repeated and the continuing calibration verification standard bracketing the sample on the second trial is also outside the acceptance limits. This effect is attributed to the sample matrix and the data is reported.					
LC/MS/MS Miscellaneous	**EPA 537 mod QSM 5.1 table B-15**		**ng/l**	**ng/l**	**ng/l**	
14434	6:2-Fluorotelomersulfonic acid[1]	27619-97-2	N.D.	4.4	1.8	1
14434	8:2-Fluorotelomersulfonic acid[1]	39108-34-4	N.D.	2.7	0.89	1
14434	NEtFOSAA[1]	2991-50-6	N.D.	2.7	0.44	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.					
14434	NMeFOSAA[1]	2355-31-9	N.D.	1.8	0.53	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.					
14434	Perfluorobutanesulfonic acid[1]	375-73-5	N.D.	1.8	0.44	1
14434	Perfluorobutanoic acid[1]	375-22-4	6.3 J	4.4	1.8	1
14434	Perfluorodecanesulfonic acid[1]	335-77-3	N.D.	1.8	0.44	1
14434	Perfluorodecanoic acid[1]	335-76-2	N.D.	1.8	0.44	1
14434	Perfluorododecanoic acid[1]	307-55-1	N.D.	1.8	0.44	1
14434	Perfluoroheptanesulfonic acid[1]	375-92-8	N.D.	1.8	0.44	1
14434	Perfluoroheptanoic acid[1]	375-85-9	N.D.	1.8	0.44	1
14434	Perfluorohexanesulfonic acid[1]	355-46-4	N.D.	1.8	0.44	1

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-17WR Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/30/2019 11:22
Collection Date/Time: 10/29/2019 15:40
SDG#: BMS81-18

ARCADIS U.S., Inc.
ELLE Sample #: GW 1187637
ELLE Group #: 2071744
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
LC/MS/MS Miscellaneous	**EPA 537 mod QSM 5.1 table B-15**		**ng/l**	**ng/l**	**ng/l**	
14434	Perfluorohexanoic acid[1]	307-24-4	N.D.	1.8	0.44	1
14434	Perfluorononanoic acid[1]	375-95-1	N.D.	1.8	0.44	1
14434	Perfluorooctanesulfonamide[1]	754-91-6	N.D.	1.8	0.44	1
14434	Perfluorooctanesulfonic acid[1]	1763-23-1	N.D.	1.8	0.44	1
14434	Perfluorooctanoic acid[1]	335-67-1	N.D.	1.8	0.44	1
14434	Perfluoropentanoic acid[1]	2706-90-3	N.D.	1.8	0.44	1
14434	Perfluorotetradecanoic acid[1]	376-06-7	N.D.	1.8	0.44	1
14434	Perfluorotridecanoic acid[1]	72629-94-8	N.D.	1.8	0.44	1
14434	Perfluoroundecanoic acid[1]	2058-94-8	N.D.	1.8	0.44	1

The recovery for the sample extraction standard(s) is outside the QC acceptance limits as noted on the QC Summary. The following action was taken: This sample was re-extracted within the method holding time and the recovery for the sample extraction standard(s) is again outside the QC acceptance limits. The data is reported from the initial trial of the sample and both sets of data are included in the data package.

Metals	**SW-846 6010D Rev.4, July 2014**		**mg/l**	**mg/l**	**mg/l**	
07044	Antimony	7440-36-0	N.D.	0.0500	0.0160	1
07035	Arsenic	7440-38-2	N.D.	0.0300	0.0160	1
07046	Barium	7440-39-3	0.0686	0.0050	0.0010	1
07047	Beryllium	7440-41-7	N.D.	0.0050	0.0010	1
07049	Cadmium	7440-43-9	N.D.	0.0050	0.0010	1
01750	Calcium	7440-70-2	830 J	1.00	0.480	5
07051	Chromium	7440-47-3	0.0032 J	0.0150	0.0016	1
07052	Cobalt	7440-48-4	N.D. J	0.0050	0.0015	1
07053	Copper	7440-50-8	N.D. J	0.100	0.0600	5
01754	Iron	7439-89-6	0.480 J	0.200	0.0400	1
07055	Lead	7439-92-1	N.D. J	0.0150	0.0071	1
01757	Magnesium	7439-95-4	46.4 J	0.100	0.0400	1
07058	Manganese	7439-96-5	0.0345 J	0.0100	0.0030	1
07061	Nickel	7440-02-0	N.D. J	0.0100	0.0021	1
01762	Potassium	7440-09-7	195	0.500	0.204	1
07036	Selenium	7782-49-2	N.D.	0.0500	0.0160	1
07066	Silver	7440-22-4	N.D.	0.0100	0.0050	1
01767	Sodium	7440-23-5	1,890 J	5.00	1.20	5
07022	Thallium[1]	7440-28-0	N.D.	0.0300	0.0081	1
	SW-846 6010D Rev.4, July 2014		**ug/l**	**ug/l**	**ug/l**	
07071	Vanadium	7440-62-2	N.D. J	10.0	1.9	1

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-17WR Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/30/2019 11:22
Collection Date/Time: 10/29/2019 15:40
SDG#: BMS81-18

ARCADIS U.S., Inc.
ELLE Sample #: GW 1187637
ELLE Group #: 2071744
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
Metals	**SW-846 6010D Rev.4, July 2014**		**ug/l**	**ug/l**	**ug/l**	
07072	Zinc	7440-66-6	4.4 J	20.0	3.7	1
Metals	**SW-846 6020B Rev.2, July 2014**		**ug/l**	**ug/l**	**ug/l**	
06023	Aluminum	7429-90-5	1,400 J	25.0	19.7	1
	SW-846 7470A		**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	N.D. J	0.00020	0.000050	1
Wet Chemistry	**EPA 300.0**		**ug/l**	**ug/l**	**ug/l**	
00224	Chloride	16887-00-6	4,290,000	800,000	400,000	2000
01504	Fluoride	16984-48-8	N.D.	500	250	5
00228	Sulfate	14808-79-8	3,040,000	500,000	150,000	500
	EPA 350.1		**ug/l**	**ug/l**	**ug/l**	
12892	Ammonia Nitrogen	7664-41-7	14,900	2,000	1,000	20
	EPA 353.2		**mg/l**	**mg/l**	**mg/l**	
00220	Nitrate Nitrogen	14797-55-8	N.D.	0.10	0.040	1
00219	Nitrite Nitrogen	14797-65-0	N.D.	0.050	0.015	1
	SM 4500-P F-2011		**ug/l**	**ug/l**	**ug/l**	
00227	Total Phosphorus as P (water)	7723-14-0	N.D.	100	50	1
	SM 5310 C-2011		**ug/l**	**ug/l**	**ug/l**	
00273	Total Organic Carbon	n.a.	1,600	1,000	500	1
	EPA 410.4		**ug/l**	**ug/l**	**ug/l**	
04001	Chemical Oxygen Demand	n.a.	35,500 J	50,000	12,800	1
	SM 2320 B-2011		**mg/l as CaCO3**	**mg/l as CaCO3**	**mg/l as CaCO3**	
12150	Total Alkalinity to pH 4.5	n.a.	74.8	8.0	2.6	1
	SM 5210 B-2011		**ug/l**	**ug/l**	**ug/l**	
14108	Biochemical Oxygen Demand-BOD	n.a.	N.D.	2,000	2,000	1

Sample Comments

State of New York Certification No. 10670

[1] = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-17WR Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/30/2019 11:22
Collection Date/Time: 10/29/2019 15:40
SDG#: BMS81-18

ARCADIS U.S., Inc.
ELLE Sample #: GW 1187637
ELLE Group #: 2071744
Matrix: Groundwater

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	Y193091AA	11/05/2019 19:22	Corie Mellinger	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	Y193091AA	11/05/2019 19:21	Corie Mellinger	1
14241	Semi-annual Groundwater BMS	SW-846 8270D	1	19303WAN026	11/06/2019 14:29	Kira N Beck	1
14244	SIM SVOAs 8270D MINI	SW-846 8270D SIM	1	19303WAP026	10/31/2019 23:51	Ashley R Transue	1
10466	BNA Water Extraction SIM	SW-846 3510C	1	19303WAP026	10/31/2019 09:30	Joshua S Ruth	1
11010	8270D BNA Extraction	SW-846 3510C	1	19303WAN026	10/31/2019 09:30	Joshua S Ruth	1
13022	Short List Aldehydes- W 8315A	SW-846 8315A	1	193030019A	10/31/2019 19:51	Jessica L Miller	1
01013	Formaldehyde Extraction	SW-846 8315A	1	193030019A	10/31/2019 09:23	Alison Moll	1
10603	Alcohols in Water	SW-846 8015D Rev.4, June 2003	1	193080007A	11/04/2019 15:15	Johanna C Kennedy	1
12926	Glycols in Water by 8015C/D	SW-846 8015D Rev.4, June 2003	1	193040002A	11/01/2019 12:21	Donald Brown	1
14434	PFAS in Water by LC/MS/MS-DoD	EPA 537 mod QSM 5.1 table B-15	1	19304003	11/01/2019 16:42	Devon M Whooley	1
14465	PFAS Water Prep - DoD	EPA 537 mod QSM 5.1 table B-15	1	19304003	10/31/2019 07:00	Toby Barnhart	1
07044	Antimony	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 16:12	Patrick J Engle	1
07035	Arsenic	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 16:12	Patrick J Engle	1
07046	Barium	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 16:12	Patrick J Engle	1
07047	Beryllium	SW-846 6010D Rev.4, July 2014	1	193041404403	11/05/2019 20:07	Cindy M Gehman	1
07049	Cadmium	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 16:12	Patrick J Engle	1
01750	Calcium	SW-846 6010D Rev.4, July 2014	1	193041404403	11/05/2019 10:26	Patrick J Engle	5
07051	Chromium	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 16:12	Patrick J Engle	1
07052	Cobalt	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 16:12	Patrick J Engle	1
07053	Copper	SW-846 6010D Rev.4, July 2014	1	193041404403	11/05/2019 14:25	Patrick J Engle	5
01754	Iron	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 16:12	Patrick J Engle	1
07055	Lead	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 16:12	Patrick J Engle	1
01757	Magnesium	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 16:12	Patrick J Engle	1
07058	Manganese	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 16:12	Patrick J Engle	1
07061	Nickel	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 16:12	Patrick J Engle	1
01762	Potassium	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 16:12	Patrick J Engle	1
07036	Selenium	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 16:12	Patrick J Engle	1

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-17WR Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/30/2019 11:22
Collection Date/Time: 10/29/2019 15:40
SDG#: BMS81-18

ARCADIS U.S., Inc.
ELLE Sample #: GW 1187637
ELLE Group #: 2071744
Matrix: Groundwater

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07066	Silver	SW-846 6010D Rev.4, July 2014	1	193041404403	11/05/2019 20:07	Cindy M Gehman	1
01767	Sodium	SW-846 6010D Rev.4, July 2014	1	193041404403	11/05/2019 14:25	Patrick J Engle	5
07022	Thallium	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 16:12	Patrick J Engle	1
07071	Vanadium	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 16:12	Patrick J Engle	1
07072	Zinc	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 16:12	Patrick J Engle	1
06023	Aluminum	SW-846 6020B Rev.2, July 2014	1	193111404701A	11/08/2019 11:30	Janeyah Rivers-Hamilton	1
00259	Mercury	SW-846 7470A	1	193050571301	11/02/2019 08:08	Damary Valentin	1
14044	ICP-WW, 3005A (tot rec) - U345	SW-846 3005A	1	193041404403	10/31/2019 11:21	James L Mertz	1
14047	ICPMS - Water, 3020A - U345	SW-846 3020A	1	193111404701	11/07/2019 14:15	JoElla L Rice	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	193050571301	11/01/2019 07:30	Annamaria Kuhns	1
00224	Chloride	EPA 300.0	1	19304135213A	11/05/2019 10:32	Samantha Faverio	2000
01504	Fluoride	EPA 300.0	1	19304135213A	10/31/2019 21:33	Kevin Litwa	5
00228	Sulfate	EPA 300.0	1	19304135213A	10/31/2019 21:48	Kevin Litwa	500
12892	Ammonia Nitrogen	EPA 350.1	1	19307107103A	11/03/2019 09:55	Ashlynn M Cornelius	20
00220	Nitrate Nitrogen	EPA 353.2	1	19308106102A	11/04/2019 12:07	Ashlynn M Cornelius	1
00219	Nitrite Nitrogen	EPA 353.2	1	19304105102B	10/31/2019 14:09	Bethany Sandone	1
00227	Total Phosphorus as P (water)	SM 4500-P F-2011	1	19305109101B	11/04/2019 14:27	Jonathan Saul	1
00273	Total Organic Carbon	SM 5310 C-2011	1	19309304504A	11/05/2019 20:47	Bethany Sandone	1
08263	Total Phos as P Prep (water)	SM 4500-P B(5)-2011	1	19305109101B	11/01/2019 20:00	Barbara A Washington	1
04001	Chemical Oxygen Demand	EPA 410.4	1	19304400101A	10/31/2019 09:15	Susan A Engle	1
12150	Total Alkalinity to pH 4.5	SM 2320 B-2011	1	19304007203A	11/01/2019 02:16	Jeremy L Bolf	1
14108	Biochemical Oxygen Demand-BOD	SM 5210 B-2011	1	19304141081A	10/31/2019 10:50	Benjamin M Morrison	1

*=This limit was used in the evaluation of the final result

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
S8118

Lab Name: Lancaster Laboratories Contract:_____
Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____
Matrix: (soil/water) WATER Lab Sample ID: 1187637
Sample wt/vol: 5.0 (g/mL)mL Lab File ID:HP09355.i/19nov05a.b/yn05s14.d
Level: (low/med) LOW Date Received: 10/30/19
% Moisture: not dec. Date Analyzed: 11/05/19
Column: (pack/cap) CAP Dilution Factor: 1.0
CONCENTRATION UNITS:
Number TICs found: 1 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		Unknown	13.26	15	J N
2.					
3.	VOCTIC	Total VOC TICs		15	J N
4.					
5.					
6.					
7.					
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30.					

page 1 of 1

FORM I VOA-TIC

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
S8118

Lab Name: Lancaster Laboratories Contract:
Lab Code: LANCAS Case No.: SAS No.: SDG No.:
Matrix: (soil/water) WATER Lab Sample ID: 1187637
Sample wt/vol: 249 (g/mL) mL Lab File ID: lk0180.d
Level: (low/med) LOW Date Received: 10/30/19
% Moisture: Decanted: (Y/N) Date Extracted: 10/31/19
Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/06/19
Injection Volume: 1 (uL) Dilution Factor: 1
GPC Cleanup: N pH: Extraction: Sepf
CONCENTRATION UNITS:
Number TICs found: 1 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		Unknown	7.123	19	J N
2.					
3.	SVOCTIC	Total SVOC TICs		19	J N
4.					
5.					
6.					
7.					
8.					
9.					
10.					
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page 1 of 1

FORM I SV-1

Sample Description: **BDA-17WR Filtered Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/30/2019 11:22
Collection Date/Time: 10/29/2019 15:40
SDG#: BMS81-19

ARCADIS U.S., Inc.
ELLE Sample #: GW 1187638
ELLE Group #: 2071744
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
Metals Dissolved	**SW-846 6010D Rev.4, July 2014**		**mg/l**	**mg/l**	**mg/l**	
07044	Antimony	7440-36-0	N.D.	0.0500	0.0160	1
07035	Arsenic	7440-38-2	N.D.	0.0300	0.0160	1
07046	Barium	7440-39-3	0.0605	0.0050	0.0010	1
07047	Beryllium	7440-41-7	N.D.	0.0050	0.0010	1
07049	Cadmium	7440-43-9	N.D.	0.0050	0.0010	1
01750	Calcium	7440-70-2	847	1.00	0.480	5
07051	Chromium	7440-47-3	0.0023 J	0.0150	0.0016	1
07052	Cobalt	7440-48-4	N.D.	0.0050	0.0015	1
07053	Copper	7440-50-8	N.D.	0.100	0.0600	5
01754	Iron	7439-89-6	N.D. J	0.200	0.0400	1
07055	Lead	7439-92-1	N.D.	0.0150	0.0071	1
01757	Magnesium	7439-95-4	58.7 J	0.100	0.0400	1
07058	Manganese	7439-96-5	0.0152	0.0100	0.0030	1
07061	Nickel	7440-02-0	N.D.	0.0100	0.0021	1
01762	Potassium	7440-09-7	199	0.500	0.204	1
07036	Selenium	7782-49-2	N.D.	0.0500	0.0160	1
07066	Silver	7440-22-4	N.D.	0.0100	0.0050	1
01767	Sodium	7440-23-5	1,850	5.00	1.20	5
07022	Thallium[1]	7440-28-0	N.D.	0.0300	0.0081	1
	SW-846 6010D Rev.4, July 2014		**ug/l**	**ug/l**	**ug/l**	
07071	Vanadium	7440-62-2	N.D.	10.0	1.9	1
07072	Zinc	7440-66-6	N.D.	20.0	3.7	1
	SW-846 6020B Rev.2, July 2014		**ug/l**	**ug/l**	**ug/l**	
06023	Aluminum	7429-90-5	N.D.	25.0	19.7	1
	SW-846 7470A		**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	N.D.	0.00020	0.000050	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals.

[1] = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-17WR Filtered Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/30/2019 11:22
Collection Date/Time: 10/29/2019 15:40
SDG#: BMS81-19

ARCADIS U.S., Inc.
ELLE Sample #: GW 1187638
ELLE Group #: 2071744
Matrix: Groundwater

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07044	Antimony	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:44	Patrick J Engle	1
07035	Arsenic	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:44	Patrick J Engle	1
07046	Barium	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:44	Patrick J Engle	1
07047	Beryllium	SW-846 6010D Rev.4, July 2014	1	193041404402	11/06/2019 00:00	Elaine F Stoltzfus	1
07049	Cadmium	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:44	Patrick J Engle	1
01750	Calcium	SW-846 6010D Rev.4, July 2014	1	193041404402	11/05/2019 09:23	Patrick J Engle	5
07051	Chromium	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:44	Patrick J Engle	1
07052	Cobalt	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:44	Patrick J Engle	1
07053	Copper	SW-846 6010D Rev.4, July 2014	1	193041404402	11/05/2019 17:50	Patrick J Engle	5
01754	Iron	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:44	Patrick J Engle	1
07055	Lead	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:44	Patrick J Engle	1
01757	Magnesium	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:44	Patrick J Engle	1
07058	Manganese	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:44	Patrick J Engle	1
07061	Nickel	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:44	Patrick J Engle	1
01762	Potassium	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:44	Patrick J Engle	1
07036	Selenium	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:44	Patrick J Engle	1
07066	Silver	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:44	Patrick J Engle	1
01767	Sodium	SW-846 6010D Rev.4, July 2014	1	193041404402	11/05/2019 09:23	Patrick J Engle	5
07022	Thallium	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:44	Patrick J Engle	1
07071	Vanadium	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:44	Patrick J Engle	1
07072	Zinc	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:44	Patrick J Engle	1
06023	Aluminum	SW-846 6020B Rev.2, July 2014	1	193111404701A	11/08/2019 11:32	Janeyah Rivers-Hamilton	1
00259	Mercury	SW-846 7470A	1	193040571302	11/01/2019 08:05	Damary Valentin	1
14044	ICP-WW, 3005A (tot rec) - U345	SW-846 3005A	1	193041404402	10/31/2019 11:21	James L Mertz	1
14047	ICPMS - Water, 3020A - U345	SW-846 3020A	1	193111404701	11/07/2019 14:15	JoElla L Rice	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	193040571302	10/31/2019 15:15	JoElla L Rice	1

*=This limit was used in the evaluation of the final result

Sample Description: **DUP-102919 Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/30/2019 11:22
Collection Date/Time: 10/29/2019
SDG#: BMS81-20FD

ARCADIS U.S., Inc.
ELLE Sample #: GW 1187639
ELLE Group #: 2071744
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	20	0.7	1
11997	Acetonitrile	75-05-8	N.D.	100	16	1
11997	Benzene	71-43-2	N.D.	1	0.2	1
11997	Bromochloromethane	74-97-5	N.D.	5	0.2	1
11997	Bromodichloromethane	75-27-4	3	1	0.2	1
11997	Bromoform	75-25-2	N.D.	4	1	1
11997	Bromomethane	74-83-9	N.D. J	1	0.3	1
11997	n-Butanol	71-36-3	N.D.	250	61	1
11997	2-Butanone	78-93-3	N.D.	10	0.3	1
11997	t-Butyl alcohol	75-65-0	N.D.	50	12	1
11997	n-Butylbenzene	104-51-8	N.D.	5	0.2	1
11997	sec-Butylbenzene	135-98-8	N.D.	5	0.2	1
11997	tert-Butylbenzene	98-06-6	N.D.	5	0.3	1
11997	Carbon Disulfide	75-15-0	N.D.	5	0.2	1
11997	Carbon Tetrachloride	56-23-5	N.D.	1	0.2	1
11997	Chlorobenzene	108-90-7	N.D.	1	0.2	1
11997	Chlorodifluoromethane[1]	75-45-6	N.D.	5	2	1
11997	Chloroethane	75-00-3	N.D.	1	0.2	1
11997	Chloroform	67-66-3	14 J	1	0.2	1
11997	Chloromethane	74-87-3	N.D.	1	0.2	1
11997	Cyclohexane	110-82-7	N.D.	5	1	1
11997	Cyclohexanone[1]	108-94-1	N.D.	100	25	1
11997	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	5	0.3	1
11997	Dibromochloromethane	124-48-1	0.5 J	1	0.2	1
11997	1,2-Dibromoethane	106-93-4	N.D.	1	0.2	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	5	0.2	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	5	0.2	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	5	0.2	1
11997	Dichlorodifluoromethane	75-71-8	N.D. J	1	0.2	1
11997	1,1-Dichloroethane	75-34-3	N.D.	1	0.2	1
11997	1,2-Dichloroethane	107-06-2	N.D.	1	0.3	1
11997	1,1-Dichloroethene	75-35-4	N.D.	1	0.2	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	1	0.2	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	1	0.2	1
11997	1,2-Dichloropropane	78-87-5	N.D.	1	0.2	1
11997	cis-1,3-Dichloropropene	10061-01-5	N.D.	1	0.2	1
11997	trans-1,3-Dichloropropene	10061-02-6	N.D.	1	0.2	1
11997	1,4-Dioxane	123-91-1	N.D.	250	29	1
11997	Ethyl Acetate	141-78-6	N.D.	5	0.7	1
11997	Ethyl ether	60-29-7	N.D.	5	0.2	1
11997	Ethylbenzene	100-41-4	N.D.	1	0.4	1

*=This limit was used in the evaluation of the final result

Sample Description: **DUP-102919 Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/30/2019 11:22
Collection Date/Time: 10/29/2019
SDG#: BMS81-20FD

ARCADIS U.S., Inc.
ELLE Sample #: GW 1187639
ELLE Group #: 2071744
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Freon 113	76-13-1	N.D.	10	0.2	1
11997	n-Heptane[1]	142-82-5	N.D.	5	2	1
11997	n-Hexane[1]	110-54-3	N.D.	5	2	1
11997	2-Hexanone	591-78-6	N.D.	10	0.3	1
11997	Isobutyl Alcohol	78-83-1	N.D.	250	36	1
11997	Isopropylbenzene	98-82-8	N.D.	5	0.2	1
11997	p-Isopropyltoluene	99-87-6	N.D.	5	0.2	1
11997	Methyl Acetate	79-20-9	N.D.	5	0.2	1
11997	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	1	0.2	1
11997	4-Methyl-2-pentanone	108-10-1	N.D.	10	0.5	1
11997	Methylcyclohexane	108-87-2	N.D.	5	0.5	1
11997	Methylene Chloride	75-09-2	N.D.	1	0.3	1
11997	Naphthalene	91-20-3	N.D.	5	1	1
11997	2-Nitropropane	79-46-9	N.D.	10	0.8	1
11997	Styrene	100-42-5	N.D.	5	0.2	1
11997	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	1	0.2	1
11997	Tetrachloroethene	127-18-4	N.D.	1	0.2	1
11997	Tetrahydrofuran	109-99-9	N.D.	10	0.7	1
11997	Toluene	108-88-3	N.D.	1	0.2	1
11997	1,2,3-Trichlorobenzene	87-61-6	N.D.	5	0.4	1
11997	1,2,4-Trichlorobenzene	120-82-1	N.D.	5	0.3	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	1	0.3	1
11997	1,1,2-Trichloroethane	79-00-5	N.D.	1	0.2	1
11997	Trichloroethene	79-01-6	N.D.	1	0.2	1
11997	Trichlorofluoromethane	75-69-4	N.D.	1	0.2	1
11997	1,2,4-Trimethylbenzene	95-63-6	N.D.	5	1	1
11997	1,3,5-Trimethylbenzene	108-67-8	N.D.	5	0.3	1
11997	Vinyl Chloride	75-01-4	N.D.	1	0.2	1
11997	m+p-Xylene	179601-23-1	N.D.	5	1	1
11997	o-Xylene	95-47-6	N.D.	1	0.4	1
11997	Xylene (Total)	1330-20-7	N.D.	6	1	1

Project defined calibration criteria are not met. The calibration is compliant with the method defined criteria.

A Report Limit Verification (RLV) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The RLV standard shows adequate sensitivity at or below the reporting limit.

00882 VOA Interp. Library Search-10

The results from the volatile library search are listed on the attached FORM 1 - VOA-TIC. The qualifiers appearing in the "Q" column are defined at the end of the report.

*=This limit was used in the evaluation of the final result

Sample Description: **DUP-102919 Grab Groundwater BMS Syracuse**

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/30/2019 11:22
Collection Date/Time: 10/29/2019
SDG#: BMS81-20FD

ARCADIS U.S., Inc.
ELLE Sample #: GW 1187639
ELLE Group #: 2071744
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
Aldehydes & Ketones	**SW-846 8315A**		**ug/l**	**ug/l**	**ug/l**	
13022	Acetaldehyde[1]	75-07-0	N.D.	60	35	1
13022	Formaldehyde	50-00-0	29 J	50	20	1
	The response for a target analyte(s) in the initial calibration verification standard is outside the QC acceptance limits.					
GC Miscellaneous	**SW-846 8015D Rev.4, June 2003**		**ug/l**	**ug/l**	**ug/l**	
10603	Ethanol	64-17-5	N.D. D2	1,000	150	1
12926	Ethylene glycol[1]	107-21-1	N.D. R	10,000	5,000	1
10603	Isopropanol[1]	67-63-0	N.D. D2	1,000	110	1
10603	Methanol	67-56-1	N.D. D2	1,000	220	1
12926	Propylene glycol[1]	57-55-6	N.D. R	10,000	2,000	1
	The response for a target analyte(s) in the continuing calibration verification standard is outside the QC acceptance limits low. The following action was taken: The analysis was repeated and the continuing calibration verification standard bracketing the sample on the second trial is also outside the acceptance limits. This effect is attributed to the sample matrix and the data is reported.					
LC/MS/MS Miscellaneous	**EPA 537 mod QSM 5.1 table B-15**		**ng/l**	**ng/l**	**ng/l**	
14434	6:2-Fluorotelomersulfonic acid[1]	27619-97-2	34 J	4.5	1.8	1
14434	8:2-Fluorotelomersulfonic acid[1]	39108-34-4	N.D.	2.7	0.90	1
14434	NEtFOSAA[1]	2991-50-6	N.D.	2.7	0.45	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.					
14434	NMeFOSAA[1]	2355-31-9	N.D.	1.8	0.54	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.					
14434	Perfluorobutanesulfonic acid[1]	375-73-5	N.D.	1.8	0.45	1
14434	Perfluorobutanoic acid[1]	375-22-4	2.0 J	4.5	1.8	1
14434	Perfluorodecanesulfonic acid[1]	335-77-3	N.D.	1.8	0.45	1
14434	Perfluorodecanoic acid[1]	335-76-2	N.D.	1.8	0.45	1
14434	Perfluorododecanoic acid[1]	307-55-1	N.D.	1.8	0.45	1
14434	Perfluoroheptanesulfonic acid[1]	375-92-8	N.D.	1.8	0.45	1
14434	Perfluoroheptanoic acid[1]	375-85-9	0.55 J	1.8	0.45	1
14434	Perfluorohexanesulfonic acid[1]	355-46-4	N.D.	1.8	0.45	1
14434	Perfluorohexanoic acid[1]	307-24-4	1.6 J	1.8	0.45	1
14434	Perfluorononanoic acid[1]	375-95-1	N.D.	1.8	0.45	1
14434	Perfluorooctanesulfonamide[1]	754-91-6	N.D.	1.8	0.45	1
14434	Perfluorooctanesulfonic acid[1]	1763-23-1	N.D.	1.8	0.45	1
14434	Perfluorooctanoic acid[1]	335-67-1	0.49 J	1.8	0.45	1
14434	Perfluoropentanoic acid[1]	2706-90-3	0.60 J	1.8	0.45	1
14434	Perfluorotetradecanoic acid[1]	376-06-7	N.D.	1.8	0.45	1

*=This limit was used in the evaluation of the final result

Sample Description: **DUP-102919 Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/30/2019 11:22
Collection Date/Time: 10/29/2019
SDG#: BMS81-20FD

ARCADIS U.S., Inc.
ELLE Sample #: GW 1187639
ELLE Group #: 2071744
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
LC/MS/MS Miscellaneous	**EPA 537 mod QSM 5.1 table B-15**		**ng/l**	**ng/l**	**ng/l**	
14434	Perfluorotridecanoic acid[1]	72629-94-8	N.D.	1.8	0.45	1
14434	Perfluoroundecanoic acid[1]	2058-94-8	N.D.	1.8	0.45	1
Metals	**SW-846 6010D Rev.4, July 2014**		**mg/l**	**mg/l**	**mg/l**	
07044	Antimony	7440-36-0	N.D.	0.0500	0.0160	1
07035	Arsenic	7440-38-2	N.D.	0.0300	0.0160	1
07046	Barium	7440-39-3	0.0538 J	0.0050	0.0010	1
07047	Beryllium	7440-41-7	N.D.	0.0050	0.0010	1
07049	Cadmium	7440-43-9	N.D.	0.0050	0.0010	1
01750	Calcium	7440-70-2	482 J	1.00	0.480	5
07051	Chromium	7440-47-3	0.0051 J	0.0150	0.0016	1
07052	Cobalt	7440-48-4	0.0030 J	0.0050	0.0015	1
07053	Copper	7440-50-8	N.D. J	0.100	0.0600	5
01754	Iron	7439-89-6	2.35 J	0.200	0.0400	1
07055	Lead	7439-92-1	N.D. J	0.0150	0.0071	1
01757	Magnesium	7439-95-4	89.2 J	0.100	0.0400	1
07058	Manganese	7439-96-5	0.372 J	0.0100	0.0030	1
07061	Nickel	7440-02-0	0.0538 J	0.0100	0.0021	1
01762	Potassium	7440-09-7	10.1	0.500	0.204	1
07036	Selenium	7782-49-2	N.D.	0.0500	0.0160	1
07066	Silver	7440-22-4	N.D.	0.0100	0.0050	1
01767	Sodium	7440-23-5	193 J	1.00	0.239	1
07022	Thallium[1]	7440-28-0	N.D.	0.0300	0.0081	1
	SW-846 6010D Rev.4, July 2014		**ug/l**	**ug/l**	**ug/l**	
07071	Vanadium	7440-62-2	N.D. J	10.0	1.9	1
07072	Zinc	7440-66-6	11.5 J	20.0	3.7	1
	SW-846 6020B Rev.2, July 2014		**ug/l**	**ug/l**	**ug/l**	
06023	Aluminum	7429-90-5	8,760 J	25.0	19.7	1
	SW-846 7470A		**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	N.D. J	0.00020	0.000050	1
Wet Chemistry	**EPA 300.0**		**ug/l**	**ug/l**	**ug/l**	
00224	Chloride	16887-00-6	91,400	20,000	10,000	50
01504	Fluoride	16984-48-8	520	500	250	5
00228	Sulfate	14808-79-8	675,000 J	50,000	15,000	50

*=This limit was used in the evaluation of the final result

Sample Description: **DUP-102919 Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/30/2019 11:22
Collection Date/Time: 10/29/2019
SDG#: BMS81-20FD

ARCADIS U.S., Inc.
ELLE Sample #: GW 1187639
ELLE Group #: 2071744
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
Wet Chemistry	**EPA 353.2**		**mg/l**	**mg/l**	**mg/l**	
00220	Nitrate Nitrogen	14797-55-8	0.44 J	0.10	0.040	1
00219	Nitrite Nitrogen	14797-65-0	N.D.	0.050	0.015	1
	The holding time was not met.					
	SM 4500-P F-2011		**ug/l**	**ug/l**	**ug/l**	
00227	Total Phosphorus as P (water)	7723-14-0	160	100	50	1
	SM 5310 C-2011		**ug/l**	**ug/l**	**ug/l**	
00273	Total Organic Carbon	n.a.	1,600	1,000	500	1
	EPA 410.4		**ug/l**	**ug/l**	**ug/l**	
04001	Chemical Oxygen Demand	n.a.	145,000	50,000	12,800	1
	SM 2320 B-2011		**mg/l as CaCO3**	**mg/l as CaCO3**	**mg/l as CaCO3**	
12150	Total Alkalinity to pH 4.5	n.a.	111	8.0	2.6	1
	SM 5210 B-2011		**ug/l**	**ug/l**	**ug/l**	
14108	Biochemical Oxygen Demand-BOD	n.a.	2,200	2,000	2,000	1

Sample Comments

State of New York Certification No. 10670

[1] = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	Y193091AA	11/05/2019 19:45	Corie Mellinger	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	Y193091AA	11/05/2019 19:44	Corie Mellinger	1
13022	Short List Aldehydes- W 8315A	SW-846 8315A	1	193030019A	10/31/2019 20:01	Jessica L Miller	1
01013	Formaldehyde Extraction	SW-846 8315A	1	193030019A	10/31/2019 09:23	Alison Moll	1
10603	Alcohols in Water	SW-846 8015D Rev.4, June 2003	1	193080007A	11/04/2019 15:31	Johanna C Kennedy	1
12926	Glycols in Water by 8015C/D	SW-846 8015D Rev.4, June 2003	1	193040002A	11/01/2019 12:34	Donald Brown	1
14434	PFAS in Water by LC/MS/MS-DoD	EPA 537 mod QSM 5.1 table B-15	1	19308018	11/05/2019 16:55	Mark Collare	1
14465	PFAS Water Prep - DoD	EPA 537 mod QSM 5.1 table B-15	2	19308018	11/04/2019 16:00	Anthony C Polaski	1
07044	Antimony	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 16:15	Patrick J Engle	1
07035	Arsenic	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 16:15	Patrick J Engle	1

*=This limit was used in the evaluation of the final result

Sample Description: **DUP-102919 Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/30/2019 11:22
Collection Date/Time: 10/29/2019
SDG#: BMS81-20FD

ARCADIS U.S., Inc.
ELLE Sample #: GW 1187639
ELLE Group #: 2071744
Matrix: Groundwater

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07046	Barium	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 16:15	Patrick J Engle	1
07047	Beryllium	SW-846 6010D Rev.4, July 2014	1	193041404403	11/05/2019 20:10	Cindy M Gehman	1
07049	Cadmium	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 16:15	Patrick J Engle	1
01750	Calcium	SW-846 6010D Rev.4, July 2014	1	193041404403	11/05/2019 10:33	Patrick J Engle	5
07051	Chromium	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 16:15	Patrick J Engle	1
07052	Cobalt	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 16:15	Patrick J Engle	1
07053	Copper	SW-846 6010D Rev.4, July 2014	1	193041404403	11/05/2019 14:32	Patrick J Engle	5
01754	Iron	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 16:15	Patrick J Engle	1
07055	Lead	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 16:15	Patrick J Engle	1
01757	Magnesium	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 16:15	Patrick J Engle	1
07058	Manganese	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 16:15	Patrick J Engle	1
07061	Nickel	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 16:15	Patrick J Engle	1
01762	Potassium	SW-846 6010D Rev.4, July 2014	1	193041404403	11/05/2019 10:29	Patrick J Engle	1
07036	Selenium	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 16:15	Patrick J Engle	1
07066	Silver	SW-846 6010D Rev.4, July 2014	1	193041404403	11/05/2019 20:10	Cindy M Gehman	1
01767	Sodium	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 16:15	Patrick J Engle	1
07022	Thallium	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 16:15	Patrick J Engle	1
07071	Vanadium	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 16:15	Patrick J Engle	1
07072	Zinc	SW-846 6010D Rev.4, July 2014	1	193041404403	11/01/2019 16:15	Patrick J Engle	1
06023	Aluminum	SW-846 6020B Rev.2, July 2014	1	193111404701A	11/08/2019 11:34	Janeyah Rivers-Hamilton	1
00259	Mercury	SW-846 7470A	1	193040571302	11/01/2019 08:03	Damary Valentin	1
14044	ICP-WW, 3005A (tot rec) - U345	SW-846 3005A	1	193041404403	10/31/2019 11:21	James L Mertz	1
14047	ICPMS - Water, 3020A - U345	SW-846 3020A	1	193111404701	11/07/2019 14:15	JoElla L Rice	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	193040571302	10/31/2019 15:15	JoElla L Rice	1
00224	Chloride	EPA 300.0	1	19308135115A	11/04/2019 12:46	Kevin Litwa	50
01504	Fluoride	EPA 300.0	1	19308135115A	11/04/2019 12:33	Kevin Litwa	5
00228	Sulfate	EPA 300.0	1	19308135115A	11/04/2019 12:46	Kevin Litwa	50
00220	Nitrate Nitrogen	EPA 353.2	1	19308106102A	11/04/2019 12:09	Ashlynn M Cornelius	1

*=This limit was used in the evaluation of the final result

Sample Description: **DUP-102919 Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/30/2019 11:22
Collection Date/Time: 10/29/2019
SDG#: BMS81-20FD

ARCADIS U.S., Inc.
ELLE Sample #: GW 1187639
ELLE Group #: 2071744
Matrix: Groundwater

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
00219	Nitrite Nitrogen	EPA 353.2	1	19304105102B	10/31/2019 13:00	Bethany Sandone	1
00227	Total Phosphorus as P (water)	SM 4500-P F-2011	1	19305109101B	11/04/2019 14:27	Jonathan Saul	1
00273	Total Organic Carbon	SM 5310 C-2011	1	19309304504B	11/05/2019 21:02	Bethany Sandone	1
08263	Total Phos as P Prep (water)	SM 4500-P B(5)-2011	1	19305109101B	11/01/2019 20:00	Barbara A Washington	1
04001	Chemical Oxygen Demand	EPA 410.4	1	19304400101A	10/31/2019 09:15	Susan A Engle	1
12150	Total Alkalinity to pH 4.5	SM 2320 B-2011	1	19304007203A	11/01/2019 02:36	Jeremy L Bolf	1
14108	Biochemical Oxygen Demand-BOD	SM 5210 B-2011	1	19303141082A	10/30/2019 17:33	Benjamin M Morrison	1

*=This limit was used in the evaluation of the final result

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
S8120

Lab Name: Lancaster Laboratories Contract:_____
Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____
Matrix: (soil/water) WATER Lab Sample ID: 1187639
Sample wt/vol: 5.0 (g/mL)mL Lab File ID:HP09355.i/19nov05a.b/yn05s15.d
Level: (low/med) LOW Date Received: 10/30/19
% Moisture: not dec. Date Analyzed: 11/05/19
Column: (pack/cap) CAP Dilution Factor: 1.0
CONCENTRATION UNITS:
Number TICs found: 0 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	VOCTIC	Total VOC TICs		0	U
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page 1 of 1

FORM I VOA-TIC

Sample Description: **DUP-102919 Filtered Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/30/2019 11:22
Collection Date/Time: 10/29/2019
SDG#: BMS81-21FD

ARCADIS U.S., Inc.
ELLE Sample #: GW 1187640
ELLE Group #: 2071744
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
Metals Dissolved	**SW-846 6010D Rev.4, July 2014**		**mg/l**	**mg/l**	**mg/l**	
07044	Antimony	7440-36-0	N.D.	0.0500	0.0160	1
07035	Arsenic	7440-38-2	N.D.	0.0300	0.0160	1
07046	Barium	7440-39-3	0.0538	0.0050	0.0010	1
07047	Beryllium	7440-41-7	N.D.	0.0050	0.0010	1
07049	Cadmium	7440-43-9	N.D.	0.0050	0.0010	1
01750	Calcium	7440-70-2	474	1.00	0.480	5
07051	Chromium	7440-47-3	0.0034 J	0.0150	0.0016	1
07052	Cobalt	7440-48-4	0.0031 J	0.0050	0.0015	1
07053	Copper	7440-50-8	N.D.	0.100	0.0600	5
01754	Iron	7439-89-6	0.318 J	0.200	0.0400	1
07055	Lead	7439-92-1	N.D.	0.0150	0.0071	1
01757	Magnesium	7439-95-4	80.8	0.100	0.0400	1
07058	Manganese	7439-96-5	0.264	0.0100	0.0030	1
07061	Nickel	7440-02-0	0.0337	0.0100	0.0021	1
01762	Potassium	7440-09-7	9.78	0.500	0.204	1
07036	Selenium	7782-49-2	N.D.	0.0500	0.0160	1
07066	Silver	7440-22-4	N.D.	0.0100	0.0050	1
01767	Sodium	7440-23-5	205	1.00	0.239	1
07022	Thallium[1]	7440-28-0	N.D.	0.0300	0.0081	1
	SW-846 6010D Rev.4, July 2014		**ug/l**	**ug/l**	**ug/l**	
07071	Vanadium	7440-62-2	N.D.	10.0	1.9	1
07072	Zinc	7440-66-6	4.9 J	20.0	3.7	1
	SW-846 6020B Rev.2, July 2014		**ug/l**	**ug/l**	**ug/l**	
06023	Aluminum	7429-90-5	466	25.0	19.7	1
	SW-846 7470A		**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	N.D.	0.00020	0.000050	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals.

[1] = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

*=This limit was used in the evaluation of the final result

Sample Description: **DUP-102919 Filtered Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/30/2019 11:22
Collection Date/Time: 10/29/2019
SDG#: BMS81-21FD

ARCADIS U.S., Inc.
ELLE Sample #: GW 1187640
ELLE Group #: 2071744
Matrix: Groundwater

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07044	Antimony	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:40	Patrick J Engle	1
07035	Arsenic	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:40	Patrick J Engle	1
07046	Barium	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:40	Patrick J Engle	1
07047	Beryllium	SW-846 6010D Rev.4, July 2014	1	193041404402	11/05/2019 23:57	Elaine F Stoltzfus	1
07049	Cadmium	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:40	Patrick J Engle	1
01750	Calcium	SW-846 6010D Rev.4, July 2014	1	193041404402	11/05/2019 09:16	Patrick J Engle	5
07051	Chromium	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:40	Patrick J Engle	1
07052	Cobalt	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:40	Patrick J Engle	1
07053	Copper	SW-846 6010D Rev.4, July 2014	1	193041404402	11/05/2019 17:44	Patrick J Engle	5
01754	Iron	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:40	Patrick J Engle	1
07055	Lead	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:40	Patrick J Engle	1
01757	Magnesium	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:40	Patrick J Engle	1
07058	Manganese	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:40	Patrick J Engle	1
07061	Nickel	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:40	Patrick J Engle	1
01762	Potassium	SW-846 6010D Rev.4, July 2014	1	193041404402	11/05/2019 09:12	Patrick J Engle	1
07036	Selenium	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:40	Patrick J Engle	1
07066	Silver	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:40	Patrick J Engle	1
01767	Sodium	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:40	Patrick J Engle	1
07022	Thallium	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:40	Patrick J Engle	1
07071	Vanadium	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:40	Patrick J Engle	1
07072	Zinc	SW-846 6010D Rev.4, July 2014	1	193041404402	11/01/2019 13:40	Patrick J Engle	1
06023	Aluminum	SW-846 6020B Rev.2, July 2014	1	193111404701A	11/08/2019 11:36	Janeyah Rivers-Hamilton	1
00259	Mercury	SW-846 7470A	1	193050571301	11/02/2019 08:10	Damary Valentin	1
14044	ICP-WW, 3005A (tot rec) - U345	SW-846 3005A	1	193041404402	10/31/2019 11:21	James L Mertz	1
14047	ICPMS - Water, 3020A - U345	SW-846 3020A	1	193111404701	11/07/2019 14:15	JoElla L Rice	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	193050571301	11/01/2019 07:30	Annamaria Kuhns	1

*=This limit was used in the evaluation of the final result

Sample Description: **Trip Blank Water**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/30/2019 11:22
Collection Date/Time: 10/29/2019
SDG#: BMS81-22TB

ARCADIS U.S., Inc.
ELLE Sample #: GW 1187641
ELLE Group #: 2071744
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	20	0.7	1
11997	Acetonitrile	75-05-8	N.D.	100	16	1
11997	Benzene	71-43-2	N.D.	1	0.2	1
11997	Bromochloromethane	74-97-5	N.D.	5	0.2	1
11997	Bromodichloromethane	75-27-4	N.D.	1	0.2	1
11997	Bromoform	75-25-2	N.D.	4	1	1
11997	Bromomethane	74-83-9	N.D. J	1	0.3	1
11997	n-Butanol	71-36-3	N.D.	250	61	1
11997	2-Butanone	78-93-3	N.D.	10	0.3	1
11997	t-Butyl alcohol	75-65-0	N.D.	50	12	1
11997	n-Butylbenzene	104-51-8	N.D.	5	0.2	1
11997	sec-Butylbenzene	135-98-8	N.D.	5	0.2	1
11997	tert-Butylbenzene	98-06-6	N.D.	5	0.3	1
11997	Carbon Disulfide	75-15-0	N.D.	5	0.2	1
11997	Carbon Tetrachloride	56-23-5	N.D.	1	0.2	1
11997	Chlorobenzene	108-90-7	N.D.	1	0.2	1
11997	Chlorodifluoromethane[1]	75-45-6	N.D.	5	2	1
11997	Chloroethane	75-00-3	N.D.	1	0.2	1
11997	Chloroform	67-66-3	N.D.	1	0.2	1
11997	Chloromethane	74-87-3	N.D.	1	0.2	1
11997	Cyclohexane	110-82-7	N.D.	5	1	1
11997	Cyclohexanone[1]	108-94-1	N.D.	100	25	1
11997	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	5	0.3	1
11997	Dibromochloromethane	124-48-1	N.D.	1	0.2	1
11997	1,2-Dibromoethane	106-93-4	N.D.	1	0.2	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	5	0.2	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	5	0.2	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	5	0.2	1
11997	Dichlorodifluoromethane	75-71-8	N.D. J	1	0.2	1
11997	1,1-Dichloroethane	75-34-3	N.D.	1	0.2	1
11997	1,2-Dichloroethane	107-06-2	N.D.	1	0.3	1
11997	1,1-Dichloroethene	75-35-4	N.D.	1	0.2	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	1	0.2	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	1	0.2	1
11997	1,2-Dichloropropane	78-87-5	N.D.	1	0.2	1
11997	cis-1,3-Dichloropropene	10061-01-5	N.D.	1	0.2	1
11997	trans-1,3-Dichloropropene	10061-02-6	N.D.	1	0.2	1
11997	1,4-Dioxane	123-91-1	N.D.	250	29	1
11997	Ethyl Acetate	141-78-6	N.D.	5	0.7	1
11997	Ethyl ether	60-29-7	N.D.	5	0.2	1
11997	Ethylbenzene	100-41-4	N.D.	1	0.4	1

*=This limit was used in the evaluation of the final result

Sample Description: **Trip Blank Water**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/30/2019 11:22
Collection Date/Time: 10/29/2019
SDG#: BMS81-22TB

ARCADIS U.S., Inc.
ELLE Sample #: GW 1187641
ELLE Group #: 2071744
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Freon 113	76-13-1	N.D.	10	0.2	1
11997	n-Heptane[1]	142-82-5	N.D.	5	2	1
11997	n-Hexane[1]	110-54-3	N.D.	5	2	1
11997	2-Hexanone	591-78-6	N.D.	10	0.3	1
11997	Isobutyl Alcohol	78-83-1	N.D.	250	36	1
11997	Isopropylbenzene	98-82-8	N.D.	5	0.2	1
11997	p-Isopropyltoluene	99-87-6	N.D.	5	0.2	1
11997	Methyl Acetate	79-20-9	N.D.	5	0.2	1
11997	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	1	0.2	1
11997	4-Methyl-2-pentanone	108-10-1	N.D.	10	0.5	1
11997	Methylcyclohexane	108-87-2	N.D.	5	0.5	1
11997	Methylene Chloride	75-09-2	N.D.	1	0.3	1
11997	Naphthalene	91-20-3	N.D.	5	1	1
11997	2-Nitropropane	79-46-9	N.D.	10	0.8	1
11997	Styrene	100-42-5	N.D.	5	0.2	1
11997	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	1	0.2	1
11997	Tetrachloroethene	127-18-4	N.D.	1	0.2	1
11997	Tetrahydrofuran	109-99-9	N.D.	10	0.7	1
11997	Toluene	108-88-3	N.D.	1	0.2	1
11997	1,2,3-Trichlorobenzene	87-61-6	N.D.	5	0.4	1
11997	1,2,4-Trichlorobenzene	120-82-1	N.D.	5	0.3	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	1	0.3	1
11997	1,1,2-Trichloroethane	79-00-5	N.D.	1	0.2	1
11997	Trichloroethene	79-01-6	N.D.	1	0.2	1
11997	Trichlorofluoromethane	75-69-4	N.D.	1	0.2	1
11997	1,2,4-Trimethylbenzene	95-63-6	N.D.	5	1	1
11997	1,3,5-Trimethylbenzene	108-67-8	N.D.	5	0.3	1
11997	Vinyl Chloride	75-01-4	N.D.	1	0.2	1
11997	m+p-Xylene	179601-23-1	N.D.	5	1	1
11997	o-Xylene	95-47-6	N.D.	1	0.4	1
11997	Xylene (Total)	1330-20-7	N.D.	6	1	1

Project defined calibration criteria are not met. The calibration is compliant with the method defined criteria.

A Report Limit Verification (RLV) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The RLV standard shows adequate sensitivity at or below the reporting limit.

00882 VOA Interp. Library Search-10

The results from the volatile library search are listed on the attached FORM 1 - VOA-TIC. The qualifiers appearing in the "Q" column are defined at the end of the report.

*=This limit was used in the evaluation of the final result

Sample Description: **Trip Blank Water**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/30/2019 11:22
Collection Date/Time: 10/29/2019
SDG#: BMS81-22TB

ARCADIS U.S., Inc.
ELLE Sample #: GW 1187641
ELLE Group #: 2071744
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC Miscellaneous	**SW-846 8015D Rev.4, June 2003**		**ug/l**	**ug/l**	**ug/l**	
10603	Ethanol	64-17-5	N.D. D2	1,000	150	1
12926	Ethylene glycol[1]	107-21-1	N.D. R	10,000	5,000	1
10603	Isopropanol[1]	67-63-0	N.D. D2	1,000	110	1
10603	Methanol	67-56-1	N.D. D2	1,000	220	1
12926	Propylene glycol[1]	57-55-6	N.D. R	10,000	2,000	1

The response for a target analyte(s) in the continuing calibration verification standard is outside the QC acceptance limits low. The following action was taken:
The analysis was repeated and the continuing calibration verification standard bracketing the sample on the second trial is also outside the acceptance limits. This effect is attributed to the sample matrix and the data is reported.

Sample Comments

State of New York Certification No. 10670

[1] = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	Y193091AA	11/05/2019 15:20	Corie Mellinger	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	Y193091AA	11/05/2019 15:19	Corie Mellinger	1
10603	Alcohols in Water	SW-846 8015D Rev.4, June 2003	1	193080007A	11/04/2019 16:04	Johanna C Kennedy	1
12926	Glycols in Water by 8015C/D	SW-846 8015D Rev.4, June 2003	1	193040002A	11/01/2019 12:46	Donald Brown	1

*=This limit was used in the evaluation of the final result

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
S8122

Lab Name: Lancaster Laboratories Contract:_____
Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____
Matrix: (soil/water) WATER Lab Sample ID: 1187641
Sample wt/vol: 5.0 (g/mL)mL Lab File ID:HP09355.i/19nov05a.b/yn05s03.d
Level: (low/med) LOW Date Received: 10/30/19
% Moisture: not dec. Date Analyzed: 11/05/19
Column: (pack/cap) CAP Dilution Factor: 1.0
CONCENTRATION UNITS:
Number TICs found: 0 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	VOCTIC	Total VOC TICs		0	U
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page 1 of 1

FORM I VOA-TIC

Sample Description: **DUP-102919-02 Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/30/2019 11:22
Collection Date/Time: 10/29/2019
SDG#: BMS81-23FD

ARCADIS U.S., Inc.
ELLE Sample #: GW 1187642
ELLE Group #: 2071744
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	Acenaphthene	83-32-9	N.D.	0.55	0.11	1
14241	Acenaphthylene	208-96-8	N.D.	0.55	0.11	1
14241	Acetophenone	98-86-2	N.D.	11	4.4	1
14241	Aniline	62-53-3	N.D.	11	3.3	1
14241	Anthracene	120-12-7	N.D.	0.55	0.11	1
14241	Atrazine	1912-24-9	N.D.	5.5	2.2	1
14241	Benzaldehyde	100-52-7	N.D.	11	3.3	1
14241	Benzo(a)anthracene	56-55-3	N.D.	0.55	0.11	1
14241	Benzo(a)pyrene	50-32-8	N.D.	0.55	0.11	1
14241	Benzo(b)fluoranthene	205-99-2	N.D.	0.55	0.11	1
14241	Benzo(g,h,i)perylene	191-24-2	N.D.	0.55	0.11	1
14241	Benzo(k)fluoranthene	207-08-9	N.D.	0.55	0.11	1
14241	Benzyl alcohol	100-51-6	N.D.	33	11	1
14241	1,1'-Biphenyl	92-52-4	N.D.	11	3.3	1
14241	4-Bromophenyl-phenylether	101-55-3	N.D.	2.2	0.55	1
14241	Butylbenzylphthalate	85-68-7	N.D.	5.5	2.2	1
14241	Di-n-butylphthalate	84-74-2	N.D.	5.5	2.2	1
14241	Caprolactam	105-60-2	N.D.	12	5.5	1
14241	Carbazole	86-74-8	N.D.	2.2	0.55	1
14241	4-Chloro-3-methylphenol	59-50-7	N.D.	2.2	0.55	1
14241	4-Chloroaniline	106-47-8	N.D.	11	4.4	1
14241	bis(2-Chloroethoxy)methane	111-91-1	N.D.	2.2	0.55	1
14241	bis(2-Chloroethyl)ether	111-44-4	N.D.	2.2	0.55	1
14241	bis(2-Chloroisopropyl)ether[1]	39638-32-9	N.D.	2.2	0.55	1
	Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.					
14241	2-Chloronaphthalene	91-58-7	N.D.	1.1	0.44	1
14241	2-Chlorophenol	95-57-8	N.D.	2.2	0.55	1
14241	4-Chlorophenyl-phenylether	7005-72-3	N.D.	2.2	0.55	1
14241	Chrysene	218-01-9	N.D.	0.55	0.11	1
14241	Dibenz(a,h)anthracene	53-70-3	N.D.	0.55	0.11	1
14241	Dibenzofuran	132-64-9	N.D.	2.2	0.55	1
14241	3,3'-Dichlorobenzidine	91-94-1	N.D.	11	3.3	1
14241	2,4-Dichlorophenol	120-83-2	N.D.	2.2	0.55	1
14241	Dicyclohexylamine[1]	101-83-7	N.D.	11	11	1
14241	Diethylphthalate	84-66-2	N.D.	5.5	2.2	1
14241	N,N-Dimethylaniline[1]	121-69-7	N.D.	1.1	0.55	1
14241	2,4-Dimethylphenol	105-67-9	N.D.	11	3.3	1
14241	Dimethylphthalate	131-11-3	N.D.	5.5	2.2	1
14241	4,6-Dinitro-2-methylphenol	534-52-1	N.D.	23	8.8	1

*=This limit was used in the evaluation of the final result

Sample Description: **DUP-102919-02 Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/30/2019 11:22
Collection Date/Time: 10/29/2019
SDG#: BMS81-23FD

ARCADIS U.S., Inc.
ELLE Sample #: GW 1187642
ELLE Group #: 2071744
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	2,4-Dinitrophenol	51-28-5	N.D.	33	15	1
14241	2,4-Dinitrotoluene	121-14-2	N.D.	5.5	1.1	1
14241	2,6-Dinitrotoluene	606-20-2	N.D.	2.2	0.55	1
14241	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	12	5.5	1
14241	Fluoranthene	206-44-0	N.D.	0.55	0.11	1
14241	Fluorene	86-73-7	N.D.	0.55	0.11	1
14241	Hexachlorobenzene	118-74-1	N.D.	0.55	0.11	1
14241	Hexachlorobutadiene	87-68-3	N.D.	2.2	0.55	1
14241	Hexachlorocyclopentadiene	77-47-4	N.D.	12	5.5	1
14241	Hexachloroethane	67-72-1	N.D.	5.5	1.1	1
14241	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.55	0.11	1
14241	Isophorone	78-59-1	N.D.	2.2	0.55	1
14241	2-Methylnaphthalene	91-57-6	N.D.	0.55	0.11	1
14241	2-Methylphenol	95-48-7	N.D.	2.2	0.55	1
14241	4-Methylphenol	65794-96-9	N.D.	2.2	0.55	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
14241	Naphthalene	91-20-3	N.D.	0.55	0.11	1
14241	2-Nitroaniline	88-74-4	N.D.	7.7	2.2	1
14241	3-Nitroaniline	99-09-2	N.D.	7.7	3.3	1
14241	4-Nitroaniline	100-01-6	N.D.	3.3	0.99	1
14241	Nitrobenzene	98-95-3	N.D.	2.2	0.55	1
14241	2-Nitrophenol	88-75-5	N.D.	11	3.3	1
14241	4-Nitrophenol	100-02-7	N.D.	33	11	1
14241	N-Nitroso-di-n-propylamine	621-64-7	N.D.	3.3	0.77	1
14241	N-Nitrosodiphenylamine	86-30-6	N.D.	3.3	0.77	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.					
14241	Di-n-octylphthalate	117-84-0	N.D.	12	5.5	1
14241	Pentachlorophenol	87-86-5	N.D.	5.5	1.1	1
14241	Phenanthrene	85-01-8	N.D.	0.55	0.11	1
14241	Phenol	108-95-2	N.D.	2.2	0.55	1
14241	Pyrene	129-00-0	N.D.	0.55	0.11	1
14241	Pyridine	110-86-1	N.D.	5.5	2.2	1
14241	1,2,4,5-Tetrachlorobenzene	95-94-3	N.D.	2.2	0.55	1
14241	2,3,4,6-Tetrachlorophenol	58-90-2	N.D.	11	4.4	1
14241	2,4,5-Trichlorophenol	95-95-4	N.D.	2.2	0.55	1
14241	2,4,6-Trichlorophenol	88-06-2	N.D.	2.2	0.55	1
14241	Triethylamine[1]	121-44-8	N.D. J	11	11	1

*=This limit was used in the evaluation of the final result

Sample Description: **DUP-102919-02 Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/30/2019 11:22
Collection Date/Time: 10/29/2019
SDG#: BMS81-23FD

ARCADIS U.S., Inc.
ELLE Sample #: GW 1187642
ELLE Group #: 2071744
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D SIM**		**ug/l**	**ug/l**	**ug/l**	
14244	1,4-Dioxane	123-91-1	N.D.	0.3	0.1	1
00886	**SVOA TIC Interpretive(25)**					
	The results from the semivolatile library search are listed on the attached FORM 1 - SV-TIC. The qualifiers appearing in the "Q" column are defined at the end of the report.					
Wet Chemistry	**EPA 350.1**		**ug/l**	**ug/l**	**ug/l**	
12892	Ammonia Nitrogen	7664-41-7	11,500	2,000	1,000	20

Sample Comments

State of New York Certification No. 10670

[1] = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14241	Semi-annual Groundwater BMS	SW-846 8270D	1	19303WAN026	11/06/2019 14:00	Kira N Beck	1
14244	SIM SVOAs 8270D MINI	SW-846 8270D SIM	1	19303WAP026	11/01/2019 00:22	Ashley R Transue	1
10466	BNA Water Extraction SIM	SW-846 3510C	1	19303WAP026	10/31/2019 09:30	Joshua S Ruth	1
11010	8270D BNA Extraction	SW-846 3510C	1	19303WAN026	10/31/2019 09:30	Joshua S Ruth	1
12892	Ammonia Nitrogen	EPA 350.1	1	19307107103A	11/03/2019 09:57	Ashlynn M Cornelius	20

*=This limit was used in the evaluation of the final result

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
S8123

Lab Name: Lancaster Laboratories Contract:
Lab Code: LANCAS Case No.: SAS No.: SDG No.:
Matrix: (soil/water) WATER Lab Sample ID: 1187642
Sample wt/vol: 227 (g/mL) mL Lab File ID: lk0179.d
Level: (low/med) LOW Date Received: 10/30/19
% Moisture: Decanted: (Y/N) Date Extracted: 10/31/19
Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/06/19
Injection Volume: 1 (uL) Dilution Factor: 1
GPC Cleanup: N pH: Extraction: Sepf
CONCENTRATION UNITS:
Number TICs found: 1 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		Unknown	7.117	19	J N
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3.	SVOCTIC	Total SVOC TICs		19	J N
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page 1 of 1

FORM I SV-1

Sample Description: **FB-102919 Grab Water**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/30/2019 11:22
Collection Date/Time: 10/29/2019 16:20
SDG#: BMS81-24FB

ARCADIS U.S., Inc.
ELLE Sample #: GW 1187643
ELLE Group #: 2071744
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
LC/MS/MS Miscellaneous	**EPA 537 mod QSM 5.1 table B-15**		**ng/l**	**ng/l**	**ng/l**	
14434	6:2-Fluorotelomersulfonic acid[1]	27619-97-2	N.D.	4.4	1.7	1
14434	8:2-Fluorotelomersulfonic acid[1]	39108-34-4	N.D.	2.6	0.87	1
14434	NEtFOSAA[1]	2991-50-6	N.D.	2.6	0.44	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.					
14434	NMeFOSAA[1]	2355-31-9	N.D.	1.7	0.52	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.					
14434	Perfluorobutanesulfonic acid[1]	375-73-5	N.D.	1.7	0.44	1
14434	Perfluorobutanoic acid[1]	375-22-4	N.D.	4.4	1.7	1
14434	Perfluorodecanesulfonic acid[1]	335-77-3	N.D.	1.7	0.44	1
14434	Perfluorodecanoic acid[1]	335-76-2	N.D.	1.7	0.44	1
14434	Perfluorododecanoic acid[1]	307-55-1	N.D.	1.7	0.44	1
14434	Perfluoroheptanesulfonic acid[1]	375-92-8	N.D.	1.7	0.44	1
14434	Perfluoroheptanoic acid[1]	375-85-9	N.D.	1.7	0.44	1
14434	Perfluorohexanesulfonic acid[1]	355-46-4	N.D.	1.7	0.44	1
14434	Perfluorohexanoic acid[1]	307-24-4	N.D.	1.7	0.44	1
14434	Perfluorononanoic acid[1]	375-95-1	N.D.	1.7	0.44	1
14434	Perfluorooctanesulfonamide[1]	754-91-6	N.D.	1.7	0.44	1
14434	Perfluorooctanesulfonic acid[1]	1763-23-1	N.D.	1.7	0.44	1
14434	Perfluorooctanoic acid[1]	335-67-1	N.D.	1.7	0.44	1
14434	Perfluoropentanoic acid[1]	2706-90-3	N.D.	1.7	0.44	1
14434	Perfluorotetradecanoic acid[1]	376-06-7	N.D.	1.7	0.44	1
14434	Perfluorotridecanoic acid[1]	72629-94-8	N.D.	1.7	0.44	1
14434	Perfluoroundecanoic acid[1]	2058-94-8	N.D.	1.7	0.44	1

Sample Comments

State of New York Certification No. 10670

[1] = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14434	PFAS in Water by LC/MS/MS-DoD	EPA 537 mod QSM 5.1 table B-15	1	19304003	11/01/2019 17:09	Devon M Whooley	1
14465	PFAS Water Prep - DoD	EPA 537 mod QSM 5.1 table B-15	1	19304003	10/31/2019 07:00	Toby Barnhart	1

*=This limit was used in the evaluation of the final result

Sample Description: **EB-102919 Grab Water**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/30/2019 11:22
Collection Date/Time: 10/29/2019 16:30
SDG#: BMS81-25EB

ARCADIS U.S., Inc.
ELLE Sample #: GW 1187644
ELLE Group #: 2071744
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
LC/MS/MS Miscellaneous	**EPA 537 mod QSM 5.1 table B-15**		**ng/l**	**ng/l**	**ng/l**	
14434	6:2-Fluorotelomersulfonic acid[1]	27619-97-2	N.D.	5.1	2.0	1
14434	8:2-Fluorotelomersulfonic acid[1]	39108-34-4	N.D.	3.1	1.0	1
14434	NEtFOSAA[1]	2991-50-6	N.D.	3.1	0.51	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.					
14434	NMeFOSAA[1]	2355-31-9	N.D.	2.0	0.61	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.					
14434	Perfluorobutanesulfonic acid[1]	375-73-5	N.D.	2.0	0.51	1
14434	Perfluorobutanoic acid[1]	375-22-4	N.D.	5.1	2.0	1
14434	Perfluorodecanesulfonic acid[1]	335-77-3	N.D.	2.0	0.51	1
14434	Perfluorodecanoic acid[1]	335-76-2	N.D.	2.0	0.51	1
14434	Perfluorododecanoic acid[1]	307-55-1	N.D.	2.0	0.51	1
14434	Perfluoroheptanesulfonic acid[1]	375-92-8	N.D.	2.0	0.51	1
14434	Perfluoroheptanoic acid[1]	375-85-9	N.D.	2.0	0.51	1
14434	Perfluorohexanesulfonic acid[1]	355-46-4	N.D.	2.0	0.51	1
14434	Perfluorohexanoic acid[1]	307-24-4	N.D.	2.0	0.51	1
14434	Perfluorononanoic acid[1]	375-95-1	N.D.	2.0	0.51	1
14434	Perfluorooctanesulfonamide[1]	754-91-6	N.D.	2.0	0.51	1
14434	Perfluorooctanesulfonic acid[1]	1763-23-1	N.D.	2.0	0.51	1
14434	Perfluorooctanoic acid[1]	335-67-1	N.D.	2.0	0.51	1
14434	Perfluoropentanoic acid[1]	2706-90-3	N.D.	2.0	0.51	1
14434	Perfluorotetradecanoic acid[1]	376-06-7	N.D.	2.0	0.51	1
14434	Perfluorotridecanoic acid[1]	72629-94-8	N.D.	2.0	0.51	1
14434	Perfluoroundecanoic acid[1]	2058-94-8	N.D.	2.0	0.51	1

Sample Comments

State of New York Certification No. 10670

[1] = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14434	PFAS in Water by LC/MS/MS-DoD	EPA 537 mod QSM 5.1 table B-15	1	19308018	11/05/2019 17:04	Mark Collare	1
14465	PFAS Water Prep - DoD	EPA 537 mod QSM 5.1 table B-15	2	19308018	11/04/2019 16:00	Anthony C Polaski	1

*=This limit was used in the evaluation of the final result

ARCADIS Design & Consultancy for natural and built assets

Bristol-Myers Squibb

Thompson Road Investigation

Data Usability Summary Report

Syracuse, NY

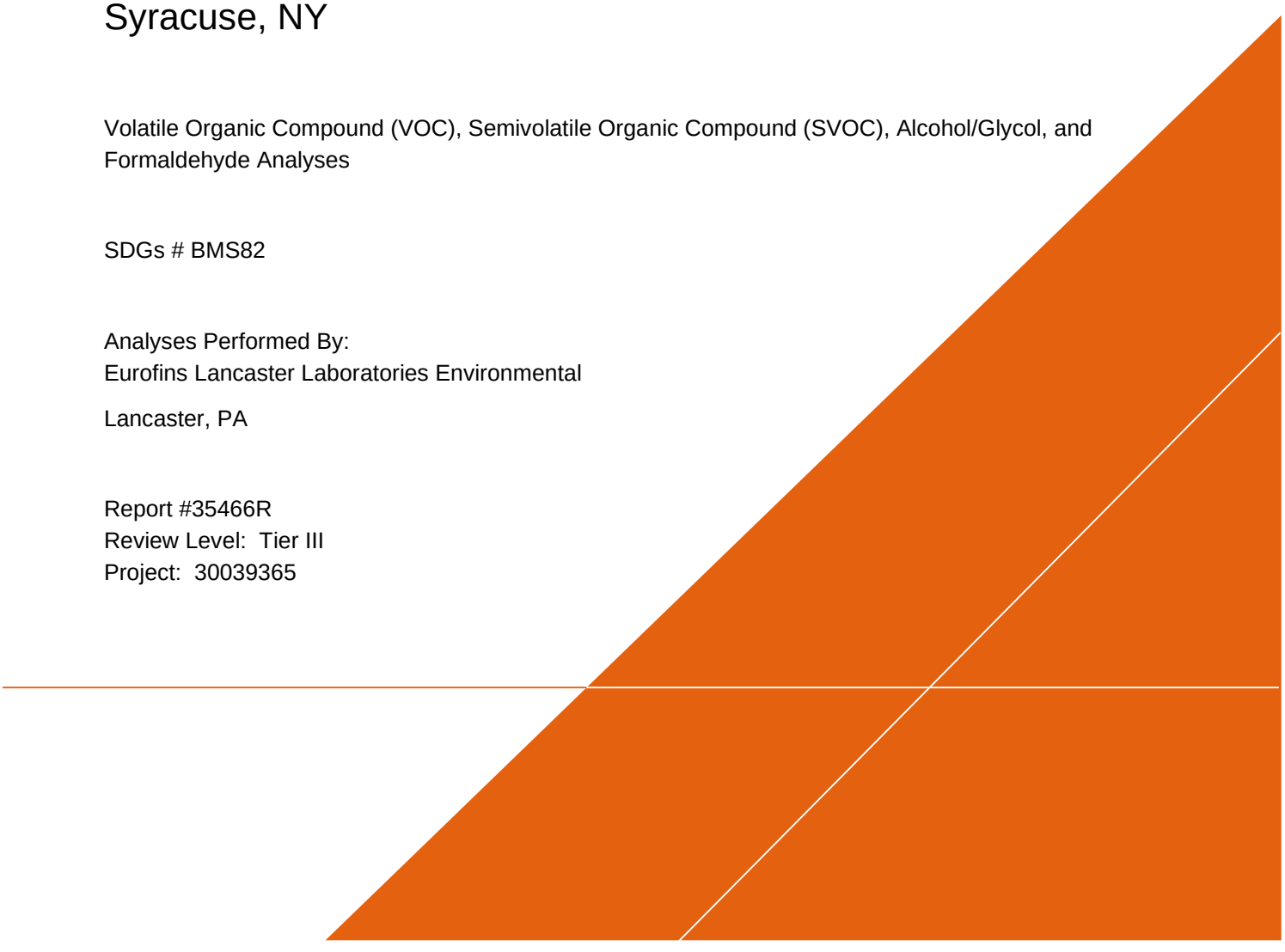
Volatile Organic Compound (VOC), Semivolatile Organic Compound (SVOC), Alcohol/Glycol, and Formaldehyde Analyses

SDGs # BMS82

Analyses Performed By:
Eurofins Lancaster Laboratories Environmental

Lancaster, PA

Report #35466R
Review Level: Tier III
Project: 30039365



SUMMARY

This data quality assessment summarizes the review of Sample Delivery Groups (SDGs) # BMS82 for samples collected in association with the with the Bristol-Myers Squibb Thompson Road Site. The review was conducted as a Tier III evaluation and included review of data package completeness. Only analytical data associated with constituents of concern were reviewed for this validation. Field documentation was not included in this review. Included with this assessment are the validation annotated sample result sheets, and chain of custody. Analyses were performed on the following samples:

SDG Number	Sample ID	Lab ID	Matrix	Sample Collection Date	Parent Sample	Analysis				
						VOC	SVOC	PFAS	MET	MISC
BMS82	PW-2T 10302019	1188912	Water	10/30/2019		X	X			X[1]
	BDA-1WT 10302019	1188913	Water	10/30/2019		X	X			X[1]
	BDA-1F 10302019	1188916	Water	10/30/2019		X	X			X[1]
	PW-6F 10302019	1188917	Water	10/30/2019		X	X			X[1]
	PW-4T 10302019	1188918	Water	10/30/2019		X	X			X[1]
	BDA-6WT 10302019	1188919	Water	10/30/2019		X	X			X[1]
	BDA-6T 10302019	1188920	Water	10/30/2019		X	X			X[1]
	TRIP BLANK 10232019	1188921	Water	10/23/2019		X				X[1]
	BDA15RX 10302019	1188922	Water	10/30/2019		X	X			
	PW-5T 10302019	1188923	Water	10/30/2019		X	X			X[1]
	PW-5RX 10302019	1188924	Water	10/30/2019		X	X			X[1]
	DUP-103019FD	1188925	Water	10/30/2019	PW-5T	X	X			X[1]
	BDA-1RX 10312019	1190178	Water	10/31/2019		X	X			X[1]
	BDA-11WT 10312019	1190179	Water	10/31/2019		X	X			
	BDA-13WT 10312019	1190180	Water	10/31/2019		X	X			X[1]
	BDA-8T 10312019	1190181	Water	10/31/2019		X	X			X[1]
	BDA-4UT 10312019	1190182	Water	10/31/2019		X	X			
	TRIP BLANK2 10232019	1190183	Water	10/23/2019		X				X[1]

Notes:
[1] Miscellaneous analyses include Aldehydes, Alcohols and Glycols

ANALYTICAL DATA PACKAGE DOCUMENTATION

The table below is the evaluation of the data package completeness.

Items Reviewed	Reported		Performance Acceptable		Not Required
	No	Yes	No	Yes	
1. Sample receipt condition		X		X	
2. Requested analyses and sample results		X		X	
3. Master tracking list		X		X	
4. Methods of analysis		X		X	
5. Reporting limits		X		X	
6. Sample collection date		X		X	
7. Laboratory sample received date		X		X	
8. Sample preservation verification (as applicable)		X		X	
9. Sample preparation/extraction/analysis dates		X		X	
10. Fully executed Chain-of-Custody (COC) form		X		X	
11. Narrative summary of QA or sample problems provided		X		X	
12. Data Package Completeness and Compliance		X		X	

Note:
QA - Quality Assurance

List of Acronyms

%D: Percent Difference

%R: Percent Recovery

AC: Acceptable

ALC/GLY: Alcohols/Glycols

BAL: Blank Action Level

CCV: Continuing Calibration Verification

CRDL: Contract Required Detection Limit

D: Dilution

EIS: Extractable Internal Standard

FB: Field Blank

FD: Field Duplicate

ALD: Aldehydes

GC/ECD: Gas Chromatograph/Electron Capture Detector

GC/MS: Gas Chromatograph/Mass spectrometer

HT: Holding Time

ICP: Inductively Coupled Plasma

ICS: Interference Control Sample

ICV: Initial Calibration Verification

ISTD: Internal Standards

LabDup: Laboratory Duplicate

LCS: Lab Control Sample

LCSD: Lab Control Sample Duplicate

LL: Lower Control Limit

MB: Method Blank

MDL: Method Detection Limit

MET: Metals

MS: Matrix Spike

MSD: Matrix Spike Duplicate

N/A: Not Applicable

NC: Not Compliant

List of Acronyms, Continued

PAH: Polyaromatic Hydrocarbon

PCB: Polychlorinated Biphenyl

PEST: Pesticide

PFAS: Per- and Polyfluoroalkyl Substances

QA: Quality Assurance

QC: Quality Control

RB: Rinse Blank

RL: Reporting Limit

RPD: Relative Percent Difference

RRF: Relative Response Factor

RSD: Relative Standard Deviation

RT: Retention Time

SDG: Sample Delivery Group

SerDil: Serial Dilution

SIM: Single Ion Monitoring

SOP: Standard Operating Procedure

SSTD: Surrogate Standards

SVOC: Semivolatile Organic Compound

TB: Trip Blank

TIC: Tentatively Identified Compound

TOC: Total Organic Carbon

TOTDIS: Total and Dissolved

UL: Upper Control Limit

USEPA: United States Environmental Protection Agency

VOC: Volatile Organic Compound

ORGANIC ANALYSIS INTRODUCTION

Analyses were performed according to United States Environmental Protection Agency (USEPA) SW846 methods 8260C, 8270D, 8015D and 8315A. Data were reviewed in accordance with USEPA National Functional Guidelines of October 1999 and applicable EPA Region 2 SOPs.

The data review process is an evaluation of data on a technical basis rather than a determination of contract compliance. As such, the standards against which the data are being weighed may differ from those specified in the analytical method. It is assumed that the data package represents the best efforts of the laboratory and had already been subjected to adequate and sufficient quality review prior to submission.

During the review process, laboratory qualified and unqualified data are verified against the supporting documentation. Based on this evaluation, qualifier codes may be added, deleted, or modified by the data reviewer. Results are qualified with the following codes in accordance with USEPA National Functional Guidelines:

- Concentration (C) Qualifiers
  - U The compound was analyzed for but not detected. The associated value is the compound quantitation limit.
  - B The compound has been found in the sample as well as its associated blank, its presence in the sample may be suspect.
- Quantitation (Q) Qualifiers
  - E The compound was quantitated above the calibration range.
  - D Concentration is based on a diluted sample analysis.

- Validation Qualifiers
  - J The compound was positively identified; however, the associated numerical value is an estimated concentration only.
  - UJ The compound was not detected above the reported sample quantitation limit. However, the reported limit is approximate and may or may not represent the actual limit of quantitation.
  - JN The analysis indicates the presence of a compound for which there is presumptive evidence to make a tentative identification. The associated numerical value is an estimated concentration only.
  - UB Compound considered non-detect at the listed value due to associated blank contamination.
  - N The analysis indicates the presence of a compound for which there is presumptive evidence to make a tentative identification.
  - R The sample results are rejected.

Two facts should be noted by all data users. First, the "R" flag means that the associated value is unusable. In other words, due to significant quality control (QC) problems, the analysis is invalid and provides no information as to whether the compound is present or not. "R" values should not appear on data tables because they cannot be relied upon, even as a last resort. The second fact to keep in mind is

that no compound concentration, even if it has passed all QC tests, is guaranteed to be accurate. Strict QC serves to increase confidence in data but any value potentially contains error.

VOLATILE ORGANIC COMPOUND (VOC) ANALYSES

1. Holding Times

The specified holding times for the following methods are presented in the following table.

Method	Matrix	Holding Time	Preservation
SW-846 8260C	Water	14 days from collection to analysis (preserved) 7 days from collection to analysis (non-preserved)	Cool to <6 °C; preserved to a pH of less than 2 s.u.
	Soil	48 hours from collection to extraction and 14 days from extraction to analysis	Cool to <6 °C.

Note:

s.u. Standard units

All samples were analyzed within the specified holding time criteria.

2. Blank Contamination

Quality assurance (QA) blanks (i.e., method and rinse blanks) are prepared to identify any contamination which may have been introduced into the samples during sample preparation or field activity. Method blanks measure laboratory contamination. Rinse blanks measure contamination of samples during field operations.

A blank action level (BAL) of five times the concentration of a detected compound in an associated blank (common laboratory contaminant compounds are calculated at ten times) is calculated for QA blanks containing concentrations greater than the method detection limit (MDL). The BAL is compared to the associated sample results to determine the appropriate qualification of the sample results, if needed.

Compounds were not detected above the MDL in the associated blanks; therefore, detected sample results were not associated with blank contamination.

3. Mass Spectrometer Tuning

Mass spectrometer performance was acceptable, and all analyses were performed within a 12-hour tune clock.

System performance and column resolution were acceptable.

4. Calibration

Satisfactory instrument calibration is established to ensure that the instrument is capable of producing acceptable quantitative data. An initial calibration demonstrates that the instrument is capable of acceptable performance at the beginning of an experimental sequence. The continuing calibration verifies that the instrument daily performance is satisfactory.

4.1 Initial Calibration

The method specifies percent relative standard deviation (%RSD) and relative response factor (RRF) limits for select compounds only. A technical review of the data applies limits to all compounds with no exceptions.

All target compounds associated with the initial calibration standards must exhibit a %RSD less than the control limit (15%) or a correlation coefficient greater than 0.99 and an RRF value greater than control limit (0.05).

4.2 Continuing Calibration

All target compounds associated with the continuing calibration standard must exhibit a percent difference (%D) less than the control limit (20%) and RRF value greater than control limit (0.05).

All compounds associated with the calibrations were within the specified control limits, with the exception of the compounds presented in the following table.

Sample Locations	Initial/Continuing	Compound	Criteria
TRIP BLANK 10232019 TRIP BLANK2 10232019	CCV %D	Dichlorodifluoromethane	-23%
		Bromomethane	-22%
		Isobutyl Alcohol	36%
		n-Butanol	27%
		1,4-Dioxane	38%
		Acetonitrile	26%
PW-2T 10302019 BDA-1WT 10302019 BDA-1F 10302019 PW-4T 10302019 BDA-6WT 10302019 BDA-6T 10302019 BDA15RX 10302019 PW-6F 10302019	CCV %D	Dichlorodifluoromethane	-23%
		Chloromethane	-32%
		Vinyl chloride	-31%
		Chloroethane	-29%
		Dichlorofluoromethane	-31%
		Trichlorofluoromethane	-27%
		Acetone	22%
		Tert-butyl alcohol	34%
		Isobutyl Alcohol	52%
		n-Butanol	38%
		1,4-Dioxane	53%
PW-5T 10302019 PW-5RX 10302019 DUP-103019FD	CCV %D	Dichlorodifluoromethane	-33%
		Chloromethane	-43%
		Vinyl chloride	-48%

Sample Locations	Initial/Continuing	Compound	Criteria
BDA-1RX 10312019 BDA-11WT 10312019 BDA-13WT 10312019 BDA-8T 10312019 BDA-4UT 10312019		Bromomethane	-44%
		Chloroethane	-37%
		Trichlorofluoromethane	-26%
		Acetonitrile	26%
		Acetone	25%
		Isobutyl Alcohol	26%
		1,4-Dioxane	41%
		Chlorodifluoromethane	-32%

The criteria used to evaluate the initial and continuing calibration are presented in the following table. In the case of a calibration deviation, the sample results are qualified.

Initial/Continuing	Criteria	Sample Result	Qualification
Initial and Continuing Calibration	RRF <0.05	Non-detect	R
		Detect	J
	RRF <0.01[1]	Non-detect	R
		Detect	J
	RRF >0.05 or RRF >0.01[1]	Non-detect	No Action
		Detect	
Initial Calibration	%RSD > 15% or a correlation coefficient <0.99	Non-detect	UJ
		Detect	J
	%RSD >90%	Non-detect	R
		Detect	J
Continuing Calibration	%D >20% (increase in sensitivity)	Non-detect	No Action
		Detect	J
	%D >20% (decrease in sensitivity)	Non-detect	UJ
		Detect	J
	%D >90% (increase/decrease in sensitivity)	Non-detect	R
		Detect	J

Initial/Continuing	Criteria	Sample Result	Qualification

5. Surrogates/System Monitoring Compounds

All samples to be analyzed for organic compounds are spiked with surrogate compounds prior to sample preparation to evaluate overall laboratory performance and efficiency of the analytical technique. VOC analysis requires that all surrogates associated with the analysis exhibit recoveries within the laboratory-established acceptance limits.

All surrogate recoveries were within control limits.

6. Internal Standard Performance

Internal standard performance criteria insure that the GC/MS sensitivity and response are stable during every sample analysis. The criteria require the internal standard compounds associated with the VOC exhibit area counts that are not greater than two times (+100%) or less than one-half (-50%) of the area counts of the associated continuing calibration standard.

All internal standard responses were within control limits.

7. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Analysis

MS/MSD data are used to assess the precision and accuracy of the analytical method. The compounds used to perform the MS/MSD analysis must exhibit a percent recovery within the laboratory-established acceptance limits. The relative percent difference (RPD) between the MS/MSD recoveries must exhibit an RPD within the laboratory-established acceptance limits.

Note: The MS/MSD recovery control limits do not apply for MS/MSD performed on sample locations where the compound concentration detected in the parent sample exceeds the MS/MSD concentration by a factor of four or greater.

Sample locations associated with the MS/MSD exhibiting recoveries outside of the control limits are presented in the following table.

Sample Locations	Compound	MS Recovery	MSD Recovery
BDA-1WT 10302019	1,4-Dioxane	>UL	AC
	Isobutyl alcohol	>UL	AC

Note:

AC Acceptable

The criteria used to evaluate the MS/MSD recoveries are presented in the following table. In the case of an MS/MSD deviation, the sample results are qualified as documented in the table below.

Control Limit	Sample Result	Qualification
> the upper control limit (UL)	Non-detect	No Action
	Detect	J

Control Limit	Sample Result	Qualification
< the lower control limit (LL) but > 10%	Non-detect	UJ
	Detect	J
< 10%	Non-detect	R
	Detect	J
Parent sample concentration > four times the MS/MSD spiking solution concentration.	Detect	No Action
	Non-detect	

Sample locations associated with MS/MSD recoveries exhibiting an RPD greater than the control limit are presented in the following table.

Sample Locations	Compound
BDA-1WT 10302019	Ethyl ether
	Trichlorofluoromethane

The criteria used to evaluate the RPD between the MS/MSD recoveries are presented in the following table. In the case of an RPD deviation, the sample results are qualified as documented in the table below.

Control Limit	Sample Result	Qualification
> UL	Non-detect	UJ
	Detect	J

8. Laboratory Control Sample/Laboratory Control Sample Duplicate (LCS/LCSD) Analysis

The LCS/LCSD analysis is used to assess the precision and accuracy of the analytical method independent of matrix interferences. The compounds associated with the LCS/LCSD analysis must exhibit a percent recovery within the laboratory-established acceptance limits.

Sample locations associated with LCS/LCSD analysis exhibiting recoveries outside of the control limits presented in the following table.

Sample Locations	Compound	LCS Recovery	LCSD Recovery
PW-5T 10302019 DUP-103019FD	Bromomethane	AC	<LL but >10%
BDA-1RX 10312019 BDA-11WT 10312019 BDA-13WT 10312019	Chloroethane	AC	<LL but >10%
BDA-8T 10312019 BDA-4UT 10312019	Chloromethane	<LL but >10%	<LL but >10%

The criteria used to evaluate the LCS/LCSD recoveries are presented in the following table. In the case of an LCS/LCSD deviation, the sample results are qualified as documented in the table below.

Control Limit	Sample Result	Qualification
> the upper control limit (UL)	Non-detect	No Action
	Detect	J
< the lower control limit (LL) but > 10%	Non-detect	UJ
	Detect	J
< 10%	Non-detect	R
	Detect	J

Note:
Sample results were not qualified as rejected (R) due to the deviations listed above.

9. Field Duplicate Analysis

Field duplicate analysis is used to assess the overall precision of the field sampling procedures and analytical method. A control limit of 50% for water matrices and 100% for soil matrices is applied to the RPD between the parent sample and the field duplicate. In the instance when the parent and/or duplicate sample concentrations are less than or equal to 5 times the RL, a control limit of two times the RL is applied for water matrices or three times the RL is applied for soil matrices.

Results for duplicate samples are summarized in the following table.

Sample ID/Duplicate ID	Compound	Sample Result	Duplicate Result	RPD
PW-5T 10302019/ DUP-103019FD	All compounds	U	U	AC

Notes:

AC Acceptable

The compound Chloroform associated with samples BDA-17WT 10292019 and DUP-102919FD exhibited a field duplicate RPD greater than the control limit. The associated sample result from these sample locations were qualified as estimated.

10. Compound Identification

Compounds are identified on the GC/MS by using the analytes relative retention time and ion spectra.

Sample results associated with compound that exhibited a concentration greater than the linear range of the instrument calibration are summarized in the following table.

Sample ID	Compound	Original Analysis	Diluted Analysis	Reported Analysis
BDA-11WT 10312019	Methylene chloride	-	21000	21000 D
BDA-4UT 10312019	Acetone	-	100000 E	100000 EJ
	Methylene chloride	-	93000 E	93000 EJ
	4-Methyl-2-pentanone	-	33000 E	33000 EJ

Note: In the instance where both the original analysis and the diluted analysis sample results exhibited a concentration greater than and/or less than the calibration linear range of the instrument; the sample result exhibiting the greatest concentration will be reported as the final result.

Sample results associated with compounds exhibiting concentrations greater than the linear range are qualified as documented in the table below when reported as the final reported sample result.

Reported Sample Results	Qualification
Diluted sample result within calibration range	D
Diluted sample result less than the calibration range	DJ
Diluted sample result greater than the calibration range	EDJ
Original sample result greater than the calibration range	EJ

Regarding sample PW-6F 10302019, the laboratory indicated “Reporting limits were raised due to sample foaming.”

Tentatively identified compounds (TICs) were identified in all sample locations associated with this SDG. VOC analysis requires that TICs be qualified as estimated (JN).

11. System Performance and Overall Assessment

Overall system performance was acceptable. Other than for those deviations specifically mentioned in this review, the overall data quality is within the guidelines specified in the method.

DATA VALIDATION CHECKLIST FOR VOCs

VOCs: SW-846 8260C	Reported		Performance Acceptable		Not Required
	No	Yes	No	Yes	
GAS CHROMATOGRAPHY/MASS SPECTROMETRY (GC/MS)					
Tier II Validation					
Holding times		X		X	
Reporting limits (units)		X		X	
Blanks					
A. Method blanks		X		X	
B. Equipment blanks					X
C. Trip blanks		X		X	
Laboratory Control Sample (LCS)		X	X		
Laboratory Control Sample Duplicate(LCSD)		X	X		
LCS/LCSD Precision (RPD)		X		X	
Matrix Spike (MS)		X	X		
Matrix Spike Duplicate(MSD)		X		X	
MS/MSD Precision (RPD)		X	X		
Field/Lab Duplicate (RPD)		X		X	
Surrogate Spike Recoveries		X		X	
Dilution Factor		X		X	
Moisture Content					X
Tier III Validation					
System performance and column resolution		X		X	
Initial calibration %RSDs		X		X	
Continuing calibration RRFs		X		X	
Continuing calibration %Ds		X	X		
Instrument tune and performance check		X		X	
Ion abundance criteria for each instrument used		X		X	
Internal standard		X		X	
Compound identification and quantitation					
A. Reconstructed ion chromatograms		X		X	
B. Quantitation Reports		X		X	

VOCs: SW-846 8260C	Reported		Performance Acceptable		Not Required
	No	Yes	No	Yes	
GAS CHROMATOGRAPHY/MASS SPECTROMETRY (GC/MS)					
C. RT of sample compounds within the established RT windows		X		X	
D. Transcription/calculation errors present		X		X	
E. Reporting limits adjusted to reflect sample dilutions		X		X	

Notes:

%RSD Relative standard deviation

%R Percent recovery

RPD Relative percent difference

%D Percent difference

SEMI-VOLATILE ORGANIC COMPOUND (SVOC) ANALYSIS

1. Holding Times

The specified holding times for the following methods are presented in the following table.

Method	Matrix	Holding Time	Preservation
SW-846 8270D	Water	7 days from collection to extraction and 40 days from extraction to analysis	Cool to <6°C
	Soil	14 days from collection to extraction and 40 days from extraction to analysis	Cool to <6°C

The analyses that exceeded the holding are presented in the following table.

Sample Locations	Holding Time	Criteria
PW-2T 10302019	Extraction Completed in 14 Days	7 Days

Sample results associated with sample locations analyzed by analytical method SW-846 8270 were qualified, as specified in the table below. All other holding times were met.

Criteria	Qualification	
	Detected Analytes	Non-detect Analytes
Analysis completed less than two times holding time	J	UJ

The original analysis for sample PW-2T 10302019 exhibited surrogate recoveries below 10%. The re-extraction, which occurred outside the holding time, exhibited acceptable surrogate recoveries. Due to laboratory error, the LCSD associated with the re-extraction was not spiked with target analytes; the LCS exhibited acceptable recoveries. The re-analysis is reported and qualified as estimated (J).

2. Blank Contamination

Quality assurance (QA) blanks (i.e., method and rinse blanks) are prepared to identify any contamination which may have been introduced into the samples during sample preparation or field activity. Method blanks measure laboratory contamination. Rinse blanks measure contamination of samples during field operations.

A blank action level (BAL) of five times the concentration of a detected compound in an associated blank (common laboratory contaminant compounds are calculated at ten times) is calculated for QA blanks containing concentrations greater than the method detection limit (MDL). The BAL is compared to the associated sample results to determine the appropriate qualification of the sample results, if needed.

Compounds were not detected above the MDL in the associated blanks; therefore, detected sample results were not associated with blank contamination.

3. Mass Spectrometer Tuning

Mass spectrometer performance was acceptable, and all analyses were performed within a 12-hour tune clock.

System performance and column resolution were acceptable.

4. Calibration

Satisfactory instrument calibration is established to ensure that the instrument is capable of producing acceptable quantitative data. An initial calibration demonstrates that the instrument is capable of acceptable performance at the beginning of an experimental sequence. The continuing calibration verifies that the instrument daily performance is satisfactory.

4.1 Initial Calibration

The method specifies percent relative standard deviation (%RSD) and relative response factor (RRF) limits for select compounds only. A technical review of the data applies limits to all compounds with no exceptions.

All target compounds associated with the initial calibration standards must exhibit a %RSD less than the control limit (20%) or a correlation coefficient greater than 0.99 and an RRF value greater than control limit (0.05).

4.2 Continuing Calibration

All target compounds associated with the continuing calibration standard must exhibit a percent difference (%D) less than the control limit (20%) and RRF value greater than control limit (0.05).

All compounds associated with the calibrations were within the specified control limits, with the exception of the compounds presented in the following table.

Sample Locations	Initial/Continuing	Compound	Criteria
BDA-1WT 10302019 BDA-1F 10302019 PW-6F 10302019 PW-4T 10302019 BDA-6WT 10302019 BDA-6T 10302019 BDA15RX 10302019 PW-5T 10302019	CCV %D	2,4-Dinitrophenol	47%
		4,6-Dinitro-2-methylphenol	25%
PW-5RX 10302019 DUP-103019FD BDA-1RX 10312019 BDA-13WT 10312019 BDA-8T 10312019	CCV %D	2,4-Dinitrophenol	40%
		4,6-Dinitro-2-methylphenol	31%

Sample Locations	Initial/Continuing	Compound	Criteria
BDA-11WT 10312019 BDA-4UT 10312019	CCV %D	2,4-Dinitrophenol	29%
		4,6-Dinitro-2-methylphenol	23%
PW-2T 10302019RE	CCV %D	Benzaldehyde	-35%
		2,4-Dinitrophenol	-23%

The criteria used to evaluate the initial and continuing calibration are presented in the following table. In the case of a calibration deviation, the sample results are qualified.

Initial/Continuing	Criteria	Sample Result	Qualification
Initial and Continuing Calibration	RRF <0.05	Non-detect	R
		Detect	J
	RRF <0.01[1]	Non-detect	R
		Detect	J
	RRF >0.05 or RRF >0.01[1]	Non-detect	No Action
		Detect	
Initial Calibration	%RSD > 15% or a correlation coefficient <0.99	Non-detect	UJ
		Detect	J
	%RSD >90%	Non-detect	R
		Detect	J
Continuing Calibration	%D >20% (increase in sensitivity)	Non-detect	No Action
		Detect	J
	%D >20% (decrease in sensitivity)	Non-detect	UJ
		Detect	J
	%D >90% (increase/decrease in sensitivity)	Non-detect	R
		Detect	J

5. Surrogates/System Monitoring Compounds

All samples to be analyzed for organic compounds are spiked with surrogate compounds prior to sample preparation to evaluate overall laboratory performance and efficiency of the analytical technique. SVOC analysis requires that two of the three SVOC surrogate compounds within each fraction exhibit recoveries within the laboratory-established acceptance limits.

Sample locations associated with surrogates exhibiting recoveries outside of the control limits presented in the following table.

Sample Locations	Surrogate	Recovery
BDA-4UT 10312019	Phenol-d6	AC
	2-Fluorophenol	AC
	2,4,6-Tribromophenol	AC
	Nitrobenzene-d5	<LL but > 10%
	2-Fluorobiphenyl	AC
	Terphenyl-d14	AC

Notes:

LL Lower control limit

AC Acceptable

The criteria used to evaluate the surrogate recoveries are presented in the following table. In the case of a surrogate deviation, the sample results associated with the deviant fraction are qualified as documented in the table below.

Control Limit	Sample Result	Qualification
> UL	Non-detect	No Action
	Detect	J
< LL but > 10%	Non-detect	UJ
	Detect	J
< 10%	Non-detect	R
	Detect	J

6. Internal Standard Performance

Internal standard performance criteria insure that the GC/MS sensitivity and response are stable during every sample analysis. The criteria requires the internal standard compounds associated with the SVOC exhibit area counts that are not greater than two times (+100%) or less than one-half (-50%) of the area counts of the associated continuing calibration standard.

All internal standard responses were within control limits.

7. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Analysis

MS/MSD data are used to assess the precision and accuracy of the analytical method. The compounds used to perform the MS/MSD analysis must exhibit a percent recovery within the laboratory-established acceptance limits. The relative percent difference (RPD) between the MS/MSD recoveries must exhibit an RPD within the laboratory-established acceptance limits.

Note: The MS/MSD recovery control limits do not apply for MS/MSD performed on sample locations where the compound concentration detected in the parent sample exceeds the MS/MSD concentration by a factor of four or greater.

The MS/MSD exhibited acceptable recoveries and RPD between the MS/MSD recoveries.

8. Laboratory Control Sample/Laboratory Control Sample Duplicate (LCS/LCSD) Analysis

The LCS/LCSD analysis is used to assess the precision and accuracy of the analytical method independent of matrix interferences. The compounds associated with the LCS/LCSD analysis must exhibit a percent recovery within the laboratory-established acceptance limits.

All compounds associated with the LCS/LCSD analysis exhibited recoveries within the control limits.

9. Field Duplicate Analysis

Field duplicate analysis is used to assess the overall precision of the field sampling procedures and analytical method. A control limit of 50% for water matrices and 100% for soil matrices is applied to the RPD between the parent sample and the field duplicate. In the instance when the parent and/or duplicate sample concentrations are less than or equal to 5 times the RL, a control limit of two times the RL is applied for water matrices or three times the RL is applied for soil matrices.

Results for duplicate samples are summarized in the following table.

Sample ID/Duplicate ID	Compound	Sample Result	Duplicate Result	RPD
PW-5T 10302019/ DUP-103019FD	2-Methylnaphthalene	0.43 J	0.51 U	AC

Notes:

AC Acceptable

The calculated RPDs between the parent sample and field duplicate were acceptable.

10. Compound Identification

Compounds are identified on the GC/MS by using the analytes relative retention time and ion spectra.

Sample results associated with compound that exhibited a concentration greater than the linear range of the instrument calibration are summarized in the following table.

Sample ID	Compound	Original Analysis	Diluted Analysis	Reported Analysis
BDA-11WT 10312019	Aniline	-	14000	14000 D
	Dicyclohexylamne	-	5500	5500 D
	N,N-Dimethylaniline	-	6600	6600 D
	Phenol	-	13000	13000 D
BDA-13WT 10312019	Dicyclohexylamne	-	290	290 D
BDA-6WT 10302019	Dicyclohexylamne	-	200	290 D
BDA-4UT 10312019	Phenol	-	3300	3300 D

Note: In the instance where both the original analysis and the diluted analysis sample results exhibited a concentration greater than and/or less than the calibration linear range of the instrument; the sample result exhibiting the greatest concentration will be reported as the final result.

Sample results associated with compounds exhibiting concentrations greater than the linear range are qualified as documented in the table below when reported as the final reported sample result.

Reported Sample Results	Qualification
Diluted sample result within calibration range	D
Diluted sample result less than the calibration range	DJ
Diluted sample result greater than the calibration range	EDJ
Original sample result greater than the calibration range	EJ

Tentatively identified compounds (TICs) were identified in all sample locations associated with this SDG. SVOC analysis requires that TICs be qualified as estimated (JN).

11. System Performance and Overall Assessment

Overall system performance was acceptable. Other than for those deviations specifically mentioned in this review, the overall data quality is within the guidelines specified in the method.

DATA VALIDATION CHECKLIST FOR SVOCs

SVOCs: SW-846 8270D	Reported		Performance Acceptable		Not Required
	No	Yes	No	Yes	
GAS CHROMATOGRAPHY/MASS SPECTROMETRY (GC/MS)					
Tier II Validation					
Holding times		X	X		
Reporting limits (units)		X		X	
Blanks					
D. Method blanks		X		X	
E. Equipment blanks					X
Laboratory Control Sample (LCS) %R		X		X	
Laboratory Control Sample Duplicate (LCSD) %R		X		X	
LCS/LCSD Precision (RPD)		X		X	
Matrix Spike (MS) %R		X		X	
Matrix Spike Duplicate (MSD) %R		X		X	
MS/MSD Precision (RPD)		X		X	
Field/Lab Duplicate (RPD)		X		X	
Surrogate Spike Recoveries		X	X		
Dilution Factor		X		X	
Moisture Content					X
Tier III Validation					
System performance and column resolution		X		X	
Initial calibration %RSDs		X		X	
Continuing calibration RRFs		X		X	
Continuing calibration %Ds		X	X		
Instrument tune and performance check		X		X	
Ion abundance criteria for each instrument used		X		X	
Internal standard		X		X	
Compound identification and quantitation					
F. Reconstructed ion chromatograms		X		X	
G. Quantitation Reports		X		X	
H. RT of sample compounds within the established RT windows		X		X	

SVOCs: SW-846 8270D		Reported		Performance Acceptable		Not Required
		No	Yes	No	Yes	
GAS CHROMATOGRAPHY/MASS SPECTROMETRY (GC/MS)						
I.	Quantitation transcriptions/calculations		X		X	
J.	Reporting limits adjusted to reflect sample dilutions		X		X	

Notes:

%RSD Relative standard deviation

%R Percent recovery

RPD Relative percent difference

%D Percent difference

GLYCOL & ALCOHOL GC ANALYSES

1. Holding Times

The specified holding times for the following methods are presented in the following table.

Method	Matrix	Holding Time	Preservation
SW-846 8015	Water	14 days from collection to analysis	Cool to <6°C
	Soil		

All samples were analyzed within the specified holding time criteria.

2. Blank Contamination

Quality assurance (QA) blanks (i.e., method and rinse blanks) are prepared to identify any contamination which may have been introduced into the samples during sample preparation or field activity. Method blanks measure laboratory contamination. Rinse blanks measure contamination of samples during field operations.

A blank action level (BAL) of five times the concentration of a detected compound in an associated blank (common laboratory contaminant compounds are calculated at ten times) is calculated for QA blanks containing concentrations greater than the method detection limit (MDL). The BAL is compared to the associated sample results to determine the appropriate qualification of the sample results, if needed.

Compounds were not detected above the MDL in the associated blanks; therefore, detected sample results were not associated with blank contamination.

3. System Performance

System performance and column resolution were acceptable.

4. Calibration

Satisfactory instrument calibration is established to ensure that the instrument is capable of producing acceptable quantitative data. An initial calibration demonstrates that the instrument is capable of acceptable performance at the beginning of an experimental sequence. The continuing calibration verifies that the instrument daily performance is satisfactory.

4.1 Initial Calibration

A maximum RSD of 20% is allowed or a correlation coefficient greater than 0.99.

4.2 Continuing Calibration

All target compounds associated with the continuing calibration standard must exhibit a percent difference (%D) less than the control limit (20%).

All Aroclors associated with calibrations were within the specified control limits, with the exception of the compounds presented in the following table.

Sample Locations	Initial/Continuing	Compound	Criteria
BDA-1WT 10302019RE	CCV %D	Ethylene glycol	-42.0%
		Propylene glycol	-36.0%

The criteria used to evaluate the initial and continuing calibration are presented in the following table. In the case of a calibration deviation, the sample results are qualified.

Initial/Continuing	Criteria	Sample Result	Qualification
Initial Calibration	%RSD > 20%or a correlation coefficient <0.99	Non-detect	UJ
		Detect	J
Continuing Calibration	%D >20% (increase in sensitivity)	Non-detect	No Action
		Detect	J
	%D >20% (decrease in sensitivity)	Non-detect	UJ
		Detect	J

5. Surrogates/System Monitoring Compounds

All samples to be analyzed for organic compounds are spiked with surrogate compounds prior to sample preparation to evaluate overall laboratory performance and efficiency of the analytical technique. The

analysis requires that the surrogate compound exhibits recovery within the laboratory-established acceptance limits.

Sample locations associated with surrogates exhibiting recoveries outside of the control limits presented in the following table.

Sample Locations	Surrogate	Recovery
PW-2T 10302019 PW-4T 10302019 BDA-6WT 10302019 PW-5T 10302019 PW-5RX 10302019 DUP-103019FD	Tetramethylene glycol	< 10%
PW-6F 10302019 BDA-1WT 10302019RE	Tetramethylene glycol	< LL but > 10%

Notes:

LL Lower control limit

The criteria used to evaluate the surrogate recoveries are presented in the following table. In the case of a surrogate deviation, the sample results are qualified as documented in the table below.

Control Limit	Sample Result	Qualification
> UL	Non-detect	No Action
	Detect	J
< LL but > 10%	Non-detect	UJ
	Detect	J
< 10%	Non-detect	R
	Detect	J

6. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Analysis

MS/MSD data are used to assess the precision and accuracy of the analytical method. The compounds used to perform the MS/MSD analysis must exhibit a percent recovery within the laboratory-established acceptance limits. The relative percent difference (RPD) between the MS/MSD recoveries must exhibit an RPD within the laboratory-established acceptance limits.

Note: The MS/MSD recovery control limits do not apply for MS/MSD performed on sample locations where the compound concentration detected in the parent sample exceeds the MS/MSD concentration by a factor of four or greater.

The MS/MSD exhibited acceptable recoveries and RPD between the MS/MSD recoveries.

7. Laboratory Control Sample/Laboratory Control Sample Duplicate (LCS/LCSD) Analysis

The LCS/LCSD analysis is used to assess the precision and accuracy of the analytical method independent of matrix interferences. The compounds associated with the LCS/LCSD analysis must exhibit a percent recovery within the laboratory-established acceptance limits.

All compounds associated with the LCS/LCSD analysis exhibited recoveries within the control limits.

8. Field Duplicate Analysis

Field duplicate analysis is used to assess the overall precision of the field sampling procedures and analytical method. A control limit of 50% for water matrices and 100% for soil matrices is applied to the RPD between the parent sample and the field duplicate. In the instance when the parent and/or duplicate sample concentrations are less than or equal to 5 times the RL, a control limit of two times the RL is applied for water matrices or three times the RL is applied for soil matrices.

Results for duplicate samples are summarized in the following table.

Sample ID/Duplicate ID	Compound	Sample Result	Duplicate Result	RPD
PW-5T 10302019/ DUP-103019FD	All compounds	U	U	AC

Sample ID/Duplicate ID	Compound	Sample Result	Duplicate Result	RPD

The calculated RPDs between the parent sample and field duplicate were acceptable.

9. Compound Identification

The retention times of all quantitated peaks must fall within the calculated retention time windows.

All identified compounds met the specified criteria.

10. System Performance and Overall Assessment

Overall system performance was acceptable. Other than for those deviations specifically mentioned in this review, the overall data quality is within the guidelines specified in the method.

DATA VALIDATION CHECKLIST FOR GENERAL GC

ALC/GLY: SW846 8015	Reported		Performance Acceptable		Not Required
	No	Yes	No	Yes	
GAS CHROMATOGRAPHY (GC/FID)					
Tier II Validation					
Holding times		X		X	
Reporting limits (units)		X		X	
Blanks					
A. Method blanks		X		X	
B. Trip blanks		X		X	
Laboratory Control Sample (LCS) %R		X		X	
Laboratory Control Sample Duplicate(LCSD) %R		X		X	
LCS/LCSD Precision (RPD)		X		X	
Matrix Spike (MS) %R		X		X	
Matrix Spike Duplicate(MSD) %R		X		X	
MS/MSD Precision (RPD)		X		X	
Field/Lab Duplicate (RPD)		X		X	
Surrogate Spike Recoveries		X	X		
Dilution Factor		X		X	
Moisture Content					X
Tier III Validation					
Initial calibration %RSDs		X		X	
Continuing calibration %Ds		X	X		
System performance and column resolution		X		X	
Compound identification and quantitation					
A. Quantitation Reports		X		X	
C. RT of sample compounds within the established RT windows		X		X	
C. Pattern identification		X		X	
D. Transcription/calculation errors present		X		X	
E. Reporting limits adjusted to reflect sample dilutions		X		X	

Notes:

%RSD – relative standard deviation
%R - percent recovery
RPD - relative percent difference
%D – difference

ALDEHYDES ANALYSES

1. Holding Times

The specified holding times for the following methods are presented in the following table.

Method	Matrix	Holding Time	Preservation
SW-846 8315A	Water	3 days until extraction; 3 days from extraction to analysis	Cool to <6 °C

All samples were analyzed within the specified holding time criteria.

2. Blank Contamination

Quality assurance (QA) blanks (i.e., method and rinse blanks) are prepared to identify any contamination which may have been introduced into the samples during sample preparation or field activity. Method blanks measure laboratory contamination. Rinse blanks measure contamination of samples during field operations.

A blank action level (BAL) of five times the concentration of a detected compound in an associated blank (common laboratory contaminant compounds are calculated at ten times) is calculated for QA blanks containing concentrations greater than the method detection limit (MDL). The BAL is compared to the associated sample results to determine the appropriate qualification of the sample results, if needed.

Compounds were not detected above the MDL in the associated blanks; therefore, detected sample results were not associated with blank contamination.

3. System Performance

System performance and column resolution were acceptable.

4. Calibration

Satisfactory instrument calibration is established to ensure that the instrument is capable of producing acceptable quantitative data. An initial calibration demonstrates that the instrument is capable of acceptable performance at the beginning of an experimental sequence. The continuing calibration verifies that the instrument daily performance is satisfactory.

4.1 Initial Calibration

A maximum RSD of 20% is allowed or a correlation coefficient greater than 0.99.

4.2 Continuing Calibration

All target compounds associated with the continuing calibration standard must exhibit a percent difference (%D) less than the control limit (20%).

All Aroclors associated with calibrations were within the specified control limits, with the exception of the compounds presented in the following table.

Sample Locations	Initial/Continuing	Compound	Criteria
BDA-1RX 10312019 BDA-13WT 10312019 BDA-8T 10312019	CCV %D	Acetaldehyde	-22.0%

The criteria used to evaluate the initial and continuing calibration are presented in the following table. In the case of a calibration deviation, the sample results are qualified.

Initial/Continuing	Criteria	Sample Result	Qualification
Initial Calibration	%RSD > 20%or a correlation coefficient <0.99	Non-detect	UJ
		Detect	J
Continuing Calibration	%D >20% (increase in sensitivity)	Non-detect	No Action
		Detect	J
	%D >20% (decrease in sensitivity)	Non-detect	UJ
		Detect	J

5. Surrogates/System Monitoring Compounds

All samples to be analyzed for organic compounds are spiked with surrogate compounds prior to sample preparation to evaluate overall laboratory performance and efficiency of the analytical technique. The

analysis requires that the surrogate compound exhibits recovery within the laboratory-established acceptance limits.

All surrogate recoveries were within control limits.

6. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Analysis

MS/MSD data are used to assess the precision and accuracy of the analytical method. The compounds used to perform the MS/MSD analysis must exhibit a percent recovery within the laboratory-established acceptance limits. The relative percent difference (RPD) between the MS/MSD recoveries must exhibit an RPD within the laboratory-established acceptance limits.

Note: The MS/MSD recovery control limits do not apply for MS/MSD performed on sample locations where the compound concentration detected in the parent sample exceeds the MS/MSD concentration by a factor of four or greater.

Sample locations associated with the MS/MSD exhibiting recoveries outside of the control limits are presented in the following table.

Sample Locations	Compound	MS Recovery	MSD Recovery
BDA-1WT 10302019	Acetaldehyde	<LL but >10%	<LL but >10%

Note:

AC Acceptable

The criteria used to evaluate the MS/MSD recoveries are presented in the following table. In the case of an MS/MSD deviation, the sample results are qualified as documented in the table below.

Control Limit	Sample Result	Qualification
> the upper control limit (UL)	Non-detect	No Action
	Detect	J
< the lower control limit (LL) but > 10%	Non-detect	UJ
	Detect	J
< 10%	Non-detect	R
	Detect	J
Parent sample concentration > four times the MS/MSD spiking solution concentration.	Detect	No Action
	Non-detect	

7. Laboratory Control Sample/Laboratory Control Sample Duplicate (LCS/LCSD) Analysis

The LCS analysis is used to assess the precision and accuracy of the analytical method independent of matrix interferences. The compounds associated with the LCS analysis must exhibit a percent recovery within the laboratory-established acceptance limits.

Sample locations associated with LCS/LCSD analysis exhibiting recoveries outside of the control limits presented in the following table.

Sample Locations	Compound	LCS Recovery	LCSD Recovery
PW-2T 10302019 BDA-1WT 10302019 BDA-1F 10302019 PW-6F 10302019 PW-4T 10302019 BDA-6WT 10302019 BDA-6T 10302019 PW-5T 10302019 PW-5RX 10302019 DUP-103019FD	Acetaldehyde	<LL but >10%	NA

The criteria used to evaluate the LCS/LCSD recoveries are presented in the following table. In the case of an LCS/LCSD deviation, the sample results are qualified as documented in the table below.

Control Limit	Sample Result	Qualification
> the upper control limit (UL)	Non-detect	No Action

Control Limit	Sample Result	Qualification
	Detect	J
< the lower control limit (LL) but > 10%	Non-detect	UJ
	Detect	J
< 10%	Non-detect	R
	Detect	J

8. Field Duplicate Analysis

Field duplicate analysis is used to assess the overall precision of the field sampling procedures and analytical method. A control limit of 50% for water matrices and 100% for soil matrices is applied to the RPD between the parent sample and the field duplicate. In the instance when the parent and/or duplicate sample concentrations are less than or equal to 5 times the RL, a control limit of two times the RL is applied for water matrices or three times the RL is applied for soil matrices.

Results for duplicate samples are summarized in the following table.

Sample ID/Duplicate ID	Compound	Sample Result	Duplicate Result	RPD
PW-5T 10302019/	Acetaldehyde	60 U	60 U	AC
DUP-103019FD	Formaldehyde	37 J	22 J	AC

Notes:

AC Acceptable

U Not Detected

The calculated RPDs between the parent sample and field duplicate were acceptable.

9. Compound Identification

The retention times of all quantitated peaks must fall within the calculated retention time windows.

All identified compounds met the specified criteria.

10. System Performance and Overall Assessment

Overall system performance was acceptable. Other than for those deviations specifically mentioned in this review, the overall data quality is within the guidelines specified in the method.

DATA VALIDATION CHECKLIST FOR GENERAL GC

Aldehyde: SW846 8315A	Reported		Performance Acceptable		Not Required
	No	Yes	No	Yes	
GAS CHROMATOGRAPHY (GC/FID)					
Tier II Validation					
Holding times		X		X	
Reporting limits (units)		X		X	
Blanks					
A. Method blanks		X		X	
B. Equipment blanks					X
Laboratory Control Sample (LCS) %R		X	X		
Laboratory Control Sample Duplicate(LCSD) %R		X		X	
LCS/LCSD Precision (RPD)		X		X	
Matrix Spike (MS) %R		X	X		
Matrix Spike Duplicate(MSD) %R		X	X		
MS/MSD Precision (RPD)		X		X	
Field/Lab Duplicate (RPD)		X		X	
Surrogate Spike Recoveries		X		X	
Dilution Factor		X		X	
Moisture Content					X
Tier III Validation					
Initial calibration %RSDs		X		X	
Continuing calibration %Ds		X	X		
System performance and column resolution		X		X	
Compound identification and quantitation					
A. Quantitation Reports		X		X	
C. RT of sample compounds within the established RT windows		X		X	
C. Pattern identification		X		X	
D. Transcription/calculation errors present		X		X	
E. Reporting limits adjusted to reflect sample dilutions		X		X	

SAMPLE COMPLIANCE REPORT

Sample Delivery Group (SDG)	Sampling Date	Protocol	Sample ID	Matrix	Compliancy[1]					Noncompliance
					VOC	SVOC	ALC	GLY	ALD	
BMS82	10/30/2019	SW846	PW-2T 10302019	Water	No	No	Yes	No	No	VOC: CCV %D SVOC: HT GLY: SSTD %R ALD: LCS %R
	10/30/2019	SW846	BDA-1WT 10302019	Water	No	Yes	Yes	No	No	VOC: CCV %D, MS/MSD RPD GLY: CCV %D, SSTD %R ALD: MS/MSD %R, LCS %R
	10/30/2019	SW846	BDA-1F 10302019	Water	No	Yes	Yes	Yes	No	VOC: CCV %D ALD: LCS %R
	10/30/2019	SW846	PW-6F 10302019	Water	No	Yes	Yes	No	No	VOC: CCV %D GLY: SSTD %R ALD: LCS %R
	10/30/2019	SW846	PW-4T 10302019	Water	No	Yes	Yes	No	No	VOC: CCV %D GLY: SSTD %R ALD: LCS %R
	10/30/2019	SW846	BDA-6WT 10302019	Water	No	Yes	Yes	No	No	VOC: CCV %D GLY: SSTD %R ALD: LCS %R
	10/30/2019	SW846	BDA-6T 10302019	Water	No	Yes	Yes	Yes	No	VOC: CCV %D ALD: LCS %R
	10/23/2019	SW846	TRIP BLANK 10232019	Water	No	-	Yes	No	-	VOC: CCV %D
	10/30/2019	SW846	BDA15RX 10302019	Water	No	Yes	-	-	-	VOC: CCV %D
	10/30/2019	SW846	PW-5T 10302019	Water	No	Yes	Yes	No	No	VOC: CCV %D, LCS/LCSD %R GLY: SSTD %R ALD: LCS %R
	10/30/2019	SW846	PW-5RX 10302019	Water	No	Yes	Yes	No	No	VOC: CCV %D GLY: SSTD %R ALD: LCS %R
	10/30/2019	SW846	DUP-103019FD	Water	No	Yes	Yes	No	No	VOC: CCV %D, LCS/LCSD %R GLY: SSTD %R

Sample Delivery Group (SDG)	Sampling Date	Protocol	Sample ID	Matrix	Compliancy[1]					Noncompliance
					VOC	SVOC	ALC	GLY	ALD	
										ALD: LCS %R
	10/31/2019	SW846	BDA-1RX 10312019	Water	No	Yes	Yes	Yes	No	VOC: CCV %D, LCS/LCSD %R ALD: CCV %D
	10/31/2019	SW846	BDA-11WT 10312019	Water	No	Yes	-	-	-	VOC: CCV %D, LCS/LCSD %R
	10/31/2019	SW846	BDA-13WT 10312019	Water	No	Yes	Yes	Yes	No	VOC: CCV %D, LCS/LCSD %R ALD: CCV %D
	10/31/2019	SW846	BDA-8T 10312019	Water	No	Yes	Yes	Yes	No	VOC: CCV %D, LCS/LCSD %R ALD: CCV %D
	10/31/2019	SW846	BDA-4UT 10312019	Water	No	Yes	-	-	-	VOC: CCV %D, LCS/LCSD %R
	10/23/2019	SW846	TRIP BLANK2 10232019	Water	No	-	Yes	Yes	-	VOC: CCV %D

Note:

1 Samples which are compliant with no added validation qualifiers are listed as "yes". Samples which are non-compliant or which have added qualifiers are listed as "no". A "no" designation does not necessarily indicate that the data have been rejected or are otherwise unusable.

VALIDATION PERFORMED BY: Jeffrey L. Davin

SIGNATURE: 

DATE: January 14, 2020

PEER REVIEW: Dennis K. Capria

DATE: January 23, 2020

CHAIN OF CUSTODY

CORRECTED SAMPLE ANALYSIS DATA SHEETS

eurofins | Lancaster Laboratories Environmental

Syracuse #225

Environmental Analysis Request/Chain of Custody

Acct. # 03074 Group # 2071978 Sample # 1188912-25 ~~1188912-924~~ 111119@pg 1 of 3

Client: Arcadis			
Project Name/#: BMS Syracuse	Site ID #:		
Project Manager: Bill McCune	P.O. #: 30033396		
Sampler: Austin George, Josh Miller, Evan Green	PWSID #:		
Phone #: 315 671 6712	Quote #:		
State where samples were collected: NY	For Compliance: Yes ☐ No ☐		

Sample Identification	Collection Date	Collection Time	Grab	Composite	Matrix: Soil	Sediment	Tissue	Water: Potable	Ground	Surface	NPDES	Other:	Total # of Containers	VOCs 8260C	SVOCs 8270D	Glycols 8015C	Alcohols	Aldehydes 8315A			Remarks
														H			H				
PW-2T	10/30/19	1000	X					GW					10	X	X	X	X	X			
BDA-1WT	10/30/19	1135	X					GW					10	X	X	X	X	X			
BDA-1WTMS	10/30/19	1135	X					GW					10	X	X	X	X	X			
BDA-1WT MSD	10/30/19	1135	X					GW					10	X	X	X	X	X			
BDA-1F	10/30/19	1435	X					GW					10	X	X	X	X	X			
PW-6F	10/30/19	1030	X					GW					10	X	X	X	X	X			
PW-4T	10/30/19	1150	X					GW					10	X	X	X	X	X			
BDA-6WT	10/30/19	1405	X					GW					10	X	X	X	X	X			
BDA-6T	10/30/19	1515	X					GW					10	X	X	X	X	X			
Trip blank	10/23/19		X					W					4	X		X	X				

Analyses Requested — Preservation and Filtration Codes

For Lab Use Only
SF #:
SCR #:

Preservation Codes
H = HCl; T = Thiosulfate; N = HNO_3; B = NaOH; S = H_2SO_4; P = H_3PO_4; F = Field Filtered; O = Other

Turnaround Time Requested (TAT) (please check): Standard ☑ Rush ☐
(Rush TAT is subject to laboratory approval and surcharges.)

Date results are needed:

Rush results requested by (please check): E-Mail ☐ Phone ☐

E-mail Address: William.McCune@arcadis.com

Phone: 315 671 6712

Data Package Options (please check if required)

Type I (Validation/non-CLP) ☐ MA MCP ☐
Type III (Reduced non-CLP) ☐ CT RCP ☐
Type VI (Raw Data Only) ☐ TX TRRP-13 ☐
NJ DKQP ☐ NYSDEC Category ☐ A or ☐ B

EDD Required? Yes ☑ No ☐ If yes, format:

Relinquished by:	Date	Time		Date	Time
Josh Sling / MT	10/30/19	1638		10/30/19	1638
Relinquished by: / SYR TA Reling	Date 10/30/19	Time 19:00		Date	Time
Relinquished by:	Date	Time		Date	Time
Relinquished by:	Date	Time		Date	Time
Relinquished by:	Date	Time		Date 10/31/19	Time ~~11:~~ 11:30

Relinquished by Commercial Carrier:

UPS ____ FedEx ✓ Other ____

NUA 2305 10/31/19

1188912-25

Syracuse *Environmental Analysis Request/Chain of Custody*

eurofins | Lancaster Laboratories Environmental

#225

Acct. # 03074 Group # 2071978 Sample # ~~1188912-929~~ ~~1188912-939~~ @KR 2588 4 10/31/19 1401326 11/1/19 pg 2 of 3

Client: Arcadis	
Project Name/#: BMS Syracuse	Site ID #:
Project Manager: Bill McCune	P.O. #: 30033396
Sampler: Austin George, Josh Miller, Evan Green	PWSID #:
Phone #: 315 671 6712	Quote #:
State where samples were collected: NY	For Compliance: Yes ☐ No ☐

Matrix: Tissue ☐, Sediment ☐, Soil ☐; Water: Ground ☑, Surface ☐, Potable ☐, NPDES ☐; Other:

Analyses Requested — Preservation and Filtration Codes

Sample Identification	Date	Time	Grab	Composite	Soil	Water	Other	Total # of Containers	VOCs 8260C (H)	SVOCs 8270D	Glycols 8015C	Alcohols (H)	Aldehydes 8315A			Remarks
BDA15RX	10/30/19	1137	X			X		5	X	X						
PW-5T	10/30/19	1407	X			X		10	X	X	X	X	X			
PW-5RX	10/30/19	1541	X			X		10	X	X	X	X	X			
DUP-103019	10/30/19	/	X			X		10	X	X	X	X	X			

RJ5 10-30-19

For Lab Use Only

SF #:

SCR #:

Preservation Codes

H = HCl T = Thiosulfate

N = HNO_3 B = NaOH

S = H_2SO_4 P = H_3PO_4

F = Field Filtered O = Other

Turnaround Time Requested (TAT) (please check): Standard ☑ Rush ☐

(Rush TAT is subject to laboratory approval and surcharges.)

Date results are needed:

Rush results requested by (please check): E-Mail ☐ Phone ☐

E-mail Address: William.McCune@arcadis.com

Phone: 315 671 6712

Data Package Options (please check if required)

Type I (Validation/non-CLP) ☐ MA MCP ☐

Type III (Reduced non-CLP) ☐ CT RCP ☐

Type VI (Raw Data Only) ☐ TX TRRP-13 ☐

NJ DKQP ☐ NYSDEC Category ☐ A or ☐ B

EDD Required? Yes ☑ No ☐ If yes, format:

Relinquished by	Date	Time	Received by	Date	Time
Josh Sirey	10/30/19	1638	[signature]	10/30/19	1638
[signature] MR TA	10-30-19	1900			
			[signature]	10/31/19	11:30

Relinquished by Commercial Carrier:

UPS ______ FedEx X Other ______

Syracuse
#225

Environmental Analysis Request/Chain of Custody

eurofins | Lancaster Laboratories Environmental

Acct. # 3074 Group # 2072206 Sample # 1190178-83

Client: Arcadis			
Project Name/#: BMS Syracuse	Site ID #:		
Project Manager: Bill McCune	P.O. #: 30033396		
Sampler: Austin George, Josh Miller, Evan Green	PWSID #:		
Phone #: 315 671 6712	Quote #:		
State where samples were collected: NY	For Compliance: Yes ☐ No ☐		

Matrix: Soil ☐ Sediment ☐ Tissue ☐ | Water: Potable ☐ Ground ☒ NPDES ☐ Surface ☐ | Other: ☐ | Total # of Containers

Analyses Requested — Preservation and Filtration Codes

Sample Identification	Collection Date	Collection Time	Grab	Composite	Total # of Containers	VOCs 8260C	SVOCs 8270D	Glycols 8015C	Alcohols	Aldehydes 8315A			Remarks
						H			H				
BDA-1RX	10/31/19	0922	X		10	X	X	X	X	X			
BDA-11WT	10/31/19	1005	X		5	X	X						
BDA-13WT	10/31/19	1027	X		10	X	X	X	X	X			
BDA-8T	10/31/19	1105	X		10	X	X	X	X	X			
BDA-4UT	10/31/19	1110	X		5	X	X						
TRIP BLANK	10/23/19	—	X		4	X		X	X				

Re: 10.31.19

For Lab Use Only
SF #: _____
SCR #: _____

Preservation Codes
H = HCl | T = Thiosulfate
N = HNO_3 | B = NaOH
S = H_2SO_4 | P = H_3PO_4
F = Field Filtered | O = Other

Turnaround Time Requested (TAT) (please check): Standard ☑ Rush ☐
(Rush TAT is subject to laboratory approval and surcharges.)

Date results are needed:

Rush results requested by (please check): E-Mail ☐ Phone ☐

E-mail Address: William.McCune@arcadis.com

Phone: 315 671 6712

Data Package Options (please check if required)

Type I (Validation/non-CLP)	☐	MA MCP	☐
Type III (Reduced non-CLP)	☐	CT RCP	☐
Type VI (Raw Data Only)	☐	TX TRRP-13	☐
NJ DKQP	☐	NYSDEC Category	☐ A or ☒ B

EDD Required? Yes ☑ No ☐ If yes, format:

Relinquished by:	Date	Time	Received by:	Date	Time
Josh Sinn	10/31/19	1430	Reg English FACyn	10/31/19	1430
Relinquished by:	Date	Time		Date	Time
Reg English	10/31/19	1900			
Relinquished by:	Date	Time		Date	Time
Relinquished by:	Date	Time		Date	Time
Relinquished by:	Date	Time	Chul Webb	Date	Time
				11/1/19	12:06

Relinquished by Commercial Carrier:

UPS _____ FedEx X Other _____

eurofins | Lancaster Laboratories Environmental

Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
P^	Concentration difference between the primary and confirmation column > 40%. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

Sample Description: **PW-2T Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/31/2019 11:30
Collection Date/Time: 10/30/2019 10:00
SDG#: BMS82-01

ARCADIS U.S., Inc.
ELLE Sample #: GW 1188912
ELLE Group #: 2071978
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	20	0.7	1
11997	Acetonitrile	75-05-8	N.D.	100	16	1
11997	Benzene	71-43-2	N.D.	1	0.2	1
11997	Bromochloromethane	74-97-5	N.D.	5	0.2	1
11997	Bromodichloromethane	75-27-4	N.D.	1	0.2	1
11997	Bromoform	75-25-2	N.D.	4	1	1
11997	Bromomethane	74-83-9	N.D.	1	0.3	1
11997	n-Butanol	71-36-3	N.D.	250	61	1
11997	2-Butanone	78-93-3	N.D.	10	0.3	1
11997	t-Butyl alcohol	75-65-0	N.D.	50	12	1
11997	n-Butylbenzene	104-51-8	N.D.	5	0.2	1
11997	sec-Butylbenzene	135-98-8	N.D.	5	0.2	1
11997	tert-Butylbenzene	98-06-6	N.D.	5	0.3	1
11997	Carbon Disulfide	75-15-0	N.D.	5	0.2	1
11997	Carbon Tetrachloride	56-23-5	N.D.	1	0.2	1
11997	Chlorobenzene	108-90-7	0.3 J	1	0.2	1
11997	Chlorodifluoromethane[1]	75-45-6	N.D. J	5	2	1
11997	Chloroethane	75-00-3	N.D. J	1	0.2	1
11997	Chloroform	67-66-3	N.D.	1	0.2	1
11997	Chloromethane	74-87-3	N.D. J	1	0.2	1
11997	Cyclohexane	110-82-7	N.D.	5	1	1
11997	Cyclohexanone[1]	108-94-1	N.D.	100	25	1
11997	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	5	0.3	1
11997	Dibromochloromethane	124-48-1	N.D. J	1	0.2	1
11997	1,2-Dibromoethane	106-93-4	N.D.	1	0.2	1
11997	1,2-Dichlorobenzene	95-50-1	9	5	0.2	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	5	0.2	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	5	0.2	1
11997	Dichlorodifluoromethane	75-71-8	N.D. J	1	0.2	1
11997	1,1-Dichloroethane	75-34-3	0.5 J	1	0.2	1
11997	1,2-Dichloroethane	107-06-2	N.D.	1	0.3	1
11997	1,1-Dichloroethene	75-35-4	N.D.	1	0.2	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	1	0.2	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	1	0.2	1
11997	1,2-Dichloropropane	78-87-5	N.D.	1	0.2	1
11997	cis-1,3-Dichloropropene	10061-01-5	N.D.	1	0.2	1
11997	trans-1,3-Dichloropropene	10061-02-6	N.D.	1	0.2	1
11997	1,4-Dioxane	123-91-1	N.D.	250	29	1
11997	Ethyl Acetate	141-78-6	N.D.	5	0.7	1
11997	Ethyl ether	60-29-7	N.D.	5	0.2	1
11997	Ethylbenzene	100-41-4	N.D.	1	0.4	1

*=This limit was used in the evaluation of the final result

Sample Description: **PW-2T Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/31/2019 11:30
Collection Date/Time: 10/30/2019 10:00
SDG#: BMS82-01

ARCADIS U.S., Inc.
ELLE Sample #: GW 1188912
ELLE Group #: 2071978
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Freon 113	76-13-1	N.D.	10	0.2	1
11997	n-Heptane[1]	142-82-5	N.D.	5	2	1
11997	n-Hexane[1]	110-54-3	N.D.	5	2	1
11997	2-Hexanone	591-78-6	N.D.	10	0.3	1
11997	Isobutyl Alcohol	78-83-1	N.D.	250	36	1
11997	Isopropylbenzene	98-82-8	N.D.	5	0.2	1
11997	p-Isopropyltoluene	99-87-6	N.D.	5	0.2	1
11997	Methyl Acetate	79-20-9	N.D.	5	0.2	1
11997	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	1	0.2	1
11997	4-Methyl-2-pentanone	108-10-1	N.D.	10	0.5	1
11997	Methylcyclohexane	108-87-2	N.D.	5	0.5	1
11997	Methylene Chloride	75-09-2	N.D.	1	0.3	1
11997	Naphthalene	91-20-3	N.D.	5	1	1
11997	2-Nitropropane	79-46-9	N.D.	10	0.8	1
11997	Styrene	100-42-5	N.D.	5	0.2	1
11997	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	1	0.2	1
11997	Tetrachloroethene	127-18-4	N.D.	1	0.2	1
11997	Tetrahydrofuran	109-99-9	N.D.	10	0.7	1
11997	Toluene	108-88-3	N.D.	1	0.2	1
11997	1,2,3-Trichlorobenzene	87-61-6	N.D.	5	0.4	1
11997	1,2,4-Trichlorobenzene	120-82-1	N.D.	5	0.3	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	1	0.3	1
11997	1,1,2-Trichloroethane	79-00-5	N.D.	1	0.2	1
11997	Trichloroethene	79-01-6	N.D.	1	0.2	1
11997	Trichlorofluoromethane	75-69-4	N.D. J	1	0.2	1
11997	1,2,4-Trimethylbenzene	95-63-6	N.D.	5	1	1
11997	1,3,5-Trimethylbenzene	108-67-8	N.D.	5	0.3	1
11997	Vinyl Chloride	75-01-4	N.D. J	1	0.2	1
11997	m+p-Xylene	179601-23-1	N.D.	5	1	1
11997	o-Xylene	95-47-6	N.D.	1	0.4	1
11997	Xylene (Total)	1330-20-7	N.D.	6	1	1

Project defined calibration criteria are not met. The calibration is compliant with the method defined criteria.

A Report Limit Verification (RLV) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The RLV standard shows adequate sensitivity at or below the reporting limit.

00882 VOA Interp. Library Search-10

The results from the volatile library search are listed on the attached FORM 1 - VOA-TIC. The qualifiers appearing in the "Q" column are defined at the end of the report.

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **PW-2T Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/31/2019 11:30
Collection Date/Time: 10/30/2019 10:00
SDG#: BMS82-01

ARCADIS U.S., Inc.
ELLE Sample #: GW 1188912
ELLE Group #: 2071978
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result		Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**		**ug/l**	**ug/l**	
14241	Acenaphthene	83-32-9	N.D.	J	0.51	0.10	1
14241	Acenaphthylene	208-96-8	N.D.		0.51	0.10	1
14241	Acetophenone	98-86-2	N.D.		10	4.0	1
14241	Aniline	62-53-3	N.D.		10	3.0	1
14241	Anthracene	120-12-7	N.D.		0.51	0.10	1
14241	Atrazine	1912-24-9	N.D.		5.1	2.0	1
14241	Benzaldehyde	100-52-7	N.D.		10	3.0	1
14241	Benzo(a)anthracene	56-55-3	N.D.		0.51	0.10	1
14241	Benzo(a)pyrene	50-32-8	N.D.		0.51	0.10	1
14241	Benzo(b)fluoranthene	205-99-2	N.D.		0.51	0.10	1
14241	Benzo(g,h,i)perylene	191-24-2	N.D.		0.51	0.10	1
14241	Benzo(k)fluoranthene	207-08-9	N.D.		0.51	0.10	1
14241	Benzyl alcohol	100-51-6	N.D.		30	10	1
14241	1,1'-Biphenyl	92-52-4	N.D.		10	3.0	1
14241	4-Bromophenyl-phenylether	101-55-3	N.D.		2.0	0.51	1
14241	Butylbenzylphthalate	85-68-7	N.D.		5.1	2.0	1
14241	Di-n-butylphthalate	84-74-2	N.D.		5.1	2.0	1
14241	Caprolactam	105-60-2	N.D.		11	5.1	1
14241	Carbazole	86-74-8	N.D.		2.0	0.51	1
14241	4-Chloro-3-methylphenol	59-50-7	N.D.		2.0	0.51	1
14241	4-Chloroaniline	106-47-8	N.D.		10	4.0	1
14241	bis(2-Chloroethoxy)methane	111-91-1	N.D.		2.0	0.51	1
14241	bis(2-Chloroethyl)ether	111-44-4	N.D.		2.0	0.51	1
14241	bis(2-Chloroisopropyl)ether[1]	39638-32-9	N.D.		2.0	0.51	1
	Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.						
14241	2-Chloronaphthalene	91-58-7	N.D.		1.0	0.40	1
14241	2-Chlorophenol	95-57-8	N.D.		2.0	0.51	1
14241	4-Chlorophenyl-phenylether	7005-72-3	N.D.		2.0	0.51	1
14241	Chrysene	218-01-9	N.D.		0.51	0.10	1
14241	Dibenz(a,h)anthracene	53-70-3	N.D.		0.51	0.10	1
14241	Dibenzofuran	132-64-9	N.D.		2.0	0.51	1
14241	3,3'-Dichlorobenzidine	91-94-1	N.D.		10	3.0	1
14241	2,4-Dichlorophenol	120-83-2	N.D.		2.0	0.51	1
14241	Dicyclohexylamine[1]	101-83-7	N.D.		10	10	1
14241	Diethylphthalate	84-66-2	N.D.		5.1	2.0	1
14241	N,N-Dimethylaniline[1]	121-69-7	N.D.		1.0	0.51	1
14241	2,4-Dimethylphenol	105-67-9	N.D.		10	3.0	1
14241	Dimethylphthalate	131-11-3	N.D.		5.1	2.0	1
14241	4,6-Dinitro-2-methylphenol	534-52-1	N.D.		21	8.1	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **PW-2T Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/31/2019 11:30
Collection Date/Time: 10/30/2019 10:00
SDG#: BMS82-01

ARCADIS U.S., Inc.
ELLE Sample #: GW 1188912
ELLE Group #: 2071978
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	2,4-Dinitrophenol	51-28-5	N.D. J	30	14	1
14241	2,4-Dinitrotoluene	121-14-2	N.D.	5.1	1.0	1
14241	2,6-Dinitrotoluene	606-20-2	N.D.	2.0	0.51	1
14241	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	11	5.1	1
14241	Fluoranthene	206-44-0	N.D.	0.51	0.10	1
14241	Fluorene	86-73-7	N.D.	0.51	0.10	1
14241	Hexachlorobenzene	118-74-1	N.D.	0.51	0.10	1
14241	Hexachlorobutadiene	87-68-3	N.D.	2.0	0.51	1
14241	Hexachlorocyclopentadiene	77-47-4	N.D.	11	5.1	1
14241	Hexachloroethane	67-72-1	N.D.	5.1	1.0	1
14241	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.51	0.10	1
14241	Isophorone	78-59-1	N.D.	2.0	0.51	1
14241	2-Methylnaphthalene	91-57-6	N.D.	0.51	0.10	1
14241	2-Methylphenol	95-48-7	N.D.	2.0	0.51	1
14241	4-Methylphenol	65794-96-9	N.D.	2.0	0.51	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
14241	Naphthalene	91-20-3	N.D.	0.51	0.10	1
14241	2-Nitroaniline	88-74-4	N.D.	7.1	2.0	1
14241	3-Nitroaniline	99-09-2	N.D.	7.1	3.0	1
14241	4-Nitroaniline	100-01-6	N.D.	3.0	0.91	1
14241	Nitrobenzene	98-95-3	N.D.	2.0	0.51	1
14241	2-Nitrophenol	88-75-5	N.D.	10	3.0	1
14241	4-Nitrophenol	100-02-7	N.D.	30	10	1
14241	N-Nitroso-di-n-propylamine	621-64-7	N.D.	3.0	0.71	1
14241	N-Nitrosodiphenylamine	86-30-6	N.D.	3.0	0.71	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.					
14241	Di-n-octylphthalate	117-84-0	N.D.	11	5.1	1
14241	Pentachlorophenol	87-86-5	N.D.	5.1	1.0	1
14241	Phenanthrene	85-01-8	N.D.	0.51	0.10	1
14241	Phenol	108-95-2	N.D.	2.0	0.51	1
14241	Pyrene	129-00-0	N.D.	0.51	0.10	1
14241	Pyridine	110-86-1	N.D.	5.1	2.0	1
14241	1,2,4,5-Tetrachlorobenzene	95-94-3	N.D.	2.0	0.51	1
14241	2,3,4,6-Tetrachlorophenol	58-90-2	N.D.	10	4.0	1
14241	2,4,5-Trichlorophenol	95-95-4	N.D.	2.0	0.51	1
14241	2,4,6-Trichlorophenol	88-06-2	N.D.	2.0	0.51	1
14241	Triethylamine[1]	121-44-8	N.D.	10	10	1

The holding time was not met.

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **PW-2T Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/31/2019 11:30
Collection Date/Time: 10/30/2019 10:00
SDG#: BMS82-01

ARCADIS U.S., Inc.
ELLE Sample #: GW 1188912
ELLE Group #: 2071978
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result		Limit of Quantitation*	Method Detection Limit	Dilution Factor

The first extraction for this sample was preformed within the method required holding time however the recovery for the sample surrogate(s) is outside the QC acceptance limits. The sample was re-extracted outside the method required holding time and the sample surrogates are compliant. Per client request, the data is reported from the second extraction.

Due to laboratory error, target analytes were not added to the Laboratory Control Spike Duplicate in the second extraction. All recoveries for target analytes in the Laboratory Control Spikes in the first extraction are compliant. Per client request, the data is reported from the second extraction.

The recovery for Dicyclohexylamine in the Laboratory Control Spikes is outside the QC acceptance limits as noted on the QC Summary. Since the recovery is high and the target analyte is not detected in the sample, the data is reported.

00886 SVOA TIC Interpretive(25)

The results from the semivolatile library search are listed on the attached FORM 1 - SV-TIC. The qualifiers appearing in the "Q" column are defined at the end of the report.

Aldehydes & Ketones		**SW-846 8315A**	**ug/l**		**ug/l**	**ug/l**	
13022	Acetaldehyde[1]	75-07-0	N.D.	J	60	35	1
13022	Formaldehyde	50-00-0	N.D.		50	20	1

The response for a target analyte(s) in the initial calibration verification standard is outside the QC acceptance limits. The client was contacted and the data reported.
The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary.

GC Miscellaneous		**SW-846 8015D Rev.4, June 2003**	**ug/l**		**ug/l**	**ug/l**	
10603	Ethanol	64-17-5	N.D.	D2	1,000	150	1
12926	Ethylene glycol[1]	107-21-1	N.D.	R	10,000	5,000	1
10603	Isopropanol[1]	67-63-0	N.D.	D2	1,000	110	1
10603	Methanol	67-56-1	N.D.	D2	1,000	220	1
12926	Propylene glycol[1]	57-55-6	N.D.	R	10,000	2,000	1

The response for surrogate Tetramethylene glycol in the continuing calibration verification standard is outside the QC acceptance limits low. The following action was taken:
The analysis was repeated and the continuing calibration verification standard bracketing the sample on the second trial is also outside the acceptance limits. This effect is attributed to the sample matrix and the data is reported.

Sample Comments

State of New York Certification No. 10670

[1] = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **PW-2T Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/31/2019 11:30
Collection Date/Time: 10/30/2019 10:00
SDG#: BMS82-01

ARCADIS U.S., Inc.
ELLE Sample #: GW 1188912
ELLE Group #: 2071978
Matrix: Groundwater

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	Y193121AA	11/08/2019 15:22	Corie Mellinger	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	Y193121AA	11/08/2019 15:21	Corie Mellinger	1
14241	Semi-annual Groundwater BMS	SW-846 8270D	1	19316WAO026	11/18/2019 04:36	Ashley R Transue	1
11010	8270D BNA Extraction	SW-846 3510C	2	19316WAO026	11/13/2019 09:00	Joshua S Ruth	1
13022	Short List Aldehydes- W 8315A	SW-846 8315A	1	193040018A	11/01/2019 17:48	Jessica L Miller	1
01013	Formaldehyde Extraction	SW-846 8315A	1	193040018A	11/01/2019 08:38	Alison Moll	1
10603	Alcohols in Water	SW-846 8015D Rev.4, June 2003	1	193080007A	11/04/2019 20:13	Johanna C Kennedy	1
12926	Glycols in Water by 8015C/D	SW-846 8015D Rev.4, June 2003	1	193080027A	11/05/2019 23:54	Donald Brown	1

*=This limit was used in the evaluation of the final result

REVISED

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
S8201

Lab Name: Lancaster Laboratories Contract:_____
Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____
Matrix: (soil/water) WATER Lab Sample ID: 1188912
Sample wt/vol: 5.0 (g/mL)mL Lab File ID:HP09355.i/19nov08a.b/yn08s10.d
Level: (low/med) LOW Date Received: 10/31/19
% Moisture: not dec. Date Analyzed: 11/08/19
Column: (pack/cap) CAP Dilution Factor: 1.0
CONCENTRATION UNITS:
Number TICs found: 0 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	VOCTIC	Total VOC TICs		0	U
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page 1 of 1

FORM I VOA-TIC

REVISED

1F

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

S8201

Lab Name: Lancaster Laboratories Contract:
Lab Code: LANCAS Case No.: SAS No.: SDG No.:
Matrix: (soil/water) WATER Lab Sample ID: 1188912
Sample wt/vol: 247 (g/mL) mL Lab File ID: lk0935.d
Level: (low/med) LOW Date Received: 10/31/19
% Moisture: Decanted: (Y/N) Date Extracted: 11/13/19
Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/18/19
Injection Volume: 1 (uL) Dilution Factor: 1
GPC Cleanup: N pH: Extraction: Sepf
CONCENTRATION UNITS:
Number TICs found: 3 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		Unknown	5.736	16	J N
2.		Unknown	6.586	54	J
3.	120-80-9	Catechol	8.859	5	J
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5.	SVOCTIC	Total SVOC TICs		75	J
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page 1 of 1

FORM I SV-1

Sample Description: **BDA-1WT Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/31/2019 11:30
Collection Date/Time: 10/30/2019 11:35
SDG#: BMS82-02BKG

ARCADIS U.S., Inc.
ELLE Sample #: GW 1188913
ELLE Group #: 2071978
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	20	0.7	1
11997	Acetonitrile	75-05-8	N.D.	100	16	1
11997	Benzene	71-43-2	N.D.	1	0.2	1
11997	Bromochloromethane	74-97-5	N.D.	5	0.2	1
11997	Bromodichloromethane	75-27-4	N.D.	1	0.2	1
11997	Bromoform	75-25-2	N.D.	4	1	1
11997	Bromomethane	74-83-9	N.D.	1	0.3	1
11997	n-Butanol	71-36-3	N.D.	250	61	1
11997	2-Butanone	78-93-3	N.D.	10	0.3	1
11997	t-Butyl alcohol	75-65-0	N.D.	50	12	1
11997	n-Butylbenzene	104-51-8	N.D.	5	0.2	1
11997	sec-Butylbenzene	135-98-8	N.D.	5	0.2	1
11997	tert-Butylbenzene	98-06-6	N.D.	5	0.3	1
11997	Carbon Disulfide	75-15-0	N.D.	5	0.2	1
11997	Carbon Tetrachloride	56-23-5	N.D.	1	0.2	1
11997	Chlorobenzene	108-90-7	N.D.	1	0.2	1
11997	Chlorodifluoromethane[1]	75-45-6	N.D. J	5	2	1
11997	Chloroethane	75-00-3	N.D. J	1	0.2	1
11997	Chloroform	67-66-3	N.D.	1	0.2	1
11997	Chloromethane	74-87-3	N.D. J	1	0.2	1
11997	Cyclohexane	110-82-7	N.D.	5	1	1
11997	Cyclohexanone[1]	108-94-1	N.D.	100	25	1
11997	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	5	0.3	1
11997	Dibromochloromethane	124-48-1	N.D.	1	0.2	1
11997	1,2-Dibromoethane	106-93-4	N.D.	1	0.2	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	5	0.2	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	5	0.2	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	5	0.2	1
11997	Dichlorodifluoromethane	75-71-8	N.D. J	1	0.2	1
11997	1,1-Dichloroethane	75-34-3	N.D.	1	0.2	1
11997	1,2-Dichloroethane	107-06-2	N.D.	1	0.3	1
11997	1,1-Dichloroethene	75-35-4	N.D.	1	0.2	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	1	0.2	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	1	0.2	1
11997	1,2-Dichloropropane	78-87-5	N.D.	1	0.2	1
11997	cis-1,3-Dichloropropene	10061-01-5	N.D.	1	0.2	1
11997	trans-1,3-Dichloropropene	10061-02-6	N.D.	1	0.2	1
11997	1,4-Dioxane	123-91-1	N.D.	250	29	1
11997	Ethyl Acetate	141-78-6	N.D.	5	0.7	1
11997	Ethyl ether	60-29-7	N.D. J	5	0.2	1
11997	Ethylbenzene	100-41-4	N.D.	1	0.4	1

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-1WT Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/31/2019 11:30
Collection Date/Time: 10/30/2019 11:35
SDG#: BMS82-02BKG

ARCADIS U.S., Inc.
ELLE Sample #: GW 1188913
ELLE Group #: 2071978
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Freon 113	76-13-1	N.D.	10	0.2	1
11997	n-Heptane[1]	142-82-5	N.D.	5	2	1
11997	n-Hexane[1]	110-54-3	N.D.	5	2	1
11997	2-Hexanone	591-78-6	N.D.	10	0.3	1
11997	Isobutyl Alcohol	78-83-1	N.D.	250	36	1
11997	Isopropylbenzene	98-82-8	N.D.	5	0.2	1
11997	p-Isopropyltoluene	99-87-6	N.D.	5	0.2	1
11997	Methyl Acetate	79-20-9	N.D.	5	0.2	1
11997	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	1	0.2	1
11997	4-Methyl-2-pentanone	108-10-1	N.D.	10	0.5	1
11997	Methylcyclohexane	108-87-2	N.D.	5	0.5	1
11997	Methylene Chloride	75-09-2	N.D.	1	0.3	1
11997	Naphthalene	91-20-3	N.D.	5	1	1
11997	2-Nitropropane	79-46-9	N.D.	10	0.8	1
11997	Styrene	100-42-5	N.D.	5	0.2	1
11997	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	1	0.2	1
11997	Tetrachloroethene	127-18-4	N.D.	1	0.2	1
11997	Tetrahydrofuran	109-99-9	N.D.	10	0.7	1
11997	Toluene	108-88-3	N.D.	1	0.2	1
11997	1,2,3-Trichlorobenzene	87-61-6	N.D.	5	0.4	1
11997	1,2,4-Trichlorobenzene	120-82-1	N.D.	5	0.3	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	1	0.3	1
11997	1,1,2-Trichloroethane	79-00-5	N.D.	1	0.2	1
11997	Trichloroethene	79-01-6	N.D.	1	0.2	1
11997	Trichlorofluoromethane	75-69-4	N.D. J	1	0.2	1
11997	1,2,4-Trimethylbenzene	95-63-6	N.D.	5	1	1
11997	1,3,5-Trimethylbenzene	108-67-8	N.D.	5	0.3	1
11997	Vinyl Chloride	75-01-4	N.D. J	1	0.2	1
11997	m+p-Xylene	179601-23-1	N.D.	5	1	1
11997	o-Xylene	95-47-6	N.D.	1	0.4	1
11997	Xylene (Total)	1330-20-7	N.D.	6	1	1

Project defined calibration criteria are not met. The calibration is compliant with the method defined criteria.

A Report Limit Verification (RLV) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The RLV standard shows adequate sensitivity at or below the reporting limit.

00882 VOA Interp. Library Search-10

The results from the volatile library search are listed on the attached FORM 1 - VOA-TIC. The qualifiers appearing in the "Q" column are defined at the end of the report.

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-1WT Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/31/2019 11:30
Collection Date/Time: 10/30/2019 11:35
SDG#: BMS82-02BKG

ARCADIS U.S., Inc.
ELLE Sample #: GW 1188913
ELLE Group #: 2071978
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	Acenaphthene	83-32-9	N.D.	0.51	0.10	1
14241	Acenaphthylene	208-96-8	N.D.	0.51	0.10	1
14241	Acetophenone	98-86-2	N.D.	10	4.1	1
14241	Aniline	62-53-3	N.D.	10	3.1	1
14241	Anthracene	120-12-7	N.D.	0.51	0.10	1
14241	Atrazine	1912-24-9	N.D.	5.1	2.0	1
14241	Benzaldehyde	100-52-7	N.D.	10	3.1	1
14241	Benzo(a)anthracene	56-55-3	N.D.	0.51	0.10	1
14241	Benzo(a)pyrene	50-32-8	N.D.	0.51	0.10	1
14241	Benzo(b)fluoranthene	205-99-2	N.D.	0.51	0.10	1
14241	Benzo(g,h,i)perylene	191-24-2	N.D.	0.51	0.10	1
14241	Benzo(k)fluoranthene	207-08-9	N.D.	0.51	0.10	1
14241	Benzyl alcohol	100-51-6	N.D.	31	10	1
14241	1,1'-Biphenyl	92-52-4	N.D.	10	3.1	1
14241	4-Bromophenyl-phenylether	101-55-3	N.D.	2.0	0.51	1
14241	Butylbenzylphthalate	85-68-7	N.D.	5.1	2.0	1
14241	Di-n-butylphthalate	84-74-2	N.D.	5.1	2.0	1
14241	Caprolactam	105-60-2	N.D.	11	5.1	1
14241	Carbazole	86-74-8	N.D.	2.0	0.51	1
14241	4-Chloro-3-methylphenol	59-50-7	N.D.	2.0	0.51	1
14241	4-Chloroaniline	106-47-8	N.D.	10	4.1	1
14241	bis(2-Chloroethoxy)methane	111-91-1	N.D.	2.0	0.51	1
14241	bis(2-Chloroethyl)ether	111-44-4	N.D.	2.0	0.51	1
14241	bis(2-Chloroisopropyl)ether[1]	39638-32-9	N.D.	2.0	0.51	1
	Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.					
14241	2-Chloronaphthalene	91-58-7	N.D.	1.0	0.41	1
14241	2-Chlorophenol	95-57-8	N.D.	2.0	0.51	1
14241	4-Chlorophenyl-phenylether	7005-72-3	N.D.	2.0	0.51	1
14241	Chrysene	218-01-9	N.D.	0.51	0.10	1
14241	Dibenz(a,h)anthracene	53-70-3	N.D.	0.51	0.10	1
14241	Dibenzofuran	132-64-9	N.D.	2.0	0.51	1
14241	3,3'-Dichlorobenzidine	91-94-1	N.D.	10	3.1	1
14241	2,4-Dichlorophenol	120-83-2	N.D.	2.0	0.51	1
14241	Dicyclohexylamine[1]	101-83-7	N.D.	10	10	1
14241	Diethylphthalate	84-66-2	N.D.	5.1	2.0	1
14241	N,N-Dimethylaniline[1]	121-69-7	N.D.	1.0	0.51	1
14241	2,4-Dimethylphenol	105-67-9	N.D.	10	3.1	1
14241	Dimethylphthalate	131-11-3	N.D.	5.1	2.0	1
14241	4,6-Dinitro-2-methylphenol	534-52-1	N.D.	21	8.2	1

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-1WT Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/31/2019 11:30
Collection Date/Time: 10/30/2019 11:35
SDG#: BMS82-02BKG

ARCADIS U.S., Inc.
ELLE Sample #: GW 1188913
ELLE Group #: 2071978
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	2,4-Dinitrophenol	51-28-5	N.D.	31	14	1
14241	2,4-Dinitrotoluene	121-14-2	N.D.	5.1	1.0	1
14241	2,6-Dinitrotoluene	606-20-2	N.D.	2.0	0.51	1
14241	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	11	5.1	1
14241	Fluoranthene	206-44-0	N.D.	0.51	0.10	1
14241	Fluorene	86-73-7	N.D.	0.51	0.10	1
14241	Hexachlorobenzene	118-74-1	N.D.	0.51	0.10	1
14241	Hexachlorobutadiene	87-68-3	N.D.	2.0	0.51	1
14241	Hexachlorocyclopentadiene	77-47-4	N.D.	11	5.1	1
14241	Hexachloroethane	67-72-1	N.D.	5.1	1.0	1
14241	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.51	0.10	1
14241	Isophorone	78-59-1	N.D.	2.0	0.51	1
14241	2-Methylnaphthalene	91-57-6	N.D.	0.51	0.10	1
14241	2-Methylphenol	95-48-7	N.D.	2.0	0.51	1
14241	4-Methylphenol	65794-96-9	N.D.	2.0	0.51	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
14241	Naphthalene	91-20-3	N.D.	0.51	0.10	1
14241	2-Nitroaniline	88-74-4	N.D.	7.1	2.0	1
14241	3-Nitroaniline	99-09-2	N.D.	7.1	3.1	1
14241	4-Nitroaniline	100-01-6	N.D.	3.1	0.92	1
14241	Nitrobenzene	98-95-3	N.D.	2.0	0.51	1
14241	2-Nitrophenol	88-75-5	N.D.	10	3.1	1
14241	4-Nitrophenol	100-02-7	N.D.	31	10	1
14241	N-Nitroso-di-n-propylamine	621-64-7	N.D.	3.1	0.71	1
14241	N-Nitrosodiphenylamine	86-30-6	N.D.	3.1	0.71	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.					
14241	Di-n-octylphthalate	117-84-0	N.D.	11	5.1	1
14241	Pentachlorophenol	87-86-5	N.D.	5.1	1.0	1
14241	Phenanthrene	85-01-8	N.D.	0.51	0.10	1
14241	Phenol	108-95-2	N.D.	2.0	0.51	1
14241	Pyrene	129-00-0	N.D.	0.51	0.10	1
14241	Pyridine	110-86-1	N.D.	5.1	2.0	1
14241	1,2,4,5-Tetrachlorobenzene	95-94-3	N.D.	2.0	0.51	1
14241	2,3,4,6-Tetrachlorophenol	58-90-2	N.D.	10	4.1	1
14241	2,4,5-Trichlorophenol	95-95-4	N.D.	2.0	0.51	1
14241	2,4,6-Trichlorophenol	88-06-2	N.D.	2.0	0.51	1
14241	Triethylamine[1]	121-44-8	N.D.	10	10	1

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **BDA-1WT Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/31/2019 11:30
Collection Date/Time: 10/30/2019 11:35
SDG#: BMS82-02BKG

ARCADIS U.S., Inc.
ELLE Sample #: GW 1188913
ELLE Group #: 2071978
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor

Summary. Since the recovery is high and the target analyte(s) was not detected in the sample, the data is reported.

00886 SVOA TIC Interpretive(25)

The results from the semivolatile library search are listed on the attached FORM 1 - SV-TIC. The qualifiers appearing in the "Q" column are defined at the end of the report.

Aldehydes & Ketones	SW-846 8315A		ug/l	ug/l	ug/l	
13022	Acetaldehyde[1]	75-07-0	N.D. J	60	35	1
13022	Formaldehyde	50-00-0	N.D.	50	20	1

The response for a target analyte(s) in the initial calibration verification standard is outside the QC acceptance limits. The client was contacted and the data reported.
The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary.

GC Miscellaneous	SW-846 8015D Rev.4, June 2003		ug/l	ug/l	ug/l	
10603	Ethanol	64-17-5	N.D. D2	1,000	150	1
12926	Ethylene glycol[1]	107-21-1	N.D. J	10,000	5,000	1
10603	Isopropanol[1]	67-63-0	N.D. D2	1,000	110	1
10603	Methanol	67-56-1	N.D. D2	1,000	220	1
12926	Propylene glycol[1]	57-55-6	N.D. J	10,000	2,000	1

The response for surrogate Tetramethylene glycol in the continuing calibration verification standard is outside the QC acceptance limits low. The following action was taken:
The analysis was repeated and the continuing calibration verification standard bracketing the sample on the second trial is also outside the acceptance limits low for Tetramethylene glycol.
The response for ethylene and propylene glycol in the continuing calibration verification standard is outside the QC acceptance limits low in the second trial. Data is reported from the second trial per client request.

Sample Comments

State of New York Certification No. 10670

[1] = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	Y193121AA	11/08/2019 13:32	Corie Mellinger	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	Y193121AA	11/08/2019 13:31	Corie Mellinger	1
14241	Semi-annual Groundwater BMS	SW-846 8270D	1	19309WAJ026	11/09/2019 14:39	Holly B Ziegler	1
11010	8270D BNA Extraction	SW-846 3510C	1	19309WAJ026	11/06/2019 02:00	Mathias Okpo	1
13022	Short List Aldehydes- W 8315A	SW-846 8315A	1	193040018A	11/01/2019 17:59	Jessica L Miller	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **BDA-1WT Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/31/2019 11:30
Collection Date/Time: 10/30/2019 11:35
SDG#: BMS82-02BKG

ARCADIS U.S., Inc.
ELLE Sample #: GW 1188913
ELLE Group #: 2071978
Matrix: Groundwater

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01013	Formaldehyde Extraction	SW-846 8315A	1	193040018A	11/01/2019 08:38	Alison Moll	1
10603	Alcohols in Water	SW-846 8015D Rev.4, June 2003	1	193080008A	11/05/2019 00:22	Johanna C Kennedy	1
12926	Glycols in Water by 8015C/D	SW-846 8015D Rev.4, June 2003	1	193100033A	11/06/2019 22:05	Donald Brown	1

*=This limit was used in the evaluation of the final result

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
S8202

Lab Name: Lancaster Laboratories Contract:_____
Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____
Matrix: (soil/water) WATER Lab Sample ID: 1188913
Sample wt/vol: 5.0 (g/mL)mL Lab File ID:HP09355.i/19nov08a.b/yn08s05.d
Level: (low/med) LOW Date Received: 10/31/19
% Moisture: not dec. Date Analyzed: 11/08/19
Column: (pack/cap) CAP Dilution Factor: 1.0
CONCENTRATION UNITS:
Number TICs found: 0 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	VOCTIC	Total VOC TICs		0	U
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page 1 of 1

FORM I VOA-TIC

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
S8202

Lab Name: Lancaster Laboratories Contract:
Lab Code: LANCAS Case No.: SAS No.: SDG No.:
Matrix: (soil/water) WATER Lab Sample ID: 1188913
Sample wt/vol: 245 (g/mL) mL Lab File ID: lk0436.d
Level: (low/med) LOW Date Received: 10/31/19
% Moisture: Decanted: (Y/N) Date Extracted: 11/06/19
Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/09/19
Injection Volume: 1 (uL) Dilution Factor: 1
GPC Cleanup: N pH: Extraction: Sepf
CONCENTRATION UNITS:
Number TICs found: 0 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	SVOCTIC	Total SVOC TICs		0	U
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page 1 of 1

FORM I SV-1

Sample Description: **BDA-1F Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/31/2019 11:30
Collection Date/Time: 10/30/2019 14:35
SDG#: BMS82-03

ARCADIS U.S., Inc.
ELLE Sample #: GW 1188916
ELLE Group #: 2071978
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	20	0.7	1
11997	Acetonitrile	75-05-8	N.D.	100	16	1
11997	Benzene	71-43-2	N.D.	1	0.2	1
11997	Bromochloromethane	74-97-5	N.D.	5	0.2	1
11997	Bromodichloromethane	75-27-4	N.D.	1	0.2	1
11997	Bromoform	75-25-2	N.D.	4	1	1
11997	Bromomethane	74-83-9	N.D.	1	0.3	1
11997	n-Butanol	71-36-3	N.D.	250	61	1
11997	2-Butanone	78-93-3	N.D.	10	0.3	1
11997	t-Butyl alcohol	75-65-0	N.D.	50	12	1
11997	n-Butylbenzene	104-51-8	N.D.	5	0.2	1
11997	sec-Butylbenzene	135-98-8	N.D.	5	0.2	1
11997	tert-Butylbenzene	98-06-6	N.D.	5	0.3	1
11997	Carbon Disulfide	75-15-0	N.D.	5	0.2	1
11997	Carbon Tetrachloride	56-23-5	N.D.	1	0.2	1
11997	Chlorobenzene	108-90-7	N.D.	1	0.2	1
11997	Chlorodifluoromethane[1]	75-45-6	N.D. J	5	2	1
11997	Chloroethane	75-00-3	N.D. J	1	0.2	1
11997	Chloroform	67-66-3	0.2 J	1	0.2	1
11997	Chloromethane	74-87-3	N.D. J	1	0.2	1
11997	Cyclohexane	110-82-7	N.D.	5	1	1
11997	Cyclohexanone[1]	108-94-1	N.D.	100	25	1
11997	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	5	0.3	1
11997	Dibromochloromethane	124-48-1	N.D.	1	0.2	1
11997	1,2-Dibromoethane	106-93-4	N.D.	1	0.2	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	5	0.2	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	5	0.2	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	5	0.2	1
11997	Dichlorodifluoromethane	75-71-8	N.D. J	1	0.2	1
11997	1,1-Dichloroethane	75-34-3	N.D.	1	0.2	1
11997	1,2-Dichloroethane	107-06-2	N.D.	1	0.3	1
11997	1,1-Dichloroethene	75-35-4	N.D.	1	0.2	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	1	0.2	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	1	0.2	1
11997	1,2-Dichloropropane	78-87-5	N.D.	1	0.2	1
11997	cis-1,3-Dichloropropene	10061-01-5	N.D.	1	0.2	1
11997	trans-1,3-Dichloropropene	10061-02-6	N.D.	1	0.2	1
11997	1,4-Dioxane	123-91-1	N.D.	250	29	1
11997	Ethyl Acetate	141-78-6	N.D.	5	0.7	1
11997	Ethyl ether	60-29-7	N.D.	5	0.2	1
11997	Ethylbenzene	100-41-4	N.D.	1	0.4	1

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-1F Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/31/2019 11:30
Collection Date/Time: 10/30/2019 14:35
SDG#: BMS82-03

ARCADIS U.S., Inc.
ELLE Sample #: GW 1188916
ELLE Group #: 2071978
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Freon 113	76-13-1	N.D.	10	0.2	1
11997	n-Heptane[1]	142-82-5	N.D.	5	2	1
11997	n-Hexane[1]	110-54-3	N.D.	5	2	1
11997	2-Hexanone	591-78-6	N.D.	10	0.3	1
11997	Isobutyl Alcohol	78-83-1	N.D.	250	36	1
11997	Isopropylbenzene	98-82-8	N.D.	5	0.2	1
11997	p-Isopropyltoluene	99-87-6	N.D.	5	0.2	1
11997	Methyl Acetate	79-20-9	N.D.	5	0.2	1
11997	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	1	0.2	1
11997	4-Methyl-2-pentanone	108-10-1	N.D.	10	0.5	1
11997	Methylcyclohexane	108-87-2	N.D.	5	0.5	1
11997	Methylene Chloride	75-09-2	0.7 J	1	0.3	1
11997	Naphthalene	91-20-3	N.D.	5	1	1
11997	2-Nitropropane	79-46-9	N.D.	10	0.8	1
11997	Styrene	100-42-5	N.D.	5	0.2	1
11997	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	1	0.2	1
11997	Tetrachloroethene	127-18-4	N.D.	1	0.2	1
11997	Tetrahydrofuran	109-99-9	N.D.	10	0.7	1
11997	Toluene	108-88-3	N.D.	1	0.2	1
11997	1,2,3-Trichlorobenzene	87-61-6	N.D.	5	0.4	1
11997	1,2,4-Trichlorobenzene	120-82-1	N.D.	5	0.3	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	1	0.3	1
11997	1,1,2-Trichloroethane	79-00-5	N.D.	1	0.2	1
11997	Trichloroethene	79-01-6	2	1	0.2	1
11997	Trichlorofluoromethane	75-69-4	N.D. J	1	0.2	1
11997	1,2,4-Trimethylbenzene	95-63-6	N.D.	5	1	1
11997	1,3,5-Trimethylbenzene	108-67-8	N.D.	5	0.3	1
11997	Vinyl Chloride	75-01-4	N.D. J	1	0.2	1
11997	m+p-Xylene	179601-23-1	N.D.	5	1	1
11997	o-Xylene	95-47-6	N.D.	1	0.4	1
11997	Xylene (Total)	1330-20-7	N.D.	6	1	1

Project defined calibration criteria are not met. The calibration is compliant with the method defined criteria.

A Report Limit Verification (RLV) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The RLV standard shows adequate sensitivity at or below the reporting limit.

00882 VOA Interp. Library Search-10

The results from the volatile library search are listed on the attached FORM 1 - VOA-TIC. The qualifiers appearing in the "Q" column are defined at the end of the report.

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-1F Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/31/2019 11:30
Collection Date/Time: 10/30/2019 14:35
SDG#: BMS82-03

ARCADIS U.S., Inc.
ELLE Sample #: GW 1188916
ELLE Group #: 2071978
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	Acenaphthene	83-32-9	N.D.	0.51	0.10	1
14241	Acenaphthylene	208-96-8	N.D.	0.51	0.10	1
14241	Acetophenone	98-86-2	N.D.	10	4.0	1
14241	Aniline	62-53-3	N.D.	10	3.0	1
14241	Anthracene	120-12-7	N.D.	0.51	0.10	1
14241	Atrazine	1912-24-9	N.D.	5.1	2.0	1
14241	Benzaldehyde	100-52-7	N.D.	10	3.0	1
14241	Benzo(a)anthracene	56-55-3	N.D.	0.51	0.10	1
14241	Benzo(a)pyrene	50-32-8	N.D.	0.51	0.10	1
14241	Benzo(b)fluoranthene	205-99-2	N.D.	0.51	0.10	1
14241	Benzo(g,h,i)perylene	191-24-2	N.D.	0.51	0.10	1
14241	Benzo(k)fluoranthene	207-08-9	N.D.	0.51	0.10	1
14241	Benzyl alcohol	100-51-6	N.D.	30	10	1
14241	1,1'-Biphenyl	92-52-4	N.D.	10	3.0	1
14241	4-Bromophenyl-phenylether	101-55-3	N.D.	2.0	0.51	1
14241	Butylbenzylphthalate	85-68-7	N.D.	5.1	2.0	1
14241	Di-n-butylphthalate	84-74-2	N.D.	5.1	2.0	1
14241	Caprolactam	105-60-2	N.D.	11	5.1	1
14241	Carbazole	86-74-8	N.D.	2.0	0.51	1
14241	4-Chloro-3-methylphenol	59-50-7	N.D.	2.0	0.51	1
14241	4-Chloroaniline	106-47-8	N.D.	10	4.0	1
14241	bis(2-Chloroethoxy)methane	111-91-1	N.D.	2.0	0.51	1
14241	bis(2-Chloroethyl)ether	111-44-4	N.D.	2.0	0.51	1
14241	bis(2-Chloroisopropyl)ether[1]	39638-32-9	N.D.	2.0	0.51	1
	Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.					
14241	2-Chloronaphthalene	91-58-7	N.D.	1.0	0.40	1
14241	2-Chlorophenol	95-57-8	N.D.	2.0	0.51	1
14241	4-Chlorophenyl-phenylether	7005-72-3	N.D.	2.0	0.51	1
14241	Chrysene	218-01-9	N.D.	0.51	0.10	1
14241	Dibenz(a,h)anthracene	53-70-3	N.D.	0.51	0.10	1
14241	Dibenzofuran	132-64-9	N.D.	2.0	0.51	1
14241	3,3'-Dichlorobenzidine	91-94-1	N.D.	10	3.0	1
14241	2,4-Dichlorophenol	120-83-2	N.D.	2.0	0.51	1
14241	Dicyclohexylamine[1]	101-83-7	N.D.	10	10	1
14241	Diethylphthalate	84-66-2	N.D.	5.1	2.0	1
14241	N,N-Dimethylaniline[1]	121-69-7	N.D.	1.0	0.51	1
14241	2,4-Dimethylphenol	105-67-9	N.D.	10	3.0	1
14241	Dimethylphthalate	131-11-3	N.D.	5.1	2.0	1
14241	4,6-Dinitro-2-methylphenol	534-52-1	N.D.	21	8.1	1

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-1F Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/31/2019 11:30
Collection Date/Time: 10/30/2019 14:35
SDG#: BMS82-03

ARCADIS U.S., Inc.
ELLE Sample #: GW 1188916
ELLE Group #: 2071978
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	2,4-Dinitrophenol	51-28-5	N.D.	30	14	1
14241	2,4-Dinitrotoluene	121-14-2	N.D.	5.1	1.0	1
14241	2,6-Dinitrotoluene	606-20-2	N.D.	2.0	0.51	1
14241	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	11	5.1	1
14241	Fluoranthene	206-44-0	N.D.	0.51	0.10	1
14241	Fluorene	86-73-7	N.D.	0.51	0.10	1
14241	Hexachlorobenzene	118-74-1	N.D.	0.51	0.10	1
14241	Hexachlorobutadiene	87-68-3	N.D.	2.0	0.51	1
14241	Hexachlorocyclopentadiene	77-47-4	N.D.	11	5.1	1
14241	Hexachloroethane	67-72-1	N.D.	5.1	1.0	1
14241	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.51	0.10	1
14241	Isophorone	78-59-1	N.D.	2.0	0.51	1
14241	2-Methylnaphthalene	91-57-6	N.D.	0.51	0.10	1
14241	2-Methylphenol	95-48-7	N.D.	2.0	0.51	1
14241	4-Methylphenol	65794-96-9	N.D.	2.0	0.51	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
14241	Naphthalene	91-20-3	N.D.	0.51	0.10	1
14241	2-Nitroaniline	88-74-4	N.D.	7.1	2.0	1
14241	3-Nitroaniline	99-09-2	N.D.	7.1	3.0	1
14241	4-Nitroaniline	100-01-6	N.D.	3.0	0.91	1
14241	Nitrobenzene	98-95-3	N.D.	2.0	0.51	1
14241	2-Nitrophenol	88-75-5	N.D.	10	3.0	1
14241	4-Nitrophenol	100-02-7	N.D.	30	10	1
14241	N-Nitroso-di-n-propylamine	621-64-7	N.D.	3.0	0.71	1
14241	N-Nitrosodiphenylamine	86-30-6	N.D.	3.0	0.71	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.					
14241	Di-n-octylphthalate	117-84-0	N.D.	11	5.1	1
14241	Pentachlorophenol	87-86-5	N.D.	5.1	1.0	1
14241	Phenanthrene	85-01-8	N.D.	0.51	0.10	1
14241	Phenol	108-95-2	N.D.	2.0	0.51	1
14241	Pyrene	129-00-0	N.D.	0.51	0.10	1
14241	Pyridine	110-86-1	N.D.	5.1	2.0	1
14241	1,2,4,5-Tetrachlorobenzene	95-94-3	N.D.	2.0	0.51	1
14241	2,3,4,6-Tetrachlorophenol	58-90-2	N.D.	10	4.0	1
14241	2,4,5-Trichlorophenol	95-95-4	N.D.	2.0	0.51	1
14241	2,4,6-Trichlorophenol	88-06-2	N.D.	2.0	0.51	1
14241	Triethylamine[1]	121-44-8	N.D.	10	10	1

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-1F Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/31/2019 11:30
Collection Date/Time: 10/30/2019 14:35
SDG#: BMS82-03

ARCADIS U.S., Inc.
ELLE Sample #: GW 1188916
ELLE Group #: 2071978
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result		Limit of Quantitation*	Method Detection Limit	Dilution Factor
	Summary. Since the recovery is high and the target analyte(s) was not detected in the sample, the data is reported.						
00886	**SVOA TIC Interpretive(25)**						
	The results from the semivolatile library search are listed on the attached FORM 1 - SV-TIC. The qualifiers appearing in the "Q" column are defined at the end of the report.						
Aldehydes & Ketones	**SW-846 8315A**		**ug/l**		**ug/l**	**ug/l**	
13022	Acetaldehyde[1]	75-07-0	N.D.	J	60	35	1
13022	Formaldehyde	50-00-0	N.D.		50	20	1
	The response for a target analyte(s) in the initial calibration verification standard is outside the QC acceptance limits. The client was contacted and the data reported. The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary.						
GC Miscellaneous	**SW-846 8015D Rev.4, June 2003**		**ug/l**		**ug/l**	**ug/l**	
10603	Ethanol	64-17-5	N.D.	~~D2~~	1,000	150	1
12926	Ethylene glycol[1]	107-21-1	7,400	J	10,000	5,000	1
10603	Isopropanol[1]	67-63-0	N.D.	D2	1,000	110	1
10603	Methanol	67-56-1	N.D.	D2	1,000	220	1
12926	Propylene glycol[1]	57-55-6	N.D.		10,000	2,000	1
	The response for surrogate Tetramethylene glycol in the continuing calibration verification standard is outside the QC acceptance limits low. The following action was taken: The analysis was repeated and the continuing calibration verification standard bracketing the sample on the second trial is also outside the acceptance limits. This effect is attributed to the sample matrix and the data is reported.						

Sample Comments

State of New York Certification No. 10670

[1] = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	Y193121AA	11/08/2019 15:44	Corie Mellinger	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	Y193121AA	11/08/2019 15:43	Corie Mellinger	1
14241	Semi-annual Groundwater BMS	SW-846 8270D	1	19309WAJ026	11/09/2019 16:06	Holly B Ziegler	1
11010	8270D BNA Extraction	SW-846 3510C	1	19309WAJ026	11/06/2019 02:00	Mathias Okpo	1
13022	Short List Aldehydes- W 8315A	SW-846 8315A	1	193040018A	11/01/2019 18:30	Jessica L Miller	1
01013	Formaldehyde Extraction	SW-846 8315A	1	193040018A	11/01/2019 08:38	Alison Moll	1

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-1F Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/31/2019 11:30
Collection Date/Time: 10/30/2019 14:35
SDG#: BMS82-03

ARCADIS U.S., Inc.
ELLE Sample #: GW 1188916
ELLE Group #: 2071978
Matrix: Groundwater

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10603	Alcohols in Water	SW-846 8015D Rev.4, June 2003	1	193080008A	11/05/2019 01:12	Johanna C Kennedy	1
12926	Glycols in Water by 8015C/D	SW-846 8015D Rev.4, June 2003	1	193080027A	11/06/2019 00:46	Donald Brown	1

*=This limit was used in the evaluation of the final result

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
S8203

Lab Name: Lancaster Laboratories Contract:_____
Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____
Matrix: (soil/water) WATER Lab Sample ID: 1188916
Sample wt/vol: 5.0 (g/mL)mL Lab File ID:HP09355.i/19nov08a.b/yn08s11.d
Level: (low/med) LOW Date Received: 10/31/19
% Moisture: not dec. Date Analyzed: 11/08/19
Column: (pack/cap) CAP Dilution Factor: 1.0
CONCENTRATION UNITS:
Number TICs found: 0 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	VOCTIC	Total VOC TICs		0	U
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page 1 of 1

FORM I VOA-TIC

1F

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

S8203

Lab Name: Lancaster Laboratories Contract:
Lab Code: LANCAS Case No.: SAS No.: SDG No.:
Matrix: (soil/water) WATER Lab Sample ID: 1188916
Sample wt/vol: 247 (g/mL) mL Lab File ID: lk0439.d
Level: (low/med) LOW Date Received: 10/31/19
% Moisture: Decanted: (Y/N) Date Extracted: 11/06/19
Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/09/19
Injection Volume: 1 (uL) Dilution Factor: 1
GPC Cleanup: N pH: Extraction: Sepf

CONCENTRATION UNITS:
Number TICs found: 0 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	SVOCTIC	Total SVOC TICs		0	U
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page 1 of 1

FORM I SV-1

Sample Description: **PW-6F Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/31/2019 11:30
Collection Date/Time: 10/30/2019 10:30
SDG#: BMS82-04

ARCADIS U.S., Inc.
ELLE Sample #: GW 1188917
ELLE Group #: 2071978
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	200	7	10
11997	Acetonitrile	75-05-8	N.D.	1,000	160	10
11997	Benzene	71-43-2	N.D.	10	2	10
11997	Bromochloromethane	74-97-5	N.D.	50	2	10
11997	Bromodichloromethane	75-27-4	N.D.	10	2	10
11997	Bromoform	75-25-2	N.D.	40	10	10
11997	Bromomethane	74-83-9	N.D.	10	3	10
11997	n-Butanol	71-36-3	N.D.	2,500	610	10
11997	2-Butanone	78-93-3	N.D.	100	3	10
11997	t-Butyl alcohol	75-65-0	N.D.	500	120	10
11997	n-Butylbenzene	104-51-8	N.D.	50	2	10
11997	sec-Butylbenzene	135-98-8	N.D.	50	2	10
11997	tert-Butylbenzene	98-06-6	N.D.	50	3	10
11997	Carbon Disulfide	75-15-0	N.D.	50	2	10
11997	Carbon Tetrachloride	56-23-5	N.D.	10	2	10
11997	Chlorobenzene	108-90-7	N.D.	10	2	10
11997	Chlorodifluoromethane[1]	75-45-6	N.D. J	50	20	10
11997	Chloroethane	75-00-3	N.D. J	10	2	10
11997	Chloroform	67-66-3	N.D.	10	2	10
11997	Chloromethane	74-87-3	N.D. J	10	2	10
11997	Cyclohexane	110-82-7	N.D.	50	10	10
11997	Cyclohexanone[1]	108-94-1	N.D.	1,000	250	10
11997	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	50	3	10
11997	Dibromochloromethane	124-48-1	N.D.	10	2	10
11997	1,2-Dibromoethane	106-93-4	N.D.	10	2	10
11997	1,2-Dichlorobenzene	95-50-1	N.D.	50	2	10
11997	1,3-Dichlorobenzene	541-73-1	N.D.	50	2	10
11997	1,4-Dichlorobenzene	106-46-7	N.D.	50	2	10
11997	Dichlorodifluoromethane	75-71-8	N.D. J	10	2	10
11997	1,1-Dichloroethane	75-34-3	N.D.	10	2	10
11997	1,2-Dichloroethane	107-06-2	N.D.	10	3	10
11997	1,1-Dichloroethene	75-35-4	N.D.	10	2	10
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	10	2	10
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	10	2	10
11997	1,2-Dichloropropane	78-87-5	N.D.	10	2	10
11997	cis-1,3-Dichloropropene	10061-01-5	N.D.	10	2	10
11997	trans-1,3-Dichloropropene	10061-02-6	N.D.	10	2	10
11997	1,4-Dioxane	123-91-1	N.D.	2,500	290	10
11997	Ethyl Acetate	141-78-6	N.D.	50	7	10
11997	Ethyl ether	60-29-7	N.D.	50	2	10
11997	Ethylbenzene	100-41-4	N.D.	10	4	10

*=This limit was used in the evaluation of the final result

Sample Description: **PW-6F Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/31/2019 11:30
Collection Date/Time: 10/30/2019 10:30
SDG#: BMS82-04

ARCADIS U.S., Inc.
ELLE Sample #: GW 1188917
ELLE Group #: 2071978
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Freon 113	76-13-1	N.D.	100	2	10
11997	n-Heptane[1]	142-82-5	N.D.	50	20	10
11997	n-Hexane[1]	110-54-3	N.D.	50	20	10
11997	2-Hexanone	591-78-6	N.D.	100	3	10
11997	Isobutyl Alcohol	78-83-1	N.D.	2,500	360	10
11997	Isopropylbenzene	98-82-8	N.D.	50	2	10
11997	p-Isopropyltoluene	99-87-6	N.D.	50	2	10
11997	Methyl Acetate	79-20-9	N.D.	50	2	10
11997	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	10	2	10
11997	4-Methyl-2-pentanone	108-10-1	N.D.	100	5	10
11997	Methylcyclohexane	108-87-2	N.D.	50	5	10
11997	Methylene Chloride	75-09-2	N.D.	10	3	10
11997	Naphthalene	91-20-3	N.D.	50	10	10
11997	2-Nitropropane	79-46-9	N.D.	100	8	10
11997	Styrene	100-42-5	N.D.	50	2	10
11997	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	10	2	10
11997	Tetrachloroethene	127-18-4	N.D.	10	2	10
11997	Tetrahydrofuran	109-99-9	N.D.	100	7	10
11997	Toluene	108-88-3	N.D.	10	2	10
11997	1,2,3-Trichlorobenzene	87-61-6	N.D.	50	4	10
11997	1,2,4-Trichlorobenzene	120-82-1	N.D.	50	3	10
11997	1,1,1-Trichloroethane	71-55-6	N.D.	10	3	10
11997	1,1,2-Trichloroethane	79-00-5	N.D.	10	2	10
11997	Trichloroethene	79-01-6	N.D.	10	2	10
11997	Trichlorofluoromethane	75-69-4	N.D. J	10	2	10
11997	1,2,4-Trimethylbenzene	95-63-6	N.D.	50	10	10
11997	1,3,5-Trimethylbenzene	108-67-8	N.D.	50	3	10
11997	Vinyl Chloride	75-01-4	N.D. J	10	2	10
11997	m+p-Xylene	179601-23-1	N.D.	50	10	10
11997	o-Xylene	95-47-6	N.D.	10	4	10
11997	Xylene (Total)	1330-20-7	N.D.	60	14	10

Project defined calibration criteria are not met. The calibration is compliant with the method defined criteria.

A Report Limit Verification (RLV) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The RLV standard shows adequate sensitivity at or below the reporting limit.

Reporting limits were raised due to sample foaming.

00882 VOA Interp. Library Search-10

*=This limit was used in the evaluation of the final result

Sample Description: **PW-6F Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/31/2019 11:30
Collection Date/Time: 10/30/2019 10:30
SDG#: BMS82-04

ARCADIS U.S., Inc.
ELLE Sample #: GW 1188917
ELLE Group #: 2071978
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
	The results from the volatile library search are listed on the attached FORM 1 - VOA-TIC. The qualifiers appearing in the "Q" column are defined at the end of the report.					
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	Acenaphthene	83-32-9	N.D.	0.54	0.11	1
14241	Acenaphthylene	208-96-8	N.D.	0.54	0.11	1
14241	Acetophenone	98-86-2	N.D.	11	4.3	1
14241	Aniline	62-53-3	N.D.	11	3.3	1
14241	Anthracene	120-12-7	N.D.	0.54	0.11	1
14241	Atrazine	1912-24-9	N.D.	5.4	2.2	1
14241	Benzaldehyde	100-52-7	N.D.	11	3.3	1
14241	Benzo(a)anthracene	56-55-3	N.D.	0.54	0.11	1
14241	Benzo(a)pyrene	50-32-8	N.D.	0.54	0.11	1
14241	Benzo(b)fluoranthene	205-99-2	N.D.	0.54	0.11	1
14241	Benzo(g,h,i)perylene	191-24-2	N.D.	0.54	0.11	1
14241	Benzo(k)fluoranthene	207-08-9	N.D.	0.54	0.11	1
14241	Benzyl alcohol	100-51-6	N.D.	33	11	1
14241	1,1'-Biphenyl	92-52-4	N.D.	11	3.3	1
14241	4-Bromophenyl-phenylether	101-55-3	N.D.	2.2	0.54	1
14241	Butylbenzylphthalate	85-68-7	N.D.	5.4	2.2	1
14241	Di-n-butylphthalate	84-74-2	N.D.	5.4	2.2	1
14241	Caprolactam	105-60-2	N.D.	12	5.4	1
14241	Carbazole	86-74-8	N.D.	2.2	0.54	1
14241	4-Chloro-3-methylphenol	59-50-7	N.D.	2.2	0.54	1
14241	4-Chloroaniline	106-47-8	N.D.	11	4.3	1
14241	bis(2-Chloroethoxy)methane	111-91-1	N.D.	2.2	0.54	1
14241	bis(2-Chloroethyl)ether	111-44-4	N.D.	2.2	0.54	1
14241	bis(2-Chloroisopropyl)ether[1]	39638-32-9	N.D.	2.2	0.54	1
	Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.					
14241	2-Chloronaphthalene	91-58-7	N.D.	1.1	0.43	1
14241	2-Chlorophenol	95-57-8	N.D.	2.2	0.54	1
14241	4-Chlorophenyl-phenylether	7005-72-3	N.D.	2.2	0.54	1
14241	Chrysene	218-01-9	N.D.	0.54	0.11	1
14241	Dibenz(a,h)anthracene	53-70-3	N.D.	0.54	0.11	1
14241	Dibenzofuran	132-64-9	N.D.	2.2	0.54	1
14241	3,3'-Dichlorobenzidine	91-94-1	N.D.	11	3.3	1
14241	2,4-Dichlorophenol	120-83-2	N.D.	2.2	0.54	1
14241	Dicyclohexylamine[1]	101-83-7	N.D.	11	11	1
14241	Diethylphthalate	84-66-2	N.D.	5.4	2.2	1
14241	N,N-Dimethylaniline[1]	121-69-7	N.D.	1.1	0.54	1
14241	2,4-Dimethylphenol	105-67-9	N.D.	11	3.3	1

*=This limit was used in the evaluation of the final result

Sample Description: **PW-6F Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/31/2019 11:30
Collection Date/Time: 10/30/2019 10:30
SDG#: BMS82-04

ARCADIS U.S., Inc.
ELLE Sample #: GW 1188917
ELLE Group #: 2071978
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	Dimethylphthalate	131-11-3	N.D.	5.4	2.2	1
14241	4,6-Dinitro-2-methylphenol	534-52-1	N.D.	23	8.7	1
14241	2,4-Dinitrophenol	51-28-5	N.D.	33	15	1
14241	2,4-Dinitrotoluene	121-14-2	N.D.	5.4	1.1	1
14241	2,6-Dinitrotoluene	606-20-2	N.D.	2.2	0.54	1
14241	bis(2-Ethylhexyl)phthalate	117-81-7	15	12	5.4	1
14241	Fluoranthene	206-44-0	0.21 J	0.54	0.11	1
14241	Fluorene	86-73-7	N.D.	0.54	0.11	1
14241	Hexachlorobenzene	118-74-1	N.D.	0.54	0.11	1
14241	Hexachlorobutadiene	87-68-3	N.D.	2.2	0.54	1
14241	Hexachlorocyclopentadiene	77-47-4	N.D.	12	5.4	1
14241	Hexachloroethane	67-72-1	N.D.	5.4	1.1	1
14241	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.54	0.11	1
14241	Isophorone	78-59-1	N.D.	2.2	0.54	1
14241	2-Methylnaphthalene	91-57-6	N.D.	0.54	0.11	1
14241	2-Methylphenol	95-48-7	N.D.	2.2	0.54	1
14241	4-Methylphenol	65794-96-9	N.D.	2.2	0.54	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
14241	Naphthalene	91-20-3	N.D.	0.54	0.11	1
14241	2-Nitroaniline	88-74-4	N.D.	7.6	2.2	1
14241	3-Nitroaniline	99-09-2	N.D.	7.6	3.3	1
14241	4-Nitroaniline	100-01-6	N.D.	3.3	0.98	1
14241	Nitrobenzene	98-95-3	N.D.	2.2	0.54	1
14241	2-Nitrophenol	88-75-5	N.D.	11	3.3	1
14241	4-Nitrophenol	100-02-7	N.D.	33	11	1
14241	N-Nitroso-di-n-propylamine	621-64-7	N.D.	3.3	0.76	1
14241	N-Nitrosodiphenylamine	86-30-6	N.D.	3.3	0.76	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.					
14241	Di-n-octylphthalate	117-84-0	N.D.	12	5.4	1
14241	Pentachlorophenol	87-86-5	N.D.	5.4	1.1	1
14241	Phenanthrene	85-01-8	N.D.	0.54	0.11	1
14241	Phenol	108-95-2	N.D.	2.2	0.54	1
14241	Pyrene	129-00-0	0.19 J	0.54	0.11	1
14241	Pyridine	110-86-1	N.D.	5.4	2.2	1
14241	1,2,4,5-Tetrachlorobenzene	95-94-3	N.D.	2.2	0.54	1
14241	2,3,4,6-Tetrachlorophenol	58-90-2	N.D.	11	4.3	1
14241	2,4,5-Trichlorophenol	95-95-4	N.D.	2.2	0.54	1
14241	2,4,6-Trichlorophenol	88-06-2	N.D.	2.2	0.54	1

*=This limit was used in the evaluation of the final result

Sample Description: **PW-6F Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/31/2019 11:30
Collection Date/Time: 10/30/2019 10:30
SDG#: BMS82-04

ARCADIS U.S., Inc.
ELLE Sample #: GW 1188917
ELLE Group #: 2071978
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	Triethylamine[1]	121-44-8	N.D.	11	11	1

00886 SVOA TIC Interpretive(25)

The results from the semivolatile library search are listed on the attached FORM 1 - SV-TIC. The qualifiers appearing in the "Q" column are defined at the end of the report.

Aldehydes & Ketones	**SW-846 8315A**		**ug/l**	**ug/l**	**ug/l**	
13022	Acetaldehyde[1]	75-07-0	N.D. J	60	35	1
13022	Formaldehyde	50-00-0	51	50	20	1

The response for a target analyte(s) in the initial calibration verification standard is outside the QC acceptance limits. The client was contacted and the data reported.
The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary.

GC Miscellaneous	**SW-846 8015D Rev.4, June 2003**		**ug/l**	**ug/l**	**ug/l**	
10603	Ethanol	64-17-5	N.D. D2	1,000	150	1
12926	Ethylene glycol[1]	107-21-1	N.D. J	10,000	5,000	1
10603	Isopropanol[1]	67-63-0	N.D. D2	1,000	110	1
10603	Methanol	67-56-1	N.D. D2	1,000	220	1
12926	Propylene glycol[1]	57-55-6	N.D. J	10,000	2,000	1

The response for surrogate Tetramethylene glycol in the continuing calibration verification standard is outside the QC acceptance limits low. The following action was taken:
The analysis was repeated and the continuing calibration verification standard bracketing the sample on the second trial is also outside the acceptance limits. This effect is attributed to the sample matrix and the data is reported.

The recovery for the sample surrogate(s) is outside the QC acceptance limits as noted on the QC Summary.

Sample Comments

State of New York Certification No. 10670

[1] = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	Y193121AA	11/08/2019 18:40	Corie Mellinger	10
01163	GC/MS VOA Water Prep	SW-846 5030C	1	Y193121AA	11/08/2019 18:39	Corie Mellinger	10
14241	Semi-annual Groundwater BMS	SW-846 8270D	1	19309WAJ026	11/09/2019 16:35	Holly B Ziegler	1

*=This limit was used in the evaluation of the final result

Sample Description: **PW-6F Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/31/2019 11:30
Collection Date/Time: 10/30/2019 10:30
SDG#: BMS82-04

ARCADIS U.S., Inc.
ELLE Sample #: GW 1188917
ELLE Group #: 2071978
Matrix: Groundwater

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11010	8270D BNA Extraction	SW-846 3510C	1	19309WAJ026	11/06/2019 02:00	Mathias Okpo	1
13022	Short List Aldehydes- W 8315A	SW-846 8315A	1	193040018A	11/01/2019 18:40	Jessica L Miller	1
01013	Formaldehyde Extraction	SW-846 8315A	1	193040018A	11/01/2019 08:38	Alison Moll	1
10603	Alcohols in Water	SW-846 8015D Rev.4, June 2003	1	193080008A	11/05/2019 01:28	Johanna C Kennedy	1
12926	Glycols in Water by 8015C/D	SW-846 8015D Rev.4, June 2003	1	193080027A	11/06/2019 00:59	Donald Brown	1

*=This limit was used in the evaluation of the final result

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
S8204

Lab Name: Lancaster Laboratories Contract:_____
Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____
Matrix: (soil/water) WATER Lab Sample ID: 1188917
Sample wt/vol: 5.0 (g/mL)mL Lab File ID:HP09355.i/19nov08a.b/yn08s21.d
Level: (low/med) LOW Date Received: 10/31/19
% Moisture: not dec. Date Analyzed: 11/08/19
Column: (pack/cap) CAP Dilution Factor: 10.0

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	VOCTIC	Total VOC TICs		0	U
2.					
3.					
4.					
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30.					

page 1 of 1

FORM I VOA-TIC

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
S8204

Lab Name: Lancaster Laboratories Contract:
Lab Code: LANCAS Case No.: SAS No.: SDG No.:
Matrix: (soil/water) WATER Lab Sample ID: 1188917
Sample wt/vol: 230 (g/mL) mL Lab File ID: lk0440.d
Level: (low/med) LOW Date Received: 10/31/19
% Moisture: Decanted: (Y/N) Date Extracted: 11/06/19
Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/09/19
Injection Volume: 1 (uL) Dilution Factor: 1
GPC Cleanup: N pH: Extraction: Sepf
CONCENTRATION UNITS:
Number TICs found: 2 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		Unknown	14.381	6	J N
2.		Unknown	15.557	6	J
3.					
4.	SVOCTIC	Total SVOC TICs		12	J
5.					
6.					
7.					
8.					
9.					
10.					
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30.					

Sample Description: **PW-4T Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/31/2019 11:30
Collection Date/Time: 10/30/2019 11:50
SDG#: BMS82-05

ARCADIS U.S., Inc.
ELLE Sample #: GW 1188918
ELLE Group #: 2071978
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	20	0.7	1
11997	Acetonitrile	75-05-8	N.D.	100	16	1
11997	Benzene	71-43-2	N.D.	1	0.2	1
11997	Bromochloromethane	74-97-5	N.D.	5	0.2	1
11997	Bromodichloromethane	75-27-4	N.D.	1	0.2	1
11997	Bromoform	75-25-2	N.D.	4	1	1
11997	Bromomethane	74-83-9	N.D.	1	0.3	1
11997	n-Butanol	71-36-3	N.D.	250	61	1
11997	2-Butanone	78-93-3	N.D.	10	0.3	1
11997	t-Butyl alcohol	75-65-0	N.D.	50	12	1
11997	n-Butylbenzene	104-51-8	N.D.	5	0.2	1
11997	sec-Butylbenzene	135-98-8	N.D.	5	0.2	1
11997	tert-Butylbenzene	98-06-6	N.D.	5	0.3	1
11997	Carbon Disulfide	75-15-0	N.D.	5	0.2	1
11997	Carbon Tetrachloride	56-23-5	N.D.	1	0.2	1
11997	Chlorobenzene	108-90-7	N.D.	1	0.2	1
11997	Chlorodifluoromethane[1]	75-45-6	N.D. J	5	2	1
11997	Chloroethane	75-00-3	N.D. J	1	0.2	1
11997	Chloroform	67-66-3	N.D.	1	0.2	1
11997	Chloromethane	74-87-3	N.D. J	1	0.2	1
11997	Cyclohexane	110-82-7	N.D.	5	1	1
11997	Cyclohexanone[1]	108-94-1	N.D.	100	25	1
11997	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	5	0.3	1
11997	Dibromochloromethane	124-48-1	N.D.	1	0.2	1
11997	1,2-Dibromoethane	106-93-4	N.D.	1	0.2	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	5	0.2	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	5	0.2	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	5	0.2	1
11997	Dichlorodifluoromethane	75-71-8	N.D. J	1	0.2	1
11997	1,1-Dichloroethane	75-34-3	N.D.	1	0.2	1
11997	1,2-Dichloroethane	107-06-2	N.D.	1	0.3	1
11997	1,1-Dichloroethene	75-35-4	N.D.	1	0.2	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	1	0.2	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	1	0.2	1
11997	1,2-Dichloropropane	78-87-5	N.D.	1	0.2	1
11997	cis-1,3-Dichloropropene	10061-01-5	N.D.	1	0.2	1
11997	trans-1,3-Dichloropropene	10061-02-6	N.D.	1	0.2	1
11997	1,4-Dioxane	123-91-1	N.D.	250	29	1
11997	Ethyl Acetate	141-78-6	N.D.	5	0.7	1
11997	Ethyl ether	60-29-7	N.D.	5	0.2	1
11997	Ethylbenzene	100-41-4	N.D.	1	0.4	1

*=This limit was used in the evaluation of the final result

Sample Description: **PW-4T Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/31/2019 11:30
Collection Date/Time: 10/30/2019 11:50
SDG#: BMS82-05

ARCADIS U.S., Inc.
ELLE Sample #: GW 1188918
ELLE Group #: 2071978
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Freon 113	76-13-1	N.D.	10	0.2	1
11997	n-Heptane[1]	142-82-5	N.D.	5	2	1
11997	n-Hexane[1]	110-54-3	N.D.	5	2	1
11997	2-Hexanone	591-78-6	N.D.	10	0.3	1
11997	Isobutyl Alcohol	78-83-1	N.D.	250	36	1
11997	Isopropylbenzene	98-82-8	N.D.	5	0.2	1
11997	p-Isopropyltoluene	99-87-6	N.D.	5	0.2	1
11997	Methyl Acetate	79-20-9	N.D.	5	0.2	1
11997	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	1	0.2	1
11997	4-Methyl-2-pentanone	108-10-1	N.D.	10	0.5	1
11997	Methylcyclohexane	108-87-2	N.D.	5	0.5	1
11997	Methylene Chloride	75-09-2	N.D.	1	0.3	1
11997	Naphthalene	91-20-3	N.D.	5	1	1
11997	2-Nitropropane	79-46-9	N.D.	10	0.8	1
11997	Styrene	100-42-5	N.D.	5	0.2	1
11997	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	1	0.2	1
11997	Tetrachloroethene	127-18-4	N.D.	1	0.2	1
11997	Tetrahydrofuran	109-99-9	N.D.	10	0.7	1
11997	Toluene	108-88-3	N.D.	1	0.2	1
11997	1,2,3-Trichlorobenzene	87-61-6	N.D.	5	0.4	1
11997	1,2,4-Trichlorobenzene	120-82-1	N.D.	5	0.3	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	1	0.3	1
11997	1,1,2-Trichloroethane	79-00-5	N.D.	1	0.2	1
11997	Trichloroethene	79-01-6	N.D.	1	0.2	1
11997	Trichlorofluoromethane	75-69-4	N.D. J	1	0.2	1
11997	1,2,4-Trimethylbenzene	95-63-6	N.D.	5	1	1
11997	1,3,5-Trimethylbenzene	108-67-8	N.D.	5	0.3	1
11997	Vinyl Chloride	75-01-4	N.D. J	1	0.2	1
11997	m+p-Xylene	179601-23-1	N.D.	5	1	1
11997	o-Xylene	95-47-6	N.D.	1	0.4	1
11997	Xylene (Total)	1330-20-7	N.D.	6	1	1

Project defined calibration criteria are not met. The calibration is compliant with the method defined criteria.

A Report Limit Verification (RLV) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The RLV standard shows adequate sensitivity at or below the reporting limit.

00882 VOA Interp. Library Search-10

The results from the volatile library search are listed on the attached FORM 1 - VOA-TIC. The qualifiers appearing in the "Q" column are defined at the end of the report.

*=This limit was used in the evaluation of the final result

Sample Description: **PW-4T Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/31/2019 11:30
Collection Date/Time: 10/30/2019 11:50
SDG#: BMS82-05

ARCADIS U.S., Inc.
ELLE Sample #: GW 1188918
ELLE Group #: 2071978
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	Acenaphthene	83-32-9	N.D.	0.53	0.11	1
14241	Acenaphthylene	208-96-8	N.D.	0.53	0.11	1
14241	Acetophenone	98-86-2	N.D.	11	4.2	1
14241	Aniline	62-53-3	N.D.	11	3.2	1
14241	Anthracene	120-12-7	N.D.	0.53	0.11	1
14241	Atrazine	1912-24-9	N.D.	5.3	2.1	1
14241	Benzaldehyde	100-52-7	N.D.	11	3.2	1
14241	Benzo(a)anthracene	56-55-3	N.D.	0.53	0.11	1
14241	Benzo(a)pyrene	50-32-8	N.D.	0.53	0.11	1
14241	Benzo(b)fluoranthene	205-99-2	N.D.	0.53	0.11	1
14241	Benzo(g,h,i)perylene	191-24-2	N.D.	0.53	0.11	1
14241	Benzo(k)fluoranthene	207-08-9	N.D.	0.53	0.11	1
14241	Benzyl alcohol	100-51-6	N.D.	32	11	1
14241	1,1'-Biphenyl	92-52-4	N.D.	11	3.2	1
14241	4-Bromophenyl-phenylether	101-55-3	N.D.	2.1	0.53	1
14241	Butylbenzylphthalate	85-68-7	N.D.	5.3	2.1	1
14241	Di-n-butylphthalate	84-74-2	N.D.	5.3	2.1	1
14241	Caprolactam	105-60-2	N.D.	12	5.3	1
14241	Carbazole	86-74-8	N.D.	2.1	0.53	1
14241	4-Chloro-3-methylphenol	59-50-7	N.D.	2.1	0.53	1
14241	4-Chloroaniline	106-47-8	N.D.	11	4.2	1
14241	bis(2-Chloroethoxy)methane	111-91-1	N.D.	2.1	0.53	1
14241	bis(2-Chloroethyl)ether	111-44-4	N.D.	2.1	0.53	1
14241	bis(2-Chloroisopropyl)ether[1]	39638-32-9	N.D.	2.1	0.53	1
	Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.					
14241	2-Chloronaphthalene	91-58-7	N.D.	1.1	0.42	1
14241	2-Chlorophenol	95-57-8	N.D.	2.1	0.53	1
14241	4-Chlorophenyl-phenylether	7005-72-3	N.D.	2.1	0.53	1
14241	Chrysene	218-01-9	N.D.	0.53	0.11	1
14241	Dibenz(a,h)anthracene	53-70-3	N.D.	0.53	0.11	1
14241	Dibenzofuran	132-64-9	N.D.	2.1	0.53	1
14241	3,3'-Dichlorobenzidine	91-94-1	N.D.	11	3.2	1
14241	2,4-Dichlorophenol	120-83-2	N.D.	2.1	0.53	1
14241	Dicyclohexylamine[1]	101-83-7	N.D.	11	11	1
14241	Diethylphthalate	84-66-2	N.D.	5.3	2.1	1
14241	N,N-Dimethylaniline[1]	121-69-7	N.D.	1.1	0.53	1
14241	2,4-Dimethylphenol	105-67-9	N.D.	11	3.2	1
14241	Dimethylphthalate	131-11-3	N.D.	5.3	2.1	1
14241	4,6-Dinitro-2-methylphenol	534-52-1	N.D.	22	8.4	1

*=This limit was used in the evaluation of the final result

Sample Description: **PW-4T Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/31/2019 11:30
Collection Date/Time: 10/30/2019 11:50
SDG#: BMS82-05

ARCADIS U.S., Inc.
ELLE Sample #: GW 1188918
ELLE Group #: 2071978
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	2,4-Dinitrophenol	51-28-5	N.D.	32	15	1
14241	2,4-Dinitrotoluene	121-14-2	N.D.	5.3	1.1	1
14241	2,6-Dinitrotoluene	606-20-2	N.D.	2.1	0.53	1
14241	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	12	5.3	1
14241	Fluoranthene	206-44-0	N.D.	0.53	0.11	1
14241	Fluorene	86-73-7	N.D.	0.53	0.11	1
14241	Hexachlorobenzene	118-74-1	N.D.	0.53	0.11	1
14241	Hexachlorobutadiene	87-68-3	N.D.	2.1	0.53	1
14241	Hexachlorocyclopentadiene	77-47-4	N.D.	12	5.3	1
14241	Hexachloroethane	67-72-1	N.D.	5.3	1.1	1
14241	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.53	0.11	1
14241	Isophorone	78-59-1	N.D.	2.1	0.53	1
14241	2-Methylnaphthalene	91-57-6	N.D.	0.53	0.11	1
14241	2-Methylphenol	95-48-7	N.D.	2.1	0.53	1
14241	4-Methylphenol	65794-96-9	N.D.	2.1	0.53	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
14241	Naphthalene	91-20-3	N.D.	0.53	0.11	1
14241	2-Nitroaniline	88-74-4	N.D.	7.4	2.1	1
14241	3-Nitroaniline	99-09-2	N.D.	7.4	3.2	1
14241	4-Nitroaniline	100-01-6	N.D.	3.2	0.95	1
14241	Nitrobenzene	98-95-3	N.D.	2.1	0.53	1
14241	2-Nitrophenol	88-75-5	N.D.	11	3.2	1
14241	4-Nitrophenol	100-02-7	N.D.	32	11	1
14241	N-Nitroso-di-n-propylamine	621-64-7	N.D.	3.2	0.74	1
14241	N-Nitrosodiphenylamine	86-30-6	N.D.	3.2	0.74	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.					
14241	Di-n-octylphthalate	117-84-0	N.D.	12	5.3	1
14241	Pentachlorophenol	87-86-5	N.D.	5.3	1.1	1
14241	Phenanthrene	85-01-8	N.D.	0.53	0.11	1
14241	Phenol	108-95-2	N.D.	2.1	0.53	1
14241	Pyrene	129-00-0	N.D.	0.53	0.11	1
14241	Pyridine	110-86-1	N.D.	5.3	2.1	1
14241	1,2,4,5-Tetrachlorobenzene	95-94-3	N.D.	2.1	0.53	1
14241	2,3,4,6-Tetrachlorophenol	58-90-2	N.D.	11	4.2	1
14241	2,4,5-Trichlorophenol	95-95-4	N.D.	2.1	0.53	1
14241	2,4,6-Trichlorophenol	88-06-2	N.D.	2.1	0.53	1
14241	Triethylamine[1]	121-44-8	N.D.	11	11	1

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC

*=This limit was used in the evaluation of the final result

Sample Description: **PW-4T Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/31/2019 11:30
Collection Date/Time: 10/30/2019 11:50
SDG#: BMS82-05

ARCADIS U.S., Inc.
ELLE Sample #: GW 1188918
ELLE Group #: 2071978
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor

Summary. Since the recovery is high and the target analyte(s) was not detected in the sample, the data is reported.

00886 SVOA TIC Interpretive(25)

The results from the semivolatile library search are listed on the attached FORM 1 - SV-TIC. The qualifiers appearing in the "Q" column are defined at the end of the report.

Aldehydes & Ketones	SW-846 8315A		ug/l	ug/l	ug/l	
13022	Acetaldehyde[1]	75-07-0	N.D. J	60	35	1
13022	Formaldehyde	50-00-0	N.D.	50	20	1

The response for a target analyte(s) in the initial calibration verification standard is outside the QC acceptance limits. The client was contacted and the data reported.
The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary.

GC Miscellaneous	SW-846 8015D Rev.4, June 2003		ug/l	ug/l	ug/l	
10603	Ethanol	64-17-5	N.D. D2	1,000	150	1
12926	Ethylene glycol[1]	107-21-1	~~N.D.~~ R	10,000	5,000	1
10603	Isopropanol[1]	67-63-0	N.D. D2	1,000	110	1
10603	Methanol	67-56-1	N.D. D2	1,000	220	1
12926	Propylene glycol[1]	57-55-6	~~N.D.~~ R	10,000	2,000	1

The response for surrogate Tetramethylene glycol in the continuing calibration verification standard is outside the QC acceptance limits low. The following action was taken:
The analysis was repeated and the continuing calibration verification standard bracketing the sample on the second trial is also outside the acceptance limits. This effect is attributed to the sample matrix and the data is reported.

Sample Comments

State of New York Certification No. 10670

[1] = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	Y193121AA	11/08/2019 16:06	Corie Mellinger	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	Y193121AA	11/08/2019 16:05	Corie Mellinger	1
14241	Semi-annual Groundwater BMS	SW-846 8270D	1	19309WAJ026	11/09/2019 17:04	Holly B Ziegler	1
11010	8270D BNA Extraction	SW-846 3510C	1	19309WAJ026	11/06/2019 02:00	Mathias Okpo	1
13022	Short List Aldehydes- W 8315A	SW-846 8315A	1	193040018A	11/01/2019 18:50	Jessica L Miller	1
01013	Formaldehyde Extraction	SW-846 8315A	1	193040018A	11/01/2019 08:38	Alison Moll	1

*=This limit was used in the evaluation of the final result

Sample Description: **PW-4T Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/31/2019 11:30
Collection Date/Time: 10/30/2019 11:50
SDG#: BMS82-05

ARCADIS U.S., Inc.
ELLE Sample #: GW 1188918
ELLE Group #: 2071978
Matrix: Groundwater

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10603	Alcohols in Water	SW-846 8015D Rev.4, June 2003	1	193080008A	11/05/2019 01:45	Johanna C Kennedy	1
12926	Glycols in Water by 8015C/D	SW-846 8015D Rev.4, June 2003	1	193080027A	11/06/2019 01:12	Donald Brown	1

*=This limit was used in the evaluation of the final result

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1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
S8205

Lab Name: Lancaster Laboratories Contract:_____
Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____
Matrix: (soil/water) WATER Lab Sample ID: 1188918
Sample wt/vol: 5.0 (g/mL)mL Lab File ID:HP09355.i/19nov08a.b/yn08s12.d
Level: (low/med) LOW Date Received: 10/31/19
% Moisture: not dec. Date Analyzed: 11/08/19
Column: (pack/cap) CAP Dilution Factor: 1.0
CONCENTRATION UNITS:
Number TICs found: 0 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	VOCTIC	Total VOC TICs		0	U
2.					
3.					
4.					
5.					
6.					
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29.					
30.					

page 1 of 1

FORM I VOA-TIC

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
S8205

Lab Name: Lancaster Laboratories Contract:
Lab Code: LANCAS Case No.: SAS No.: SDG No.:
Matrix: (soil/water) WATER Lab Sample ID: 1188918
Sample wt/vol: 238 (g/mL) mL Lab File ID: lk0441.d
Level: (low/med) LOW Date Received: 10/31/19
% Moisture: Decanted: (Y/N) Date Extracted: 11/06/19
Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/09/19
Injection Volume: 1 (uL) Dilution Factor: 1
GPC Cleanup: N pH: Extraction: Sepf
CONCENTRATION UNITS:
Number TICs found: 0 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	SVOCTIC	Total SVOC TICs		0	U
2.					
3.					
4.					
5.					
6.					
7.					
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page 1 of 1

FORM I SV-1

Sample Description: **BDA-6WT Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/31/2019 11:30
Collection Date/Time: 10/30/2019 14:05
SDG#: BMS82-06

ARCADIS U.S., Inc.
ELLE Sample #: GW 1188919
ELLE Group #: 2071978
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	20	0.7	1
11997	Acetonitrile	75-05-8	N.D.	100	16	1
11997	Benzene	71-43-2	N.D.	1	0.2	1
11997	Bromochloromethane	74-97-5	N.D.	5	0.2	1
11997	Bromodichloromethane	75-27-4	N.D.	1	0.2	1
11997	Bromoform	75-25-2	N.D.	4	1	1
11997	Bromomethane	74-83-9	N.D.	1	0.3	1
11997	n-Butanol	71-36-3	N.D.	250	61	1
11997	2-Butanone	78-93-3	N.D.	10	0.3	1
11997	t-Butyl alcohol	75-65-0	N.D.	50	12	1
11997	n-Butylbenzene	104-51-8	N.D.	5	0.2	1
11997	sec-Butylbenzene	135-98-8	N.D.	5	0.2	1
11997	tert-Butylbenzene	98-06-6	N.D.	5	0.3	1
11997	Carbon Disulfide	75-15-0	N.D.	5	0.2	1
11997	Carbon Tetrachloride	56-23-5	N.D.	1	0.2	1
11997	Chlorobenzene	108-90-7	N.D.	1	0.2	1
11997	Chlorodifluoromethane[1]	75-45-6	N.D. J	5	2	1
11997	Chloroethane	75-00-3	N.D. J	1	0.2	1
11997	Chloroform	67-66-3	N.D.	1	0.2	1
11997	Chloromethane	74-87-3	N.D. J	1	0.2	1
11997	Cyclohexane	110-82-7	N.D.	5	1	1
11997	Cyclohexanone[1]	108-94-1	N.D.	100	25	1
11997	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	5	0.3	1
11997	Dibromochloromethane	124-48-1	N.D.	1	0.2	1
11997	1,2-Dibromoethane	106-93-4	N.D.	1	0.2	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	5	0.2	1
11997	1,3-Dichlorobenzene	541-73-1	0.7 J	5	0.2	1
11997	1,4-Dichlorobenzene	106-46-7	1 J	5	0.2	1
11997	Dichlorodifluoromethane	75-71-8	N.D. J	1	0.2	1
11997	1,1-Dichloroethane	75-34-3	N.D.	1	0.2	1
11997	1,2-Dichloroethane	107-06-2	N.D.	1	0.3	1
11997	1,1-Dichloroethene	75-35-4	N.D.	1	0.2	1
11997	cis-1,2-Dichloroethene	156-59-2	0.5 J	1	0.2	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	1	0.2	1
11997	1,2-Dichloropropane	78-87-5	N.D.	1	0.2	1
11997	cis-1,3-Dichloropropene	10061-01-5	N.D.	1	0.2	1
11997	trans-1,3-Dichloropropene	10061-02-6	N.D.	1	0.2	1
11997	1,4-Dioxane	123-91-1	N.D.	250	29	1
11997	Ethyl Acetate	141-78-6	N.D.	5	0.7	1
11997	Ethyl ether	60-29-7	N.D.	5	0.2	1
11997	Ethylbenzene	100-41-4	N.D.	1	0.4	1

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-6WT Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/31/2019 11:30
Collection Date/Time: 10/30/2019 14:05
SDG#: BMS82-06

ARCADIS U.S., Inc.
ELLE Sample #: GW 1188919
ELLE Group #: 2071978
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		ug/l	ug/l	ug/l	
11997	Freon 113	76-13-1	N.D.	10	0.2	1
11997	n-Heptane[1]	142-82-5	N.D.	5	2	1
11997	n-Hexane[1]	110-54-3	N.D.	5	2	1
11997	2-Hexanone	591-78-6	N.D.	10	0.3	1
11997	Isobutyl Alcohol	78-83-1	N.D.	250	36	1
11997	Isopropylbenzene	98-82-8	N.D.	5	0.2	1
11997	p-Isopropyltoluene	99-87-6	N.D.	5	0.2	1
11997	Methyl Acetate	79-20-9	N.D.	5	0.2	1
11997	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	1	0.2	1
11997	4-Methyl-2-pentanone	108-10-1	N.D.	10	0.5	1
11997	Methylcyclohexane	108-87-2	N.D.	5	0.5	1
11997	Methylene Chloride	75-09-2	N.D.	1	0.3	1
11997	Naphthalene	91-20-3	N.D.	5	1	1
11997	2-Nitropropane	79-46-9	N.D.	10	0.8	1
11997	Styrene	100-42-5	N.D.	5	0.2	1
11997	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	1	0.2	1
11997	Tetrachloroethene	127-18-4	N.D.	1	0.2	1
11997	Tetrahydrofuran	109-99-9	N.D.	10	0.7	1
11997	Toluene	108-88-3	N.D.	1	0.2	1
11997	1,2,3-Trichlorobenzene	87-61-6	N.D.	5	0.4	1
11997	1,2,4-Trichlorobenzene	120-82-1	N.D.	5	0.3	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	1	0.3	1
11997	1,1,2-Trichloroethane	79-00-5	N.D.	1	0.2	1
11997	Trichloroethene	79-01-6	N.D.	1	0.2	1
11997	Trichlorofluoromethane	75-69-4	N.D. J	1	0.2	1
11997	1,2,4-Trimethylbenzene	95-63-6	N.D.	5	1	1
11997	1,3,5-Trimethylbenzene	108-67-8	N.D.	5	0.3	1
11997	Vinyl Chloride	75-01-4	N.D. J	1	0.2	1
11997	m+p-Xylene	179601-23-1	N.D.	5	1	1
11997	o-Xylene	95-47-6	N.D.	1	0.4	1
11997	Xylene (Total)	1330-20-7	N.D.	6	1	1

Project defined calibration criteria are not met. The calibration is compliant with the method defined criteria.

A Report Limit Verification (RLV) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The RLV standard shows adequate sensitivity at or below the reporting limit.

00882 VOA Interp. Library Search-10

The results from the volatile library search are listed on the attached FORM 1 - VOA-TIC. The qualifiers appearing in the "Q" column are defined at the end of the report.

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-6WT Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/31/2019 11:30
Collection Date/Time: 10/30/2019 14:05
SDG#: BMS82-06

ARCADIS U.S., Inc.
ELLE Sample #: GW 1188919
ELLE Group #: 2071978
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	Acenaphthene	83-32-9	N.D.	0.51	0.10	1
14241	Acenaphthylene	208-96-8	N.D.	0.51	0.10	1
14241	Acetophenone	98-86-2	N.D.	10	4.0	1
14241	Aniline	62-53-3	N.D.	10	3.0	1
14241	Anthracene	120-12-7	N.D.	0.51	0.10	1
14241	Atrazine	1912-24-9	N.D.	5.1	2.0	1
14241	Benzaldehyde	100-52-7	N.D.	10	3.0	1
14241	Benzo(a)anthracene	56-55-3	N.D.	0.51	0.10	1
14241	Benzo(a)pyrene	50-32-8	N.D.	0.51	0.10	1
14241	Benzo(b)fluoranthene	205-99-2	N.D.	0.51	0.10	1
14241	Benzo(g,h,i)perylene	191-24-2	N.D.	0.51	0.10	1
14241	Benzo(k)fluoranthene	207-08-9	N.D.	0.51	0.10	1
14241	Benzyl alcohol	100-51-6	N.D.	30	10	1
14241	1,1'-Biphenyl	92-52-4	N.D.	10	3.0	1
14241	4-Bromophenyl-phenylether	101-55-3	N.D.	2.0	0.51	1
14241	Butylbenzylphthalate	85-68-7	N.D.	5.1	2.0	1
14241	Di-n-butylphthalate	84-74-2	N.D.	5.1	2.0	1
14241	Caprolactam	105-60-2	N.D.	11	5.1	1
14241	Carbazole	86-74-8	N.D.	2.0	0.51	1
14241	4-Chloro-3-methylphenol	59-50-7	N.D.	2.0	0.51	1
14241	4-Chloroaniline	106-47-8	N.D.	10	4.0	1
14241	bis(2-Chloroethoxy)methane	111-91-1	N.D.	2.0	0.51	1
14241	bis(2-Chloroethyl)ether	111-44-4	N.D.	2.0	0.51	1
14241	bis(2-Chloroisopropyl)ether[1]	39638-32-9	N.D.	2.0	0.51	1
	Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.					
14241	2-Chloronaphthalene	91-58-7	N.D.	1.0	0.40	1
14241	2-Chlorophenol	95-57-8	N.D.	2.0	0.51	1
14241	4-Chlorophenyl-phenylether	7005-72-3	N.D.	2.0	0.51	1
14241	Chrysene	218-01-9	N.D.	0.51	0.10	1
14241	Dibenz(a,h)anthracene	53-70-3	N.D.	0.51	0.10	1
14241	Dibenzofuran	132-64-9	N.D.	2.0	0.51	1
14241	3,3'-Dichlorobenzidine	91-94-1	N.D.	10	3.0	1
14241	2,4-Dichlorophenol	120-83-2	N.D.	2.0	0.51	1
14241	Dicyclohexylamine[1]	101-83-7	200 D	51	51	5
14241	Diethylphthalate	84-66-2	N.D.	5.1	2.0	1
14241	N,N-Dimethylaniline[1]	121-69-7	N.D.	1.0	0.51	1
14241	2,4-Dimethylphenol	105-67-9	N.D.	10	3.0	1
14241	Dimethylphthalate	131-11-3	N.D.	5.1	2.0	1
14241	4,6-Dinitro-2-methylphenol	534-52-1	N.D.	21	8.1	1

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-6WT Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/31/2019 11:30
Collection Date/Time: 10/30/2019 14:05
SDG#: BMS82-06

ARCADIS U.S., Inc.
ELLE Sample #: GW 1188919
ELLE Group #: 2071978
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	2,4-Dinitrophenol	51-28-5	N.D.	30	14	1
14241	2,4-Dinitrotoluene	121-14-2	N.D.	5.1	1.0	1
14241	2,6-Dinitrotoluene	606-20-2	N.D.	2.0	0.51	1
14241	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	11	5.1	1
14241	Fluoranthene	206-44-0	N.D.	0.51	0.10	1
14241	Fluorene	86-73-7	N.D.	0.51	0.10	1
14241	Hexachlorobenzene	118-74-1	N.D.	0.51	0.10	1
14241	Hexachlorobutadiene	87-68-3	N.D.	2.0	0.51	1
14241	Hexachlorocyclopentadiene	77-47-4	N.D.	11	5.1	1
14241	Hexachloroethane	67-72-1	N.D.	5.1	1.0	1
14241	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.51	0.10	1
14241	Isophorone	78-59-1	N.D.	2.0	0.51	1
14241	2-Methylnaphthalene	91-57-6	N.D.	0.51	0.10	1
14241	2-Methylphenol	95-48-7	N.D.	2.0	0.51	1
14241	4-Methylphenol	65794-96-9	N.D.	2.0	0.51	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
14241	Naphthalene	91-20-3	N.D.	0.51	0.10	1
14241	2-Nitroaniline	88-74-4	N.D.	7.1	2.0	1
14241	3-Nitroaniline	99-09-2	N.D.	7.1	3.0	1
14241	4-Nitroaniline	100-01-6	N.D.	3.0	0.91	1
14241	Nitrobenzene	98-95-3	N.D.	2.0	0.51	1
14241	2-Nitrophenol	88-75-5	N.D.	10	3.0	1
14241	4-Nitrophenol	100-02-7	N.D.	30	10	1
14241	N-Nitroso-di-n-propylamine	621-64-7	N.D.	3.0	0.71	1
14241	N-Nitrosodiphenylamine	86-30-6	N.D.	3.0	0.71	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.					
14241	Di-n-octylphthalate	117-84-0	N.D.	11	5.1	1
14241	Pentachlorophenol	87-86-5	N.D.	5.1	1.0	1
14241	Phenanthrene	85-01-8	N.D.	0.51	0.10	1
14241	Phenol	108-95-2	N.D.	2.0	0.51	1
14241	Pyrene	129-00-0	N.D.	0.51	0.10	1
14241	Pyridine	110-86-1	N.D.	5.1	2.0	1
14241	1,2,4,5-Tetrachlorobenzene	95-94-3	N.D.	2.0	0.51	1
14241	2,3,4,6-Tetrachlorophenol	58-90-2	N.D.	10	4.0	1
14241	2,4,5-Trichlorophenol	95-95-4	N.D.	2.0	0.51	1
14241	2,4,6-Trichlorophenol	88-06-2	N.D.	2.0	0.51	1
14241	Triethylamine[1]	121-44-8	N.D.	10	10	1

The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-6WT Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/31/2019 11:30
Collection Date/Time: 10/30/2019 14:05
SDG#: BMS82-06

ARCADIS U.S., Inc.
ELLE Sample #: GW 1188919
ELLE Group #: 2071978
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result		Limit of Quantitation*	Method Detection Limit	Dilution Factor
	the TNI/DoD Standards. The following analytes are accepted based on this allowance: Dicyclohexylamine						
00886	**SVOA TIC Interpretive(25)**						
	The results from the semivolatile library search are listed on the attached FORM 1 - SV-TIC. The qualifiers appearing in the "Q" column are defined at the end of the report.						
Aldehydes & Ketones	**SW-846 8315A**		**ug/l**		**ug/l**	**ug/l**	
13022	Acetaldehyde[1]	75-07-0	N.D.	J	60	35	1
13022	Formaldehyde	50-00-0	26	J	50	20	1
	The response for a target analyte(s) in the initial calibration verification standard is outside the QC acceptance limits. The client was contacted and the data reported. The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary.						
GC Miscellaneous	**SW-846 8015D Rev.4, June 2003**		**ug/l**		**ug/l**	**ug/l**	
10603	Ethanol	64-17-5	N.D.	D2	1,000	150	1
12926	Ethylene glycol[1]	107-21-1	~~N.D.~~	R	10,000	5,000	1
10603	Isopropanol[1]	67-63-0	N.D.	D2	1,000	110	1
10603	Methanol	67-56-1	N.D.	D2	1,000	220	1
12926	Propylene glycol[1]	57-55-6	~~N.D.~~	R	10,000	2,000	1
	The response for surrogate Tetramethylene glycol in the continuing calibration verification standard is outside the QC acceptance limits low. The following action was taken: The analysis was repeated and the continuing calibration verification standard bracketing the sample on the second trial is also outside the acceptance limits. This effect is attributed to the sample matrix and the data is reported.						

Sample Comments

State of New York Certification No. 10670

[1] = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	Y193121AA	11/08/2019 16:28	Corie Mellinger	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	Y193121AA	11/08/2019 16:27	Corie Mellinger	1
14241	Semi-annual Groundwater BMS	SW-846 8270D	1	19309WAJ026	11/09/2019 17:33	Holly B Ziegler	1
14241	Semi-annual Groundwater BMS	SW-846 8270D	1	19309WAJ026	11/09/2019 23:39	Holly B Ziegler	5
11010	8270D BNA Extraction	SW-846 3510C	1	19309WAJ026	11/06/2019 02:00	Mathias Okpo	1
13022	Short List Aldehydes- W 8315A	SW-846 8315A	1	193040018A	11/01/2019 19:01	Jessica L Miller	1
01013	Formaldehyde Extraction	SW-846 8315A	1	193040018A	11/01/2019 08:38	Alison Moll	1

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-6WT Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/31/2019 11:30
Collection Date/Time: 10/30/2019 14:05
SDG#: BMS82-06

ARCADIS U.S., Inc.
ELLE Sample #: GW 1188919
ELLE Group #: 2071978
Matrix: Groundwater

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10603	Alcohols in Water	SW-846 8015D Rev.4, June 2003	1	193080008A	11/05/2019 02:02	Johanna C Kennedy	1
12926	Glycols in Water by 8015C/D	SW-846 8015D Rev.4, June 2003	1	193080027A	11/06/2019 01:25	Donald Brown	1

*=This limit was used in the evaluation of the final result

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
S8206

Lab Name: Lancaster Laboratories Contract:_____
Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____
Matrix: (soil/water) WATER Lab Sample ID: 1188919
Sample wt/vol: 5.0 (g/mL)mL Lab File ID:HP09355.i/19nov08a.b/yn08s13.d
Level: (low/med) LOW Date Received: 10/31/19
% Moisture: not dec. Date Analyzed: 11/08/19
Column: (pack/cap) CAP Dilution Factor: 1.0
CONCENTRATION UNITS:
Number TICs found: 2 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	420-56-4	Trimethylsilyl fluoride	2.48	15	J N
2.	1066-40-6	Silanol, trimethyl-	6.10	150	J
3.					
4.	VOCTIC	Total VOC TICs		160	J
5.					
6.					
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page 1 of 1

FORM I VOA-TIC

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
S8206

Lab Name: Lancaster Laboratories Contract:
Lab Code: LANCAS Case No.: SAS No.: SDG No.:
Matrix: (soil/water) WATER Lab Sample ID: 1188919
Sample wt/vol: 247 (g/mL) mL Lab File ID: lk0442.d
Level: (low/med) LOW Date Received: 10/31/19
% Moisture: Decanted: (Y/N) Date Extracted: 11/06/19
Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/09/19
Injection Volume: 1 (uL) Dilution Factor: 1
GPC Cleanup: N pH: Extraction: Sepf
CONCENTRATION UNITS:
Number TICs found: 15 (ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Unknown	8.727	20	J
2.	Unknown	9.155	26	J
3.	Unknown	9.203	17	J
4.	Unknown	9.262	29	J
5.	Unknown	9.305	30	J
6.	Unknown	9.348	89	J
7.	Unknown	9.407	25	J
8.	Unknown	9.487	28	J
9.	Unknown	9.524	33	J
10.154559-11-2	2,5-Diisopropylpiperazine	9.556	77	J
11.545-90-4	Dimepheptanol	9.701	24	J
12.1000195-05-6	(1-Ethyl-2-methylpropyl)meth	9.733	35	J
13.1000339-95-2	5-Chlorovaleramide, N,N-dime	9.765	44	J
14.15402-82-1	3,5-Dimethoxyamphetamine	14.424	280	J
15.51207-66-0	(S)-(+)-1-(2-Pyrrolidinylmet	15.467	56	J
16.				
17.SVOCTIC	Total SVOC TICs		810	J
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page 1 of 1

FORM I SV-1

Sample Description: **BDA-6T Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/31/2019 11:30
Collection Date/Time: 10/30/2019 15:15
SDG#: BMS82-07

ARCADIS U.S., Inc.
ELLE Sample #: GW 1188920
ELLE Group #: 2071978
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	20	0.7	1
11997	Acetonitrile	75-05-8	N.D.	100	16	1
11997	Benzene	71-43-2	N.D.	1	0.2	1
11997	Bromochloromethane	74-97-5	N.D.	5	0.2	1
11997	Bromodichloromethane	75-27-4	N.D.	1	0.2	1
11997	Bromoform	75-25-2	N.D.	4	1	1
11997	Bromomethane	74-83-9	N.D.	1	0.3	1
11997	n-Butanol	71-36-3	N.D.	250	61	1
11997	2-Butanone	78-93-3	N.D.	10	0.3	1
11997	t-Butyl alcohol	75-65-0	N.D.	50	12	1
11997	n-Butylbenzene	104-51-8	N.D.	5	0.2	1
11997	sec-Butylbenzene	135-98-8	N.D.	5	0.2	1
11997	tert-Butylbenzene	98-06-6	N.D.	5	0.3	1
11997	Carbon Disulfide	75-15-0	N.D.	5	0.2	1
11997	Carbon Tetrachloride	56-23-5	N.D.	1	0.2	1
11997	Chlorobenzene	108-90-7	N.D.	1	0.2	1
11997	Chlorodifluoromethane[1]	75-45-6	N.D. J	5	2	1
11997	Chloroethane	75-00-3	N.D. J	1	0.2	1
11997	Chloroform	67-66-3	N.D.	1	0.2	1
11997	Chloromethane	74-87-3	N.D. J	1	0.2	1
11997	Cyclohexane	110-82-7	N.D.	5	1	1
11997	Cyclohexanone[1]	108-94-1	N.D.	100	25	1
11997	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	5	0.3	1
11997	Dibromochloromethane	124-48-1	N.D.	1	0.2	1
11997	1,2-Dibromoethane	106-93-4	N.D.	1	0.2	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	5	0.2	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	5	0.2	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	5	0.2	1
11997	Dichlorodifluoromethane	75-71-8	N.D. J	1	0.2	1
11997	1,1-Dichloroethane	75-34-3	N.D.	1	0.2	1
11997	1,2-Dichloroethane	107-06-2	N.D.	1	0.3	1
11997	1,1-Dichloroethene	75-35-4	N.D.	1	0.2	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	1	0.2	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	1	0.2	1
11997	1,2-Dichloropropane	78-87-5	N.D.	1	0.2	1
11997	cis-1,3-Dichloropropene	10061-01-5	N.D.	1	0.2	1
11997	trans-1,3-Dichloropropene	10061-02-6	N.D.	1	0.2	1
11997	1,4-Dioxane	123-91-1	N.D.	250	29	1
11997	Ethyl Acetate	141-78-6	N.D.	5	0.7	1
11997	Ethyl ether	60-29-7	N.D.	5	0.2	1
11997	Ethylbenzene	100-41-4	N.D.	1	0.4	1

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-6T Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/31/2019 11:30
Collection Date/Time: 10/30/2019 15:15
SDG#: BMS82-07

ARCADIS U.S., Inc.
ELLE Sample #: GW 1188920
ELLE Group #: 2071978
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Freon 113	76-13-1	N.D.	10	0.2	1
11997	n-Heptane[1]	142-82-5	N.D.	5	2	1
11997	n-Hexane[1]	110-54-3	N.D.	5	2	1
11997	2-Hexanone	591-78-6	N.D.	10	0.3	1
11997	Isobutyl Alcohol	78-83-1	N.D.	250	36	1
11997	Isopropylbenzene	98-82-8	N.D.	5	0.2	1
11997	p-Isopropyltoluene	99-87-6	N.D.	5	0.2	1
11997	Methyl Acetate	79-20-9	N.D.	5	0.2	1
11997	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	1	0.2	1
11997	4-Methyl-2-pentanone	108-10-1	N.D.	10	0.5	1
11997	Methylcyclohexane	108-87-2	N.D.	5	0.5	1
11997	Methylene Chloride	75-09-2	N.D.	1	0.3	1
11997	Naphthalene	91-20-3	N.D.	5	1	1
11997	2-Nitropropane	79-46-9	N.D.	10	0.8	1
11997	Styrene	100-42-5	N.D.	5	0.2	1
11997	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	1	0.2	1
11997	Tetrachloroethene	127-18-4	N.D.	1	0.2	1
11997	Tetrahydrofuran	109-99-9	N.D.	10	0.7	1
11997	Toluene	108-88-3	N.D.	1	0.2	1
11997	1,2,3-Trichlorobenzene	87-61-6	N.D.	5	0.4	1
11997	1,2,4-Trichlorobenzene	120-82-1	N.D.	5	0.3	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	1	0.3	1
11997	1,1,2-Trichloroethane	79-00-5	N.D.	1	0.2	1
11997	Trichloroethene	79-01-6	N.D.	1	0.2	1
11997	Trichlorofluoromethane	75-69-4	N.D. J	1	0.2	1
11997	1,2,4-Trimethylbenzene	95-63-6	N.D.	5	1	1
11997	1,3,5-Trimethylbenzene	108-67-8	N.D.	5	0.3	1
11997	Vinyl Chloride	75-01-4	N.D. J	1	0.2	1
11997	m+p-Xylene	179601-23-1	N.D.	5	1	1
11997	o-Xylene	95-47-6	N.D.	1	0.4	1
11997	Xylene (Total)	1330-20-7	N.D.	6	1	1

Project defined calibration criteria are not met. The calibration is compliant with the method defined criteria.

A Report Limit Verification (RLV) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The RLV standard shows adequate sensitivity at or below the reporting limit.

00882 VOA Interp. Library Search-10

The results from the volatile library search are listed on the attached FORM 1 - VOA-TIC. The qualifiers appearing in the "Q" column are defined at the end of the report.

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-6T Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/31/2019 11:30
Collection Date/Time: 10/30/2019 15:15
SDG#: BMS82-07

ARCADIS U.S., Inc.
ELLE Sample #: GW 1188920
ELLE Group #: 2071978
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	Acenaphthene	83-32-9	N.D.	0.54	0.11	1
14241	Acenaphthylene	208-96-8	N.D.	0.54	0.11	1
14241	Acetophenone	98-86-2	N.D.	11	4.3	1
14241	Aniline	62-53-3	N.D.	11	3.3	1
14241	Anthracene	120-12-7	N.D.	0.54	0.11	1
14241	Atrazine	1912-24-9	N.D.	5.4	2.2	1
14241	Benzaldehyde	100-52-7	N.D.	11	3.3	1
14241	Benzo(a)anthracene	56-55-3	N.D.	0.54	0.11	1
14241	Benzo(a)pyrene	50-32-8	N.D.	0.54	0.11	1
14241	Benzo(b)fluoranthene	205-99-2	N.D.	0.54	0.11	1
14241	Benzo(g,h,i)perylene	191-24-2	N.D.	0.54	0.11	1
14241	Benzo(k)fluoranthene	207-08-9	N.D.	0.54	0.11	1
14241	Benzyl alcohol	100-51-6	N.D.	33	11	1
14241	1,1'-Biphenyl	92-52-4	N.D.	11	3.3	1
14241	4-Bromophenyl-phenylether	101-55-3	N.D.	2.2	0.54	1
14241	Butylbenzylphthalate	85-68-7	N.D.	5.4	2.2	1
14241	Di-n-butylphthalate	84-74-2	N.D.	5.4	2.2	1
14241	Caprolactam	105-60-2	N.D.	12	5.4	1
14241	Carbazole	86-74-8	N.D.	2.2	0.54	1
14241	4-Chloro-3-methylphenol	59-50-7	N.D.	2.2	0.54	1
14241	4-Chloroaniline	106-47-8	N.D.	11	4.3	1
14241	bis(2-Chloroethoxy)methane	111-91-1	N.D.	2.2	0.54	1
14241	bis(2-Chloroethyl)ether	111-44-4	N.D.	2.2	0.54	1
14241	bis(2-Chloroisopropyl)ether[1]	39638-32-9	N.D.	2.2	0.54	1
	Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.					
14241	2-Chloronaphthalene	91-58-7	N.D.	1.1	0.43	1
14241	2-Chlorophenol	95-57-8	N.D.	2.2	0.54	1
14241	4-Chlorophenyl-phenylether	7005-72-3	N.D.	2.2	0.54	1
14241	Chrysene	218-01-9	N.D.	0.54	0.11	1
14241	Dibenz(a,h)anthracene	53-70-3	N.D.	0.54	0.11	1
14241	Dibenzofuran	132-64-9	N.D.	2.2	0.54	1
14241	3,3'-Dichlorobenzidine	91-94-1	N.D.	11	3.3	1
14241	2,4-Dichlorophenol	120-83-2	N.D.	2.2	0.54	1
14241	Dicyclohexylamine[1]	101-83-7	N.D.	11	11	1
14241	Diethylphthalate	84-66-2	N.D.	5.4	2.2	1
14241	N,N-Dimethylaniline[1]	121-69-7	N.D.	1.1	0.54	1
14241	2,4-Dimethylphenol	105-67-9	N.D.	11	3.3	1
14241	Dimethylphthalate	131-11-3	N.D.	5.4	2.2	1
14241	4,6-Dinitro-2-methylphenol	534-52-1	N.D.	23	8.7	1

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-6T Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/31/2019 11:30
Collection Date/Time: 10/30/2019 15:15
SDG#: BMS82-07

ARCADIS U.S., Inc.
ELLE Sample #: GW 1188920
ELLE Group #: 2071978
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	2,4-Dinitrophenol	51-28-5	N.D.	33	15	1
14241	2,4-Dinitrotoluene	121-14-2	N.D.	5.4	1.1	1
14241	2,6-Dinitrotoluene	606-20-2	N.D.	2.2	0.54	1
14241	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	12	5.4	1
14241	Fluoranthene	206-44-0	N.D.	0.54	0.11	1
14241	Fluorene	86-73-7	N.D.	0.54	0.11	1
14241	Hexachlorobenzene	118-74-1	N.D.	0.54	0.11	1
14241	Hexachlorobutadiene	87-68-3	N.D.	2.2	0.54	1
14241	Hexachlorocyclopentadiene	77-47-4	N.D.	12	5.4	1
14241	Hexachloroethane	67-72-1	N.D.	5.4	1.1	1
14241	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.54	0.11	1
14241	Isophorone	78-59-1	N.D.	2.2	0.54	1
14241	2-Methylnaphthalene	91-57-6	N.D.	0.54	0.11	1
14241	2-Methylphenol	95-48-7	N.D.	2.2	0.54	1
14241	4-Methylphenol	65794-96-9	N.D.	2.2	0.54	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
14241	Naphthalene	91-20-3	N.D.	0.54	0.11	1
14241	2-Nitroaniline	88-74-4	N.D.	7.6	2.2	1
14241	3-Nitroaniline	99-09-2	N.D.	7.6	3.3	1
14241	4-Nitroaniline	100-01-6	N.D.	3.3	0.98	1
14241	Nitrobenzene	98-95-3	N.D.	2.2	0.54	1
14241	2-Nitrophenol	88-75-5	N.D.	11	3.3	1
14241	4-Nitrophenol	100-02-7	N.D.	33	11	1
14241	N-Nitroso-di-n-propylamine	621-64-7	N.D.	3.3	0.76	1
14241	N-Nitrosodiphenylamine	86-30-6	N.D.	3.3	0.76	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.					
14241	Di-n-octylphthalate	117-84-0	N.D.	12	5.4	1
14241	Pentachlorophenol	87-86-5	N.D.	5.4	1.1	1
14241	Phenanthrene	85-01-8	N.D.	0.54	0.11	1
14241	Phenol	108-95-2	N.D.	2.2	0.54	1
14241	Pyrene	129-00-0	N.D.	0.54	0.11	1
14241	Pyridine	110-86-1	N.D.	5.4	2.2	1
14241	1,2,4,5-Tetrachlorobenzene	95-94-3	N.D.	2.2	0.54	1
14241	2,3,4,6-Tetrachlorophenol	58-90-2	N.D.	11	4.3	1
14241	2,4,5-Trichlorophenol	95-95-4	N.D.	2.2	0.54	1
14241	2,4,6-Trichlorophenol	88-06-2	N.D.	2.2	0.54	1
14241	Triethylamine[1]	121-44-8	N.D.	11	11	1

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-6T Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/31/2019 11:30
Collection Date/Time: 10/30/2019 15:15
SDG#: BMS82-07

ARCADIS U.S., Inc.
ELLE Sample #: GW 1188920
ELLE Group #: 2071978
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
	Summary. Since the recovery is high and the target analyte(s) was not detected in the sample, the data is reported.					
00886	**SVOA TIC Interpretive(25)**					
	The results from the semivolatile library search are listed on the attached FORM 1 - SV-TIC. The qualifiers appearing in the "Q" column are defined at the end of the report.					
Aldehydes & Ketones	**SW-846 8315A**		**ug/l**	**ug/l**	**ug/l**	
13022	Acetaldehyde[1]	75-07-0	N.D. J	60	35	1
13022	Formaldehyde	50-00-0	N.D.	50	20	1
	The response for a target analyte(s) in the initial calibration verification standard is outside the QC acceptance limits. The client was contacted and the data reported. The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary.					
GC Miscellaneous	**SW-846 8015D Rev.4, June 2003**		**ug/l**	**ug/l**	**ug/l**	
10603	Ethanol	64-17-5	N.D. D2	1,000	150	1
12926	Ethylene glycol[1]	107-21-1	N.D.	10,000	5,000	1
10603	Isopropanol[1]	67-63-0	N.D. D2	1,000	110	1
10603	Methanol	67-56-1	N.D. D2	1,000	220	1
12926	Propylene glycol[1]	57-55-6	N.D.	10,000	2,000	1
	The response for tetramethylene glycol in the continuing calibration verification standard is outside the QC acceptance limits low. The following action was taken: The analysis was repeated and the continuing calibration verification standard bracketing the sample on the second trial is also outside the acceptance limits. This effect is attributed to the sample matrix and the data is reported.					

Sample Comments

State of New York Certification No. 10670

[1] = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	Y193121AA	11/08/2019 16:50	Corie Mellinger	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	Y193121AA	11/08/2019 16:49	Corie Mellinger	1
14241	Semi-annual Groundwater BMS	SW-846 8270D	1	19309WAJ026	11/09/2019 18:02	Holly B Ziegler	1
11010	8270D BNA Extraction	SW-846 3510C	1	19309WAJ026	11/06/2019 02:00	Mathias Okpo	1
13022	Short List Aldehydes- W 8315A	SW-846 8315A	1	193040018A	11/01/2019 19:21	Jessica L Miller	1
01013	Formaldehyde Extraction	SW-846 8315A	1	193040018A	11/01/2019 08:38	Alison Moll	1

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-6T Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/31/2019 11:30
Collection Date/Time: 10/30/2019 15:15
SDG#: BMS82-07

ARCADIS U.S., Inc.
ELLE Sample #: GW 1188920
ELLE Group #: 2071978
Matrix: Groundwater

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10603	Alcohols in Water	SW-846 8015D Rev.4, June 2003	1	193080008A	11/05/2019 02:19	Johanna C Kennedy	1
12926	Glycols in Water by 8015C/D	SW-846 8015D Rev.4, June 2003	1	193080028A	11/06/2019 01:25	Donald Brown	1

*=This limit was used in the evaluation of the final result

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
S8207

Lab Name: Lancaster Laboratories Contract:_____
Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____
Matrix: (soil/water) WATER Lab Sample ID: 1188920
Sample wt/vol: 5.0 (g/mL)mL Lab File ID:HP09355.i/19nov08a.b/yn08s14.d
Level: (low/med) LOW Date Received: 10/31/19
% Moisture: not dec. Date Analyzed: 11/08/19
Column: (pack/cap) CAP Dilution Factor: 1.0
CONCENTRATION UNITS:
Number TICs found: 0 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	VOCTIC	Total VOC TICs		0	U
2.					
3.					
4.					
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29.					
30.					

page 1 of 1

FORM I VOA-TIC

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
S8207

Lab Name: Lancaster Laboratories Contract:
Lab Code: LANCAS Case No.: SAS No.: SDG No.:
Matrix: (soil/water) WATER Lab Sample ID: 1188920
Sample wt/vol: 230 (g/mL) mL Lab File ID: lk0443.d
Level: (low/med) LOW Date Received: 10/31/19
% Moisture: Decanted: (Y/N) Date Extracted: 11/06/19
Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/09/19
Injection Volume: 1 (uL) Dilution Factor: 1
GPC Cleanup: N pH: Extraction: Sepf
CONCENTRATION UNITS:
Number TICs found: 0 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	SVOCTIC	Total SVOC TICs		0	U
2.					
3.					
4.					
5.					
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page 1 of 1

FORM I SV-1

Sample Description: **Trip Blank Water**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/31/2019 11:30
Collection Date/Time: 10/23/2019
SDG#: BMS82-08TB

ARCADIS U.S., Inc.
ELLE Sample #: GW 1188921
ELLE Group #: 2071978
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	20	0.7	1
11997	Acetonitrile	75-05-8	N.D.	100	16	1
11997	Benzene	71-43-2	N.D.	1	0.2	1
11997	Bromochloromethane	74-97-5	N.D.	5	0.2	1
11997	Bromodichloromethane	75-27-4	N.D.	1	0.2	1
11997	Bromoform	75-25-2	N.D.	4	1	1
11997	Bromomethane	74-83-9	N.D. J	1	0.3	1
11997	n-Butanol	71-36-3	N.D.	250	61	1
11997	2-Butanone	78-93-3	N.D.	10	0.3	1
11997	t-Butyl alcohol	75-65-0	N.D.	50	12	1
11997	n-Butylbenzene	104-51-8	N.D.	5	0.2	1
11997	sec-Butylbenzene	135-98-8	N.D.	5	0.2	1
11997	tert-Butylbenzene	98-06-6	N.D.	5	0.3	1
11997	Carbon Disulfide	75-15-0	N.D.	5	0.2	1
11997	Carbon Tetrachloride	56-23-5	N.D.	1	0.2	1
11997	Chlorobenzene	108-90-7	N.D.	1	0.2	1
11997	Chlorodifluoromethane[1]	75-45-6	N.D.	5	2	1
11997	Chloroethane	75-00-3	N.D.	1	0.2	1
11997	Chloroform	67-66-3	N.D.	1	0.2	1
11997	Chloromethane	74-87-3	N.D.	1	0.2	1
11997	Cyclohexane	110-82-7	N.D.	5	1	1
11997	Cyclohexanone[1]	108-94-1	N.D.	100	25	1
11997	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	5	0.3	1
11997	Dibromochloromethane	124-48-1	N.D.	1	0.2	1
11997	1,2-Dibromoethane	106-93-4	N.D.	1	0.2	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	5	0.2	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	5	0.2	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	5	0.2	1
11997	Dichlorodifluoromethane	75-71-8	N.D. J	1	0.2	1
11997	1,1-Dichloroethane	75-34-3	N.D.	1	0.2	1
11997	1,2-Dichloroethane	107-06-2	N.D.	1	0.3	1
11997	1,1-Dichloroethene	75-35-4	N.D.	1	0.2	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	1	0.2	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	1	0.2	1
11997	1,2-Dichloropropane	78-87-5	N.D.	1	0.2	1
11997	cis-1,3-Dichloropropene	10061-01-5	N.D.	1	0.2	1
11997	trans-1,3-Dichloropropene	10061-02-6	N.D.	1	0.2	1
11997	1,4-Dioxane	123-91-1	N.D.	250	29	1
11997	Ethyl Acetate	141-78-6	N.D.	5	0.7	1
11997	Ethyl ether	60-29-7	N.D.	5	0.2	1
11997	Ethylbenzene	100-41-4	N.D.	1	0.4	1

*=This limit was used in the evaluation of the final result

Sample Description: **Trip Blank Water**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/31/2019 11:30
Collection Date/Time: 10/23/2019
SDG#: BMS82-08TB

ARCADIS U.S., Inc.
ELLE Sample #: GW 1188921
ELLE Group #: 2071978
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Freon 113	76-13-1	N.D.	10	0.2	1
11997	n-Heptane[1]	142-82-5	N.D.	5	2	1
11997	n-Hexane[1]	110-54-3	N.D.	5	2	1
11997	2-Hexanone	591-78-6	N.D.	10	0.3	1
11997	Isobutyl Alcohol	78-83-1	N.D.	250	36	1
11997	Isopropylbenzene	98-82-8	N.D.	5	0.2	1
11997	p-Isopropyltoluene	99-87-6	N.D.	5	0.2	1
11997	Methyl Acetate	79-20-9	N.D.	5	0.2	1
11997	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	1	0.2	1
11997	4-Methyl-2-pentanone	108-10-1	N.D.	10	0.5	1
11997	Methylcyclohexane	108-87-2	N.D.	5	0.5	1
11997	Methylene Chloride	75-09-2	N.D.	1	0.3	1
11997	Naphthalene	91-20-3	N.D.	5	1	1
11997	2-Nitropropane	79-46-9	N.D.	10	0.8	1
11997	Styrene	100-42-5	N.D.	5	0.2	1
11997	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	1	0.2	1
11997	Tetrachloroethene	127-18-4	N.D.	1	0.2	1
11997	Tetrahydrofuran	109-99-9	N.D.	10	0.7	1
11997	Toluene	108-88-3	N.D.	1	0.2	1
11997	1,2,3-Trichlorobenzene	87-61-6	N.D.	5	0.4	1
11997	1,2,4-Trichlorobenzene	120-82-1	N.D.	5	0.3	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	1	0.3	1
11997	1,1,2-Trichloroethane	79-00-5	N.D.	1	0.2	1
11997	Trichloroethene	79-01-6	N.D.	1	0.2	1
11997	Trichlorofluoromethane	75-69-4	N.D.	1	0.2	1
11997	1,2,4-Trimethylbenzene	95-63-6	N.D.	5	1	1
11997	1,3,5-Trimethylbenzene	108-67-8	N.D.	5	0.3	1
11997	Vinyl Chloride	75-01-4	N.D.	1	0.2	1
11997	m+p-Xylene	179601-23-1	N.D.	5	1	1
11997	o-Xylene	95-47-6	N.D.	1	0.4	1
11997	Xylene (Total)	1330-20-7	N.D.	6	1	1

Project defined calibration criteria are not met. The calibration is compliant with the method defined criteria.

A Report Limit Verification (RLV) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The RLV standard shows adequate sensitivity at or below the reporting limit.

00882 VOA Interp. Library Search-10

The results from the volatile library search are listed on the attached FORM 1 - VOA-TIC. The qualifiers appearing in the "Q" column are defined at the end of the report.

*=This limit was used in the evaluation of the final result

Sample Description: **Trip Blank Water**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/31/2019 11:30
Collection Date/Time: 10/23/2019
SDG#: BMS82-08TB

ARCADIS U.S., Inc.
ELLE Sample #: GW 1188921
ELLE Group #: 2071978
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC Miscellaneous	**SW-846 8015D Rev.4, June 2003**		**ug/l**	**ug/l**	**ug/l**	
10603	Ethanol	64-17-5	N.D. D2	1,000	150	1
12926	Ethylene glycol[1]	107-21-1	N.D.	10,000	5,000	1
10603	Isopropanol[1]	67-63-0	N.D. D2	1,000	110	1
10603	Methanol	67-56-1	N.D. D2	1,000	220	1
12926	Propylene glycol[1]	57-55-6	N.D.	10,000	2,000	1

The response for tetramethylene glycol in the continuing calibration verification standard is outside the QC acceptance limits low. The following action was taken:
The analysis was repeated and the continuing calibration verification standard bracketing the sample on the second trial is also outside the acceptance limits. This effect is attributed to the sample matrix and the data is reported.

Sample Comments

State of New York Certification No. 10670

[1] = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	Y193091AA	11/05/2019 15:42	Corie Mellinger	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	Y193091AA	11/05/2019 15:41	Corie Mellinger	1
10603	Alcohols in Water	SW-846 8015D Rev.4, June 2003	1	193080008A	11/05/2019 02:52	Johanna C Kennedy	1
12926	Glycols in Water by 8015C/D	SW-846 8015D Rev.4, June 2003	1	193080028A	11/06/2019 02:03	Donald Brown	1

*=This limit was used in the evaluation of the final result

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
S8208

Lab Name: Lancaster Laboratories Contract:_____
Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____
Matrix: (soil/water) WATER Lab Sample ID: 1188921
Sample wt/vol: 5.0 (g/mL)mL Lab File ID:HP09355.i/19nov05a.b/yn05s04.d
Level: (low/med) LOW Date Received: 10/31/19
% Moisture: not dec. Date Analyzed: 11/05/19
Column: (pack/cap) CAP Dilution Factor: 1.0
CONCENTRATION UNITS:
Number TICs found: 0 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	VOCTIC	Total VOC TICs		0	U
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page 1 of 1

FORM I VOA-TIC

Sample Description: **BDA15RX Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/31/2019 11:30
Collection Date/Time: 10/30/2019 11:37
SDG#: BMS82-09

ARCADIS U.S., Inc.
ELLE Sample #: GW 1188922
ELLE Group #: 2071978
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	28 J	20	0.7	1
11997	Acetonitrile	75-05-8	N.D.	100	16	1
11997	Benzene	71-43-2	0.4 J	1	0.2	1
11997	Bromochloromethane	74-97-5	N.D.	5	0.2	1
11997	Bromodichloromethane	75-27-4	N.D.	1	0.2	1
11997	Bromoform	75-25-2	N.D.	4	1	1
11997	Bromomethane	74-83-9	N.D.	1	0.3	1
11997	n-Butanol	71-36-3	N.D.	250	61	1
11997	2-Butanone	78-93-3	2 J	10	0.3	1
11997	t-Butyl alcohol	75-65-0	N.D.	50	12	1
11997	n-Butylbenzene	104-51-8	N.D.	5	0.2	1
11997	sec-Butylbenzene	135-98-8	N.D.	5	0.2	1
11997	tert-Butylbenzene	98-06-6	N.D.	5	0.3	1
11997	Carbon Disulfide	75-15-0	N.D.	5	0.2	1
11997	Carbon Tetrachloride	56-23-5	N.D.	1	0.2	1
11997	Chlorobenzene	108-90-7	N.D.	1	0.2	1
11997	Chlorodifluoromethane[1]	75-45-6	N.D. J	5	2	1
11997	Chloroethane	75-00-3	N.D. J	1	0.2	1
11997	Chloroform	67-66-3	N.D.	1	0.2	1
11997	Chloromethane	74-87-3	N.D. J	1	0.2	1
11997	Cyclohexane	110-82-7	N.D.	5	1	1
11997	Cyclohexanone[1]	108-94-1	N.D.	100	25	1
11997	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	5	0.3	1
11997	Dibromochloromethane	124-48-1	N.D.	1	0.2	1
11997	1,2-Dibromoethane	106-93-4	N.D.	1	0.2	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	5	0.2	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	5	0.2	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	5	0.2	1
11997	Dichlorodifluoromethane	75-71-8	N.D. J	1	0.2	1
11997	1,1-Dichloroethane	75-34-3	N.D.	1	0.2	1
11997	1,2-Dichloroethane	107-06-2	N.D.	1	0.3	1
11997	1,1-Dichloroethene	75-35-4	N.D.	1	0.2	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	1	0.2	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	1	0.2	1
11997	1,2-Dichloropropane	78-87-5	N.D.	1	0.2	1
11997	cis-1,3-Dichloropropene	10061-01-5	N.D.	1	0.2	1
11997	trans-1,3-Dichloropropene	10061-02-6	N.D.	1	0.2	1
11997	1,4-Dioxane	123-91-1	N.D.	250	29	1
11997	Ethyl Acetate	141-78-6	N.D.	5	0.7	1
11997	Ethyl ether	60-29-7	N.D.	5	0.2	1
11997	Ethylbenzene	100-41-4	N.D.	1	0.4	1

*=This limit was used in the evaluation of the final result

Sample Description: **BDA15RX Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/31/2019 11:30
Collection Date/Time: 10/30/2019 11:37
SDG#: BMS82-09

ARCADIS U.S., Inc.
ELLE Sample #: GW 1188922
ELLE Group #: 2071978
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Freon 113	76-13-1	N.D.	10	0.2	1
11997	n-Heptane[1]	142-82-5	N.D.	5	2	1
11997	n-Hexane[1]	110-54-3	N.D.	5	2	1
11997	2-Hexanone	591-78-6	N.D.	10	0.3	1
11997	Isobutyl Alcohol	78-83-1	N.D.	250	36	1
11997	Isopropylbenzene	98-82-8	N.D.	5	0.2	1
11997	p-Isopropyltoluene	99-87-6	N.D.	5	0.2	1
11997	Methyl Acetate	79-20-9	N.D.	5	0.2	1
11997	Methyl Tertiary Butyl Ether	1634-04-4	0.4 J	1	0.2	1
11997	4-Methyl-2-pentanone	108-10-1	1 J	10	0.5	1
11997	Methylcyclohexane	108-87-2	N.D.	5	0.5	1
11997	Methylene Chloride	75-09-2	1	1	0.3	1
11997	Naphthalene	91-20-3	N.D.	5	1	1
11997	2-Nitropropane	79-46-9	N.D.	10	0.8	1
11997	Styrene	100-42-5	N.D.	5	0.2	1
11997	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	1	0.2	1
11997	Tetrachloroethene	127-18-4	N.D.	1	0.2	1
11997	Tetrahydrofuran	109-99-9	N.D.	10	0.7	1
11997	Toluene	108-88-3	0.2 J	1	0.2	1
11997	1,2,3-Trichlorobenzene	87-61-6	N.D.	5	0.4	1
11997	1,2,4-Trichlorobenzene	120-82-1	N.D.	5	0.3	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	1	0.3	1
11997	1,1,2-Trichloroethane	79-00-5	N.D.	1	0.2	1
11997	Trichloroethene	79-01-6	N.D.	1	0.2	1
11997	Trichlorofluoromethane	75-69-4	N.D. J	1	0.2	1
11997	1,2,4-Trimethylbenzene	95-63-6	N.D.	5	1	1
11997	1,3,5-Trimethylbenzene	108-67-8	N.D.	5	0.3	1
11997	Vinyl Chloride	75-01-4	N.D. J	1	0.2	1
11997	m+p-Xylene	179601-23-1	N.D.	5	1	1
11997	o-Xylene	95-47-6	N.D.	1	0.4	1
11997	Xylene (Total)	1330-20-7	N.D.	6	1	1

Project defined calibration criteria are not met. The calibration is compliant with the method defined criteria.

A Report Limit Verification (RLV) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The RLV standard shows adequate sensitivity at or below the reporting limit.

00882 VOA Interp. Library Search-10

The results from the volatile library search are listed on the attached FORM 1 - VOA-TIC. The qualifiers appearing in the "Q" column are defined at the end of the report.

*=This limit was used in the evaluation of the final result

Sample Description: **BDA15RX Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/31/2019 11:30
Collection Date/Time: 10/30/2019 11:37
SDG#: BMS82-09

ARCADIS U.S., Inc.
ELLE Sample #: GW 1188922
ELLE Group #: 2071978
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	Acenaphthene	83-32-9	N.D.	0.51	0.10	1
14241	Acenaphthylene	208-96-8	N.D.	0.51	0.10	1
14241	Acetophenone	98-86-2	N.D.	10	4.0	1
14241	Aniline	62-53-3	N.D.	10	3.0	1
14241	Anthracene	120-12-7	N.D.	0.51	0.10	1
14241	Atrazine	1912-24-9	N.D.	5.1	2.0	1
14241	Benzaldehyde	100-52-7	N.D.	10	3.0	1
14241	Benzo(a)anthracene	56-55-3	N.D.	0.51	0.10	1
14241	Benzo(a)pyrene	50-32-8	N.D.	0.51	0.10	1
14241	Benzo(b)fluoranthene	205-99-2	N.D.	0.51	0.10	1
14241	Benzo(g,h,i)perylene	191-24-2	N.D.	0.51	0.10	1
14241	Benzo(k)fluoranthene	207-08-9	N.D.	0.51	0.10	1
14241	Benzyl alcohol	100-51-6	N.D.	30	10	1
14241	1,1'-Biphenyl	92-52-4	N.D.	10	3.0	1
14241	4-Bromophenyl-phenylether	101-55-3	N.D.	2.0	0.51	1
14241	Butylbenzylphthalate	85-68-7	N.D.	5.1	2.0	1
14241	Di-n-butylphthalate	84-74-2	N.D.	5.1	2.0	1
14241	Caprolactam	105-60-2	13	11	5.1	1
14241	Carbazole	86-74-8	N.D.	2.0	0.51	1
14241	4-Chloro-3-methylphenol	59-50-7	N.D.	2.0	0.51	1
14241	4-Chloroaniline	106-47-8	N.D.	10	4.0	1
14241	bis(2-Chloroethoxy)methane	111-91-1	N.D.	2.0	0.51	1
14241	bis(2-Chloroethyl)ether	111-44-4	N.D.	2.0	0.51	1
14241	bis(2-Chloroisopropyl)ether[1]	39638-32-9	N.D.	2.0	0.51	1
	Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.					
14241	2-Chloronaphthalene	91-58-7	N.D.	1.0	0.40	1
14241	2-Chlorophenol	95-57-8	N.D.	2.0	0.51	1
14241	4-Chlorophenyl-phenylether	7005-72-3	N.D.	2.0	0.51	1
14241	Chrysene	218-01-9	N.D.	0.51	0.10	1
14241	Dibenz(a,h)anthracene	53-70-3	N.D.	0.51	0.10	1
14241	Dibenzofuran	132-64-9	N.D.	2.0	0.51	1
14241	3,3'-Dichlorobenzidine	91-94-1	N.D.	10	3.0	1
14241	2,4-Dichlorophenol	120-83-2	N.D.	2.0	0.51	1
14241	Dicyclohexylamine[1]	101-83-7	N.D.	10	10	1
14241	Diethylphthalate	84-66-2	N.D.	5.1	2.0	1
14241	N,N-Dimethylaniline[1]	121-69-7	N.D.	1.0	0.51	1
14241	2,4-Dimethylphenol	105-67-9	N.D.	10	3.0	1
14241	Dimethylphthalate	131-11-3	N.D.	5.1	2.0	1
14241	4,6-Dinitro-2-methylphenol	534-52-1	N.D.	21	8.1	1

*=This limit was used in the evaluation of the final result

Sample Description: **BDA15RX Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/31/2019 11:30
Collection Date/Time: 10/30/2019 11:37
SDG#: BMS82-09

ARCADIS U.S., Inc.
ELLE Sample #: GW 1188922
ELLE Group #: 2071978
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	2,4-Dinitrophenol	51-28-5	N.D.	30	14	1
14241	2,4-Dinitrotoluene	121-14-2	N.D.	5.1	1.0	1
14241	2,6-Dinitrotoluene	606-20-2	N.D.	2.0	0.51	1
14241	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	11	5.1	1
14241	Fluoranthene	206-44-0	N.D.	0.51	0.10	1
14241	Fluorene	86-73-7	N.D.	0.51	0.10	1
14241	Hexachlorobenzene	118-74-1	N.D.	0.51	0.10	1
14241	Hexachlorobutadiene	87-68-3	N.D.	2.0	0.51	1
14241	Hexachlorocyclopentadiene	77-47-4	N.D.	11	5.1	1
14241	Hexachloroethane	67-72-1	N.D.	5.1	1.0	1
14241	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.51	0.10	1
14241	Isophorone	78-59-1	N.D.	2.0	0.51	1
14241	2-Methylnaphthalene	91-57-6	N.D.	0.51	0.10	1
14241	2-Methylphenol	95-48-7	N.D.	2.0	0.51	1
14241	4-Methylphenol	65794-96-9	N.D.	2.0	0.51	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
14241	Naphthalene	91-20-3	N.D.	0.51	0.10	1
14241	2-Nitroaniline	88-74-4	N.D.	7.1	2.0	1
14241	3-Nitroaniline	99-09-2	N.D.	7.1	3.0	1
14241	4-Nitroaniline	100-01-6	N.D.	3.0	0.91	1
14241	Nitrobenzene	98-95-3	N.D.	2.0	0.51	1
14241	2-Nitrophenol	88-75-5	N.D.	10	3.0	1
14241	4-Nitrophenol	100-02-7	N.D.	30	10	1
14241	N-Nitroso-di-n-propylamine	621-64-7	N.D.	3.0	0.71	1
14241	N-Nitrosodiphenylamine	86-30-6	N.D.	3.0	0.71	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.					
14241	Di-n-octylphthalate	117-84-0	N.D.	11	5.1	1
14241	Pentachlorophenol	87-86-5	N.D.	5.1	1.0	1
14241	Phenanthrene	85-01-8	N.D.	0.51	0.10	1
14241	Phenol	108-95-2	1.2 J	2.0	0.51	1
14241	Pyrene	129-00-0	N.D.	0.51	0.10	1
14241	Pyridine	110-86-1	N.D.	5.1	2.0	1
14241	1,2,4,5-Tetrachlorobenzene	95-94-3	N.D.	2.0	0.51	1
14241	2,3,4,6-Tetrachlorophenol	58-90-2	N.D.	10	4.0	1
14241	2,4,5-Trichlorophenol	95-95-4	N.D.	2.0	0.51	1
14241	2,4,6-Trichlorophenol	88-06-2	N.D.	2.0	0.51	1
14241	Triethylamine[1]	121-44-8	N.D.	10	10	1

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC

*=This limit was used in the evaluation of the final result

Sample Description: **BDA15RX Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/31/2019 11:30
Collection Date/Time: 10/30/2019 11:37
SDG#: BMS82-09

ARCADIS U.S., Inc.
ELLE Sample #: GW 1188922
ELLE Group #: 2071978
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor

Summary. Since the recovery is high and the target analyte(s) was not detected in the sample, the data is reported.

00886 SVOA TIC Interpretive(25)

The results from the semivolatile library search are listed on the attached FORM 1 - SV-TIC. The qualifiers appearing in the "Q" column are defined at the end of the report.

Sample Comments

State of New York Certification No. 10670

[1] = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	Y193121AA	11/08/2019 17:12	Corie Mellinger	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	Y193121AA	11/08/2019 17:11	Corie Mellinger	1
14241	Semi-annual Groundwater BMS	SW-846 8270D	1	19309WAJ026	11/09/2019 18:31	Holly B Ziegler	1
11010	8270D BNA Extraction	SW-846 3510C	1	19309WAJ026	11/06/2019 02:00	Mathias Okpo	1

*=This limit was used in the evaluation of the final result

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1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
S8209

Lab Name: Lancaster Laboratories Contract:_____
Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____
Matrix: (soil/water) WATER Lab Sample ID: 1188922
Sample wt/vol: 5.0 (g/mL)mL Lab File ID:HP09355.i/19nov08a.b/yn08s15.d
Level: (low/med) LOW Date Received: 10/31/19
% Moisture: not dec. Date Analyzed: 11/08/19
Column: (pack/cap) CAP Dilution Factor: 1.0
CONCENTRATION UNITS:
Number TICs found: 2 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		Unknown alkane	13.26	210	J N
2.		Unknown	13.32	5	J
3.					
4.	VOCTIC	Total VOC TICs		210	J
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					
16.					
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29.					
30.					

page 1 of 1

FORM I VOA-TIC

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
S8209

Lab Name: Lancaster Laboratories Contract:
Lab Code: LANCAS Case No.: SAS No.: SDG No.:
Matrix: (soil/water) WATER Lab Sample ID: 1188922
Sample wt/vol: 247 (g/mL) mL Lab File ID: lk0444.d
Level: (low/med) LOW Date Received: 10/31/19
% Moisture: Decanted: (Y/N) Date Extracted: 11/06/19
Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/09/19
Injection Volume: 1 (uL) Dilution Factor: 1
GPC Cleanup: N pH: Extraction: Sepf
CONCENTRATION UNITS:
Number TICs found: 15 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		Unknown	5.465	51	J N
2.		Unknown	5.855	10	J
3.		Unknown	6.978	8	J
4.		Unknown	7.080	290	J
5.		Unknown	7.224	8	J
6.		Unknown	8.016	5	J
7.		Unknown	8.160	81	J
8.	65-85-0	Benzoic acid	8.765	190	J
9.		Unknown	8.807	85	J
10.		Unknown	8.829	50	J
11.		Unknown	8.856	70	J
12.		Unknown	8.888	99	J
13.		Unknown	9.631	6	J
14.		Unknown	15.547	5	J
15.	85-60-9	Phenol, 4,4'-butylidenebis[2	18.842	7	J
16.					
17.	SVOCTIC	Total SVOC TICs		970	J
18.					
19.					
20.					
21.					
22.					
23.					
24.					
25.					
26.					
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29.					
30.					

page 1 of 1

FORM I SV-1

Sample Description: **PW-5T Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/31/2019 11:30
Collection Date/Time: 10/30/2019 14:07
SDG#: BMS82-10

ARCADIS U.S., Inc.
ELLE Sample #: GW 1188923
ELLE Group #: 2071978
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	20	0.7	1
11997	Acetonitrile	75-05-8	N.D.	100	16	1
11997	Benzene	71-43-2	N.D.	1	0.2	1
11997	Bromochloromethane	74-97-5	N.D.	5	0.2	1
11997	Bromodichloromethane	75-27-4	N.D.	1	0.2	1
11997	Bromoform	75-25-2	N.D.	4	1	1
11997	Bromomethane	74-83-9	N.D. J	1	0.3	1
11997	n-Butanol	71-36-3	N.D.	250	61	1
11997	2-Butanone	78-93-3	N.D.	10	0.3	1
11997	t-Butyl alcohol	75-65-0	N.D.	50	12	1
11997	n-Butylbenzene	104-51-8	N.D.	5	0.2	1
11997	sec-Butylbenzene	135-98-8	N.D.	5	0.2	1
11997	tert-Butylbenzene	98-06-6	N.D.	5	0.3	1
11997	Carbon Disulfide	75-15-0	N.D.	5	0.2	1
11997	Carbon Tetrachloride	56-23-5	N.D.	1	0.2	1
11997	Chlorobenzene	108-90-7	N.D.	1	0.2	1
11997	Chlorodifluoromethane[1]	75-45-6	N.D. J	5	2	1
11997	Chloroethane	75-00-3	N.D. J	1	0.2	1
11997	Chloroform	67-66-3	N.D.	1	0.2	1
11997	Chloromethane	74-87-3	N.D. J	1	0.2	1
11997	Cyclohexane	110-82-7	N.D.	5	1	1
11997	Cyclohexanone[1]	108-94-1	N.D.	100	25	1
11997	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	5	0.3	1
11997	Dibromochloromethane	124-48-1	N.D.	1	0.2	1
11997	1,2-Dibromoethane	106-93-4	N.D.	1	0.2	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	5	0.2	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	5	0.2	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	5	0.2	1
11997	Dichlorodifluoromethane	75-71-8	N.D. J	1	0.2	1
11997	1,1-Dichloroethane	75-34-3	N.D.	1	0.2	1
11997	1,2-Dichloroethane	107-06-2	N.D.	1	0.3	1
11997	1,1-Dichloroethene	75-35-4	N.D.	1	0.2	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	1	0.2	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	1	0.2	1
11997	1,2-Dichloropropane	78-87-5	N.D.	1	0.2	1
11997	cis-1,3-Dichloropropene	10061-01-5	N.D.	1	0.2	1
11997	trans-1,3-Dichloropropene	10061-02-6	N.D.	1	0.2	1
11997	1,4-Dioxane	123-91-1	N.D.	250	29	1
11997	Ethyl Acetate	141-78-6	N.D.	5	0.7	1
11997	Ethyl ether	60-29-7	N.D.	5	0.2	1
11997	Ethylbenzene	100-41-4	N.D.	1	0.4	1

*=This limit was used in the evaluation of the final result

Sample Description: **PW-5T Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/31/2019 11:30
Collection Date/Time: 10/30/2019 14:07
SDG#: BMS82-10

ARCADIS U.S., Inc.
ELLE Sample #: GW 1188923
ELLE Group #: 2071978
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Freon 113	76-13-1	N.D.	10	0.2	1
11997	n-Heptane[1]	142-82-5	N.D.	5	2	1
11997	n-Hexane[1]	110-54-3	N.D.	5	2	1
11997	2-Hexanone	591-78-6	N.D.	10	0.3	1
11997	Isobutyl Alcohol	78-83-1	N.D.	250	36	1
11997	Isopropylbenzene	98-82-8	N.D.	5	0.2	1
11997	p-Isopropyltoluene	99-87-6	N.D.	5	0.2	1
11997	Methyl Acetate	79-20-9	N.D.	5	0.2	1
11997	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	1	0.2	1
11997	4-Methyl-2-pentanone	108-10-1	N.D.	10	0.5	1
11997	Methylcyclohexane	108-87-2	N.D.	5	0.5	1
11997	Methylene Chloride	75-09-2	N.D.	1	0.3	1
11997	Naphthalene	91-20-3	N.D.	5	1	1
11997	2-Nitropropane	79-46-9	N.D.	10	0.8	1
11997	Styrene	100-42-5	N.D.	5	0.2	1
11997	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	1	0.2	1
11997	Tetrachloroethene	127-18-4	N.D.	1	0.2	1
11997	Tetrahydrofuran	109-99-9	N.D.	10	0.7	1
11997	Toluene	108-88-3	N.D.	1	0.2	1
11997	1,2,3-Trichlorobenzene	87-61-6	N.D.	5	0.4	1
11997	1,2,4-Trichlorobenzene	120-82-1	N.D.	5	0.3	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	1	0.3	1
11997	1,1,2-Trichloroethane	79-00-5	N.D.	1	0.2	1
11997	Trichloroethene	79-01-6	N.D.	1	0.2	1
11997	Trichlorofluoromethane	75-69-4	N.D. J	1	0.2	1
11997	1,2,4-Trimethylbenzene	95-63-6	N.D.	5	1	1
11997	1,3,5-Trimethylbenzene	108-67-8	N.D.	5	0.3	1
11997	Vinyl Chloride	75-01-4	N.D. J	1	0.2	1
11997	m+p-Xylene	179601-23-1	N.D.	5	1	1
11997	o-Xylene	95-47-6	N.D.	1	0.4	1
11997	Xylene (Total)	1330-20-7	N.D.	6	1	1

Project defined calibration criteria are not met. The calibration is compliant with the method defined criteria.

A Report Limit Verification (RLV) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The RLV standard shows adequate sensitivity at or below the reporting limit.

The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the TNI/DoD Standards. The following analytes are accepted based on this

*=This limit was used in the evaluation of the final result

Sample Description: **PW-5T Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/31/2019 11:30
Collection Date/Time: 10/30/2019 14:07
SDG#: BMS82-10

ARCADIS U.S., Inc.
ELLE Sample #: GW 1188923
ELLE Group #: 2071978
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor

allowance: chloromethane, bromomethane and chloroethane.

A targeted library search was performed yielding the following results: hexachloroethane is non-detect.

Preservation requirements were not met. The sample was received at pH < 2 which is not the preservation specified for acrolein or acrylonitrile under the referenced method. The preservation criteria is pH of 4-5.

00882 VOA Interp. Library Search-10

The results from the volatile library search are listed on the attached FORM 1 - VOA-TIC. The qualifiers appearing in the "Q" column are defined at the end of the report.

GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	Acenaphthene	83-32-9	N.D.	0.51	0.10	1
14241	Acenaphthylene	208-96-8	N.D.	0.51	0.10	1
14241	Acetophenone	98-86-2	N.D.	10	4.1	1
14241	Aniline	62-53-3	N.D.	10	3.1	1
14241	Anthracene	120-12-7	N.D.	0.51	0.10	1
14241	Atrazine	1912-24-9	N.D.	5.1	2.0	1
14241	Benzaldehyde	100-52-7	N.D.	10	3.1	1
14241	Benzo(a)anthracene	56-55-3	N.D.	0.51	0.10	1
14241	Benzo(a)pyrene	50-32-8	N.D.	0.51	0.10	1
14241	Benzo(b)fluoranthene	205-99-2	N.D.	0.51	0.10	1
14241	Benzo(g,h,i)perylene	191-24-2	N.D.	0.51	0.10	1
14241	Benzo(k)fluoranthene	207-08-9	N.D.	0.51	0.10	1
14241	Benzyl alcohol	100-51-6	N.D.	31	10	1
14241	1,1'-Biphenyl	92-52-4	N.D.	10	3.1	1
14241	4-Bromophenyl-phenylether	101-55-3	N.D.	2.0	0.51	1
14241	Butylbenzylphthalate	85-68-7	N.D.	5.1	2.0	1
14241	Di-n-butylphthalate	84-74-2	N.D.	5.1	2.0	1
14241	Caprolactam	105-60-2	N.D.	11	5.1	1
14241	Carbazole	86-74-8	N.D.	2.0	0.51	1
14241	4-Chloro-3-methylphenol	59-50-7	N.D.	2.0	0.51	1
14241	4-Chloroaniline	106-47-8	N.D.	10	4.1	1
14241	bis(2-Chloroethoxy)methane	111-91-1	N.D.	2.0	0.51	1
14241	bis(2-Chloroethyl)ether	111-44-4	N.D.	2.0	0.51	1
14241	bis(2-Chloroisopropyl)ether[1]	39638-32-9	N.D.	2.0	0.51	1
	Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.					
14241	2-Chloronaphthalene	91-58-7	N.D.	1.0	0.41	1
14241	2-Chlorophenol	95-57-8	N.D.	2.0	0.51	1
14241	4-Chlorophenyl-phenylether	7005-72-3	N.D.	2.0	0.51	1

*=This limit was used in the evaluation of the final result

Sample Description: **PW-5T Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/31/2019 11:30
Collection Date/Time: 10/30/2019 14:07
SDG#: BMS82-10

ARCADIS U.S., Inc.
ELLE Sample #: GW 1188923
ELLE Group #: 2071978
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	Chrysene	218-01-9	N.D.	0.51	0.10	1
14241	Dibenz(a,h)anthracene	53-70-3	N.D.	0.51	0.10	1
14241	Dibenzofuran	132-64-9	N.D.	2.0	0.51	1
14241	3,3'-Dichlorobenzidine	91-94-1	N.D.	10	3.1	1
14241	2,4-Dichlorophenol	120-83-2	N.D.	2.0	0.51	1
14241	Dicyclohexylamine[1]	101-83-7	N.D.	10	10	1
14241	Diethylphthalate	84-66-2	N.D.	5.1	2.0	1
14241	N,N-Dimethylaniline[1]	121-69-7	N.D.	1.0	0.51	1
14241	2,4-Dimethylphenol	105-67-9	N.D.	10	3.1	1
14241	Dimethylphthalate	131-11-3	N.D.	5.1	2.0	1
14241	4,6-Dinitro-2-methylphenol	534-52-1	N.D.	22	8.2	1
14241	2,4-Dinitrophenol	51-28-5	N.D.	31	14	1
14241	2,4-Dinitrotoluene	121-14-2	N.D.	5.1	1.0	1
14241	2,6-Dinitrotoluene	606-20-2	N.D.	2.0	0.51	1
14241	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	11	5.1	1
14241	Fluoranthene	206-44-0	N.D.	0.51	0.10	1
14241	Fluorene	86-73-7	N.D.	0.51	0.10	1
14241	Hexachlorobenzene	118-74-1	N.D.	0.51	0.10	1
14241	Hexachlorobutadiene	87-68-3	N.D.	2.0	0.51	1
14241	Hexachlorocyclopentadiene	77-47-4	N.D.	11	5.1	1
14241	Hexachloroethane	67-72-1	N.D.	5.1	1.0	1
14241	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.51	0.10	1
14241	Isophorone	78-59-1	N.D.	2.0	0.51	1
14241	2-Methylnaphthalene	91-57-6	0.43 J	0.51	0.10	1
14241	2-Methylphenol	95-48-7	N.D.	2.0	0.51	1
14241	4-Methylphenol	65794-96-9	N.D.	2.0	0.51	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
14241	Naphthalene	91-20-3	N.D.	0.51	0.10	1
14241	2-Nitroaniline	88-74-4	N.D.	7.2	2.0	1
14241	3-Nitroaniline	99-09-2	N.D.	7.2	3.1	1
14241	4-Nitroaniline	100-01-6	N.D.	3.1	0.92	1
14241	Nitrobenzene	98-95-3	N.D.	2.0	0.51	1
14241	2-Nitrophenol	88-75-5	N.D.	10	3.1	1
14241	4-Nitrophenol	100-02-7	N.D.	31	10	1
14241	N-Nitroso-di-n-propylamine	621-64-7	N.D.	3.1	0.72	1
14241	N-Nitrosodiphenylamine	86-30-6	N.D.	3.1	0.72	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.					
14241	Di-n-octylphthalate	117-84-0	N.D.	11	5.1	1

*=This limit was used in the evaluation of the final result

Sample Description: **PW-5T Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/31/2019 11:30
Collection Date/Time: 10/30/2019 14:07
SDG#: BMS82-10

ARCADIS U.S., Inc.
ELLE Sample #: GW 1188923
ELLE Group #: 2071978
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	Pentachlorophenol	87-86-5	N.D.	5.1	1.0	1
14241	Phenanthrene	85-01-8	N.D.	0.51	0.10	1
14241	Phenol	108-95-2	N.D.	2.0	0.51	1
14241	Pyrene	129-00-0	N.D.	0.51	0.10	1
14241	Pyridine	110-86-1	N.D.	5.1	2.0	1
14241	1,2,4,5-Tetrachlorobenzene	95-94-3	N.D.	2.0	0.51	1
14241	2,3,4,6-Tetrachlorophenol	58-90-2	N.D.	10	4.1	1
14241	2,4,5-Trichlorophenol	95-95-4	N.D.	2.0	0.51	1
14241	2,4,6-Trichlorophenol	88-06-2	N.D.	2.0	0.51	1
14241	Triethylamine[1]	121-44-8	N.D.	10	10	1

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. Since the recovery is high and the target analyte(s) was not detected in the sample, the data is reported.

00886 SVOA TIC Interpretive(25)

The results from the semivolatile library search are listed on the attached FORM 1 - SV-TIC. The qualifiers appearing in the "Q" column are defined at the end of the report.

Aldehydes & Ketones	**SW-846 8315A**		**ug/l**	**ug/l**	**ug/l**	
13022	Acetaldehyde[1]	75-07-0	N.D. J	60	35	1
13022	Formaldehyde	50-00-0	22 J	50	20	1

The response for a target analyte(s) in the initial calibration verification standard is outside the QC acceptance limits. The client was contacted and the data reported.
The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary.

GC Miscellaneous	**SW-846 8015D Rev.4, June 2003**		**ug/l**	**ug/l**	**ug/l**	
10603	Ethanol	64-17-5	N.D. D2	1,000	150	1
12926	Ethylene glycol[1]	107-21-1	~~N.D.~~ R	10,000	5,000	1
10603	Isopropanol[1]	67-63-0	N.D. D2	1,000	110	1
10603	Methanol	67-56-1	N.D. D2	1,000	220	1
12926	Propylene glycol[1]	57-55-6	~~N.D.~~ R	10,000	2,000	1

The response for tetramethylene glycol in the continuing calibration verification standard is outside the QC acceptance limits low. The following action was taken:
The analysis was repeated and the continuing calibration verification standard bracketing the sample on the second trial is also outside the acceptance limits. This effect is attributed to the sample matrix and the data is reported.

*=This limit was used in the evaluation of the final result

Sample Description: **PW-5T Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/31/2019 11:30
Collection Date/Time: 10/30/2019 14:07
SDG#: BMS82-10

ARCADIS U.S., Inc.
ELLE Sample #: GW 1188923
ELLE Group #: 2071978
Matrix: Groundwater

Sample Comments

State of New York Certification No. 10670

[1] = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	Y193131AA	11/09/2019 16:12	Linda C Pape	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	Y193131AA	11/09/2019 16:11	Linda C Pape	1
14241	Semi-annual Groundwater BMS	SW-846 8270D	1	19309WAJ026	11/09/2019 19:00	Holly B Ziegler	1
11010	8270D BNA Extraction	SW-846 3510C	1	19309WAJ026	11/06/2019 02:00	Mathias Okpo	1
13022	Short List Aldehydes- W 8315A	SW-846 8315A	1	193040018A	11/01/2019 19:32	Jessica L Miller	1
01013	Formaldehyde Extraction	SW-846 8315A	1	193040018A	11/01/2019 08:38	Alison Moll	1
10603	Alcohols in Water	SW-846 8015D Rev.4, June 2003	1	193080008A	11/05/2019 03:09	Johanna C Kennedy	1
12926	Glycols in Water by 8015C/D	SW-846 8015D Rev.4, June 2003	1	193080028A	11/06/2019 02:16	Donald Brown	1

*=This limit was used in the evaluation of the final result

1E

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

S8210

Lab Name: Lancaster Laboratories Contract:_____
Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____
Matrix: (soil/water) WATER Lab Sample ID: 1188923
Sample wt/vol: 5.0 (g/mL)mL Lab File ID:HP09355.i/19nov09a.b/yn09s13.d
Level: (low/med) LOW Date Received: 10/31/19
% Moisture: not dec. Date Analyzed: 11/09/19
Column: (pack/cap) CAP Dilution Factor: 1.0
CONCENTRATION UNITS:
Number TICs found: 0 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	VOCTIC	Total VOC TICs		0	U
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
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12.					
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29.					
30.					

page 1 of 1

FORM I VOA-TIC

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
S8210

Lab Name: Lancaster Laboratories Contract:
Lab Code: LANCAS Case No.: SAS No.: SDG No.:
Matrix: (soil/water) WATER Lab Sample ID: 1188923
Sample wt/vol: 244 (g/mL) mL Lab File ID: lk0445.d
Level: (low/med) LOW Date Received: 10/31/19
% Moisture: Decanted: (Y/N) Date Extracted: 11/06/19
Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/09/19
Injection Volume: 1 (uL) Dilution Factor: 1
GPC Cleanup: N pH: Extraction: Sepf
CONCENTRATION UNITS:
Number TICs found: 1 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		Unknown	21.393	33	J N
2.					
3.	SVOCTIC	Total SVOC TICs		33	J N
4.					
5.					
6.					
7.					
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11.					
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page 1 of 1

FORM I SV-1

Sample Description: **PW-5RX Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/31/2019 11:30
Collection Date/Time: 10/30/2019 15:41
SDG#: BMS82-11

ARCADIS U.S., Inc.
ELLE Sample #: GW 1188924
ELLE Group #: 2071978
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	20	0.7	1
11997	Acetonitrile	75-05-8	N.D.	100	16	1
11997	Benzene	71-43-2	N.D.	1	0.2	1
11997	Bromochloromethane	74-97-5	N.D.	5	0.2	1
11997	Bromodichloromethane	75-27-4	N.D.	1	0.2	1
11997	Bromoform	75-25-2	N.D.	4	1	1
11997	Bromomethane	74-83-9	N.D. J	1	0.3	1
11997	n-Butanol	71-36-3	N.D.	250	61	1
11997	2-Butanone	78-93-3	N.D.	10	0.3	1
11997	t-Butyl alcohol	75-65-0	N.D.	50	12	1
11997	n-Butylbenzene	104-51-8	N.D.	5	0.2	1
11997	sec-Butylbenzene	135-98-8	N.D.	5	0.2	1
11997	tert-Butylbenzene	98-06-6	N.D.	5	0.3	1
11997	Carbon Disulfide	75-15-0	N.D.	5	0.2	1
11997	Carbon Tetrachloride	56-23-5	N.D.	1	0.2	1
11997	Chlorobenzene	108-90-7	N.D.	1	0.2	1
11997	Chlorodifluoromethane[1]	75-45-6	N.D. J	5	2	1
11997	Chloroethane	75-00-3	N.D. J	1	0.2	1
11997	Chloroform	67-66-3	N.D.	1	0.2	1
11997	Chloromethane	74-87-3	N.D. J	1	0.2	1
11997	Cyclohexane	110-82-7	N.D.	5	1	1
11997	Cyclohexanone[1]	108-94-1	N.D.	100	25	1
11997	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	5	0.3	1
11997	Dibromochloromethane	124-48-1	N.D.	1	0.2	1
11997	1,2-Dibromoethane	106-93-4	N.D.	1	0.2	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	5	0.2	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	5	0.2	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	5	0.2	1
11997	Dichlorodifluoromethane	75-71-8	N.D. J	1	0.2	1
11997	1,1-Dichloroethane	75-34-3	N.D.	1	0.2	1
11997	1,2-Dichloroethane	107-06-2	N.D.	1	0.3	1
11997	1,1-Dichloroethene	75-35-4	N.D.	1	0.2	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	1	0.2	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	1	0.2	1
11997	1,2-Dichloropropane	78-87-5	N.D.	1	0.2	1
11997	cis-1,3-Dichloropropene	10061-01-5	N.D.	1	0.2	1
11997	trans-1,3-Dichloropropene	10061-02-6	N.D.	1	0.2	1
11997	1,4-Dioxane	123-91-1	N.D.	250	29	1
11997	Ethyl Acetate	141-78-6	N.D.	5	0.7	1
11997	Ethyl ether	60-29-7	N.D.	5	0.2	1
11997	Ethylbenzene	100-41-4	N.D.	1	0.4	1

*=This limit was used in the evaluation of the final result

Sample Description: **PW-5RX Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/31/2019 11:30
Collection Date/Time: 10/30/2019 15:41
SDG#: BMS82-11

ARCADIS U.S., Inc.
ELLE Sample #: GW 1188924
ELLE Group #: 2071978
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		ug/l	ug/l	ug/l	
11997	Freon 113	76-13-1	N.D.	10	0.2	1
11997	n-Heptane[1]	142-82-5	N.D.	5	2	1
11997	n-Hexane[1]	110-54-3	N.D.	5	2	1
11997	2-Hexanone	591-78-6	N.D.	10	0.3	1
11997	Isobutyl Alcohol	78-83-1	N.D.	250	36	1
11997	Isopropylbenzene	98-82-8	N.D.	5	0.2	1
11997	p-Isopropyltoluene	99-87-6	N.D.	5	0.2	1
11997	Methyl Acetate	79-20-9	N.D.	5	0.2	1
11997	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	1	0.2	1
11997	4-Methyl-2-pentanone	108-10-1	N.D.	10	0.5	1
11997	Methylcyclohexane	108-87-2	N.D.	5	0.5	1
11997	Methylene Chloride	75-09-2	N.D.	1	0.3	1
11997	Naphthalene	91-20-3	N.D.	5	1	1
11997	2-Nitropropane	79-46-9	N.D.	10	0.8	1
11997	Styrene	100-42-5	N.D.	5	0.2	1
11997	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	1	0.2	1
11997	Tetrachloroethene	127-18-4	N.D.	1	0.2	1
11997	Tetrahydrofuran	109-99-9	N.D.	10	0.7	1
11997	Toluene	108-88-3	N.D.	1	0.2	1
11997	1,2,3-Trichlorobenzene	87-61-6	N.D.	5	0.4	1
11997	1,2,4-Trichlorobenzene	120-82-1	N.D.	5	0.3	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	1	0.3	1
11997	1,1,2-Trichloroethane	79-00-5	N.D.	1	0.2	1
11997	Trichloroethene	79-01-6	N.D.	1	0.2	1
11997	Trichlorofluoromethane	75-69-4	N.D. J	1	0.2	1
11997	1,2,4-Trimethylbenzene	95-63-6	N.D.	5	1	1
11997	1,3,5-Trimethylbenzene	108-67-8	N.D.	5	0.3	1
11997	Vinyl Chloride	75-01-4	N.D. J	1	0.2	1
11997	m+p-Xylene	179601-23-1	N.D.	5	1	1
11997	o-Xylene	95-47-6	N.D.	1	0.4	1
11997	Xylene (Total)	1330-20-7	N.D.	6	1	1

Project defined calibration criteria are not met. The calibration is compliant with the method defined criteria.

A Report Limit Verification (RLV) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The RLV standard shows adequate sensitivity at or below the reporting limit.

The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the TNI/DoD Standards. The following analytes are accepted based on this

*=This limit was used in the evaluation of the final result

Sample Description: **PW-5RX Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/31/2019 11:30
Collection Date/Time: 10/30/2019 15:41
SDG#: BMS82-11

ARCADIS U.S., Inc.
ELLE Sample #: GW 1188924
ELLE Group #: 2071978
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
	allowance: chloromethane, bromomethane and chloroethane.					
00882	**VOA Interp. Library Search-10**					
	The results from the volatile library search are listed on the attached FORM 1 - VOA-TIC. The qualifiers appearing in the "Q" column are defined at the end of the report.					
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	Acenaphthene	83-32-9	N.D.	0.51	0.10	1
14241	Acenaphthylene	208-96-8	N.D.	0.51	0.10	1
14241	Acetophenone	98-86-2	N.D.	10	4.1	1
14241	Aniline	62-53-3	N.D.	10	3.1	1
14241	Anthracene	120-12-7	N.D.	0.51	0.10	1
14241	Atrazine	1912-24-9	N.D.	5.1	2.0	1
14241	Benzaldehyde	100-52-7	N.D.	10	3.1	1
14241	Benzo(a)anthracene	56-55-3	N.D.	0.51	0.10	1
14241	Benzo(a)pyrene	50-32-8	N.D.	0.51	0.10	1
14241	Benzo(b)fluoranthene	205-99-2	N.D.	0.51	0.10	1
14241	Benzo(g,h,i)perylene	191-24-2	N.D.	0.51	0.10	1
14241	Benzo(k)fluoranthene	207-08-9	N.D.	0.51	0.10	1
14241	Benzyl alcohol	100-51-6	N.D.	31	10	1
14241	1,1'-Biphenyl	92-52-4	N.D.	10	3.1	1
14241	4-Bromophenyl-phenylether	101-55-3	N.D.	2.0	0.51	1
14241	Butylbenzylphthalate	85-68-7	N.D.	5.1	2.0	1
14241	Di-n-butylphthalate	84-74-2	N.D.	5.1	2.0	1
14241	Caprolactam	105-60-2	N.D.	11	5.1	1
14241	Carbazole	86-74-8	N.D.	2.0	0.51	1
14241	4-Chloro-3-methylphenol	59-50-7	N.D.	2.0	0.51	1
14241	4-Chloroaniline	106-47-8	N.D.	10	4.1	1
14241	bis(2-Chloroethoxy)methane	111-91-1	N.D.	2.0	0.51	1
14241	bis(2-Chloroethyl)ether	111-44-4	N.D.	2.0	0.51	1
14241	bis(2-Chloroisopropyl)ether[1]	39638-32-9	N.D.	2.0	0.51	1
	Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.					
14241	2-Chloronaphthalene	91-58-7	N.D.	1.0	0.41	1
14241	2-Chlorophenol	95-57-8	N.D.	2.0	0.51	1
14241	4-Chlorophenyl-phenylether	7005-72-3	N.D.	2.0	0.51	1
14241	Chrysene	218-01-9	N.D.	0.51	0.10	1
14241	Dibenz(a,h)anthracene	53-70-3	N.D.	0.51	0.10	1
14241	Dibenzofuran	132-64-9	N.D.	2.0	0.51	1
14241	3,3'-Dichlorobenzidine	91-94-1	N.D.	10	3.1	1
14241	2,4-Dichlorophenol	120-83-2	N.D.	2.0	0.51	1
14241	Dicyclohexylamine[1]	101-83-7	N.D.	10	10	1

*=This limit was used in the evaluation of the final result

Sample Description: **PW-5RX Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/31/2019 11:30
Collection Date/Time: 10/30/2019 15:41
SDG#: BMS82-11

ARCADIS U.S., Inc.
ELLE Sample #: GW 1188924
ELLE Group #: 2071978
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	Diethylphthalate	84-66-2	N.D.	5.1	2.0	1
14241	N,N-Dimethylaniline[1]	121-69-7	N.D.	1.0	0.51	1
14241	2,4-Dimethylphenol	105-67-9	N.D.	10	3.1	1
14241	Dimethylphthalate	131-11-3	N.D.	5.1	2.0	1
14241	4,6-Dinitro-2-methylphenol	534-52-1	N.D.	21	8.2	1
14241	2,4-Dinitrophenol	51-28-5	N.D.	31	14	1
14241	2,4-Dinitrotoluene	121-14-2	N.D.	5.1	1.0	1
14241	2,6-Dinitrotoluene	606-20-2	N.D.	2.0	0.51	1
14241	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	11	5.1	1
14241	Fluoranthene	206-44-0	N.D.	0.51	0.10	1
14241	Fluorene	86-73-7	N.D.	0.51	0.10	1
14241	Hexachlorobenzene	118-74-1	N.D.	0.51	0.10	1
14241	Hexachlorobutadiene	87-68-3	N.D.	2.0	0.51	1
14241	Hexachlorocyclopentadiene	77-47-4	N.D.	11	5.1	1
14241	Hexachloroethane	67-72-1	N.D.	5.1	1.0	1
14241	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.51	0.10	1
14241	Isophorone	78-59-1	N.D.	2.0	0.51	1
14241	2-Methylnaphthalene	91-57-6	N.D.	0.51	0.10	1
14241	2-Methylphenol	95-48-7	N.D.	2.0	0.51	1
14241	4-Methylphenol	65794-96-9	N.D.	2.0	0.51	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
14241	Naphthalene	91-20-3	N.D.	0.51	0.10	1
14241	2-Nitroaniline	88-74-4	N.D.	7.1	2.0	1
14241	3-Nitroaniline	99-09-2	N.D.	7.1	3.1	1
14241	4-Nitroaniline	100-01-6	N.D.	3.1	0.92	1
14241	Nitrobenzene	98-95-3	N.D.	2.0	0.51	1
14241	2-Nitrophenol	88-75-5	N.D.	10	3.1	1
14241	4-Nitrophenol	100-02-7	N.D.	31	10	1
14241	N-Nitroso-di-n-propylamine	621-64-7	N.D.	3.1	0.71	1
14241	N-Nitrosodiphenylamine	86-30-6	N.D.	3.1	0.71	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.					
14241	Di-n-octylphthalate	117-84-0	N.D.	11	5.1	1
14241	Pentachlorophenol	87-86-5	N.D.	5.1	1.0	1
14241	Phenanthrene	85-01-8	N.D.	0.51	0.10	1
14241	Phenol	108-95-2	N.D.	2.0	0.51	1
14241	Pyrene	129-00-0	N.D.	0.51	0.10	1
14241	Pyridine	110-86-1	N.D.	5.1	2.0	1
14241	1,2,4,5-Tetrachlorobenzene	95-94-3	N.D.	2.0	0.51	1

*=This limit was used in the evaluation of the final result

Sample Description: **PW-5RX Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/31/2019 11:30
Collection Date/Time: 10/30/2019 15:41
SDG#: BMS82-11

ARCADIS U.S., Inc.
ELLE Sample #: GW 1188924
ELLE Group #: 2071978
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result		Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**		**ug/l**	**ug/l**	
14241	2,3,4,6-Tetrachlorophenol	58-90-2	N.D.		10	4.1	1
14241	2,4,5-Trichlorophenol	95-95-4	N.D.		2.0	0.51	1
14241	2,4,6-Trichlorophenol	88-06-2	N.D.		2.0	0.51	1
14241	Triethylamine[1]	121-44-8	N.D.		10	10	1

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. Since the recovery is high and the target analyte(s) was not detected in the sample, the data is reported.

00886 SVOA TIC Interpretive(25)

The results from the semivolatile library search are listed on the attached FORM 1 - SV-TIC. The qualifiers appearing in the "Q" column are defined at the end of the report.

Aldehydes & Ketones	**SW-846 8315A**		**ug/l**		**ug/l**	**ug/l**	
13022	Acetaldehyde[1]	75-07-0	N.D.	J	60	35	1
13022	Formaldehyde	50-00-0	36	J	50	20	1

The response for a target analyte(s) in the initial calibration verification standard is outside the QC acceptance limits. The client was contacted and the data reported.
The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary.

GC Miscellaneous	**SW-846 8015D Rev.4, June 2003**		**ug/l**		**ug/l**	**ug/l**	
10603	Ethanol	64-17-5	N.D.	D2	1,000	150	1
12926	Ethylene glycol[1]	107-21-1	~~N.D.~~	R	10,000	5,000	1
10603	Isopropanol[1]	67-63-0	N.D.	D2	1,000	110	1
10603	Methanol	67-56-1	N.D.	D2	1,000	220	1
12926	Propylene glycol[1]	57-55-6	~~N.D.~~	R	10,000	2,000	1

The response for tetramethylene glycol in the continuing calibration verification standard is outside the QC acceptance limits low. The following action was taken:
The analysis was repeated and the continuing calibration verification standard bracketing the sample on the second trial is also outside the acceptance limits. This effect is attributed to the sample matrix and the data is reported.

Sample Comments

State of New York Certification No. 10670

[1] = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

*=This limit was used in the evaluation of the final result

Sample Description: **PW-5RX Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/31/2019 11:30
Collection Date/Time: 10/30/2019 15:41
SDG#: BMS82-11

ARCADIS U.S., Inc.
ELLE Sample #: GW 1188924
ELLE Group #: 2071978
Matrix: Groundwater

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	Y193131AA	11/09/2019 16:34	Linda C Pape	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	Y193131AA	11/09/2019 16:33	Linda C Pape	1
14241	Semi-annual Groundwater BMS	SW-846 8270D	1	19309WAJ026	11/10/2019 00:08	Holly B Ziegler	1
11010	8270D BNA Extraction	SW-846 3510C	1	19309WAJ026	11/06/2019 02:00	Mathias Okpo	1
13022	Short List Aldehydes- W 8315A	SW-846 8315A	1	193040018A	11/01/2019 19:42	Jessica L Miller	1
01013	Formaldehyde Extraction	SW-846 8315A	1	193040018A	11/01/2019 08:38	Alison Moll	1
10603	Alcohols in Water	SW-846 8015D Rev.4, June 2003	1	193080008A	11/05/2019 03:25	Johanna C Kennedy	1
12926	Glycols in Water by 8015C/D	SW-846 8015D Rev.4, June 2003	1	193080028A	11/06/2019 02:29	Donald Brown	1

*=This limit was used in the evaluation of the final result

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
S8211

Lab Name: Lancaster Laboratories Contract:_____
Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____
Matrix: (soil/water) WATER Lab Sample ID: 1188924
Sample wt/vol: 5.0 (g/mL)mL Lab File ID:HP09355.i/19nov09a.b/yn09s14.d
Level: (low/med) LOW Date Received: 10/31/19
% Moisture: not dec. Date Analyzed: 11/09/19
Column: (pack/cap) CAP Dilution Factor: 1.0
CONCENTRATION UNITS:
Number TICs found: 0 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	VOCTIC	Total VOC TICs		0	U
2.					
3.					
4.					
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page 1 of 1

FORM I VOA-TIC

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
S8211

Lab Name: Lancaster Laboratories Contract:
Lab Code: LANCAS Case No.: SAS No.: SDG No.:
Matrix: (soil/water) WATER Lab Sample ID: 1188924
Sample wt/vol: 245 (g/mL) mL Lab File ID: lk0459.d
Level: (low/med) LOW Date Received: 10/31/19
% Moisture: Decanted: (Y/N) Date Extracted: 11/06/19
Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/10/19
Injection Volume: 1 (uL) Dilution Factor: 1
GPC Cleanup: N pH: Extraction: Sepf
CONCENTRATION UNITS:
Number TICs found: 1 (ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 1000314-35-9	3-Amino-4,5-dimethyl-2(5H)-f	5.716	9	J N
2.				
3. SVOCTIC	Total SVOC TICs		9	J N
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
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30.				

Sample Description: **DUP-103019 Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/31/2019 11:30
Collection Date/Time: 10/30/2019
SDG#: BMS82-12FD

ARCADIS U.S., Inc.
ELLE Sample #: GW 1188925
ELLE Group #: 2071978
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	20	0.7	1
11997	Acetonitrile	75-05-8	N.D.	100	16	1
11997	Benzene	71-43-2	N.D.	1	0.2	1
11997	Bromochloromethane	74-97-5	N.D.	5	0.2	1
11997	Bromodichloromethane	75-27-4	N.D.	1	0.2	1
11997	Bromoform	75-25-2	N.D.	4	1	1
11997	Bromomethane	74-83-9	N.D. J	1	0.3	1
11997	n-Butanol	71-36-3	N.D.	250	61	1
11997	2-Butanone	78-93-3	N.D.	10	0.3	1
11997	t-Butyl alcohol	75-65-0	N.D.	50	12	1
11997	n-Butylbenzene	104-51-8	N.D.	5	0.2	1
11997	sec-Butylbenzene	135-98-8	N.D.	5	0.2	1
11997	tert-Butylbenzene	98-06-6	N.D.	5	0.3	1
11997	Carbon Disulfide	75-15-0	N.D.	5	0.2	1
11997	Carbon Tetrachloride	56-23-5	N.D.	1	0.2	1
11997	Chlorobenzene	108-90-7	N.D.	1	0.2	1
11997	Chlorodifluoromethane[1]	75-45-6	N.D. J	5	2	1
11997	Chloroethane	75-00-3	N.D. J	1	0.2	1
11997	Chloroform	67-66-3	N.D.	1	0.2	1
11997	Chloromethane	74-87-3	N.D. J	1	0.2	1
11997	Cyclohexane	110-82-7	N.D.	5	1	1
11997	Cyclohexanone[1]	108-94-1	N.D.	100	25	1
11997	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	5	0.3	1
11997	Dibromochloromethane	124-48-1	N.D.	1	0.2	1
11997	1,2-Dibromoethane	106-93-4	N.D.	1	0.2	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	5	0.2	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	5	0.2	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	5	0.2	1
11997	Dichlorodifluoromethane	75-71-8	N.D. J	1	0.2	1
11997	1,1-Dichloroethane	75-34-3	N.D.	1	0.2	1
11997	1,2-Dichloroethane	107-06-2	N.D.	1	0.3	1
11997	1,1-Dichloroethene	75-35-4	N.D.	1	0.2	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	1	0.2	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	1	0.2	1
11997	1,2-Dichloropropane	78-87-5	N.D.	1	0.2	1
11997	cis-1,3-Dichloropropene	10061-01-5	N.D.	1	0.2	1
11997	trans-1,3-Dichloropropene	10061-02-6	N.D.	1	0.2	1
11997	1,4-Dioxane	123-91-1	N.D.	250	29	1
11997	Ethyl Acetate	141-78-6	N.D.	5	0.7	1
11997	Ethyl ether	60-29-7	N.D.	5	0.2	1
11997	Ethylbenzene	100-41-4	N.D.	1	0.4	1

*=This limit was used in the evaluation of the final result

Sample Description: **DUP-103019 Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/31/2019 11:30
Collection Date/Time: 10/30/2019
SDG#: BMS82-12FD

ARCADIS U.S., Inc.
ELLE Sample #: GW 1188925
ELLE Group #: 2071978
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Freon 113	76-13-1	N.D.	10	0.2	1
11997	n-Heptane[1]	142-82-5	N.D.	5	2	1
11997	n-Hexane[1]	110-54-3	N.D.	5	2	1
11997	2-Hexanone	591-78-6	N.D.	10	0.3	1
11997	Isobutyl Alcohol	78-83-1	N.D.	250	36	1
11997	Isopropylbenzene	98-82-8	N.D.	5	0.2	1
11997	p-Isopropyltoluene	99-87-6	N.D.	5	0.2	1
11997	Methyl Acetate	79-20-9	N.D.	5	0.2	1
11997	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	1	0.2	1
11997	4-Methyl-2-pentanone	108-10-1	N.D.	10	0.5	1
11997	Methylcyclohexane	108-87-2	N.D.	5	0.5	1
11997	Methylene Chloride	75-09-2	N.D.	1	0.3	1
11997	Naphthalene	91-20-3	N.D.	5	1	1
11997	2-Nitropropane	79-46-9	N.D.	10	0.8	1
11997	Styrene	100-42-5	N.D.	5	0.2	1
11997	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	1	0.2	1
11997	Tetrachloroethene	127-18-4	N.D.	1	0.2	1
11997	Tetrahydrofuran	109-99-9	N.D.	10	0.7	1
11997	Toluene	108-88-3	N.D.	1	0.2	1
11997	1,2,3-Trichlorobenzene	87-61-6	N.D.	5	0.4	1
11997	1,2,4-Trichlorobenzene	120-82-1	N.D.	5	0.3	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	1	0.3	1
11997	1,1,2-Trichloroethane	79-00-5	N.D.	1	0.2	1
11997	Trichloroethene	79-01-6	N.D.	1	0.2	1
11997	Trichlorofluoromethane	75-69-4	N.D. J	1	0.2	1
11997	1,2,4-Trimethylbenzene	95-63-6	N.D.	5	1	1
11997	1,3,5-Trimethylbenzene	108-67-8	N.D.	5	0.3	1
11997	Vinyl Chloride	75-01-4	N.D. J	1	0.2	1
11997	m+p-Xylene	179601-23-1	N.D.	5	1	1
11997	o-Xylene	95-47-6	N.D.	1	0.4	1
11997	Xylene (Total)	1330-20-7	N.D.	6	1	1

Project defined calibration criteria are not met. The calibration is compliant with the method defined criteria.

A Report Limit Verification (RLV) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The RLV standard shows adequate sensitivity at or below the reporting limit.

The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the TNI/DoD Standards. The following analytes are accepted based on this

*=This limit was used in the evaluation of the final result

Sample Description: **DUP-103019 Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/31/2019 11:30
Collection Date/Time: 10/30/2019
SDG#: BMS82-12FD

ARCADIS U.S., Inc.
ELLE Sample #: GW 1188925
ELLE Group #: 2071978
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
	allowance: chloromethane, bromomethane and chloroethane.					
00882	**VOA Interp. Library Search-10**					
	The results from the volatile library search are listed on the attached FORM 1 - VOA-TIC. The qualifiers appearing in the "Q" column are defined at the end of the report.					
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	Acenaphthene	83-32-9	N.D.	0.51	0.10	1
14241	Acenaphthylene	208-96-8	N.D.	0.51	0.10	1
14241	Acetophenone	98-86-2	N.D.	10	4.1	1
14241	Aniline	62-53-3	N.D.	10	3.0	1
14241	Anthracene	120-12-7	N.D.	0.51	0.10	1
14241	Atrazine	1912-24-9	N.D.	5.1	2.0	1
14241	Benzaldehyde	100-52-7	N.D.	10	3.0	1
14241	Benzo(a)anthracene	56-55-3	N.D.	0.51	0.10	1
14241	Benzo(a)pyrene	50-32-8	N.D.	0.51	0.10	1
14241	Benzo(b)fluoranthene	205-99-2	N.D.	0.51	0.10	1
14241	Benzo(g,h,i)perylene	191-24-2	N.D.	0.51	0.10	1
14241	Benzo(k)fluoranthene	207-08-9	N.D.	0.51	0.10	1
14241	Benzyl alcohol	100-51-6	N.D.	30	10	1
14241	1,1'-Biphenyl	92-52-4	N.D.	10	3.0	1
14241	4-Bromophenyl-phenylether	101-55-3	N.D.	2.0	0.51	1
14241	Butylbenzylphthalate	85-68-7	N.D.	5.1	2.0	1
14241	Di-n-butylphthalate	84-74-2	N.D.	5.1	2.0	1
14241	Caprolactam	105-60-2	N.D.	11	5.1	1
14241	Carbazole	86-74-8	N.D.	2.0	0.51	1
14241	4-Chloro-3-methylphenol	59-50-7	N.D.	2.0	0.51	1
14241	4-Chloroaniline	106-47-8	N.D.	10	4.1	1
14241	bis(2-Chloroethoxy)methane	111-91-1	N.D.	2.0	0.51	1
14241	bis(2-Chloroethyl)ether	111-44-4	N.D.	2.0	0.51	1
14241	bis(2-Chloroisopropyl)ether[1]	39638-32-9	N.D.	2.0	0.51	1
	Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.					
14241	2-Chloronaphthalene	91-58-7	N.D.	1.0	0.41	1
14241	2-Chlorophenol	95-57-8	N.D.	2.0	0.51	1
14241	4-Chlorophenyl-phenylether	7005-72-3	N.D.	2.0	0.51	1
14241	Chrysene	218-01-9	N.D.	0.51	0.10	1
14241	Dibenz(a,h)anthracene	53-70-3	N.D.	0.51	0.10	1
14241	Dibenzofuran	132-64-9	N.D.	2.0	0.51	1
14241	3,3'-Dichlorobenzidine	91-94-1	N.D.	10	3.0	1
14241	2,4-Dichlorophenol	120-83-2	N.D.	2.0	0.51	1
14241	Dicyclohexylamine[1]	101-83-7	N.D.	10	10	1

*=This limit was used in the evaluation of the final result

Sample Description: **DUP-103019 Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/31/2019 11:30
Collection Date/Time: 10/30/2019
SDG#: BMS82-12FD

ARCADIS U.S., Inc.
ELLE Sample #: GW 1188925
ELLE Group #: 2071978
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	Diethylphthalate	84-66-2	N.D.	5.1	2.0	1
14241	N,N-Dimethylaniline[1]	121-69-7	N.D.	1.0	0.51	1
14241	2,4-Dimethylphenol	105-67-9	N.D.	10	3.0	1
14241	Dimethylphthalate	131-11-3	N.D.	5.1	2.0	1
14241	4,6-Dinitro-2-methylphenol	534-52-1	N.D.	21	8.1	1
14241	2,4-Dinitrophenol	51-28-5	N.D.	30	14	1
14241	2,4-Dinitrotoluene	121-14-2	N.D.	5.1	1.0	1
14241	2,6-Dinitrotoluene	606-20-2	N.D.	2.0	0.51	1
14241	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	11	5.1	1
14241	Fluoranthene	206-44-0	N.D.	0.51	0.10	1
14241	Fluorene	86-73-7	N.D.	0.51	0.10	1
14241	Hexachlorobenzene	118-74-1	N.D.	0.51	0.10	1
14241	Hexachlorobutadiene	87-68-3	N.D.	2.0	0.51	1
14241	Hexachlorocyclopentadiene	77-47-4	N.D.	11	5.1	1
14241	Hexachloroethane	67-72-1	N.D.	5.1	1.0	1
14241	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.51	0.10	1
14241	Isophorone	78-59-1	N.D.	2.0	0.51	1
14241	2-Methylnaphthalene	91-57-6	N.D.	0.51	0.10	1
14241	2-Methylphenol	95-48-7	N.D.	2.0	0.51	1
14241	4-Methylphenol	65794-96-9	N.D.	2.0	0.51	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
14241	Naphthalene	91-20-3	N.D.	0.51	0.10	1
14241	2-Nitroaniline	88-74-4	N.D.	7.1	2.0	1
14241	3-Nitroaniline	99-09-2	N.D.	7.1	3.0	1
14241	4-Nitroaniline	100-01-6	N.D.	3.0	0.91	1
14241	Nitrobenzene	98-95-3	N.D.	2.0	0.51	1
14241	2-Nitrophenol	88-75-5	N.D.	10	3.0	1
14241	4-Nitrophenol	100-02-7	N.D.	30	10	1
14241	N-Nitroso-di-n-propylamine	621-64-7	N.D.	3.0	0.71	1
14241	N-Nitrosodiphenylamine	86-30-6	N.D.	3.0	0.71	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.					
14241	Di-n-octylphthalate	117-84-0	N.D.	11	5.1	1
14241	Pentachlorophenol	87-86-5	N.D.	5.1	1.0	1
14241	Phenanthrene	85-01-8	N.D.	0.51	0.10	1
14241	Phenol	108-95-2	N.D.	2.0	0.51	1
14241	Pyrene	129-00-0	N.D.	0.51	0.10	1
14241	Pyridine	110-86-1	N.D.	5.1	2.0	1
14241	1,2,4,5-Tetrachlorobenzene	95-94-3	N.D.	2.0	0.51	1

*=This limit was used in the evaluation of the final result

Sample Description: **DUP-103019 Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/31/2019 11:30
Collection Date/Time: 10/30/2019
SDG#: BMS82-12FD

ARCADIS U.S., Inc.
ELLE Sample #: GW 1188925
ELLE Group #: 2071978
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	2,3,4,6-Tetrachlorophenol	58-90-2	N.D.	10	4.1	1
14241	2,4,5-Trichlorophenol	95-95-4	N.D.	2.0	0.51	1
14241	2,4,6-Trichlorophenol	88-06-2	N.D.	2.0	0.51	1
14241	Triethylamine[1]	121-44-8	N.D.	10	10	1

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. Since the recovery is high and the target analyte(s) was not detected in the sample, the data is reported.

00886 SVOA TIC Interpretive(25)

The results from the semivolatile library search are listed on the attached FORM 1 - SV-TIC. The qualifiers appearing in the "Q" column are defined at the end of the report.

Aldehydes & Ketones	**SW-846 8315A**		**ug/l**	**ug/l**	**ug/l**	
13022	Acetaldehyde[1]	75-07-0	N.D. J	60	35	1
13022	Formaldehyde	50-00-0	37 J	50	20	1

The response for a target analyte(s) in the initial calibration verification standard is outside the QC acceptance limits. The client was contacted and the data reported.
The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary.

GC Miscellaneous	**SW-846 8015D Rev.4, June 2003**		**ug/l**	**ug/l**	**ug/l**	
10603	Ethanol	64-17-5	N.D. D2	1,000	150	1
12926	Ethylene glycol[1]	107-21-1	~~N.D.~~ R	10,000	5,000	1
10603	Isopropanol[1]	67-63-0	N.D. D2	1,000	110	1
10603	Methanol	67-56-1	N.D. D2	1,000	220	1
12926	Propylene glycol[1]	57-55-6	~~N.D.~~ R	10,000	2,000	1

The response for tetramethylene glycol in the continuing calibration verification standard is outside the QC acceptance limits low. The following action was taken:
The analysis was repeated and the continuing calibration verification standard bracketing the sample on the second trial is also outside the acceptance limits. This effect is attributed to the sample matrix and the data is reported.

Sample Comments

State of New York Certification No. 10670

[1] = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

*=This limit was used in the evaluation of the final result

Sample Description: **DUP-103019 Grab Groundwater BMS Syracuse**

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/31/2019 11:30
Collection Date/Time: 10/30/2019
SDG#: BMS82-12FD

ARCADIS U.S., Inc.
ELLE Sample #: GW 1188925
ELLE Group #: 2071978
Matrix: Groundwater

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	Y193131AA	11/09/2019 16:56	Linda C Pape	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	Y193131AA	11/09/2019 16:55	Linda C Pape	1
14241	Semi-annual Groundwater BMS	SW-846 8270D	1	19309WAJ026	11/10/2019 00:37	Holly B Ziegler	1
11010	8270D BNA Extraction	SW-846 3510C	1	19309WAJ026	11/06/2019 02:00	Mathias Okpo	1
13022	Short List Aldehydes- W 8315A	SW-846 8315A	1	193040018A	11/01/2019 19:53	Jessica L Miller	1
01013	Formaldehyde Extraction	SW-846 8315A	1	193040018A	11/01/2019 08:38	Alison Moll	1
10603	Alcohols in Water	SW-846 8015D Rev.4, June 2003	1	193080008A	11/05/2019 03:42	Johanna C Kennedy	1
12926	Glycols in Water by 8015C/D	SW-846 8015D Rev.4, June 2003	1	193080028A	11/06/2019 02:41	Donald Brown	1

*=This limit was used in the evaluation of the final result

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
S8212

Lab Name: Lancaster Laboratories Contract:_____
Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____
Matrix: (soil/water) WATER Lab Sample ID: 1188925
Sample wt/vol: 5.0 (g/mL)mL Lab File ID:HP09355.i/19nov09a.b/yn09s15.d
Level: (low/med) LOW Date Received: 10/31/19
% Moisture: not dec. Date Analyzed: 11/09/19
Column: (pack/cap) CAP Dilution Factor: 1.0
CONCENTRATION UNITS:
Number TICs found: 0 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	VOCTIC	Total VOC TICs		0	U
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
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page 1 of 1

FORM I VOA-TIC

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
S8212

Lab Name: Lancaster Laboratories Contract:
Lab Code: LANCAS Case No.: SAS No.: SDG No.:
Matrix: (soil/water) WATER Lab Sample ID: 1188925
Sample wt/vol: 246 (g/mL) mL Lab File ID: lk0460.d
Level: (low/med) LOW Date Received: 10/31/19
% Moisture: Decanted: (Y/N) Date Extracted: 11/06/19
Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/10/19
Injection Volume: 1 (uL) Dilution Factor: 1
GPC Cleanup: N pH: Extraction: Sepf
CONCENTRATION UNITS:
Number TICs found: 2 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		Unknown	3.218	4	J N
2.		Unknown	19.232	4	J
3.					
4.	SVOCTIC	Total SVOC TICs		9	J
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
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page 1 of 1

FORM I SV-1

Syracuse
#225

Environmental Analysis Request/Chain of Custody

eurofins | Lancaster Laboratories Environmental

Acct. # 3074 Group # 2072206 Sample # 1190178-83

Client: Arcadis			
Project Name/#: BMS Syracuse	Site ID #:		
Project Manager: Bill McCune	P.O. #: 30033396		
Sampler: Austin George, Josh Miller, Evan Green	PWSID #:		
Phone #: 315 671 6712	Quote #:		
State where samples were collected: NY	For Compliance: Yes ☐ No ☐		

Matrix: Soil ☐ Sediment ☐ Tissue ☐ | Water: Potable ☐ Ground ☒ NPDES ☐ Surface ☐ | Other: ☐ | Total # of Containers

Analyses Requested — Preservation and Filtration Codes

Sample Identification	Collection Date	Collection Time	Grab	Composite	Total # of Containers	VOCs 8260C	SVOCs 8270D	Glycols 8015C	Alcohols	Aldehydes 8315A			Remarks
						H			H				
BDA-1RX	10/31/19	0922	X		10	X	X	X	X	X			
BDA-11WT	10/31/19	1005	X		5	X	X						
BDA-13WT	10/31/19	1027	X		10	X	X	X	X	X			
BDA-8T	10/31/19	1105	X		10	X	X	X	X	X			
BDA-4UT	10/31/19	1110	X		5	X	X						
TRIP BLANK	10/23/19	—	X		4	X		X	X				

Re: 10.31.19

For Lab Use Only
SF #: _____
SCR #: _____

Preservation Codes
H = HCl | T = Thiosulfate
N = HNO_3 | B = NaOH
S = H_2SO_4 | P = H_3PO_4
F = Field Filtered | O = Other

Turnaround Time Requested (TAT) (please check): Standard ☑ Rush ☐
(Rush TAT is subject to laboratory approval and surcharges.)

Date results are needed:

Rush results requested by (please check): E-Mail ☐ Phone ☐

E-mail Address: William.McCune@arcadis.com

Phone: 315 671 6712

Data Package Options (please check if required)

Type I (Validation/non-CLP)	☐	MA MCP	☐
Type III (Reduced non-CLP)	☐	CT RCP	☐
Type VI (Raw Data Only)	☐	TX TRRP-13	☐
NJ DKQP	☐	NYSDEC Category	☐ A or ☒ B

EDD Required? Yes ☑ No ☐ If yes, format:

Relinquished by:	Date	Time	Received by:	Date	Time
Josh Sinn	10/31/19	1430	Reg English FACyn	10/31/19	1430
Relinquished by:	Date	Time		Date	Time
Reg English	10/31/19	1900			
Relinquished by:	Date	Time		Date	Time
Relinquished by:	Date	Time		Date	Time
Relinquished by:	Date	Time	Chul Webb	Date	Time
				11/1/19	12:06

Relinquished by Commercial Carrier:

UPS _____ FedEx X Other _____

eurofins | Lancaster Laboratories Environmental

Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
P^	Concentration difference between the primary and confirmation column > 40%. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

Sample Description: **BDA-1RX Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 11/01/2019 12:06
Collection Date/Time: 10/31/2019 09:22
SDG#: BMS82-13

ARCADIS U.S., Inc.
ELLE Sample #: GW 1190178
ELLE Group #: 2072206
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	0.9 J	20	0.7	1
11997	Acetonitrile	75-05-8	N.D.	100	16	1
11997	Benzene	71-43-2	N.D.	1	0.2	1
11997	Bromochloromethane	74-97-5	N.D.	5	0.2	1
11997	Bromodichloromethane	75-27-4	8	1	0.2	1
11997	Bromoform	75-25-2	N.D.	4	1	1
11997	Bromomethane	74-83-9	N.D. J	1	0.3	1
11997	n-Butanol	71-36-3	N.D.	250	61	1
11997	2-Butanone	78-93-3	N.D.	10	0.3	1
11997	t-Butyl alcohol	75-65-0	N.D.	50	12	1
11997	n-Butylbenzene	104-51-8	N.D.	5	0.2	1
11997	sec-Butylbenzene	135-98-8	N.D.	5	0.2	1
11997	tert-Butylbenzene	98-06-6	N.D.	5	0.3	1
11997	Carbon Disulfide	75-15-0	N.D.	5	0.2	1
11997	Carbon Tetrachloride	56-23-5	N.D.	1	0.2	1
11997	Chlorobenzene	108-90-7	N.D.	1	0.2	1
11997	Chlorodifluoromethane[1]	75-45-6	N.D. J	5	2	1
11997	Chloroethane	75-00-3	N.D. J	1	0.2	1
11997	Chloroform	67-66-3	67	1	0.2	1
11997	Chloromethane	74-87-3	N.D. J	1	0.2	1
11997	Cyclohexane	110-82-7	N.D.	5	1	1
11997	Cyclohexanone[1]	108-94-1	N.D.	100	25	1
11997	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	5	0.3	1
11997	Dibromochloromethane	124-48-1	2	1	0.2	1
11997	1,2-Dibromoethane	106-93-4	N.D.	1	0.2	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	5	0.2	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	5	0.2	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	5	0.2	1
11997	Dichlorodifluoromethane	75-71-8	N.D. J	1	0.2	1
11997	1,1-Dichloroethane	75-34-3	N.D.	1	0.2	1
11997	1,2-Dichloroethane	107-06-2	N.D.	1	0.3	1
11997	1,1-Dichloroethene	75-35-4	N.D.	1	0.2	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	1	0.2	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	1	0.2	1
11997	1,2-Dichloropropane	78-87-5	N.D.	1	0.2	1
11997	cis-1,3-Dichloropropene	10061-01-5	N.D.	1	0.2	1
11997	trans-1,3-Dichloropropene	10061-02-6	N.D.	1	0.2	1
11997	1,4-Dioxane	123-91-1	N.D.	250	29	1
11997	Ethyl Acetate	141-78-6	N.D.	5	0.7	1
11997	Ethyl ether	60-29-7	N.D.	5	0.2	1
11997	Ethylbenzene	100-41-4	N.D.	1	0.4	1

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-1RX Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 11/01/2019 12:06
Collection Date/Time: 10/31/2019 09:22
SDG#: BMS82-13

ARCADIS U.S., Inc.
ELLE Sample #: GW 1190178
ELLE Group #: 2072206
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Freon 113	76-13-1	N.D.	10	0.2	1
11997	n-Heptane[1]	142-82-5	N.D.	5	2	1
11997	n-Hexane[1]	110-54-3	N.D.	5	2	1
11997	2-Hexanone	591-78-6	N.D.	10	0.3	1
11997	Isobutyl Alcohol	78-83-1	N.D.	250	36	1
11997	Isopropylbenzene	98-82-8	N.D.	5	0.2	1
11997	p-Isopropyltoluene	99-87-6	N.D.	5	0.2	1
11997	Methyl Acetate	79-20-9	N.D.	5	0.2	1
11997	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	1	0.2	1
11997	4-Methyl-2-pentanone	108-10-1	N.D.	10	0.5	1
11997	Methylcyclohexane	108-87-2	N.D.	5	0.5	1
11997	Methylene Chloride	75-09-2	0.8 J	1	0.3	1
11997	Naphthalene	91-20-3	N.D.	5	1	1
11997	2-Nitropropane	79-46-9	N.D.	10	0.8	1
11997	Styrene	100-42-5	N.D.	5	0.2	1
11997	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	1	0.2	1
11997	Tetrachloroethene	127-18-4	N.D.	1	0.2	1
11997	Tetrahydrofuran	109-99-9	N.D.	10	0.7	1
11997	Toluene	108-88-3	N.D.	1	0.2	1
11997	1,2,3-Trichlorobenzene	87-61-6	N.D.	5	0.4	1
11997	1,2,4-Trichlorobenzene	120-82-1	N.D.	5	0.3	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	1	0.3	1
11997	1,1,2-Trichloroethane	79-00-5	N.D.	1	0.2	1
11997	Trichloroethene	79-01-6	N.D.	1	0.2	1
11997	Trichlorofluoromethane	75-69-4	N.D. J	1	0.2	1
11997	1,2,4-Trimethylbenzene	95-63-6	N.D.	5	1	1
11997	1,3,5-Trimethylbenzene	108-67-8	N.D.	5	0.3	1
11997	Vinyl Chloride	75-01-4	N.D. J	1	0.2	1
11997	m+p-Xylene	179601-23-1	N.D.	5	1	1
11997	o-Xylene	95-47-6	N.D.	1	0.4	1
11997	Xylene (Total)	1330-20-7	N.D.	6	1	1

Project defined calibration criteria are not met. The calibration is compliant with the method defined criteria.

A Report Limit Verification (RLV) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The RLV standard shows adequate sensitivity at or below the reporting limit.

The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the TNI/DoD Standards. The following analytes are accepted based on this

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-1RX Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 11/01/2019 12:06
Collection Date/Time: 10/31/2019 09:22
SDG#: BMS82-13

ARCADIS U.S., Inc.
ELLE Sample #: GW 1190178
ELLE Group #: 2072206
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
	allowance: chloromethane, bromomethane and chloroethane.					
00882	**VOA Interp. Library Search-10**					
	The results from the volatile library search are listed on the attached FORM 1 - VOA-TIC. The qualifiers appearing in the "Q" column are defined at the end of the report.					
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	Acenaphthene	83-32-9	N.D.	0.51	0.10	1
14241	Acenaphthylene	208-96-8	N.D.	0.51	0.10	1
14241	Acetophenone	98-86-2	N.D.	10	4.0	1
14241	Aniline	62-53-3	N.D.	10	3.0	1
14241	Anthracene	120-12-7	N.D.	0.51	0.10	1
14241	Atrazine	1912-24-9	N.D.	5.1	2.0	1
14241	Benzaldehyde	100-52-7	N.D.	10	3.0	1
14241	Benzo(a)anthracene	56-55-3	N.D.	0.51	0.10	1
14241	Benzo(a)pyrene	50-32-8	N.D.	0.51	0.10	1
14241	Benzo(b)fluoranthene	205-99-2	N.D.	0.51	0.10	1
14241	Benzo(g,h,i)perylene	191-24-2	N.D.	0.51	0.10	1
14241	Benzo(k)fluoranthene	207-08-9	N.D.	0.51	0.10	1
14241	Benzyl alcohol	100-51-6	N.D.	30	10	1
14241	1,1'-Biphenyl	92-52-4	N.D.	10	3.0	1
14241	4-Bromophenyl-phenylether	101-55-3	N.D.	2.0	0.51	1
14241	Butylbenzylphthalate	85-68-7	N.D.	5.1	2.0	1
14241	Di-n-butylphthalate	84-74-2	N.D.	5.1	2.0	1
14241	Caprolactam	105-60-2	N.D.	11	5.1	1
14241	Carbazole	86-74-8	N.D.	2.0	0.51	1
14241	4-Chloro-3-methylphenol	59-50-7	N.D.	2.0	0.51	1
14241	4-Chloroaniline	106-47-8	N.D.	10	4.0	1
14241	bis(2-Chloroethoxy)methane	111-91-1	N.D.	2.0	0.51	1
14241	bis(2-Chloroethyl)ether	111-44-4	N.D.	2.0	0.51	1
14241	bis(2-Chloroisopropyl)ether[1]	39638-32-9	N.D.	2.0	0.51	1
	Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.					
14241	2-Chloronaphthalene	91-58-7	N.D.	1.0	0.40	1
14241	2-Chlorophenol	95-57-8	N.D.	2.0	0.51	1
14241	4-Chlorophenyl-phenylether	7005-72-3	N.D.	2.0	0.51	1
14241	Chrysene	218-01-9	N.D.	0.51	0.10	1
14241	Dibenz(a,h)anthracene	53-70-3	N.D.	0.51	0.10	1
14241	Dibenzofuran	132-64-9	N.D.	2.0	0.51	1
14241	3,3'-Dichlorobenzidine	91-94-1	N.D.	10	3.0	1
14241	2,4-Dichlorophenol	120-83-2	N.D.	2.0	0.51	1
14241	Dicyclohexylamine[1]	101-83-7	N.D.	10	10	1

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-1RX Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 11/01/2019 12:06
Collection Date/Time: 10/31/2019 09:22
SDG#: BMS82-13

ARCADIS U.S., Inc.
ELLE Sample #: GW 1190178
ELLE Group #: 2072206
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	Diethylphthalate	84-66-2	N.D.	5.1	2.0	1
14241	N,N-Dimethylaniline[1]	121-69-7	0.53 J	1.0	0.51	1
14241	2,4-Dimethylphenol	105-67-9	N.D.	10	3.0	1
14241	Dimethylphthalate	131-11-3	N.D.	5.1	2.0	1
14241	4,6-Dinitro-2-methylphenol	534-52-1	N.D.	21	8.1	1
14241	2,4-Dinitrophenol	51-28-5	N.D.	30	14	1
14241	2,4-Dinitrotoluene	121-14-2	N.D.	5.1	1.0	1
14241	2,6-Dinitrotoluene	606-20-2	N.D.	2.0	0.51	1
14241	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	11	5.1	1
14241	Fluoranthene	206-44-0	N.D.	0.51	0.10	1
14241	Fluorene	86-73-7	N.D.	0.51	0.10	1
14241	Hexachlorobenzene	118-74-1	N.D.	0.51	0.10	1
14241	Hexachlorobutadiene	87-68-3	N.D.	2.0	0.51	1
14241	Hexachlorocyclopentadiene	77-47-4	N.D.	11	5.1	1
14241	Hexachloroethane	67-72-1	N.D.	5.1	1.0	1
14241	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.51	0.10	1
14241	Isophorone	78-59-1	N.D.	2.0	0.51	1
14241	2-Methylnaphthalene	91-57-6	N.D.	0.51	0.10	1
14241	2-Methylphenol	95-48-7	N.D.	2.0	0.51	1
14241	4-Methylphenol	65794-96-9	N.D.	2.0	0.51	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
14241	Naphthalene	91-20-3	N.D.	0.51	0.10	1
14241	2-Nitroaniline	88-74-4	N.D.	7.1	2.0	1
14241	3-Nitroaniline	99-09-2	N.D.	7.1	3.0	1
14241	4-Nitroaniline	100-01-6	N.D.	3.0	0.91	1
14241	Nitrobenzene	98-95-3	N.D.	2.0	0.51	1
14241	2-Nitrophenol	88-75-5	N.D.	10	3.0	1
14241	4-Nitrophenol	100-02-7	N.D.	30	10	1
14241	N-Nitroso-di-n-propylamine	621-64-7	N.D.	3.0	0.71	1
14241	N-Nitrosodiphenylamine	86-30-6	N.D.	3.0	0.71	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.					
14241	Di-n-octylphthalate	117-84-0	N.D.	11	5.1	1
14241	Pentachlorophenol	87-86-5	N.D.	5.1	1.0	1
14241	Phenanthrene	85-01-8	N.D.	0.51	0.10	1
14241	Phenol	108-95-2	1.5 J	2.0	0.51	1
14241	Pyrene	129-00-0	N.D.	0.51	0.10	1
14241	Pyridine	110-86-1	N.D.	5.1	2.0	1
14241	1,2,4,5-Tetrachlorobenzene	95-94-3	N.D.	2.0	0.51	1

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-1RX Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 11/01/2019 12:06
Collection Date/Time: 10/31/2019 09:22
SDG#: BMS82-13

ARCADIS U.S., Inc.
ELLE Sample #: GW 1190178
ELLE Group #: 2072206
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	2,3,4,6-Tetrachlorophenol	58-90-2	N.D.	10	4.0	1
14241	2,4,5-Trichlorophenol	95-95-4	N.D.	2.0	0.51	1
14241	2,4,6-Trichlorophenol	88-06-2	N.D.	2.0	0.51	1
14241	Triethylamine[1]	121-44-8	N.D.	10	10	1

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. Since the recovery is high and the target analyte(s) was not detected in the sample, the data is reported.

The recovery for the method blank surrogate(s) is outside the QC acceptance limits as noted on the QC Summary. The following action was taken:
The sample was re-extracted outside the method required holding time and the method blank surrogate recoveries are compliant.
All results are reported from the first trial.

00886 SVOA TIC Interpretive(25)

The results from the semivolatile library search are listed on the attached FORM 1 - SV-TIC. The qualifiers appearing in the "Q" column are defined at the end of the report.

Aldehydes & Ketones	**SW-846 8315A**		**ug/l**	**ug/l**	**ug/l**	
13022	Acetaldehyde[1]	75-07-0	N.D. J	60	35	1
13022	Formaldehyde	50-00-0	N.D.	50	20	1

The response for a target analyte(s) in the initial calibration verification standard is outside the QC acceptance limits.

GC Miscellaneous	**SW-846 8015D Rev.4, June 2003**		**ug/l**	**ug/l**	**ug/l**	
10603	Ethanol	64-17-5	N.D. D2	1,000	150	1
12926	Ethylene glycol[1]	107-21-1	N.D.	10,000	5,000	1
10603	Isopropanol[1]	67-63-0	N.D. D2	1,000	110	1
10603	Methanol	67-56-1	N.D. D2	1,000	220	1
12926	Propylene glycol[1]	57-55-6	N.D.	10,000	2,000	1

The response for tetramethylene glycol in the continuing calibration verification standard is outside the QC acceptance limits low. The following action was taken:
The analysis was repeated and the continuing calibration verification standard bracketing the sample on the second trial is also outside the acceptance limits. This effect is attributed to the sample matrix and the data is reported.

Sample Comments

State of New York Certification No. 10670

[1] = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-1RX Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 11/01/2019 12:06
Collection Date/Time: 10/31/2019 09:22
SDG#: BMS82-13

ARCADIS U.S., Inc.
ELLE Sample #: GW 1190178
ELLE Group #: 2072206
Matrix: Groundwater

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	Y193131AA	11/09/2019 17:18	Linda C Pape	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	Y193131AA	11/09/2019 17:17	Linda C Pape	1
14241	Semi-annual Groundwater BMS	SW-846 8270D	1	19310WAD026	11/10/2019 01:06	Holly B Ziegler	1
11010	8270D BNA Extraction	SW-846 3510C	1	19310WAD026	11/06/2019 17:48	Laura Duquette	1
13022	Short List Aldehydes- W 8315A	SW-846 8315A	1	193050016A	11/04/2019 17:39	Jessica L Miller	1
01013	Formaldehyde Extraction	SW-846 8315A	1	193050016A	11/02/2019 07:32	Alison Moll	1
10603	Alcohols in Water	SW-846 8015D Rev.4, June 2003	1	193080008A	11/05/2019 03:58	Johanna C Kennedy	1
12926	Glycols in Water by 8015C/D	SW-846 8015D Rev.4, June 2003	1	193100032A	11/07/2019 00:01	Donald Brown	1

*=This limit was used in the evaluation of the final result

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
S8214

Lab Name: Lancaster Laboratories Contract:_____
Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____
Matrix: (soil/water) WATER Lab Sample ID: 1190178
Sample wt/vol: 5.0 (g/mL)mL Lab File ID:HP09355.i/19nov09a.b/yn09s16.d
Level: (low/med) LOW Date Received: 11/01/19
% Moisture: not dec. Date Analyzed: 11/09/19
Column: (pack/cap) CAP Dilution Factor: 1.0
CONCENTRATION UNITS:
Number TICs found: 0 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	VOCTIC	Total VOC TICs		0	U
2.					
3.					
4.					
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28.					
29.					
30.					

page 1 of 1

FORM I VOA-TIC

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
S8214

Lab Name: Lancaster Laboratories Contract:
Lab Code: LANCAS Case No.: SAS No.: SDG No.:
Matrix: (soil/water) WATER Lab Sample ID: 1190178
Sample wt/vol: 247 (g/mL) mL Lab File ID: lk0461.d
Level: (low/med) LOW Date Received: 11/01/19
% Moisture: Decanted: (Y/N) Date Extracted: 11/06/19
Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/10/19
Injection Volume: 1 (uL) Dilution Factor: 1
GPC Cleanup: N pH: Extraction: Sepf
CONCENTRATION UNITS:
Number TICs found: 3 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		Unknown	17.660	6	J N
2.	791-28-6	Triphenylphosphine oxide	18.066	4	J
3.	85-60-9	Phenol, 4,4'-butylidenebis[2	18.847	14	J
4.					
5.	SVOCTIC	Total SVOC TICs		25	J
6.					
7.					
8.					
9.					
10.					
11.					
12.					
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14.					
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27.					
28.					
29.					
30.					

Sample Description: **BDA-11WT Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 11/01/2019 12:06
Collection Date/Time: 10/31/2019 10:05
SDG#: BMS82-14

ARCADIS U.S., Inc.
ELLE Sample #: GW 1190179
ELLE Group #: 2072206
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	660 J	400	14	20
11997	Acetonitrile	75-05-8	N.D.	2,000	320	20
11997	Benzene	71-43-2	9 J	20	4	20
11997	Bromochloromethane	74-97-5	N.D.	100	4	20
11997	Bromodichloromethane	75-27-4	N.D.	20	4	20
11997	Bromoform	75-25-2	N.D.	80	20	20
11997	Bromomethane	74-83-9	N.D. J	20	6	20
11997	n-Butanol	71-36-3	N.D.	5,000	1,200	20
11997	2-Butanone	78-93-3	51 J	200	6	20
11997	t-Butyl alcohol	75-65-0	N.D.	1,000	240	20
11997	n-Butylbenzene	104-51-8	N.D.	100	4	20
11997	sec-Butylbenzene	135-98-8	N.D.	100	4	20
11997	tert-Butylbenzene	98-06-6	N.D.	100	6	20
11997	Carbon Disulfide	75-15-0	N.D.	100	4	20
11997	Carbon Tetrachloride	56-23-5	N.D.	20	4	20
11997	Chlorobenzene	108-90-7	N.D.	20	4	20
11997	Chlorodifluoromethane[1]	75-45-6	N.D. J	100	40	20
11997	Chloroethane	75-00-3	N.D. J	20	4	20
11997	Chloroform	67-66-3	N.D.	20	4	20
11997	Chloromethane	74-87-3	N.D. J	20	4	20
11997	Cyclohexane	110-82-7	N.D.	100	20	20
11997	Cyclohexanone[1]	108-94-1	N.D.	2,000	500	20
11997	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	100	6	20
11997	Dibromochloromethane	124-48-1	N.D.	20	4	20
11997	1,2-Dibromoethane	106-93-4	N.D.	20	4	20
11997	1,2-Dichlorobenzene	95-50-1	4 J	100	4	20
11997	1,3-Dichlorobenzene	541-73-1	N.D.	100	4	20
11997	1,4-Dichlorobenzene	106-46-7	N.D.	100	4	20
11997	Dichlorodifluoromethane	75-71-8	N.D. J	20	4	20
11997	1,1-Dichloroethane	75-34-3	N.D.	20	4	20
11997	1,2-Dichloroethane	107-06-2	N.D.	20	6	20
11997	1,1-Dichloroethene	75-35-4	N.D.	20	4	20
11997	cis-1,2-Dichloroethene	156-59-2	17 J	20	4	20
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	20	4	20
11997	1,2-Dichloropropane	78-87-5	N.D.	20	4	20
11997	cis-1,3-Dichloropropene	10061-01-5	N.D.	20	4	20
11997	trans-1,3-Dichloropropene	10061-02-6	N.D.	20	4	20
11997	1,4-Dioxane	123-91-1	N.D.	5,000	580	20
11997	Ethyl Acetate	141-78-6	N.D.	100	14	20
11997	Ethyl ether	60-29-7	N.D.	100	4	20
11997	Ethylbenzene	100-41-4	N.D.	20	8	20

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-11WT Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 11/01/2019 12:06
Collection Date/Time: 10/31/2019 10:05
SDG#: BMS82-14

ARCADIS U.S., Inc.
ELLE Sample #: GW 1190179
ELLE Group #: 2072206
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result		Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**		**ug/l**	**ug/l**	
11997	Freon 113	76-13-1	N.D.		200	4	20
11997	n-Heptane[1]	142-82-5	N.D.		100	40	20
11997	n-Hexane[1]	110-54-3	N.D.		100	40	20
11997	2-Hexanone	591-78-6	N.D.		200	6	20
11997	Isobutyl Alcohol	78-83-1	1,400	J	5,000	720	20
11997	Isopropylbenzene	98-82-8	N.D.		100	4	20
11997	p-Isopropyltoluene	99-87-6	N.D.		100	4	20
11997	Methyl Acetate	79-20-9	25	J	100	4	20
11997	Methyl Tertiary Butyl Ether	1634-04-4	N.D.		20	4	20
11997	4-Methyl-2-pentanone	108-10-1	650		200	10	20
11997	Methylcyclohexane	108-87-2	N.D.		100	10	20
11997	Methylene Chloride	75-09-2	21,000	D	200	60	200
11997	Naphthalene	91-20-3	N.D.		100	20	20
11997	2-Nitropropane	79-46-9	N.D.		200	16	20
11997	Styrene	100-42-5	N.D.		100	4	20
11997	1,1,2,2-Tetrachloroethane	79-34-5	N.D.		20	4	20
11997	Tetrachloroethene	127-18-4	N.D.		20	4	20
11997	Tetrahydrofuran	109-99-9	N.D.		200	14	20
11997	Toluene	108-88-3	48		20	4	20
11997	1,2,3-Trichlorobenzene	87-61-6	N.D.		100	8	20
11997	1,2,4-Trichlorobenzene	120-82-1	N.D.		100	6	20
11997	1,1,1-Trichloroethane	71-55-6	N.D.		20	6	20
11997	1,1,2-Trichloroethane	79-00-5	N.D.		20	4	20
11997	Trichloroethene	79-01-6	N.D.		20	4	20
11997	Trichlorofluoromethane	75-69-4	N.D.	J	20	4	20
11997	1,2,4-Trimethylbenzene	95-63-6	N.D.		100	20	20
11997	1,3,5-Trimethylbenzene	108-67-8	N.D.		100	6	20
11997	Vinyl Chloride	75-01-4	N.D.	J	20	4	20
11997	m+p-Xylene	179601-23-1	N.D.		100	20	20
11997	o-Xylene	95-47-6	N.D.		20	8	20
11997	Xylene (Total)	1330-20-7	N.D.		120	28	20

Project defined calibration criteria are not met. The calibration is compliant with the method defined criteria.

A Report Limit Verification (RLV) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The RLV standard shows adequate sensitivity at or below the reporting limit.

The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the TNI/DoD Standards. The following analytes are accepted based on this

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-11WT Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 11/01/2019 12:06
Collection Date/Time: 10/31/2019 10:05
SDG#: BMS82-14

ARCADIS U.S., Inc.
ELLE Sample #: GW 1190179
ELLE Group #: 2072206
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result		Limit of Quantitation*	Method Detection Limit	Dilution Factor
	allowance: chloromethane, bromomethane and chloroethane.						
00882	**VOA Interp. Library Search-10**						
	The results from the volatile library search are listed on the attached FORM 1 - VOA-TIC. The qualifiers appearing in the "Q" column are defined at the end of the report.						
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**		**ug/l**	**ug/l**	
14241	Acenaphthene	83-32-9	N.D.		5.3	1.1	10
14241	Acenaphthylene	208-96-8	N.D.		5.3	1.1	10
14241	Acetophenone	98-86-2	N.D.		110	42	10
14241	Aniline	62-53-3	14,000	D	2,100	630	200
14241	Anthracene	120-12-7	N.D.		5.3	1.1	10
14241	Atrazine	1912-24-9	N.D.		53	21	10
14241	Benzaldehyde	100-52-7	N.D.		110	32	10
14241	Benzo(a)anthracene	56-55-3	N.D.		5.3	1.1	10
14241	Benzo(a)pyrene	50-32-8	N.D.		5.3	1.1	10
14241	Benzo(b)fluoranthene	205-99-2	N.D.		5.3	1.1	10
14241	Benzo(g,h,i)perylene	191-24-2	N.D.		5.3	1.1	10
14241	Benzo(k)fluoranthene	207-08-9	N.D.		5.3	1.1	10
14241	Benzyl alcohol	100-51-6	N.D.		320	110	10
14241	1,1'-Biphenyl	92-52-4	N.D.		110	32	10
14241	4-Bromophenyl-phenylether	101-55-3	N.D.		21	5.3	10
14241	Butylbenzylphthalate	85-68-7	N.D.		53	21	10
14241	Di-n-butylphthalate	84-74-2	N.D.		53	21	10
14241	Caprolactam	105-60-2	N.D.		120	53	10
14241	Carbazole	86-74-8	N.D.		21	5.3	10
14241	4-Chloro-3-methylphenol	59-50-7	N.D.		21	5.3	10
14241	4-Chloroaniline	106-47-8	N.D.		110	42	10
14241	bis(2-Chloroethoxy)methane	111-91-1	N.D.		21	5.3	10
14241	bis(2-Chloroethyl)ether	111-44-4	N.D.		21	5.3	10
14241	bis(2-Chloroisopropyl)ether[1]	39638-32-9	N.D.		21	5.3	10
	Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.						
14241	2-Chloronaphthalene	91-58-7	N.D.		11	4.2	10
14241	2-Chlorophenol	95-57-8	N.D.		21	5.3	10
14241	4-Chlorophenyl-phenylether	7005-72-3	N.D.		21	5.3	10
14241	Chrysene	218-01-9	N.D.		5.3	1.1	10
14241	Dibenz(a,h)anthracene	53-70-3	N.D.		5.3	1.1	10
14241	Dibenzofuran	132-64-9	N.D.		21	5.3	10
14241	3,3'-Dichlorobenzidine	91-94-1	N.D.		110	32	10
14241	2,4-Dichlorophenol	120-83-2	N.D.		21	5.3	10
14241	Dicyclohexylamine[1]	101-83-7	5,500	D	2,100	2,100	200

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-11WT Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 11/01/2019 12:06
Collection Date/Time: 10/31/2019 10:05
SDG#: BMS82-14

ARCADIS U.S., Inc.
ELLE Sample #: GW 1190179
ELLE Group #: 2072206
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	Diethylphthalate	84-66-2	N.D.	53	21	10
14241	N,N-Dimethylaniline[1]	121-69-7	6,600 D	210	110	200
14241	2,4-Dimethylphenol	105-67-9	N.D.	110	32	10
14241	Dimethylphthalate	131-11-3	N.D.	53	21	10
14241	4,6-Dinitro-2-methylphenol	534-52-1	N.D.	220	84	10
14241	2,4-Dinitrophenol	51-28-5	N.D.	320	150	10
14241	2,4-Dinitrotoluene	121-14-2	N.D.	53	11	10
14241	2,6-Dinitrotoluene	606-20-2	N.D.	21	5.3	10
14241	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	120	53	10
14241	Fluoranthene	206-44-0	N.D.	5.3	1.1	10
14241	Fluorene	86-73-7	N.D.	5.3	1.1	10
14241	Hexachlorobenzene	118-74-1	N.D.	5.3	1.1	10
14241	Hexachlorobutadiene	87-68-3	N.D.	21	5.3	10
14241	Hexachlorocyclopentadiene	77-47-4	N.D.	120	53	10
14241	Hexachloroethane	67-72-1	N.D.	53	11	10
14241	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	5.3	1.1	10
14241	Isophorone	78-59-1	N.D.	21	5.3	10
14241	2-Methylnaphthalene	91-57-6	N.D.	5.3	1.1	10
14241	2-Methylphenol	95-48-7	N.D.	21	5.3	10
14241	4-Methylphenol	65794-96-9	N.D.	21	5.3	10
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
14241	Naphthalene	91-20-3	N.D.	5.3	1.1	10
14241	2-Nitroaniline	88-74-4	N.D.	74	21	10
14241	3-Nitroaniline	99-09-2	N.D.	74	32	10
14241	4-Nitroaniline	100-01-6	N.D.	32	9.5	10
14241	Nitrobenzene	98-95-3	N.D.	21	5.3	10
14241	2-Nitrophenol	88-75-5	N.D.	110	32	10
14241	4-Nitrophenol	100-02-7	N.D.	320	110	10
14241	N-Nitroso-di-n-propylamine	621-64-7	N.D.	32	7.4	10
14241	N-Nitrosodiphenylamine	86-30-6	N.D.	32	7.4	10
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.					
14241	Di-n-octylphthalate	117-84-0	N.D.	120	53	10
14241	Pentachlorophenol	87-86-5	N.D.	53	11	10
14241	Phenanthrene	85-01-8	N.D.	5.3	1.1	10
14241	Phenol	108-95-2	13,000 D	420	110	200
14241	Pyrene	129-00-0	N.D.	5.3	1.1	10
14241	Pyridine	110-86-1	N.D.	53	21	10
14241	1,2,4,5-Tetrachlorobenzene	95-94-3	N.D.	21	5.3	10

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-11WT Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 11/01/2019 12:06
Collection Date/Time: 10/31/2019 10:05
SDG#: BMS82-14

ARCADIS U.S., Inc.
ELLE Sample #: GW 1190179
ELLE Group #: 2072206
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	2,3,4,6-Tetrachlorophenol	58-90-2	N.D.	110	42	10
14241	2,4,5-Trichlorophenol	95-95-4	N.D.	21	5.3	10
14241	2,4,6-Trichlorophenol	88-06-2	N.D.	21	5.3	10
14241	Triethylamine[1]	121-44-8	N.D.	110	110	10

The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the TNI/DoD Standards. The following analytes are accepted based on this allowance: Dicyclohexylamine

The recovery for the method blank surrogate(s) is outside the QC acceptance limits as noted on the QC Summary. The following action was taken:
The sample was re-extracted outside the method required holding time and the method blank surrogate recoveries are compliant.
All results are reported from the first trial.

Reporting limits were raised due to interference from the sample matrix.

00886 SVOA TIC Interpretive(25)

The results from the semivolatile library search are listed on the attached FORM 1 - SV-TIC. The qualifiers appearing in the "Q" column are defined at the end of the report.

Sample Comments

State of New York Certification No. 10670

[1] = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	Y193131AA	11/09/2019 18:46	Linda C Pape	20
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	Y193171AA	11/13/2019 17:34	Linda C Pape	200
01163	GC/MS VOA Water Prep	SW-846 5030C	1	Y193131AA	11/09/2019 18:45	Linda C Pape	20
01163	GC/MS VOA Water Prep	SW-846 5030C	2	Y193171AA	11/13/2019 17:33	Linda C Pape	200
14241	Semi-annual Groundwater BMS	SW-846 8270D	1	19310WAD026	11/10/2019 15:51	Ashley R Transue	10
14241	Semi-annual Groundwater BMS	SW-846 8270D	1	19310WAD026	11/13/2019 00:18	Ashley R Transue	200
11010	8270D BNA Extraction	SW-846 3510C	1	19310WAD026	11/06/2019 17:48	Laura Duquette	1

*=This limit was used in the evaluation of the final result

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
S8215

Lab Name: Lancaster Laboratories Contract:_____
Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____
Matrix: (soil/water) WATER Lab Sample ID: 1190179
Sample wt/vol: 5.0 (g/mL)mL Lab File ID:HP09355.i/19nov09a.b/yn09s20.d
Level: (low/med) LOW Date Received: 11/01/19
% Moisture: not dec. Date Analyzed: 11/09/19
Column: (pack/cap) CAP Dilution Factor: 20.0
CONCENTRATION UNITS:
Number TICs found: 0 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	VOCTIC	Total VOC TICs		0	U
2.					
3.					
4.					
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29.					
30.					

page 1 of 1

FORM I VOA-TIC

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
S8215

Lab Name: Lancaster Laboratories Contract:
Lab Code: LANCAS Case No.: SAS No.: SDG No.:
Matrix: (soil/water) WATER Lab Sample ID: 1190179
Sample wt/vol: 238 (g/mL) mL Lab File ID: lk0511.d
Level: (low/med) LOW Date Received: 11/01/19
% Moisture: Decanted: (Y/N) Date Extracted: 11/06/19
Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/10/19
Injection Volume: 1 (uL) Dilution Factor: 10
GPC Cleanup: N pH: Extraction: Sepf
CONCENTRATION UNITS:
Number TICs found: 20 (ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Unknown	3.261	190	J
2.	Unknown	3.951	160	J
3.	Unknown	3.999	190	J
4.	Unknown	4.020	130	J
5.541-05-9	Cyclotrisiloxane, hexamethyl	4.143	270	J
6.	Unknown	4.876	150	J
7.	Unknown	6.593	290	J
8.	Unknown	6.631	300	J
9.	Unknown	6.673	580	J
10.100-61-8	Aniline, N-methyl-	7.577	5400	J
11.	Unknown	8.016	86	J
12.	Unknown	8.717	510	J
13.	Unknown	8.743	390	J
14.698-01-1	Benzenamine, 2-chloro-N,N-di	8.824	150	J
15.	Unknown	8.872	68	J
16.	Unknown	10.573	95	J
17.	Unknown	11.054	260	J
18.	Unknown	11.091	94	J
19.101-77-9	Benzenamine, 4,4'-methyleneb	15.697	3000	J
20.	Unknown	16.237	180	J
21.				
22.SVOCTIC	Total SVOC TICs		12000	J
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

N

Sample Description: **BDA-13WT Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 11/01/2019 12:06
Collection Date/Time: 10/31/2019 10:27
SDG#: BMS82-15

ARCADIS U.S., Inc.
ELLE Sample #: GW 1190180
ELLE Group #: 2072206
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	4 J	20	0.7	1
11997	Acetonitrile	75-05-8	N.D.	100	16	1
11997	Benzene	71-43-2	N.D.	1	0.2	1
11997	Bromochloromethane	74-97-5	N.D.	5	0.2	1
11997	Bromodichloromethane	75-27-4	N.D.	1	0.2	1
11997	Bromoform	75-25-2	N.D.	4	1	1
11997	Bromomethane	74-83-9	N.D. J	1	0.3	1
11997	n-Butanol	71-36-3	N.D.	250	61	1
11997	2-Butanone	78-93-3	2 J	10	0.3	1
11997	t-Butyl alcohol	75-65-0	N.D.	50	12	1
11997	n-Butylbenzene	104-51-8	0.5 J	5	0.2	1
11997	sec-Butylbenzene	135-98-8	2 J	5	0.2	1
11997	tert-Butylbenzene	98-06-6	N.D.	5	0.3	1
11997	Carbon Disulfide	75-15-0	N.D.	5	0.2	1
11997	Carbon Tetrachloride	56-23-5	N.D.	1	0.2	1
11997	Chlorobenzene	108-90-7	N.D.	1	0.2	1
11997	Chlorodifluoromethane[1]	75-45-6	N.D. J	5	2	1
11997	Chloroethane	75-00-3	N.D. J	1	0.2	1
11997	Chloroform	67-66-3	2	1	0.2	1
11997	Chloromethane	74-87-3	N.D. J	1	0.2	1
11997	Cyclohexane	110-82-7	27	5	1	1
11997	Cyclohexanone[1]	108-94-1	80 J	100	25	1
11997	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	5	0.3	1
11997	Dibromochloromethane	124-48-1	N.D.	1	0.2	1
11997	1,2-Dibromoethane	106-93-4	N.D.	1	0.2	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	5	0.2	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	5	0.2	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	5	0.2	1
11997	Dichlorodifluoromethane	75-71-8	N.D. J	1	0.2	1
11997	1,1-Dichloroethane	75-34-3	N.D.	1	0.2	1
11997	1,2-Dichloroethane	107-06-2	N.D.	1	0.3	1
11997	1,1-Dichloroethene	75-35-4	N.D.	1	0.2	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	1	0.2	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	1	0.2	1
11997	1,2-Dichloropropane	78-87-5	N.D.	1	0.2	1
11997	cis-1,3-Dichloropropene	10061-01-5	N.D.	1	0.2	1
11997	trans-1,3-Dichloropropene	10061-02-6	N.D.	1	0.2	1
11997	1,4-Dioxane	123-91-1	N.D.	250	29	1
11997	Ethyl Acetate	141-78-6	N.D.	5	0.7	1
11997	Ethyl ether	60-29-7	N.D.	5	0.2	1
11997	Ethylbenzene	100-41-4	2	1	0.4	1

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-13WT Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 11/01/2019 12:06
Collection Date/Time: 10/31/2019 10:27
SDG#: BMS82-15

ARCADIS U.S., Inc.
ELLE Sample #: GW 1190180
ELLE Group #: 2072206
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result		Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**		**ug/l**	**ug/l**	
11997	Freon 113	76-13-1	N.D.		10	0.2	1
11997	n-Heptane[1]	142-82-5	N.D.		5	2	1
11997	n-Hexane[1]	110-54-3	N.D.		5	2	1
11997	2-Hexanone	591-78-6	N.D.		10	0.3	1
11997	Isobutyl Alcohol	78-83-1	N.D.		250	36	1
11997	Isopropylbenzene	98-82-8	2	J	5	0.2	1
11997	p-Isopropyltoluene	99-87-6	N.D.		5	0.2	1
11997	Methyl Acetate	79-20-9	N.D.		5	0.2	1
11997	Methyl Tertiary Butyl Ether	1634-04-4	N.D.		1	0.2	1
11997	4-Methyl-2-pentanone	108-10-1	N.D.		10	0.5	1
11997	Methylcyclohexane	108-87-2	3	J	5	0.5	1
11997	Methylene Chloride	75-09-2	2		1	0.3	1
11997	Naphthalene	91-20-3	N.D.		5	1	1
11997	2-Nitropropane	79-46-9	4	J	10	0.8	1
11997	Styrene	100-42-5	N.D.		5	0.2	1
11997	1,1,2,2-Tetrachloroethane	79-34-5	N.D.		1	0.2	1
11997	Tetrachloroethene	127-18-4	N.D.		1	0.2	1
11997	Tetrahydrofuran	109-99-9	N.D.		10	0.7	1
11997	Toluene	108-88-3	N.D.		1	0.2	1
11997	1,2,3-Trichlorobenzene	87-61-6	N.D.		5	0.4	1
11997	1,2,4-Trichlorobenzene	120-82-1	N.D.		5	0.3	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.		1	0.3	1
11997	1,1,2-Trichloroethane	79-00-5	N.D.		1	0.2	1
11997	Trichloroethene	79-01-6	N.D.		1	0.2	1
11997	Trichlorofluoromethane	75-69-4	N.D.	J	1	0.2	1
11997	1,2,4-Trimethylbenzene	95-63-6	N.D.		5	1	1
11997	1,3,5-Trimethylbenzene	108-67-8	0.4	J	5	0.3	1
11997	Vinyl Chloride	75-01-4	N.D.	J	1	0.2	1
11997	m+p-Xylene	179601-23-1	N.D.		5	1	1
11997	o-Xylene	95-47-6	N.D.		1	0.4	1
11997	Xylene (Total)	1330-20-7	N.D.		6	1	1

00882 VOA Interp. Library Search-10
The results from the volatile library search are listed on the attached FORM 1 - VOA-TIC. The qualifiers appearing in the "Q" column are defined at the end of the report.

GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**		**ug/l**	**ug/l**	
14241	Acenaphthene	83-32-9	N.D.		0.51	0.10	1
14241	Acenaphthylene	208-96-8	N.D.		0.51	0.10	1
14241	Acetophenone	98-86-2	N.D.		10	4.0	1
14241	Aniline	62-53-3	7.5	J	10	3.0	1

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-13WT Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 11/01/2019 12:06
Collection Date/Time: 10/31/2019 10:27
SDG#: BMS82-15

ARCADIS U.S., Inc.
ELLE Sample #: GW 1190180
ELLE Group #: 2072206
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	Anthracene	120-12-7	N.D.	0.51	0.10	1
14241	Atrazine	1912-24-9	N.D.	5.1	2.0	1
14241	Benzaldehyde	100-52-7	N.D.	10	3.0	1
14241	Benzo(a)anthracene	56-55-3	N.D.	0.51	0.10	1
14241	Benzo(a)pyrene	50-32-8	N.D.	0.51	0.10	1
14241	Benzo(b)fluoranthene	205-99-2	N.D.	0.51	0.10	1
14241	Benzo(g,h,i)perylene	191-24-2	N.D.	0.51	0.10	1
14241	Benzo(k)fluoranthene	207-08-9	N.D.	0.51	0.10	1
14241	Benzyl alcohol	100-51-6	N.D.	30	10	1
14241	1,1'-Biphenyl	92-52-4	N.D.	10	3.0	1
14241	4-Bromophenyl-phenylether	101-55-3	N.D.	2.0	0.51	1
14241	Butylbenzylphthalate	85-68-7	N.D.	5.1	2.0	1
14241	Di-n-butylphthalate	84-74-2	N.D.	5.1	2.0	1
14241	Caprolactam	105-60-2	N.D.	11	5.1	1
14241	Carbazole	86-74-8	N.D.	2.0	0.51	1
14241	4-Chloro-3-methylphenol	59-50-7	N.D.	2.0	0.51	1
14241	4-Chloroaniline	106-47-8	N.D.	10	4.0	1
14241	bis(2-Chloroethoxy)methane	111-91-1	N.D.	2.0	0.51	1
14241	bis(2-Chloroethyl)ether	111-44-4	N.D.	2.0	0.51	1
14241	bis(2-Chloroisopropyl)ether[1]	39638-32-9	N.D.	2.0	0.51	1
	Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.					
14241	2-Chloronaphthalene	91-58-7	N.D.	1.0	0.40	1
14241	2-Chlorophenol	95-57-8	N.D.	2.0	0.51	1
14241	4-Chlorophenyl-phenylether	7005-72-3	N.D.	2.0	0.51	1
14241	Chrysene	218-01-9	N.D.	0.51	0.10	1
14241	Dibenz(a,h)anthracene	53-70-3	N.D.	0.51	0.10	1
14241	Dibenzofuran	132-64-9	N.D.	2.0	0.51	1
14241	3,3'-Dichlorobenzidine	91-94-1	N.D.	10	3.0	1
14241	2,4-Dichlorophenol	120-83-2	N.D.	2.0	0.51	1
14241	Dicyclohexylamine[1]	101-83-7	290 D	100	100	10
14241	Diethylphthalate	84-66-2	N.D.	5.1	2.0	1
14241	N,N-Dimethylaniline[1]	121-69-7	2.6	1.0	0.51	1
14241	2,4-Dimethylphenol	105-67-9	N.D.	10	3.0	1
14241	Dimethylphthalate	131-11-3	N.D.	5.1	2.0	1
14241	4,6-Dinitro-2-methylphenol	534-52-1	N.D.	21	8.1	1
14241	2,4-Dinitrophenol	51-28-5	N.D.	30	14	1
14241	2,4-Dinitrotoluene	121-14-2	N.D.	5.1	1.0	1
14241	2,6-Dinitrotoluene	606-20-2	N.D.	2.0	0.51	1
14241	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	11	5.1	1

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-13WT Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 11/01/2019 12:06
Collection Date/Time: 10/31/2019 10:27
SDG#: BMS82-15

ARCADIS U.S., Inc.
ELLE Sample #: GW 1190180
ELLE Group #: 2072206
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	Fluoranthene	206-44-0	N.D.	0.51	0.10	1
14241	Fluorene	86-73-7	N.D.	0.51	0.10	1
14241	Hexachlorobenzene	118-74-1	N.D.	0.51	0.10	1
14241	Hexachlorobutadiene	87-68-3	N.D.	2.0	0.51	1
14241	Hexachlorocyclopentadiene	77-47-4	N.D.	11	5.1	1
14241	Hexachloroethane	67-72-1	N.D.	5.1	1.0	1
14241	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.51	0.10	1
14241	Isophorone	78-59-1	N.D.	2.0	0.51	1
14241	2-Methylnaphthalene	91-57-6	N.D.	0.51	0.10	1
14241	2-Methylphenol	95-48-7	N.D.	2.0	0.51	1
14241	4-Methylphenol	65794-96-9	N.D.	2.0	0.51	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
14241	Naphthalene	91-20-3	N.D.	0.51	0.10	1
14241	2-Nitroaniline	88-74-4	N.D.	7.1	2.0	1
14241	3-Nitroaniline	99-09-2	N.D.	7.1	3.0	1
14241	4-Nitroaniline	100-01-6	N.D.	3.0	0.91	1
14241	Nitrobenzene	98-95-3	N.D.	2.0	0.51	1
14241	2-Nitrophenol	88-75-5	N.D.	10	3.0	1
14241	4-Nitrophenol	100-02-7	N.D.	30	10	1
14241	N-Nitroso-di-n-propylamine	621-64-7	N.D.	3.0	0.71	1
14241	N-Nitrosodiphenylamine	86-30-6	N.D.	3.0	0.71	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.					
14241	Di-n-octylphthalate	117-84-0	N.D.	11	5.1	1
14241	Pentachlorophenol	87-86-5	N.D.	5.1	1.0	1
14241	Phenanthrene	85-01-8	N.D.	0.51	0.10	1
14241	Phenol	108-95-2	7.7	2.0	0.51	1
14241	Pyrene	129-00-0	N.D.	0.51	0.10	1
14241	Pyridine	110-86-1	N.D.	5.1	2.0	1
14241	1,2,4,5-Tetrachlorobenzene	95-94-3	N.D.	2.0	0.51	1
14241	2,3,4,6-Tetrachlorophenol	58-90-2	N.D.	10	4.0	1
14241	2,4,5-Trichlorophenol	95-95-4	N.D.	2.0	0.51	1
14241	2,4,6-Trichlorophenol	88-06-2	N.D.	2.0	0.51	1
14241	Triethylamine[1]	121-44-8	N.D.	10	10	1

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. Since the recovery is high and the target analyte(s) was not detected in the sample, the data is reported.

The recovery for the method blank surrogate(s) is outside the QC acceptance

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-13WT Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 11/01/2019 12:06
Collection Date/Time: 10/31/2019 10:27
SDG#: BMS82-15

ARCADIS U.S., Inc.
ELLE Sample #: GW 1190180
ELLE Group #: 2072206
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result		Limit of Quantitation*	Method Detection Limit	Dilution Factor
	limits as noted on the QC Summary. The following action was taken: The sample was re-extracted outside the method required holding time and the method blank surrogate recoveries are compliant. All results are reported from the first trial.						
00886	**SVOA TIC Interpretive(25)**						
	The results from the semivolatile library search are listed on the attached FORM 1 - SV-TIC. The qualifiers appearing in the "Q" column are defined at the end of the report.						
Aldehydes & Ketones	**SW-846 8315A**		**ug/l**		**ug/l**	**ug/l**	
13022	Acetaldehyde[1]	75-07-0	N.D.	J	60	35	1
13022	Formaldehyde	50-00-0	35	J	50	20	1
	The response for a target analyte(s) in the initial calibration verification standard is outside the QC acceptance limits.						
GC Miscellaneous	**SW-846 8015D Rev.4, June 2003**		**ug/l**		**ug/l**	**ug/l**	
10603	Ethanol	64-17-5	N.D.	D2	1,000	150	1
12926	Ethylene glycol[1]	107-21-1	N.D.		10,000	5,000	1
10603	Isopropanol[1]	67-63-0	N.D.	D2	1,000	110	1
10603	Methanol	67-56-1	N.D.	D2	1,000	220	1
12926	Propylene glycol[1]	57-55-6	N.D.		10,000	2,000	1
	The response for tetramethylene glycol in the continuing calibration verification standard is outside the QC acceptance limits low. The following action was taken: The analysis was repeated and the continuing calibration verification standard bracketing the sample on the second trial is also outside the acceptance limits. This effect is attributed to the sample matrix and the data is reported.						

Sample Comments

State of New York Certification No. 10670

[1] = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	Y193131AA	11/09/2019 17:40	Linda C Pape	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	Y193131AA	11/09/2019 17:39	Linda C Pape	1
14241	Semi-annual Groundwater BMS	SW-846 8270D	1	19310WAD026	11/10/2019 02:04	Holly B Ziegler	1
14241	Semi-annual Groundwater BMS	SW-846 8270D	1	19310WAD026	11/10/2019 15:22	Ashley R Transue	10
11010	8270D BNA Extraction	SW-846 3510C	1	19310WAD026	11/06/2019 17:48	Laura Duquette	1
13022	Short List Aldehydes- W 8315A	SW-846 8315A	1	193050016A	11/04/2019 17:49	Jessica L Miller	1
01013	Formaldehyde Extraction	SW-846 8315A	1	193050016A	11/02/2019 07:32	Alison Moll	1

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-13WT Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 11/01/2019 12:06
Collection Date/Time: 10/31/2019 10:27
SDG#: BMS82-15

ARCADIS U.S., Inc.
ELLE Sample #: GW 1190180
ELLE Group #: 2072206
Matrix: Groundwater

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10603	Alcohols in Water	SW-846 8015D Rev.4, June 2003	1	193080008A	11/05/2019 04:14	Johanna C Kennedy	1
12926	Glycols in Water by 8015C/D	SW-846 8015D Rev.4, June 2003	1	193100032A	11/07/2019 00:14	Donald Brown	1

*=This limit was used in the evaluation of the final result

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
S8216

Lab Name: Lancaster Laboratories Contract:_____
Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____
Matrix: (soil/water) WATER Lab Sample ID: 1190180
Sample wt/vol: 5.0 (g/mL)mL Lab File ID:HP09355.i/19nov09a.b/yn09s17.d
Level: (low/med) LOW Date Received: 11/01/19
% Moisture: not dec. Date Analyzed: 11/09/19
Column: (pack/cap) CAP Dilution Factor: 1.0
CONCENTRATION UNITS:
Number TICs found: 10 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	108-08-7	Pentane, 2,4-dimethyl-	6.03	10	J N
2.		Unknown alicyclic	7.66	8	J
3.	872-56-0	Isopropylcyclobutane	7.76	10	J
4.		Unknown alkane	9.36	9	J
5.		Unknown alkane	9.79	7	J
6.		Unknown alkane	10.10	10	J
7.	103-65-1	Benzene, propyl-	12.48	6	J
8.	76089-59-3	1,3-Cyclopentadiene, 1,2,3,4	13.94	6	J
9.	17057-82-8	1H-Indene, 2,3-dihydro-1,2-d	14.19	7	J
10.	4830-99-3	1H-Indene, 1-ethyl-2,3-dihyd	14.56	7	J
11.					
12.	VOCTIC	Total VOC TICs		81	J
13.					
14.					
15.					
16.					
17.					
18.					
19.					
20.					
21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

page 1 of 1

FORM I VOA-TIC

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
S8216

Lab Name: Lancaster Laboratories Contract:
Lab Code: LANCAS Case No.: SAS No.: SDG No.:
Matrix: (soil/water) WATER Lab Sample ID: 1190180
Sample wt/vol: 247 (g/mL) mL Lab File ID: lk0463.d
Level: (low/med) LOW Date Received: 11/01/19
% Moisture: Decanted: (Y/N) Date Extracted: 11/06/19
Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/10/19
Injection Volume: 1 (uL) Dilution Factor: 1
GPC Cleanup: N pH: Extraction: Sepf
CONCENTRATION UNITS:
Number TICs found: 11 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		Unknown	2.919	8	J N
2.		Unknown	3.213	4	J
3.		Unknown	3.256	9	J
4.		Unknown	4.010	6	J
5.		Unknown	6.572	6	J
6.		Unknown	6.866	6	J
7.	100-61-8	Aniline, N-methyl-	7.556	6	J
8.		Unknown	12.883	5	J
9.		Unknown	20.639	27	J
10.		Unknown	20.676	12	J
11.		Unknown	23.089	390	J
12.					
13.	SVOCTIC	Total SVOC TICs		480	J
14.					
15.					
16.					
17.					
18.					
19.					
20.					
21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

page 1 of 1

FORM I SV-1

Sample Description: **BDA-8T Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 11/01/2019 12:06
Collection Date/Time: 10/31/2019 11:05
SDG#: BMS82-16

ARCADIS U.S., Inc.
ELLE Sample #: GW 1190181
ELLE Group #: 2072206
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	20	0.7	1
11997	Acetonitrile	75-05-8	N.D.	100	16	1
11997	Benzene	71-43-2	N.D.	1	0.2	1
11997	Bromochloromethane	74-97-5	N.D.	5	0.2	1
11997	Bromodichloromethane	75-27-4	N.D.	1	0.2	1
11997	Bromoform	75-25-2	N.D.	4	1	1
11997	Bromomethane	74-83-9	N.D. J	1	0.3	1
11997	n-Butanol	71-36-3	N.D.	250	61	1
11997	2-Butanone	78-93-3	N.D.	10	0.3	1
11997	t-Butyl alcohol	75-65-0	N.D.	50	12	1
11997	n-Butylbenzene	104-51-8	N.D.	5	0.2	1
11997	sec-Butylbenzene	135-98-8	N.D.	5	0.2	1
11997	tert-Butylbenzene	98-06-6	N.D.	5	0.3	1
11997	Carbon Disulfide	75-15-0	N.D.	5	0.2	1
11997	Carbon Tetrachloride	56-23-5	N.D.	1	0.2	1
11997	Chlorobenzene	108-90-7	N.D.	1	0.2	1
11997	Chlorodifluoromethane[1]	75-45-6	N.D. J	5	2	1
11997	Chloroethane	75-00-3	N.D. J	1	0.2	1
11997	Chloroform	67-66-3	N.D.	1	0.2	1
11997	Chloromethane	74-87-3	N.D. J	1	0.2	1
11997	Cyclohexane	110-82-7	N.D.	5	1	1
11997	Cyclohexanone[1]	108-94-1	N.D.	100	25	1
11997	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	5	0.3	1
11997	Dibromochloromethane	124-48-1	N.D.	1	0.2	1
11997	1,2-Dibromoethane	106-93-4	N.D.	1	0.2	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	5	0.2	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	5	0.2	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	5	0.2	1
11997	Dichlorodifluoromethane	75-71-8	N.D. J	1	0.2	1
11997	1,1-Dichloroethane	75-34-3	N.D.	1	0.2	1
11997	1,2-Dichloroethane	107-06-2	N.D.	1	0.3	1
11997	1,1-Dichloroethene	75-35-4	N.D.	1	0.2	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	1	0.2	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	1	0.2	1
11997	1,2-Dichloropropane	78-87-5	N.D.	1	0.2	1
11997	cis-1,3-Dichloropropene	10061-01-5	N.D.	1	0.2	1
11997	trans-1,3-Dichloropropene	10061-02-6	N.D.	1	0.2	1
11997	1,4-Dioxane	123-91-1	N.D.	250	29	1
11997	Ethyl Acetate	141-78-6	N.D.	5	0.7	1
11997	Ethyl ether	60-29-7	N.D.	5	0.2	1
11997	Ethylbenzene	100-41-4	N.D.	1	0.4	1

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-8T Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 11/01/2019 12:06
Collection Date/Time: 10/31/2019 11:05
SDG#: BMS82-16

ARCADIS U.S., Inc.
ELLE Sample #: GW 1190181
ELLE Group #: 2072206
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Freon 113	76-13-1	N.D.	10	0.2	1
11997	n-Heptane[1]	142-82-5	N.D.	5	2	1
11997	n-Hexane[1]	110-54-3	N.D.	5	2	1
11997	2-Hexanone	591-78-6	N.D.	10	0.3	1
11997	Isobutyl Alcohol	78-83-1	N.D.	250	36	1
11997	Isopropylbenzene	98-82-8	N.D.	5	0.2	1
11997	p-Isopropyltoluene	99-87-6	N.D.	5	0.2	1
11997	Methyl Acetate	79-20-9	N.D.	5	0.2	1
11997	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	1	0.2	1
11997	4-Methyl-2-pentanone	108-10-1	N.D.	10	0.5	1
11997	Methylcyclohexane	108-87-2	N.D.	5	0.5	1
11997	Methylene Chloride	75-09-2	N.D.	1	0.3	1
11997	Naphthalene	91-20-3	N.D.	5	1	1
11997	2-Nitropropane	79-46-9	N.D.	10	0.8	1
11997	Styrene	100-42-5	N.D.	5	0.2	1
11997	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	1	0.2	1
11997	Tetrachloroethene	127-18-4	N.D.	1	0.2	1
11997	Tetrahydrofuran	109-99-9	N.D.	10	0.7	1
11997	Toluene	108-88-3	N.D.	1	0.2	1
11997	1,2,3-Trichlorobenzene	87-61-6	N.D.	5	0.4	1
11997	1,2,4-Trichlorobenzene	120-82-1	N.D.	5	0.3	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	1	0.3	1
11997	1,1,2-Trichloroethane	79-00-5	N.D.	1	0.2	1
11997	Trichloroethene	79-01-6	N.D.	1	0.2	1
11997	Trichlorofluoromethane	75-69-4	N.D. J	1	0.2	1
11997	1,2,4-Trimethylbenzene	95-63-6	N.D.	5	1	1
11997	1,3,5-Trimethylbenzene	108-67-8	N.D.	5	0.3	1
11997	Vinyl Chloride	75-01-4	N.D. J	1	0.2	1
11997	m+p-Xylene	179601-23-1	N.D.	5	1	1
11997	o-Xylene	95-47-6	N.D.	1	0.4	1
11997	Xylene (Total)	1330-20-7	N.D.	6	1	1

Project defined calibration criteria are not met. The calibration is compliant with the method defined criteria.

A Report Limit Verification (RLV) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The RLV standard shows adequate sensitivity at or below the reporting limit.

The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the TNI/DoD Standards. The following analytes are accepted based on this

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-8T Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 11/01/2019 12:06
Collection Date/Time: 10/31/2019 11:05
SDG#: BMS82-16

ARCADIS U.S., Inc.
ELLE Sample #: GW 1190181
ELLE Group #: 2072206
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
	allowance: chloromethane, bromomethane and chloroethane.					
00882	**VOA Interp. Library Search-10**					
	The results from the volatile library search are listed on the attached FORM 1 - VOA-TIC. The qualifiers appearing in the "Q" column are defined at the end of the report.					
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	Acenaphthene	83-32-9	N.D.	0.52	0.10	1
14241	Acenaphthylene	208-96-8	N.D.	0.52	0.10	1
14241	Acetophenone	98-86-2	N.D.	10	4.1	1
14241	Aniline	62-53-3	N.D.	10	3.1	1
14241	Anthracene	120-12-7	N.D.	0.52	0.10	1
14241	Atrazine	1912-24-9	N.D.	5.2	2.1	1
14241	Benzaldehyde	100-52-7	N.D.	10	3.1	1
14241	Benzo(a)anthracene	56-55-3	N.D.	0.52	0.10	1
14241	Benzo(a)pyrene	50-32-8	N.D.	0.52	0.10	1
14241	Benzo(b)fluoranthene	205-99-2	N.D.	0.52	0.10	1
14241	Benzo(g,h,i)perylene	191-24-2	N.D.	0.52	0.10	1
14241	Benzo(k)fluoranthene	207-08-9	N.D.	0.52	0.10	1
14241	Benzyl alcohol	100-51-6	N.D.	31	10	1
14241	1,1'-Biphenyl	92-52-4	N.D.	10	3.1	1
14241	4-Bromophenyl-phenylether	101-55-3	N.D.	2.1	0.52	1
14241	Butylbenzylphthalate	85-68-7	N.D.	5.2	2.1	1
14241	Di-n-butylphthalate	84-74-2	N.D.	5.2	2.1	1
14241	Caprolactam	105-60-2	N.D.	11	5.2	1
14241	Carbazole	86-74-8	N.D.	2.1	0.52	1
14241	4-Chloro-3-methylphenol	59-50-7	N.D.	2.1	0.52	1
14241	4-Chloroaniline	106-47-8	N.D.	10	4.1	1
14241	bis(2-Chloroethoxy)methane	111-91-1	N.D.	2.1	0.52	1
14241	bis(2-Chloroethyl)ether	111-44-4	N.D.	2.1	0.52	1
14241	bis(2-Chloroisopropyl)ether[1]	39638-32-9	N.D.	2.1	0.52	1
	Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.					
14241	2-Chloronaphthalene	91-58-7	N.D.	1.0	0.41	1
14241	2-Chlorophenol	95-57-8	N.D.	2.1	0.52	1
14241	4-Chlorophenyl-phenylether	7005-72-3	N.D.	2.1	0.52	1
14241	Chrysene	218-01-9	N.D.	0.52	0.10	1
14241	Dibenz(a,h)anthracene	53-70-3	N.D.	0.52	0.10	1
14241	Dibenzofuran	132-64-9	N.D.	2.1	0.52	1
14241	3,3'-Dichlorobenzidine	91-94-1	N.D.	10	3.1	1
14241	2,4-Dichlorophenol	120-83-2	N.D.	2.1	0.52	1
14241	Dicyclohexylamine[1]	101-83-7	N.D.	10	10	1

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-8T Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 11/01/2019 12:06
Collection Date/Time: 10/31/2019 11:05
SDG#: BMS82-16

ARCADIS U.S., Inc.
ELLE Sample #: GW 1190181
ELLE Group #: 2072206
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	Diethylphthalate	84-66-2	N.D.	5.2	2.1	1
14241	N,N-Dimethylaniline[1]	121-69-7	N.D.	1.0	0.52	1
14241	2,4-Dimethylphenol	105-67-9	N.D.	10	3.1	1
14241	Dimethylphthalate	131-11-3	N.D.	5.2	2.1	1
14241	4,6-Dinitro-2-methylphenol	534-52-1	N.D.	22	8.3	1
14241	2,4-Dinitrophenol	51-28-5	N.D.	31	14	1
14241	2,4-Dinitrotoluene	121-14-2	N.D.	5.2	1.0	1
14241	2,6-Dinitrotoluene	606-20-2	N.D.	2.1	0.52	1
14241	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	11	5.2	1
14241	Fluoranthene	206-44-0	N.D.	0.52	0.10	1
14241	Fluorene	86-73-7	N.D.	0.52	0.10	1
14241	Hexachlorobenzene	118-74-1	N.D.	0.52	0.10	1
14241	Hexachlorobutadiene	87-68-3	N.D.	2.1	0.52	1
14241	Hexachlorocyclopentadiene	77-47-4	N.D.	11	5.2	1
14241	Hexachloroethane	67-72-1	N.D.	5.2	1.0	1
14241	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.52	0.10	1
14241	Isophorone	78-59-1	N.D.	2.1	0.52	1
14241	2-Methylnaphthalene	91-57-6	N.D.	0.52	0.10	1
14241	2-Methylphenol	95-48-7	N.D.	2.1	0.52	1
14241	4-Methylphenol	65794-96-9	N.D.	2.1	0.52	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
14241	Naphthalene	91-20-3	N.D.	0.52	0.10	1
14241	2-Nitroaniline	88-74-4	N.D.	7.2	2.1	1
14241	3-Nitroaniline	99-09-2	N.D.	7.2	3.1	1
14241	4-Nitroaniline	100-01-6	N.D.	3.1	0.93	1
14241	Nitrobenzene	98-95-3	N.D.	2.1	0.52	1
14241	2-Nitrophenol	88-75-5	N.D.	10	3.1	1
14241	4-Nitrophenol	100-02-7	N.D.	31	10	1
14241	N-Nitroso-di-n-propylamine	621-64-7	N.D.	3.1	0.72	1
14241	N-Nitrosodiphenylamine	86-30-6	N.D.	3.1	0.72	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.					
14241	Di-n-octylphthalate	117-84-0	N.D.	11	5.2	1
14241	Pentachlorophenol	87-86-5	N.D.	5.2	1.0	1
14241	Phenanthrene	85-01-8	N.D.	0.52	0.10	1
14241	Phenol	108-95-2	N.D.	2.1	0.52	1
14241	Pyrene	129-00-0	N.D.	0.52	0.10	1
14241	Pyridine	110-86-1	N.D.	5.2	2.1	1
14241	1,2,4,5-Tetrachlorobenzene	95-94-3	N.D.	2.1	0.52	1

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-8T Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 11/01/2019 12:06
Collection Date/Time: 10/31/2019 11:05
SDG#: BMS82-16

ARCADIS U.S., Inc.
ELLE Sample #: GW 1190181
ELLE Group #: 2072206
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	2,3,4,6-Tetrachlorophenol	58-90-2	N.D.	10	4.1	1
14241	2,4,5-Trichlorophenol	95-95-4	N.D.	2.1	0.52	1
14241	2,4,6-Trichlorophenol	88-06-2	N.D.	2.1	0.52	1
14241	Triethylamine[1]	121-44-8	N.D.	10	10	1

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. Since the recovery is high and the target analyte(s) was not detected in the sample, the data is reported.

The recovery for the method blank surrogate(s) is outside the QC acceptance limits as noted on the QC Summary. All other QC indicators for the batch are within specification, and there are no detections in the sample. The data is reported.

00886 SVOA TIC Interpretive(25)

The results from the semivolatile library search are listed on the attached FORM 1 - SV-TIC. The qualifiers appearing in the "Q" column are defined at the end of the report.

Aldehydes & Ketones	**SW-846 8315A**		**ug/l**	**ug/l**	**ug/l**	
13022	Acetaldehyde[1]	75-07-0	N.D. J	60	35	1
13022	Formaldehyde	50-00-0	N.D.	50	20	1

The response for a target analyte(s) in the initial calibration verification standard is outside the QC acceptance limits.

GC Miscellaneous	**SW-846 8015D Rev.4, June 2003**		**ug/l**	**ug/l**	**ug/l**	
10603	Ethanol	64-17-5	N.D. D2	1,000	150	1
12926	Ethylene glycol[1]	107-21-1	N.D.	10,000	5,000	1
10603	Isopropanol[1]	67-63-0	N.D. D2	1,000	110	1
10603	Methanol	67-56-1	N.D. D2	1,000	220	1
12926	Propylene glycol[1]	57-55-6	N.D.	10,000	2,000	1

The response for tetramethylene glycol in the continuing calibration verification standard is outside the QC acceptance limits low. The following action was taken:
The analysis was repeated and the continuing calibration verification standard bracketing the sample on the second trial is also outside the acceptance limits. This effect is attributed to the sample matrix and the data is reported.

Sample Comments

State of New York Certification No. 10670

[1] = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-8T Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 11/01/2019 12:06
Collection Date/Time: 10/31/2019 11:05
SDG#: BMS82-16

ARCADIS U.S., Inc.
ELLE Sample #: GW 1190181
ELLE Group #: 2072206
Matrix: Groundwater

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	Y193131AA	11/09/2019 18:02	Linda C Pape	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	Y193131AA	11/09/2019 18:01	Linda C Pape	1
14241	Semi-annual Groundwater BMS	SW-846 8270D	1	19310WAD026	11/10/2019 02:33	Holly B Ziegler	1
11010	8270D BNA Extraction	SW-846 3510C	1	19310WAD026	11/06/2019 17:48	Laura Duquette	1
13022	Short List Aldehydes- W 8315A	SW-846 8315A	1	193050016A	11/04/2019 18:00	Jessica L Miller	1
01013	Formaldehyde Extraction	SW-846 8315A	1	193050016A	11/02/2019 07:32	Alison Moll	1
10603	Alcohols in Water	SW-846 8015D Rev.4, June 2003	1	193080008A	11/05/2019 04:31	Johanna C Kennedy	1
12926	Glycols in Water by 8015C/D	SW-846 8015D Rev.4, June 2003	1	193100032A	11/07/2019 00:27	Donald Brown	1

*=This limit was used in the evaluation of the final result

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
S8217

Lab Name: Lancaster Laboratories Contract:_____
Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____
Matrix: (soil/water) WATER Lab Sample ID: 1190181
Sample wt/vol: 5.0 (g/mL)mL Lab File ID:HP09355.i/19nov09a.b/yn09s18.d
Level: (low/med) LOW Date Received: 11/01/19
% Moisture: not dec. Date Analyzed: 11/09/19
Column: (pack/cap) CAP Dilution Factor: 1.0
CONCENTRATION UNITS:
Number TICs found: 0 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	VOCTIC	Total VOC TICs		0	U
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page 1 of 1

FORM I VOA-TIC

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
S8217

Lab Name: Lancaster Laboratories Contract:
Lab Code: LANCAS Case No.: SAS No.: SDG No.:
Matrix: (soil/water) WATER Lab Sample ID: 1190181
Sample wt/vol: 242 (g/mL) mL Lab File ID: lk0464.d
Level: (low/med) LOW Date Received: 11/01/19
% Moisture: Decanted: (Y/N) Date Extracted: 11/06/19
Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/10/19
Injection Volume: 1 (uL) Dilution Factor: 1
GPC Cleanup: N pH: Extraction: Sepf
CONCENTRATION UNITS:
Number TICs found: 2 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		Unknown	2.919	47	J N
2.		Unknown	3.256	49	J N
3.					
4.	SVOCTIC	Total SVOC TICs		97	J N
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page 1 of 1

FORM I SV-1

Sample Description: **BDA-4UT Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 11/01/2019 12:06
Collection Date/Time: 10/31/2019 11:10
SDG#: BMS82-17

ARCADIS U.S., Inc.
ELLE Sample #: GW 1190182
ELLE Group #: 2072206
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	100,000 E J	200	7	10
11997	Acetonitrile	75-05-8	N.D.	1,000	160	10
11997	Benzene	71-43-2	9 J	10	2	10
11997	Bromochloromethane	74-97-5	N.D.	50	2	10
11997	Bromodichloromethane	75-27-4	N.D.	10	2	10
11997	Bromoform	75-25-2	N.D.	40	10	10
11997	Bromomethane	74-83-9	N.D. J	10	3	10
11997	n-Butanol	71-36-3	N.D.	2,500	610	10
11997	2-Butanone	78-93-3	690	100	3	10
11997	t-Butyl alcohol	75-65-0	N.D.	500	120	10
11997	n-Butylbenzene	104-51-8	N.D.	50	2	10
11997	sec-Butylbenzene	135-98-8	N.D.	50	2	10
11997	tert-Butylbenzene	98-06-6	N.D.	50	3	10
11997	Carbon Disulfide	75-15-0	26 J	50	2	10
11997	Carbon Tetrachloride	56-23-5	N.D.	10	2	10
11997	Chlorobenzene	108-90-7	N.D.	10	2	10
11997	Chlorodifluoromethane[1]	75-45-6	N.D. J	50	20	10
11997	Chloroethane	75-00-3	N.D. J	10	2	10
11997	Chloroform	67-66-3	N.D.	10	2	10
11997	Chloromethane	74-87-3	35 J	10	2	10
11997	Cyclohexane	110-82-7	37 J	50	10	10
11997	Cyclohexanone[1]	108-94-1	470 J	1,000	250	10
11997	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	50	3	10
11997	Dibromochloromethane	124-48-1	N.D.	10	2	10
11997	1,2-Dibromoethane	106-93-4	N.D.	10	2	10
11997	1,2-Dichlorobenzene	95-50-1	N.D.	50	2	10
11997	1,3-Dichlorobenzene	541-73-1	N.D.	50	2	10
11997	1,4-Dichlorobenzene	106-46-7	N.D. J	50	2	10
11997	Dichlorodifluoromethane	75-71-8	N.D.	10	2	10
11997	1,1-Dichloroethane	75-34-3	12	10	2	10
11997	1,2-Dichloroethane	107-06-2	N.D.	10	3	10
11997	1,1-Dichloroethene	75-35-4	33	10	2	10
11997	cis-1,2-Dichloroethene	156-59-2	170	10	2	10
11997	trans-1,2-Dichloroethene	156-60-5	58	10	2	10
11997	1,2-Dichloropropane	78-87-5	N.D.	10	2	10
11997	cis-1,3-Dichloropropene	10061-01-5	N.D.	10	2	10
11997	trans-1,3-Dichloropropene	10061-02-6	N.D.	10	2	10
11997	1,4-Dioxane	123-91-1	N.D.	2,500	290	10
11997	Ethyl Acetate	141-78-6	N.D.	50	7	10
11997	Ethyl ether	60-29-7	N.D.	50	2	10
11997	Ethylbenzene	100-41-4	16	10	4	10

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-4UT Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 11/01/2019 12:06
Collection Date/Time: 10/31/2019 11:10
SDG#: BMS82-17

ARCADIS U.S., Inc.
ELLE Sample #: GW 1190182
ELLE Group #: 2072206
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Freon 113	76-13-1	N.D.	100	2	10
11997	n-Heptane[1]	142-82-5	N.D.	50	20	10
11997	n-Hexane[1]	110-54-3	N.D.	50	20	10
11997	2-Hexanone	591-78-6	N.D.	100	3	10
11997	Isobutyl Alcohol	78-83-1	1,300 J	2,500	360	10
11997	Isopropylbenzene	98-82-8	N.D.	50	2	10
11997	p-Isopropyltoluene	99-87-6	3 J	50	2	10
11997	Methyl Acetate	79-20-9	N.D.	50	2	10
11997	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	10	2	10
11997	4-Methyl-2-pentanone	108-10-1	33,000 E J	100	5	10
11997	Methylcyclohexane	108-87-2	N.D.	50	5	10
11997	Methylene Chloride	75-09-2	93,000 E J	10	3	10
11997	Naphthalene	91-20-3	400	50	10	10
11997	2-Nitropropane	79-46-9	N.D.	100	8	10
11997	Styrene	100-42-5	N.D.	50	2	10
11997	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	10	2	10
11997	Tetrachloroethene	127-18-4	23	10	2	10
11997	Tetrahydrofuran	109-99-9	150	100	7	10
11997	Toluene	108-88-3	400	10	2	10
11997	1,2,3-Trichlorobenzene	87-61-6	N.D.	50	4	10
11997	1,2,4-Trichlorobenzene	120-82-1	N.D.	50	3	10
11997	1,1,1-Trichloroethane	71-55-6	N.D.	10	3	10
11997	1,1,2-Trichloroethane	79-00-5	N.D.	10	2	10
11997	Trichloroethene	79-01-6	18	10	2	10
11997	Trichlorofluoromethane	75-69-4	N.D. J	10	2	10
11997	1,2,4-Trimethylbenzene	95-63-6	N.D.	50	10	10
11997	1,3,5-Trimethylbenzene	108-67-8	8 J	50	3	10
11997	Vinyl Chloride	75-01-4	8 J	10	2	10
11997	m+p-Xylene	179601-23-1	26 J	50	10	10
11997	o-Xylene	95-47-6	10	10	4	10
11997	Xylene (Total)	1330-20-7	36 J	60	14	10

Project defined calibration criteria are not met. The calibration is compliant with the method defined criteria.

A Report Limit Verification (RLV) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The RLV standard shows adequate sensitivity at or below the reporting limit.

The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the TNI/DoD Standards. The following analytes are accepted based on this

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-4UT Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 11/01/2019 12:06
Collection Date/Time: 10/31/2019 11:10
SDG#: BMS82-17

ARCADIS U.S., Inc.
ELLE Sample #: GW 1190182
ELLE Group #: 2072206
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result		Limit of Quantitation*	Method Detection Limit	Dilution Factor
	allowance: chloromethane, bromomethane and chloroethane.						
	The concentrations reported for Acetone, Methylene Chloride and 4-Methyl-2-pentanone are estimated since they exceed the calibration range of the instrument. A further diluted analysis was performed from a previously opened container with headspace. The result for Acetone was 170,000 ug/l. The result for Methylene Chloride was 390,000 ug/l. The result for 4-Methyl-2 pentanone was 210,000 ug/l.						
00882	**VOA Interp. Library Search-10**						
	The results from the volatile library search are listed on the attached FORM 1 - VOA-TIC. The qualifiers appearing in the "Q" column are defined at the end of the report.						
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**		**ug/l**	**ug/l**	
14241	Acenaphthene	83-32-9	N.D.		5.2	1.0	10
14241	Acenaphthylene	208-96-8	N.D.		5.2	1.0	10
14241	Acetophenone	98-86-2	64	J	100	42	10
14241	Aniline	62-53-3	N.D.		100	31	10
14241	Anthracene	120-12-7	N.D.		5.2	1.0	10
14241	Atrazine	1912-24-9	N.D.		52	21	10
14241	Benzaldehyde	100-52-7	N.D.		100	31	10
14241	Benzo(a)anthracene	56-55-3	N.D.		5.2	1.0	10
14241	Benzo(a)pyrene	50-32-8	N.D.		5.2	1.0	10
14241	Benzo(b)fluoranthene	205-99-2	N.D.		5.2	1.0	10
14241	Benzo(g,h,i)perylene	191-24-2	N.D.		5.2	1.0	10
14241	Benzo(k)fluoranthene	207-08-9	N.D.		5.2	1.0	10
14241	Benzyl alcohol	100-51-6	N.D.		310	100	10
14241	1,1'-Biphenyl	92-52-4	N.D.		100	31	10
14241	4-Bromophenyl-phenylether	101-55-3	N.D.		21	5.2	10
14241	Butylbenzylphthalate	85-68-7	N.D.		52	21	10
14241	Di-n-butylphthalate	84-74-2	N.D.		52	21	10
14241	Caprolactam	105-60-2	N.D.		110	52	10
14241	Carbazole	86-74-8	7.5	J	21	5.2	10
14241	4-Chloro-3-methylphenol	59-50-7	N.D.		21	5.2	10
14241	4-Chloroaniline	106-47-8	N.D.		100	42	10
14241	bis(2-Chloroethoxy)methane	111-91-1	N.D.		21	5.2	10
14241	bis(2-Chloroethyl)ether	111-44-4	N.D.		21	5.2	10
14241	bis(2-Chloroisopropyl)ether[1]	39638-32-9	N.D.		21	5.2	10
	Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.						
14241	2-Chloronaphthalene	91-58-7	N.D.		10	4.2	10
14241	2-Chlorophenol	95-57-8	N.D.		21	5.2	10
14241	4-Chlorophenyl-phenylether	7005-72-3	N.D.		21	5.2	10

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-4UT Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 11/01/2019 12:06
Collection Date/Time: 10/31/2019 11:10
SDG#: BMS82-17

ARCADIS U.S., Inc.
ELLE Sample #: GW 1190182
ELLE Group #: 2072206
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	Chrysene	218-01-9	N.D.	5.2	1.0	10
14241	Dibenz(a,h)anthracene	53-70-3	N.D.	5.2	1.0	10
14241	Dibenzofuran	132-64-9	N.D.	21	5.2	10
14241	3,3'-Dichlorobenzidine	91-94-1	N.D.	100	31	10
14241	2,4-Dichlorophenol	120-83-2	N.D.	21	5.2	10
14241	Dicyclohexylamine[1]	101-83-7	N.D.	100	100	10
14241	Diethylphthalate	84-66-2	N.D.	52	21	10
14241	N,N-Dimethylaniline[1]	121-69-7	N.D.	10	5.2	10
14241	2,4-Dimethylphenol	105-67-9	N.D.	100	31	10
14241	Dimethylphthalate	131-11-3	N.D.	52	21	10
14241	4,6-Dinitro-2-methylphenol	534-52-1	N.D.	220	83	10
14241	2,4-Dinitrophenol	51-28-5	N.D.	310	150	10
14241	2,4-Dinitrotoluene	121-14-2	N.D.	52	10	10
14241	2,6-Dinitrotoluene	606-20-2	N.D.	21	5.2	10
14241	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	110	52	10
14241	Fluoranthene	206-44-0	N.D.	5.2	1.0	10
14241	Fluorene	86-73-7	N.D.	5.2	1.0	10
14241	Hexachlorobenzene	118-74-1	N.D.	5.2	1.0	10
14241	Hexachlorobutadiene	87-68-3	N.D.	21	5.2	10
14241	Hexachlorocyclopentadiene	77-47-4	N.D.	110	52	10
14241	Hexachloroethane	67-72-1	N.D.	52	10	10
14241	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	5.2	1.0	10
14241	Isophorone	78-59-1	N.D.	21	5.2	10
14241	2-Methylnaphthalene	91-57-6	16	5.2	1.0	10
14241	2-Methylphenol	95-48-7	130	21	5.2	10
14241	4-Methylphenol	65794-96-9	560	21	5.2	10
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
14241	Naphthalene	91-20-3	240	5.2	1.0	10
14241	2-Nitroaniline	88-74-4	N.D.	73	21	10
14241	3-Nitroaniline	99-09-2	N.D.	73	31	10
14241	4-Nitroaniline	100-01-6	N.D.	31	9.4	10
14241	Nitrobenzene	98-95-3	N.D.	21	5.2	10
14241	2-Nitrophenol	88-75-5	N.D.	100	31	10
14241	4-Nitrophenol	100-02-7	N.D.	310	100	10
14241	N-Nitroso-di-n-propylamine	621-64-7	N.D.	31	7.3	10
14241	N-Nitrosodiphenylamine	86-30-6	N.D.	31	7.3	10
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.					
14241	Di-n-octylphthalate	117-84-0	N.D.	110	52	10

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-4UT Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 11/01/2019 12:06
Collection Date/Time: 10/31/2019 11:10
SDG#: BMS82-17

ARCADIS U.S., Inc.
ELLE Sample #: GW 1190182
ELLE Group #: 2072206
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	Pentachlorophenol	87-86-5	N.D.	52	10	10
14241	Phenanthrene	85-01-8	N.D.	5.2	1.0	10
14241	Phenol	108-95-2	3,300 D	100	26	50
14241	Pyrene	129-00-0	N.D.	5.2	1.0	10
14241	Pyridine	110-86-1	N.D.	52	21	10
14241	1,2,4,5-Tetrachlorobenzene	95-94-3	N.D.	21	5.2	10
14241	2,3,4,6-Tetrachlorophenol	58-90-2	N.D.	100	42	10
14241	2,4,5-Trichlorophenol	95-95-4	N.D.	21	5.2	10
14241	2,4,6-Trichlorophenol	88-06-2	N.D.	21	5.2	10
14241	Triethylamine[1]	121-44-8	210	100	100	10

The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the TNI/DoD Standards. The following analytes are accepted based on this allowance: Dicyclohexylamine

The recovery for the method blank surrogate(s) is outside the QC acceptance limits as noted on the QC Summary. The following action was taken:
The sample was re-extracted outside the method required holding time and the method blank surrogate recoveries are compliant.
All results are reported from the first trial.

Reporting limits were raised due to interference from the sample matrix.

00886 SVOA TIC Interpretive(25)

The results from the semivolatile library search are listed on the attached FORM 1 - SV-TIC. The qualifiers appearing in the "Q" column are defined at the end of the report.

Sample Comments

State of New York Certification No. 10670

[1] = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	Y193131AA	11/09/2019 19:30	Linda C Pape	10
01163	GC/MS VOA Water Prep	SW-846 5030C	1	Y193131AA	11/09/2019 19:29	Linda C Pape	10
14241	Semi-annual Groundwater BMS	SW-846 8270D	1	19310WAD026	11/10/2019 16:20	Ashley R Transue	10
14241	Semi-annual Groundwater BMS	SW-846 8270D	1	19310WAD026	11/11/2019 14:12	Ashley R Transue	50
11010	8270D BNA Extraction	SW-846 3510C	1	19310WAD026	11/06/2019 17:48	Laura Duquette	1

*=This limit was used in the evaluation of the final result

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
S8218

Lab Name: Lancaster Laboratories Contract:_____
Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____
Matrix: (soil/water) WATER Lab Sample ID: 1190182
Sample wt/vol: 5.0 (g/mL)mL Lab File ID:HP09355.i/19nov09a.b/yn09s22.d
Level: (low/med) LOW Date Received: 11/01/19
% Moisture: not dec. Date Analyzed: 11/09/19
Column: (pack/cap) CAP Dilution Factor: 10.0
CONCENTRATION UNITS:
Number TICs found: 9 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		Unknown alcohol	8.91	220	J N
2.		Unknown alicyclic	11.13	590	J
3.		Unknown alicyclic	11.47	180	J
4.	1618-26-4	2,4-Dithiapentane	11.94	620	J
5.		Unknown	12.02	140	J
6.		Unknown alkane	12.36	180	J
7.		Unknown alicyclic	12.47	130	J
8.		Unknown alcohol	12.70	140	J
9.		Unknown alkane	12.85	230	J
10.					
11.	VOCTIC	Total VOC TICs		2400	J
12.					
13.					
14.					
15.					
16.					
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27.					
28.					
29.					
30.					

page 1 of 1

FORM I VOA-TIC

1F

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

S8218

Lab Name: Lancaster Laboratories Contract:
Lab Code: LANCAS Case No.: SAS No.: SDG No.:
Matrix: (soil/water) WATER Lab Sample ID: 1190182
Sample wt/vol: 240 (g/mL) mL Lab File ID: lk0512.d
Level: (low/med) LOW Date Received: 11/01/19
% Moisture: Decanted: (Y/N) Date Extracted: 11/06/19
Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/10/19
Injection Volume: 1 (uL) Dilution Factor: 10
GPC Cleanup: N pH: Extraction: Sepf
CONCENTRATION UNITS:
Number TICs found: 20 (ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Unknown	2.266	790	J N
2.	Unknown	3.068	97000	J
3.108-11-2	2-Pentanol, 4-methyl-	3.464	75000	J
4.	Unknown	4.331	2600	J
5.	Unknown	4.470	1700	J
6.	Unknown	4.534	1800	J
7.	Unknown	4.550	720	J
8.503-74-2	Butanoic acid, 3-methyl-	4.919	1000	J
9.	Unknown	4.994	1200	J
10.	Unknown	5.138	750	J
11.	Unknown	5.229	1700	J
12.1618-26-4	2,4-Dithiapentane	5.304	1100	J
13.	Unknown	5.539	1900	J
14.	Unknown	6.620	1300	J
15.	Unknown	6.748	3500	J
16.	Unknown	7.042	750	J
17.149-57-5	Hexanoic acid, 2-ethyl-	8.454	16000	J
18.65-85-0	Benzoic acid	8.802	1500	J
19.291-21-4	1,3,5-Trithiane	10.321	1200	J
20.	Unknown	11.872	780	J
21.				
22.SVOCTIC	Total SVOC TICs		210000	J
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

page 1 of 1

FORM I SV-1

Sample Description: **TRIP BLANK Water**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 11/01/2019 12:06
Collection Date/Time: 10/23/2019
SDG#: BMS82-18TB

ARCADIS U.S., Inc.
ELLE Sample #: GW 1190183
ELLE Group #: 2072206
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	20	0.7	1
11997	Acetonitrile	75-05-8	N.D.	100	16	1
11997	Benzene	71-43-2	N.D.	1	0.2	1
11997	Bromochloromethane	74-97-5	N.D.	5	0.2	1
11997	Bromodichloromethane	75-27-4	N.D.	1	0.2	1
11997	Bromoform	75-25-2	N.D.	4	1	1
11997	Bromomethane	74-83-9	N.D. J	1	0.3	1
11997	n-Butanol	71-36-3	N.D.	250	61	1
11997	2-Butanone	78-93-3	N.D.	10	0.3	1
11997	t-Butyl alcohol	75-65-0	N.D.	50	12	1
11997	n-Butylbenzene	104-51-8	N.D.	5	0.2	1
11997	sec-Butylbenzene	135-98-8	N.D.	5	0.2	1
11997	tert-Butylbenzene	98-06-6	N.D.	5	0.3	1
11997	Carbon Disulfide	75-15-0	N.D.	5	0.2	1
11997	Carbon Tetrachloride	56-23-5	N.D.	1	0.2	1
11997	Chlorobenzene	108-90-7	N.D.	1	0.2	1
11997	Chlorodifluoromethane[1]	75-45-6	N.D.	5	2	1
11997	Chloroethane	75-00-3	N.D.	1	0.2	1
11997	Chloroform	67-66-3	N.D.	1	0.2	1
11997	Chloromethane	74-87-3	N.D.	1	0.2	1
11997	Cyclohexane	110-82-7	N.D.	5	1	1
11997	Cyclohexanone[1]	108-94-1	N.D.	100	25	1
11997	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	5	0.3	1
11997	Dibromochloromethane	124-48-1	N.D.	1	0.2	1
11997	1,2-Dibromoethane	106-93-4	N.D.	1	0.2	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	5	0.2	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	5	0.2	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	5	0.2	1
11997	Dichlorodifluoromethane	75-71-8	N.D. J	1	0.2	1
11997	1,1-Dichloroethane	75-34-3	N.D.	1	0.2	1
11997	1,2-Dichloroethane	107-06-2	N.D.	1	0.3	1
11997	1,1-Dichloroethene	75-35-4	N.D.	1	0.2	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	1	0.2	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	1	0.2	1
11997	1,2-Dichloropropane	78-87-5	N.D.	1	0.2	1
11997	cis-1,3-Dichloropropene	10061-01-5	N.D.	1	0.2	1
11997	trans-1,3-Dichloropropene	10061-02-6	N.D.	1	0.2	1
11997	1,4-Dioxane	123-91-1	N.D.	250	29	1
11997	Ethyl Acetate	141-78-6	N.D.	5	0.7	1
11997	Ethyl ether	60-29-7	N.D.	5	0.2	1
11997	Ethylbenzene	100-41-4	N.D.	1	0.4	1

*=This limit was used in the evaluation of the final result

Sample Description: **TRIP BLANK Water**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 11/01/2019 12:06
Collection Date/Time: 10/23/2019
SDG#: BMS82-18TB

ARCADIS U.S., Inc.
ELLE Sample #: GW 1190183
ELLE Group #: 2072206
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Freon 113	76-13-1	N.D.	10	0.2	1
11997	n-Heptane[1]	142-82-5	N.D.	5	2	1
11997	n-Hexane[1]	110-54-3	N.D.	5	2	1
11997	2-Hexanone	591-78-6	N.D.	10	0.3	1
11997	Isobutyl Alcohol	78-83-1	N.D.	250	36	1
11997	Isopropylbenzene	98-82-8	N.D.	5	0.2	1
11997	p-Isopropyltoluene	99-87-6	N.D.	5	0.2	1
11997	Methyl Acetate	79-20-9	N.D.	5	0.2	1
11997	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	1	0.2	1
11997	4-Methyl-2-pentanone	108-10-1	N.D.	10	0.5	1
11997	Methylcyclohexane	108-87-2	N.D.	5	0.5	1
11997	Methylene Chloride	75-09-2	N.D.	1	0.3	1
11997	Naphthalene	91-20-3	N.D.	5	1	1
11997	2-Nitropropane	79-46-9	N.D.	10	0.8	1
11997	Styrene	100-42-5	N.D.	5	0.2	1
11997	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	1	0.2	1
11997	Tetrachloroethene	127-18-4	N.D.	1	0.2	1
11997	Tetrahydrofuran	109-99-9	N.D.	10	0.7	1
11997	Toluene	108-88-3	N.D.	1	0.2	1
11997	1,2,3-Trichlorobenzene	87-61-6	N.D.	5	0.4	1
11997	1,2,4-Trichlorobenzene	120-82-1	N.D.	5	0.3	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	1	0.3	1
11997	1,1,2-Trichloroethane	79-00-5	N.D.	1	0.2	1
11997	Trichloroethene	79-01-6	N.D.	1	0.2	1
11997	Trichlorofluoromethane	75-69-4	N.D.	1	0.2	1
11997	1,2,4-Trimethylbenzene	95-63-6	N.D.	5	1	1
11997	1,3,5-Trimethylbenzene	108-67-8	N.D.	5	0.3	1
11997	Vinyl Chloride	75-01-4	N.D.	1	0.2	1
11997	m+p-Xylene	179601-23-1	N.D.	5	1	1
11997	o-Xylene	95-47-6	N.D.	1	0.4	1
11997	Xylene (Total)	1330-20-7	N.D.	6	1	1

Project defined calibration criteria are not met. The calibration is compliant with the method defined criteria.

A Report Limit Verification (RLV) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The RLV standard shows adequate sensitivity at or below the reporting limit.

00882 VOA Interp. Library Search-10

The results from the volatile library search are listed on the attached FORM 1 - VOA-TIC. The qualifiers appearing in the "Q" column are defined at the end of the report.

*=This limit was used in the evaluation of the final result

Sample Description: **TRIP BLANK Water**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 11/01/2019 12:06
Collection Date/Time: 10/23/2019
SDG#: BMS82-18TB

ARCADIS U.S., Inc.
ELLE Sample #: GW 1190183
ELLE Group #: 2072206
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC Miscellaneous	**SW-846 8015D Rev.4, June 2003**		**ug/l**	**ug/l**	**ug/l**	
10603	Ethanol	64-17-5	N.D. D2	1,000	150	1
12926	Ethylene glycol[1]	107-21-1	N.D.	10,000	5,000	1
10603	Isopropanol[1]	67-63-0	N.D. D2	1,000	110	1
10603	Methanol	67-56-1	N.D. D2	1,000	220	1
12926	Propylene glycol[1]	57-55-6	N.D.	10,000	2,000	1

The response for tetramethylene glycol in the continuing calibration verification standard is outside the QC acceptance limits low. The following action was taken:
The analysis was repeated and the continuing calibration verification standard bracketing the sample on the second trial is also outside the acceptance limits. This effect is attributed to the sample matrix and the data is reported.

Sample Comments

State of New York Certification No. 10670

[1] = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	Y193091AA	11/05/2019 16:04	Corie Mellinger	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	Y193091AA	11/05/2019 16:03	Corie Mellinger	1
10603	Alcohols in Water	SW-846 8015D Rev.4, June 2003	1	193080008A	11/05/2019 04:48	Johanna C Kennedy	1
12926	Glycols in Water by 8015C/D	SW-846 8015D Rev.4, June 2003	1	193100032A	11/07/2019 00:40	Donald Brown	1

*=This limit was used in the evaluation of the final result

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
S8219

Lab Name: Lancaster Laboratories Contract:_____
Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____
Matrix: (soil/water) WATER Lab Sample ID: 1190183
Sample wt/vol: 5.0 (g/mL)mL Lab File ID:HP09355.i/19nov05a.b/yn05s05.d
Level: (low/med) LOW Date Received: 11/01/19
% Moisture: not dec. Date Analyzed: 11/05/19
Column: (pack/cap) CAP Dilution Factor: 1.0
CONCENTRATION UNITS:
Number TICs found: 0 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	VOCTIC	Total VOC TICs		0	U
2.					
3.					
4.					
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page 1 of 1

FORM I VOA-TIC

ARCADIS Design & Consultancy for natural and built assets

Bristol-Myers Squibb

Thompson Road Investigation

Data Usability Summary Report

Syracuse, NY

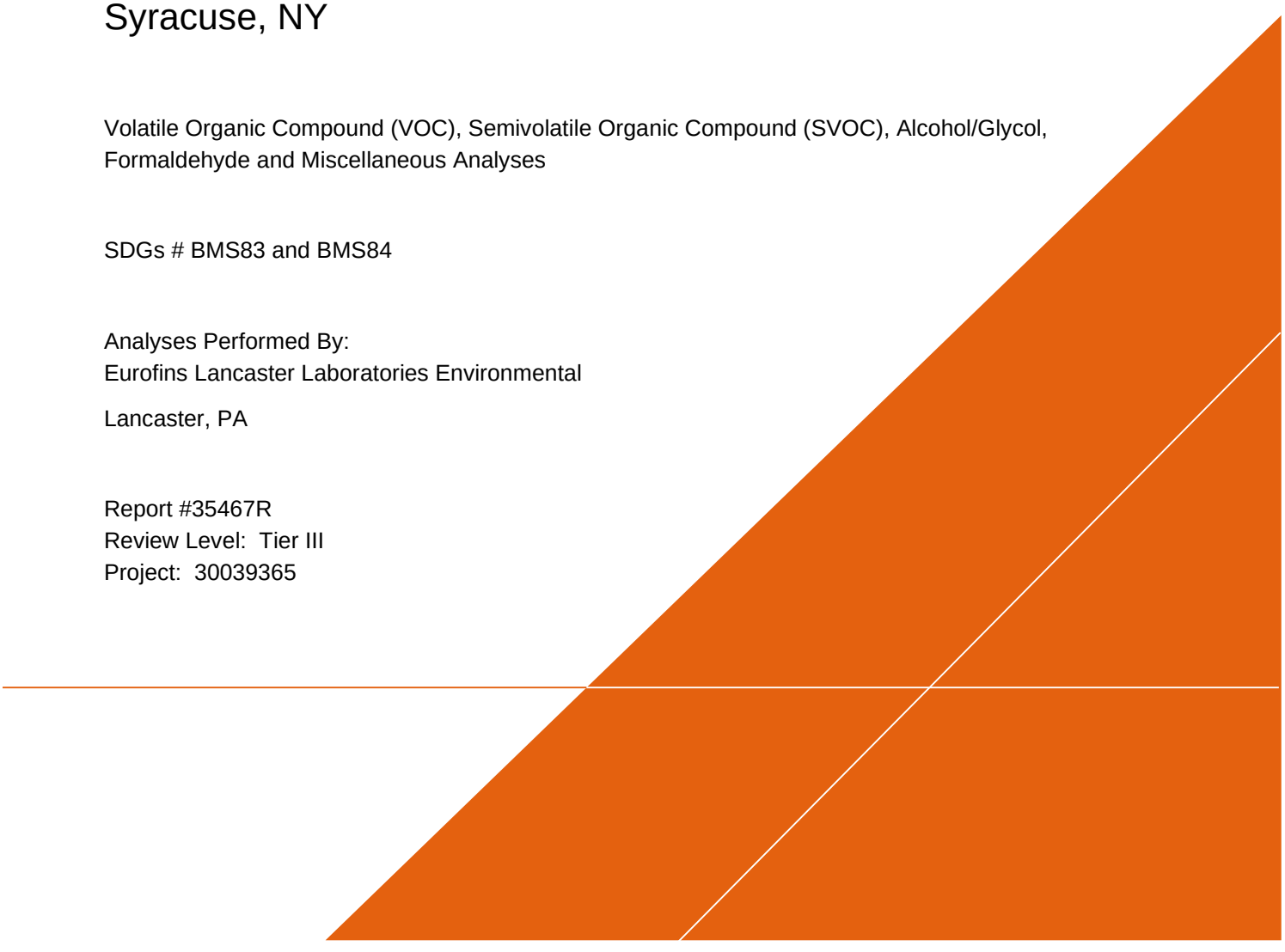
Volatile Organic Compound (VOC), Semivolatile Organic Compound (SVOC), Alcohol/Glycol, Formaldehyde and Miscellaneous Analyses

SDGs # BMS83 and BMS84

Analyses Performed By:
Eurofins Lancaster Laboratories Environmental

Lancaster, PA

Report #35467R
Review Level: Tier III
Project: 30039365



SUMMARY

This data quality assessment summarizes the review of Sample Delivery Groups (SDGs) # BMS83 and BMS84 for samples collected in association with the with the Bristol-Myers Squibb Thompson Road Site. The review was conducted as a Tier III evaluation and included review of data package completeness. Only analytical data associated with constituents of concern were reviewed for this validation. Field documentation was not included in this review. Included with this assessment are the validation annotated sample result sheets, and chain of custody. Analyses were performed on the following samples:

SDG Number	Sample ID	Lab ID	Matrix	Sample Collection Date	Parent Sample	Analysis				
						VOC	SVOC	PFAS	MET	MISC
BMS83	BDA-17WT 10302019	1188926	Water	10/30/2019						X[2]
BMS84	BDA-12RX 11012019	1191061	Water	11/01/2019		X	X			X[1]
	BDA-12T 11012019	1191062	Water	11/01/2019		X	X			X[1]
	BDA-8WT 11012019	1191063	Water	11/01/2019		X	X			X[1]
	BDA-8RX 11012019	1191064	Water	11/01/2019		X	X			X[1]
	CHP-43RX 11012019	1191065	Water	11/01/2019		X	X			X[1]

Notes:
[1] Miscellaneous analyses include Aldehydes, Alcohols and Glycols
[2]Miscellaneous analyses include Ammonia Nitrogen, Total Phosphorus, and Chemical Oxygen Demand (COD).

ANALYTICAL DATA PACKAGE DOCUMENTATION

The table below is the evaluation of the data package completeness.

Items Reviewed	Reported		Performance Acceptable		Not Required
	No	Yes	No	Yes	
1. Sample receipt condition		X		X	
2. Requested analyses and sample results		X		X	
3. Master tracking list		X		X	
4. Methods of analysis		X		X	
5. Reporting limits		X		X	
6. Sample collection date		X		X	
7. Laboratory sample received date		X		X	
8. Sample preservation verification (as applicable)		X		X	
9. Sample preparation/extraction/analysis dates		X		X	
10. Fully executed Chain-of-Custody (COC) form		X		X	
11. Narrative summary of QA or sample problems provided		X		X	
12. Data Package Completeness and Compliance		X		X	

Note:
QA - Quality Assurance

List of Acronyms

%D: Percent Difference

%R: Percent Recovery

AC: Acceptable

ALC/GLY: Alcohols/Glycols

BAL: Blank Action Level

CCV: Continuing Calibration Verification

CRDL: Contract Required Detection Limit

D: Dilution

EIS: Extractable Internal Standard

FB: Field Blank

FD: Field Duplicate

ALD: Aldehydes

GC/ECD: Gas Chromatograph/Electron Capture Detector

GC/MS: Gas Chromatograph/Mass spectrometer

HT: Holding Time

ICP: Inductively Coupled Plasma

ICS: Interference Control Sample

ICV: Initial Calibration Verification

ISTD: Internal Standards

LabDup: Laboratory Duplicate

LCS: Lab Control Sample

LCSD: Lab Control Sample Duplicate

LL: Lower Control Limit

MB: Method Blank

MDL: Method Detection Limit

MET: Metals

MS: Matrix Spike

MSD: Matrix Spike Duplicate

N/A: Not Applicable

NC: Not Compliant

List of Acronyms, Continued

PAH: Polyaromatic Hydrocarbon

PCB: Polychlorinated Biphenyl

PEST: Pesticide

PFAS: Per- and Polyfluoroalkyl Substances

QA: Quality Assurance

QC: Quality Control

RB: Rinse Blank

RL: Reporting Limit

RPD: Relative Percent Difference

RRF: Relative Response Factor

RSD: Relative Standard Deviation

RT: Retention Time

SDG: Sample Delivery Group

SerDil: Serial Dilution

SIM: Single Ion Monitoring

SOP: Standard Operating Procedure

SSTD: Surrogate Standards

SVOC: Semivolatile Organic Compound

TB: Trip Blank

TIC: Tentatively Identified Compound

TOC: Total Organic Carbon

TOTDIS: Total and Dissolved

UL: Upper Control Limit

USEPA: United States Environmental Protection Agency

VOC: Volatile Organic Compound

ORGANIC ANALYSIS INTRODUCTION

Analyses were performed according to United States Environmental Protection Agency (USEPA) SW846 methods 8260C, 8270D, 8015D and 8315A. Data were reviewed in accordance with USEPA National Functional Guidelines of October 1999 and applicable EPA Region 2 SOPs.

The data review process is an evaluation of data on a technical basis rather than a determination of contract compliance. As such, the standards against which the data are being weighed may differ from those specified in the analytical method. It is assumed that the data package represents the best efforts of the laboratory and had already been subjected to adequate and sufficient quality review prior to submission.

During the review process, laboratory qualified and unqualified data are verified against the supporting documentation. Based on this evaluation, qualifier codes may be added, deleted, or modified by the data reviewer. Results are qualified with the following codes in accordance with USEPA National Functional Guidelines:

- Concentration (C) Qualifiers
  - U The compound was analyzed for but not detected. The associated value is the compound quantitation limit.
  - B The compound has been found in the sample as well as its associated blank, its presence in the sample may be suspect.
- Quantitation (Q) Qualifiers
  - E The compound was quantitated above the calibration range.
  - D Concentration is based on a diluted sample analysis.

- Validation Qualifiers
  - J The compound was positively identified; however, the associated numerical value is an estimated concentration only.
  - UJ The compound was not detected above the reported sample quantitation limit. However, the reported limit is approximate and may or may not represent the actual limit of quantitation.
  - JN The analysis indicates the presence of a compound for which there is presumptive evidence to make a tentative identification. The associated numerical value is an estimated concentration only.
  - UB Compound considered non-detect at the listed value due to associated blank contamination.
  - N The analysis indicates the presence of a compound for which there is presumptive evidence to make a tentative identification.
  - R The sample results are rejected.

Two facts should be noted by all data users. First, the "R" flag means that the associated value is unusable. In other words, due to significant quality control (QC) problems, the analysis is invalid and provides no information as to whether the compound is present or not. "R" values should not appear on data tables because they cannot be relied upon, even as a last resort. The second fact to keep in mind is

that no compound concentration, even if it has passed all QC tests, is guaranteed to be accurate. Strict QC serves to increase confidence in data but any value potentially contains error.

VOLATILE ORGANIC COMPOUND (VOC) ANALYSES

1. Holding Times

The specified holding times for the following methods are presented in the following table.

Method	Matrix	Holding Time	Preservation
SW-846 8260C	Water	14 days from collection to analysis (preserved) 7 days from collection to analysis (non-preserved)	Cool to <6 °C; preserved to a pH of less than 2 s.u.
	Soil	48 hours from collection to extraction and 14 days from extraction to analysis	Cool to <6 °C.

Note:

s.u. Standard units

All samples were analyzed within the specified holding time criteria.

2. Blank Contamination

Quality assurance (QA) blanks (i.e., method and rinse blanks) are prepared to identify any contamination which may have been introduced into the samples during sample preparation or field activity. Method blanks measure laboratory contamination. Rinse blanks measure contamination of samples during field operations.

A blank action level (BAL) of five times the concentration of a detected compound in an associated blank (common laboratory contaminant compounds are calculated at ten times) is calculated for QA blanks containing concentrations greater than the method detection limit (MDL). The BAL is compared to the associated sample results to determine the appropriate qualification of the sample results, if needed.

Compounds were not detected above the MDL in the associated blanks; therefore, detected sample results were not associated with blank contamination.

3. Mass Spectrometer Tuning

Mass spectrometer performance was acceptable, and all analyses were performed within a 12-hour tune clock.

System performance and column resolution were acceptable.

4. Calibration

Satisfactory instrument calibration is established to ensure that the instrument is capable of producing acceptable quantitative data. An initial calibration demonstrates that the instrument is capable of acceptable performance at the beginning of an experimental sequence. The continuing calibration verifies that the instrument daily performance is satisfactory.

4.1 Initial Calibration

The method specifies percent relative standard deviation (%RSD) and relative response factor (RRF) limits for select compounds only. A technical review of the data applies limits to all compounds with no exceptions.

All target compounds associated with the initial calibration standards must exhibit a %RSD less than the control limit (15%) or a correlation coefficient greater than 0.99 and an RRF value greater than control limit (0.05).

4.2 Continuing Calibration

All target compounds associated with the continuing calibration standard must exhibit a percent difference (%D) less than the control limit (20%) and RRF value greater than control limit (0.05).

All compounds associated with the calibrations were within the specified control limits, with the exception of the compounds presented in the following table.

Sample Locations	Initial/Continuing	Compound	Criteria
BDA-12RX 11012019 BDA-12T 11012019 BDA-8WT 11012019 BDA-8RX 11012019 CHP-43RX 11012019	CCV %D	Dichlorodifluoromethane	-38%
		Chloromethane	-25%
		Vinyl chloride	-23%
		Bromomethane	-30%
		Chloroethane	-23%
		Acetone	31%
		Tetrahydrofuran	24%
		1,4-Dioxane	38%
		Acetonitrile	34%

The criteria used to evaluate the initial and continuing calibration are presented in the following table. In the case of a calibration deviation, the sample results are qualified.

Initial/Continuing	Criteria	Sample Result	Qualification
Initial and Continuing Calibration	RRF <0.05	Non-detect	R
		Detect	J
	RRF <0.01[1]	Non-detect	R
		Detect	J
	RRF >0.05 or RRF >0.01[1]	Non-detect	No Action
		Detect	
Initial Calibration	%RSD > 15% or a correlation coefficient <0.99	Non-detect	UJ
		Detect	J
	%RSD >90%	Non-detect	R
		Detect	J
Continuing Calibration	%D >20% (increase in sensitivity)	Non-detect	No Action
		Detect	J
	%D >20% (decrease in sensitivity)	Non-detect	UJ

Initial/Continuing	Criteria	Sample Result	Qualification
		Detect	J
	%D >90% (increase/decrease in sensitivity)	Non-detect	R
		Detect	J

5. Surrogates/System Monitoring Compounds

All samples to be analyzed for organic compounds are spiked with surrogate compounds prior to sample preparation to evaluate overall laboratory performance and efficiency of the analytical technique. VOC analysis requires that all surrogates associated with the analysis exhibit recoveries within the laboratory-established acceptance limits.

All surrogate recoveries were within control limits.

6. Internal Standard Performance

Internal standard performance criteria insure that the GC/MS sensitivity and response are stable during every sample analysis. The criteria require the internal standard compounds associated with the VOC exhibit area counts that are not greater than two times (+100%) or less than one-half (-50%) of the area counts of the associated continuing calibration standard.

All internal standard responses were within control limits.

7. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Analysis

MS/MSD data are used to assess the precision and accuracy of the analytical method. The compounds used to perform the MS/MSD analysis must exhibit a percent recovery within the laboratory-established acceptance limits. The relative percent difference (RPD) between the MS/MSD recoveries must exhibit an RPD within the laboratory-established acceptance limits.

Note: The MS/MSD recovery control limits do not apply for MS/MSD performed on sample locations where the compound concentration detected in the parent sample exceeds the MS/MSD concentration by a factor of four or greater.

A MS/MSD analysis was not performed on a sample location within this SDG.

8. Laboratory Control Sample/Laboratory Control Sample Duplicate (LCS/LCSD) Analysis

The LCS/LCSD analysis is used to assess the precision and accuracy of the analytical method independent of matrix interferences. The compounds associated with the LCS/LCSD analysis must exhibit a percent recovery within the laboratory-established acceptance limits.

Sample locations associated with LCS/LCSD analysis exhibiting recoveries outside of the control limits presented in the following table.

Sample Locations	Compound	LCS Recovery	LCSD Recovery
BDA-12RX 11012019	sec-Butylbenzene	>UL	>UL
BDA-12T 11012019	1,2-Dichloropropane	AC	>UL
BDA-8WT 11012019	1,4-Dioxane	>UL	AC
BDA-8RX 11012019	1,1,2,2-Tetrachloroethane	>UL	>UL

The criteria used to evaluate the LCS/LCSD recoveries are presented in the following table. In the case of an LCS/LCSD deviation, the sample results are qualified as documented in the table below.

Control Limit	Sample Result	Qualification
> the upper control limit (UL)	Non-detect	No Action
	Detect	J
< the lower control limit (LL) but > 10%	Non-detect	UJ
	Detect	J
< 10%	Non-detect	R
	Detect	J

9. Field Duplicate Analysis

Field duplicate analysis is used to assess the overall precision of the field sampling procedures and analytical method. A control limit of 50% for water matrices and 100% for soil matrices is applied to the RPD between the parent sample and the field duplicate. In the instance when the parent and/or duplicate sample concentrations are less than or equal to 5 times the RL, a control limit of two times the RL is applied for water matrices or three times the RL is applied for soil matrices.

A field duplicate was not included with these SDGs.

10. Compound Identification

Compounds are identified on the GC/MS by using the analytes relative retention time and ion spectra.

Sample results associated with compound that exhibited a concentration greater than the linear range of the instrument calibration are summarized in the following table.

Sample ID	Compound	Original Analysis	Diluted Analysis	Reported Analysis
CHP-43RX 11012019	Methylene chloride	-	370000 E	370000 EJ

Note: In the instance where both the original analysis and the diluted analysis sample results exhibited a concentration greater than and/or less than the calibration linear range of the instrument; the sample result exhibiting the greatest concentration will be reported as the final result.

Sample results associated with compounds exhibiting concentrations greater than the linear range are qualified as documented in the table below when reported as the final reported sample result.

Reported Sample Results	Qualification
Diluted sample result within calibration range	D
Diluted sample result less than the calibration range	DJ
Diluted sample result greater than the calibration range	EDJ
Original sample result greater than the calibration range	EJ

Tentatively identified compounds (TICs) were identified in all sample locations associated with this SDG. VOC analysis requires that TICs be qualified as estimated (JN).

11. System Performance and Overall Assessment

Overall system performance was acceptable. Other than for those deviations specifically mentioned in this review, the overall data quality is within the guidelines specified in the method.

DATA VALIDATION CHECKLIST FOR VOCs

VOCs: SW-846 8260C	Reported		Performance Acceptable		Not Required
	No	Yes	No	Yes	
GAS CHROMATOGRAPHY/MASS SPECTROMETRY (GC/MS)					
Tier II Validation					
Holding times		X		X	
Reporting limits (units)		X		X	
Blanks					
A. Method blanks		X		X	
B. Equipment blanks					X
C. Trip blanks					X
Laboratory Control Sample (LCS)		X	X		
Laboratory Control Sample Duplicate(LCSD)		X	X		
LCS/LCSD Precision (RPD)		X		X	
Matrix Spike (MS)					X
Matrix Spike Duplicate(MSD)					X
MS/MSD Precision (RPD)					X
Field/Lab Duplicate (RPD)					X
Surrogate Spike Recoveries		X		X	
Dilution Factor		X		X	
Moisture Content					X
Tier III Validation					
System performance and column resolution		X		X	
Initial calibration %RSDs		X		X	
Continuing calibration RRFs		X		X	
Continuing calibration %Ds		X	X		
Instrument tune and performance check		X		X	
Ion abundance criteria for each instrument used		X		X	
Internal standard		X		X	
Compound identification and quantitation					
A. Reconstructed ion chromatograms		X		X	
B. Quantitation Reports		X		X	

VOCs: SW-846 8260C	Reported		Performance Acceptable		Not Required
	No	Yes	No	Yes	
GAS CHROMATOGRAPHY/MASS SPECTROMETRY (GC/MS)					
C. RT of sample compounds within the established RT windows		X		X	
D. Transcription/calculation errors present		X		X	
E. Reporting limits adjusted to reflect sample dilutions		X		X	

Notes:

%RSD Relative standard deviation

%R Percent recovery

RPD Relative percent difference

%D Percent difference

SEMI-VOLATILE ORGANIC COMPOUND (SVOC) ANALYSIS

1. Holding Times

The specified holding times for the following methods are presented in the following table.

Method	Matrix	Holding Time	Preservation
SW-846 8270D and 8270D-SIM	Water	7 days from collection to extraction and 40 days from extraction to analysis	Cool to <6°C
	Soil	14 days from collection to extraction and 40 days from extraction to analysis	Cool to <6°C

All samples were analyzed within the specified holding time criteria.

2. Blank Contamination

Quality assurance (QA) blanks (i.e., method and rinse blanks) are prepared to identify any contamination which may have been introduced into the samples during sample preparation or field activity. Method blanks measure laboratory contamination. Rinse blanks measure contamination of samples during field operations.

A blank action level (BAL) of five times the concentration of a detected compound in an associated blank (common laboratory contaminant compounds are calculated at ten times) is calculated for QA blanks containing concentrations greater than the method detection limit (MDL). The BAL is compared to the associated sample results to determine the appropriate qualification of the sample results, if needed.

Compounds were not detected above the MDL in the associated blanks; therefore, detected sample results were not associated with blank contamination.

3. Mass Spectrometer Tuning

Mass spectrometer performance was acceptable, and all analyses were performed within a 12-hour tune clock.

System performance and column resolution were acceptable.

4. Calibration

Satisfactory instrument calibration is established to ensure that the instrument is capable of producing acceptable quantitative data. An initial calibration demonstrates that the instrument is capable of acceptable performance at the beginning of an experimental sequence. The continuing calibration verifies that the instrument daily performance is satisfactory.

4.1 Initial Calibration

The method specifies percent relative standard deviation (%RSD) and relative response factor (RRF) limits for select compounds only. A technical review of the data applies limits to all compounds with no exceptions.

All target compounds associated with the initial calibration standards must exhibit a %RSD less than the control limit (20%) or a correlation coefficient greater than 0.99 and an RRF value greater than control limit (0.05).

4.2 Continuing Calibration

All target compounds associated with the continuing calibration standard must exhibit a percent difference (%D) less than the control limit (20%) and RRF value greater than control limit (0.05).

All compounds associated with the calibrations were within the specified control limits.

5. Surrogates/System Monitoring Compounds

All samples to be analyzed for organic compounds are spiked with surrogate compounds prior to sample preparation to evaluate overall laboratory performance and efficiency of the analytical technique. SVOC analysis requires that two of the three SVOC surrogate compounds within each fraction exhibit recoveries within the laboratory-established acceptance limits.

All surrogate recoveries were within control limits.

6. Internal Standard Performance

Internal standard performance criteria insure that the GC/MS sensitivity and response are stable during every sample analysis. The criteria requires the internal standard compounds associated with the SVOC exhibit area counts that are not greater than two times (+100%) or less than one-half (-50%) of the area counts of the associated continuing calibration standard.

All internal standard responses were within control limits.

7. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Analysis

MS/MSD data are used to assess the precision and accuracy of the analytical method. The compounds used to perform the MS/MSD analysis must exhibit a percent recovery within the laboratory-established acceptance limits. The relative percent difference (RPD) between the MS/MSD recoveries must exhibit an RPD within the laboratory-established acceptance limits.

Note: The MS/MSD recovery control limits do not apply for MS/MSD performed on sample locations where the compound concentration detected in the parent sample exceeds the MS/MSD concentration by a factor of four or greater.

A MS/MSD analysis was not performed on a sample location within this SDG.

8. Laboratory Control Sample/Laboratory Control Sample Duplicate (LCS/LCSD) Analysis

The LCS/LCSD analysis is used to assess the precision and accuracy of the analytical method independent of matrix interferences. The compounds associated with the LCS/LCSD analysis must exhibit a percent recovery within the laboratory-established acceptance limits.

All compounds associated with the LCS/LCSD analysis exhibited recoveries within the control limits.

9. Field Duplicate Analysis

Field duplicate analysis is used to assess the overall precision of the field sampling procedures and analytical method. A control limit of 50% for water matrices and 100% for soil matrices is applied to the RPD between the parent sample and the field duplicate. In the instance when the parent and/or duplicate sample concentrations are less than or equal to 5 times the RL, a control limit of two times the RL is applied for water matrices or three times the RL is applied for soil matrices.

A field duplicate was not included with these SDGs.

10. Compound Identification

Compounds are identified on the GC/MS by using the analytes relative retention time and ion spectra.

Sample results associated with compound that exhibited a concentration greater than the linear range of the instrument calibration are summarized in the following table.

Sample ID	Compound	Original Analysis	Diluted Analysis	Reported Analysis
BDA-12RX 11012019	Caprolactam	-	350	350 D

Note: In the instance where both the original analysis and the diluted analysis sample results exhibited a concentration greater than and/or less than the calibration linear range of the instrument; the sample result exhibiting the greatest concentration will be reported as the final result.

Sample results associated with compounds exhibiting concentrations greater than the linear range are qualified as documented in the table below when reported as the final reported sample result.

Reported Sample Results	Qualification
Diluted sample result within calibration range	D
Diluted sample result less than the calibration range	DJ
Diluted sample result greater than the calibration range	EDJ
Original sample result greater than the calibration range	EJ

Tentatively identified compounds (TICs) were identified in all sample locations associated with this SDG. SVOC analysis requires that TICs be qualified as estimated (JN).

11. System Performance and Overall Assessment

Overall system performance was acceptable. Other than for those deviations specifically mentioned in this review, the overall data quality is within the guidelines specified in the method.

DATA VALIDATION CHECKLIST FOR SVOCs

SVOCs: SW-846 8270D and 8270D-SIM	Reported		Performance Acceptable		Not Required
	No	Yes	No	Yes	
GAS CHROMATOGRAPHY/MASS SPECTROMETRY (GC/MS)					
Tier II Validation					
Holding times		X		X	
Reporting limits (units)		X		X	
Blanks					
D. Method blanks		X		X	
E. Equipment blanks					X
Laboratory Control Sample (LCS) %R		X		X	
Laboratory Control Sample Duplicate (LCSD) %R		X		X	
LCS/LCSD Precision (RPD)		X		X	
Matrix Spike (MS) %R					X
Matrix Spike Duplicate (MSD) %R					X
MS/MSD Precision (RPD)					X
Field/Lab Duplicate (RPD)					X
Surrogate Spike Recoveries		X		X	
Dilution Factor		X		X	
Moisture Content					X
Tier III Validation					
System performance and column resolution		X		X	
Initial calibration %RSDs		X		X	
Continuing calibration RRFs		X		X	
Continuing calibration %Ds		X		X	
Instrument tune and performance check		X		X	
Ion abundance criteria for each instrument used		X		X	
Internal standard		X		X	
Compound identification and quantitation					
F. Reconstructed ion chromatograms		X		X	
G. Quantitation Reports		X		X	
H. RT of sample compounds within the established RT windows		X		X	

SVOCs: SW-846 8270D and 8270D-SIM		Reported		Performance Acceptable		Not Required
		No	Yes	No	Yes	
GAS CHROMATOGRAPHY/MASS SPECTROMETRY (GC/MS)						
I.	Quantitation transcriptions/calculations		X		X	
J.	Reporting limits adjusted to reflect sample dilutions		X		X	

Notes:

%RSD Relative standard deviation

%R Percent recovery

RPD Relative percent difference

%D Percent difference

GLYCOL & ALCOHOL GC ANALYSES

1. Holding Times

The specified holding times for the following methods are presented in the following table.

Method	Matrix	Holding Time	Preservation
SW-846 8015	Water	14 days from collection to analysis	Cool to <6°C
	Soil		

All samples were analyzed within the specified holding time criteria.

2. Blank Contamination

Quality assurance (QA) blanks (i.e., method and rinse blanks) are prepared to identify any contamination which may have been introduced into the samples during sample preparation or field activity. Method blanks measure laboratory contamination. Rinse blanks measure contamination of samples during field operations.

A blank action level (BAL) of five times the concentration of a detected compound in an associated blank (common laboratory contaminant compounds are calculated at ten times) is calculated for QA blanks containing concentrations greater than the method detection limit (MDL). The BAL is compared to the associated sample results to determine the appropriate qualification of the sample results, if needed.

Compounds were not detected above the MDL in the associated blanks; therefore, detected sample results were not associated with blank contamination.

3. System Performance

System performance and column resolution were acceptable.

4. Calibration

Satisfactory instrument calibration is established to ensure that the instrument is capable of producing acceptable quantitative data. An initial calibration demonstrates that the instrument is capable of acceptable performance at the beginning of an experimental sequence. The continuing calibration verifies that the instrument daily performance is satisfactory.

4.1 Initial Calibration

A maximum RSD of 20% is allowed or a correlation coefficient greater than 0.99.

4.2 Continuing Calibration

All target compounds associated with the continuing calibration standard must exhibit a percent difference (%D) less than the control limit (20%).

All compounds associated with the calibrations were within the specified control limits.

5. Surrogates/System Monitoring Compounds

All samples to be analyzed for organic compounds are spiked with surrogate compounds prior to sample preparation to evaluate overall laboratory performance and efficiency of the analytical technique. The analysis requires that the surrogate compound exhibits recovery within the laboratory-established acceptance limits.

All surrogate recoveries were within control limits.

6. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Analysis

MS/MSD data are used to assess the precision and accuracy of the analytical method. The compounds used to perform the MS/MSD analysis must exhibit a percent recovery within the laboratory-established acceptance limits. The relative percent difference (RPD) between the MS/MSD recoveries must exhibit an RPD within the laboratory-established acceptance limits.

Note: The MS/MSD recovery control limits do not apply for MS/MSD performed on sample locations where the compound concentration detected in the parent sample exceeds the MS/MSD concentration by a factor of four or greater.

A MS/MSD analysis was not performed on a sample location within this SDG.

7. Laboratory Control Sample/Laboratory Control Sample Duplicate (LCS/LCSD) Analysis

The LCS/LCSD analysis is used to assess the precision and accuracy of the analytical method independent of matrix interferences. The compounds associated with the LCS/LCSD analysis must exhibit a percent recovery within the laboratory-established acceptance limits.

All compounds associated with the LCS/LCSD analysis exhibited recoveries within the control limits.

8. Field Duplicate Analysis

Field duplicate analysis is used to assess the overall precision of the field sampling procedures and analytical method. A control limit of 50% for water matrices and 100% for soil matrices is applied to the RPD between the parent sample and the field duplicate. In the instance when the parent and/or duplicate sample concentrations are less than or equal to 5 times the RL, a control limit of two times the RL is applied for water matrices or three times the RL is applied for soil matrices.

A field duplicate was not included with these SDGs.

9. Compound Identification

The retention times of all quantitated peaks must fall within the calculated retention time windows.

All identified compounds met the specified criteria.

10. System Performance and Overall Assessment

Overall system performance was acceptable. Other than for those deviations specifically mentioned in this review, the overall data quality is within the guidelines specified in the method.

DATA VALIDATION CHECKLIST FOR GENERAL GC

ALC/GLY: SW846 8015	Reported		Performance Acceptable		Not Required
	No	Yes	No	Yes	
GAS CHROMATOGRAPHY (GC/FID)					
Tier II Validation					
Holding times		X		X	
Reporting limits (units)		X		X	
Blanks					
A. Method blanks		X		X	
B. Trip blanks					X
Laboratory Control Sample (LCS) %R		X		X	
Laboratory Control Sample Duplicate(LCSD) %R		X		X	
LCS/LCSD Precision (RPD)		X		X	
Matrix Spike (MS) %R					X
Matrix Spike Duplicate(MSD) %R					X
MS/MSD Precision (RPD)					X
Field/Lab Duplicate (RPD)					X
Surrogate Spike Recoveries		X		X	
Dilution Factor		X		X	
Moisture Content					X
Tier III Validation					
Initial calibration %RSDs		X		X	
Continuing calibration %Ds		X		X	
System performance and column resolution		X		X	
Compound identification and quantitation					
A. Quantitation Reports		X		X	
C. RT of sample compounds within the established RT windows		X		X	
C. Pattern identification		X		X	
D. Transcription/calculation errors present		X		X	
E. Reporting limits adjusted to reflect sample dilutions		X		X	

Notes:

%RSD – relative standard deviation
%R - percent recovery
RPD - relative percent difference
%D – difference

ALDEHYDES ANALYSES

1. Holding Times

The specified holding times for the following methods are presented in the following table.

Method	Matrix	Holding Time	Preservation
SW-846 8315A	Water	3 days until extraction; 3 days from extraction to analysis	Cool to <6 °C

All samples were analyzed within the specified holding time criteria.

2. Blank Contamination

Quality assurance (QA) blanks (i.e., method and rinse blanks) are prepared to identify any contamination which may have been introduced into the samples during sample preparation or field activity. Method blanks measure laboratory contamination. Rinse blanks measure contamination of samples during field operations.

A blank action level (BAL) of five times the concentration of a detected compound in an associated blank (common laboratory contaminant compounds are calculated at ten times) is calculated for QA blanks containing concentrations greater than the method detection limit (MDL). The BAL is compared to the associated sample results to determine the appropriate qualification of the sample results, if needed.

Compounds were not detected above the MDL in the associated blanks; therefore, detected sample results were not associated with blank contamination.

3. System Performance

System performance and column resolution were acceptable.

4. Calibration

Satisfactory instrument calibration is established to ensure that the instrument is capable of producing acceptable quantitative data. An initial calibration demonstrates that the instrument is capable of acceptable performance at the beginning of an experimental sequence. The continuing calibration verifies that the instrument daily performance is satisfactory.

4.1 Initial Calibration

A maximum RSD of 20% is allowed or a correlation coefficient greater than 0.99.

4.2 Continuing Calibration

All target compounds associated with the continuing calibration standard must exhibit a percent difference (%D) less than the control limit (20%).

All compounds associated with the calibrations were within the specified control limits.

5. Surrogates/System Monitoring Compounds

All samples to be analyzed for organic compounds are spiked with surrogate compounds prior to sample preparation to evaluate overall laboratory performance and efficiency of the analytical technique. The

analysis requires that the surrogate compound exhibits recovery within the laboratory-established acceptance limits.

All surrogate recoveries were within control limits.

6. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Analysis

MS/MSD data are used to assess the precision and accuracy of the analytical method. The compounds used to perform the MS/MSD analysis must exhibit a percent recovery within the laboratory-established acceptance limits. The relative percent difference (RPD) between the MS/MSD recoveries must exhibit an RPD within the laboratory-established acceptance limits.

Note: The MS/MSD recovery control limits do not apply for MS/MSD performed on sample locations where the compound concentration detected in the parent sample exceeds the MS/MSD concentration by a factor of four or greater.

The MS/MSD exhibited acceptable recoveries and RPD between the MS/MSD recoveries.

7. Laboratory Control Sample/Laboratory Control Sample Duplicate (LCS/LCSD) Analysis

The LCS analysis is used to assess the precision and accuracy of the analytical method independent of matrix interferences. The compounds associated with the LCS analysis must exhibit a percent recovery within the laboratory-established acceptance limits.

All compounds associated with the LCS/LCSD analysis exhibited recoveries within the control limits.

8. Field Duplicate Analysis

Field duplicate analysis is used to assess the overall precision of the field sampling procedures and analytical method. A control limit of 50% for water matrices and 100% for soil matrices is applied to the RPD between the parent sample and the field duplicate. In the instance when the parent and/or duplicate sample concentrations are less than or equal to 5 times the RL, a control limit of two times the RL is applied for water matrices or three times the RL is applied for soil matrices.

A field duplicate was not included with these SDGs.

9. Compound Identification

The retention times of all quantitated peaks must fall within the calculated retention time windows.

All identified compounds met the specified criteria.

10. System Performance and Overall Assessment

Overall system performance was acceptable. Other than for those deviations specifically mentioned in this review, the overall data quality is within the guidelines specified in the method.

DATA VALIDATION CHECKLIST FOR GENERAL GC

Aldehyde: SW846 8315A	Reported		Performance Acceptable		Not Required
	No	Yes	No	Yes	
GAS CHROMATOGRAPHY (GC/FID)					
Tier II Validation					
Holding times		X		X	
Reporting limits (units)		X		X	
Blanks					
A. Method blanks		X		X	
B. Equipment blanks					X
Laboratory Control Sample (LCS) %R		X		X	
Laboratory Control Sample Duplicate(LCSD) %R		X		X	
LCS/LCSD Precision (RPD)		X		X	
Matrix Spike (MS) %R					X
Matrix Spike Duplicate(MSD) %R					X
MS/MSD Precision (RPD)					X
Field/Lab Duplicate (RPD)					X
Surrogate Spike Recoveries		X		X	
Dilution Factor		X		X	
Moisture Content					X
Tier III Validation					
Initial calibration %RSDs		X		X	
Continuing calibration %Ds		X		X	
System performance and column resolution		X		X	
Compound identification and quantitation					
A. Quantitation Reports		X		X	
C. RT of sample compounds within the established RT windows		X		X	
C. Pattern identification		X		X	
D. Transcription/calculation errors present		X		X	
E. Reporting limits adjusted to reflect sample dilutions		X		X	

INORGANIC ANALYSIS INTRODUCTION

Analyses were performed according to United States Environmental Protection Agency (USEPA) SW-846 Methods 350.1, 410.4, and SM4500 P F. Data were reviewed in accordance with USEPA National Functional Guidelines of October 2004.

The data review process is an evaluation of data on a technical basis rather than a determination of contract compliance. As such, the standards against which the data are being weighed may differ from those specified in the analytical method. It is assumed that the data package represents the best efforts of the laboratory and that it was already subjected to adequate and sufficient quality review prior to submission.

During the review process, laboratory qualified and unqualified data are verified against the supporting documentation. Based on this evaluation, qualifier codes may be added, deleted, or modified by the data reviewer. Results are qualified with the following codes in accordance with the USEPA National Functional Guidelines:

- Concentration (C) Qualifiers

  U The analyte was analyzed for but not detected. The associated value is the analyte instrument detection limit.

  J The reported value was obtained from a reading less than the reporting limit (RL), but greater than or equal to the method detection limit (MDL).

- Quantitation (Q) Qualifiers

  E The reported value is estimated due to the presence of interference.

  N Spiked sample recovery is not within control limits.

  * Duplicate analysis is not within control limits.

- Validation Qualifiers

  J The analyte was positively identified; however, the associated numerical value is an estimated concentration only.

  UJ The analyte was not detected above the reporting limit. However, the reported limit is approximate and may or may not represent the actual limit of detection.

  UB Analyte considered non-detect at the listed value due to associated blank contamination.

  R The sample results are rejected.

Two facts should be noted by all data users. First, the "R" flag means that the associated value is unusable. In other words, due to significant quality control (QC) problems, the analysis is invalid and provides no information as to whether the compound is present or not. "R" values should not appear on data tables because they cannot be relied upon, even as a last resort. The second fact to keep in mind is that no compound concentration, even if it has passed all QC tests, is guaranteed to be accurate. Strict QC serves to increase confidence in data but any value potentially contains error.

%D Percent difference

GENERAL CHEMISTRY ANALYSES

1. Holding Times

The specified holding times for the following methods are presented in the following table.

Method	Matrix	Holding Time	Preservation
Total Phosphorus By SM4500-P F	Water	28 days from collection to analysis	Cool to <6 °C; preserved to a pH of less than 2.
Ammonia-N by EPA 350.1	Water	28 days from collection to analysis	Cool to <6 °C; preserved to a pH of less than 2.
Chemical Oxygen Demand (COD) by EPA 410.4	Water	28 days from collection to analysis	Cool to <6 °C; preserved to a pH of less than 2.

Note:

s.u. Standard units

All samples were analyzed within the specified holding time criteria.

2. Blank Contamination

Quality assurance (QA) blanks (i.e., method and rinse blanks) are prepared to identify any contamination which may have been introduced into the samples during sample preparation or field activity. Method blanks measure laboratory contamination. Rinse blanks measure contamination of samples during field operations.

A blank action level (BAL) of five times the concentration of a detected compound in an associated blank is calculated for QA blanks containing concentrations greater than the method detection limit (MDL). The BAL is compared to the associated sample results to determine the appropriate qualification of the sample results, if needed.

Analytes were not detected above the MDL in the associated blanks; therefore, detected sample results were not associated with blank contamination.

3. Calibration

Satisfactory instrument calibration is established to ensure that the instrument is capable of producing acceptable quantitative data. An initial calibration demonstrates that the instrument is capable of acceptable performance at the beginning of an experimental sequence. The continuing calibration verifies that the instrument daily performance is satisfactory.

The correct number and type of standards were analyzed. The correlation coefficient of the initial calibration was greater than 0.995 and all initial calibration verification standard recoveries were within control limits.

All calibration standard recoveries were within the control limit.

4. Matrix Spike (MS)/Laboratory Duplicate Analysis

MS and laboratory duplicate data are used to assess the precision and accuracy of the analytical method.

4.1 MS/MSD Analysis

All analytes must exhibit a percent recovery within the established acceptance limits of 75% to 125%. The MS recovery control limits do not apply for MS performed on sample locations where the analyte's concentration detected in the parent sample exceeds the MS concentration by a factor of four or greater. In instance where this is true, the data will not be qualified even if the percent recovery does not meet the control limits and the laboratory flag will be removed.

Sample locations associated with the MS/MSD exhibiting recoveries outside of the control limits are presented in the following table.

Sample Locations	Compound	MS Recovery	MSD Recovery
BDA-17WT 10302019	Ammonia Nitrogen	>UL	AC
	COD	AC	<LL but >10%

Note:

AC Acceptable

The criteria used to evaluate the MS/MSD recoveries are presented in the following table. In the case of an MS/MSD deviation, the sample results are qualified as documented in the table below.

Control Limit	Sample Result	Qualification
> the upper control limit (UL)	Non-detect	No Action
	Detect	J
< the lower control limit (LL) but > 10%	Non-detect	UJ
	Detect	J
< 10%	Non-detect	R
	Detect	J
Parent sample concentration > four times the MS/MSD spiking solution concentration.	Detect	No Action
	Non-detect	

Sample locations associated with MS/MSD recoveries exhibiting an RPD greater than the control limit are presented in the following table.

Sample Locations	Compound
BDA-17WT 10302019	Ammonia Nitrogen

The criteria used to evaluate the RPD between the MS/MSD recoveries are presented in the following table. In the case of an RPD deviation, the sample results are qualified as documented in the table below.

Control Limit	Sample Result	Qualification
> UL	Non-detect	UJ
	Detect	J

4.2 Laboratory Duplicate Analysis

The laboratory duplicate relative percent difference (RPD) criterion is applied when parent and duplicate sample concentrations are greater than or equal to 5 times the RL. A control limit of 20% for water matrices is applied when the criteria above is true. In the instance when the parent and/or duplicate sample concentrations are less than or equal to 5 times the RL, a control limit of one times the RL is applied for water matrices.

All analytes associated with laboratory duplicate RPD were within the control limit, with the exception of the analytes presented in the following table.

Sample Location	Analytes	Laboratory RPD
BDA-17WT 10302019	COD	23%

The criteria used to evaluate laboratory duplicate RPD are presented in the following table. In the case of a laboratory duplicate RPD deviation, the sample results are qualified. The qualifications are applied to the parent sample result associated with this SDG.

Sample Concentration	Control Limit	Sample Result	Qualification
Parent sample and laboratory sample concentration >5 times RL	Water 20% or Soil 35%	Non-detect	UJ
		Detect	J
Parent sample and/or laboratory duplicate sample result ≤ five times the RL and difference between samples >RL	Water one times RL or Soil two times RL	Non-detect	UJ
		Detect	J

5. Field Duplicate Analysis

Field duplicate analysis is used to assess the overall precision of the field sampling procedures and analytical method. A control limit of 50% for water matrices is applied to the RPD between the parent sample and field duplicate. In the instance when the parent and/or duplicate sample concentrations are less than or equal to 5 times the RL, a control limit of two times the RL is applied for water matrices.

A field duplicate was not included with these SDGs.

6. Laboratory Control Sample (LCS) Analysis

The LCS analysis is used to assess the accuracy of the analytical method independent of matrix interferences. The analytes associated with the LCS analysis must exhibit a percent recovery between the control limits of 80% and 120%.

All compounds associated with the LCS/LCSD analysis exhibited recoveries within the control limits.

7. System Performance and Overall Assessment

Overall system performance was acceptable. Other than for those deviations specifically mentioned in this review, the overall data quality is within the guidelines specified in the method.

DATA VALIDATION CHECKLIST FOR GENERAL CHEMISTRY

General Chemistry: 350.1, 410.4, and SM4500 P F	Reported		Performance Acceptable		Not Required
	No	Yes	No	Yes	
MISCELLANEOUS INSTRUMENTATION					
Tier II Validation					
Holding times		X		X	
Reporting limits (units)		X		X	
Blanks					
A. Instrument Blanks		X		X	
B. Method Blanks		X		X	
C. Equipment blanks					X
Laboratory Control Sample (LCS) %R		X		X	
Laboratory Control Sample Duplicate(LCSD) %R		X		X	
LCS/LCSD Precision (RPD)		X		X	
Matrix Spike (MS) %R		X	X		
Matrix Spike Duplicate(MSD) %R		X	X		
MS/MSD Precision (RPD)		X	X		
Field/Lab Duplicate (RPD)		X	X		
Dilution Factor		X		X	
Moisture Content					X
Tier III Validation					
Initial calibration %RSD or correlation coefficient		X		X	
Continuing calibration %R		X		X	
Raw Data					
Transcription/calculation errors present		X		X	
Reporting limits adjusted to reflect sample dilutions		X		X	

Notes:

%RSD Relative standard deviation

%R Percent recovery

RPD Relative percent difference

%D Percent difference

SAMPLE COMPLIANCE REPORT

Sample Delivery Group (SDG)	Sampling Date	Protocol	Sample ID	Matrix	Compliancy[1]					Noncompliance
					VOC	SVOC	ALC/ GLY	MISC	ALD	
BMS83	10/30/2019	SW846	BDA-17WT 10302019	Water	-	-	-	No	-	MISC: MS/MSD %R/RPD
BMS84	11/01/2019	SW846	BDA-12RX 11012019	Water	No	No	Yes	Yes	No	VOC: CCV %D
	11/01/2019	SW846	BDA-12T 11012019	Water	No	No	No	Yes	No	VOC: CCV %D
	11/01/2019	SW846	BDA-8WT 11012019	Water	No	No	No	Yes	No	VOC: CCV %D
	11/01/2019	SW846	BDA-8RX 11012019	Water	No	No	Yes	Yes	No	VOC: CCV %D

Note:

1 Samples which are compliant with no added validation qualifiers are listed as "yes". Samples which are non-compliant or which have added qualifiers are listed as "no". A "no" designation does not necessarily indicate that the data have been rejected or are otherwise unusable.

VALIDATION PERFORMED BY: Jeffrey L. Davin

SIGNATURE: 

DATE: January 15, 2020

PEER REVIEW: Dennis K. Capria

DATE: January 23, 2020

CHAIN OF CUSTODY

CORRECTED SAMPLE ANALYSIS DATA SHEETS

eurofins | Lancaster Laboratories Environmental

Syracuse
#225

2072188 1188926-90101

Environmental Analysis Request/Chain of Custody

Acct. # 03074 Group # ~~2071978~~ JH1326 11/1/19 Sample # ~~1188912-924~~

Pg 3 of 3

Client: Arcadis		
Project Name/#: BMS Syracuse	Site ID #:	
Project Manager: Bill McCune	P.O. #: 30033396	
Sampler: Austin George, Josh Miller, Evan Green	PWSID #:	
Phone #: 315 671 6712	Quote #:	
State where samples were collected: NY	For Compliance: Yes ☐ No ☐	

Matrix: Tissue ☐, Sediment ☐, Soil ☐; Water: Ground ☑, Surface ☐, Potable ☐, NPDES ☐; Other:

Analyses Requested / Preservation and Filtration Codes

Sample Identification	Collection Date	Collection Time	Grab	Composite	Soil	Water	Other	Total # of Containers	1,4-Dioxane	PFAS	Nitrogen as Ammonia (S)	Nitrate & Nitrite, Chloride, Fluoride, Sulfate	TAL Metals Total / TAL Metals Dissolved (N, F)	Total Alkalinity	Total Organic Carbon (P)	Total Phosphorus / Chemical Oxygen Demand (S)	Biological Oxygen Demand	Remarks
BOA-17WT	10/30/19	0855	X			GW		2			X					X		5-day TAT or ASAP
BOA-17WT MS	10/30/19	0855	X			GW		2			X					X		5-day TAT or ASAP
BOA-17WT MSD	10/30/19	0855	X			GW		2			X					X		5-day TAT or ASAP

RE 10.30.19

For Lab Use Only
SF #: ____
SCR #: ____

Preservation Codes
H = HCl T = Thiosulfate
N = HNO_3 B = NaOH
S = H_2SO_4 P = H_3PO_4
F = Field Filtered O = Other

Turnaround Time Requested (TAT) (please check): Standard ☑ Rush ☐
(Rush TAT is subject to laboratory approval and surcharges.)

Date results are needed:
Rush results requested by (please check): E-Mail ☐ Phone ☐
E-mail Address: William.McCune@arcadis.com
Phone: 315 671 6712

Relinquished by:	Date	Time	Received by:	Date	Time
Josh Sinay [signature]	10/30/19	1638	[signature]	10/30/19	1635
R Eck [signature]	10-30-19	1800			
			[signature]	10/31/19	11:30

Relinquished by Commercial Carrier:
UPS ____ FedEx X Other ____

Data Package Options (please check if required)
Type I (Validation/non-CLP) ☐ MA MCP ☐
Type III (Reduced non-CLP) ☐ CT RCP ☐
Type VI (Raw Data Only) ☐ TX TRRP-13 ☐
NJ DKQP ☐ NYSDEC Category ☐ A or ☐ B

EDD Required? Yes ☑ No ☐ If yes, format:

Eurofins Lancaster Laboratories Environmental, LLC • 2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 7045 0717

eurofins | Lancaster Laboratories Environmental

Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
P^	Concentration difference between the primary and confirmation column > 40%. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

Sample Description: **BDA-17WT Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 10/31/2019 11:30
Collection Date/Time: 10/30/2019 08:55
SDG#: BMS83-01BKG

ARCADIS U.S., Inc.
ELLE Sample #: GW 1188926
ELLE Group #: 2072188
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result		Limit of Quantitation*	Method Detection Limit	Dilution Factor
Wet Chemistry	**EPA 350.1**		**ug/l**		**ug/l**	**ug/l**	
12892	Ammonia Nitrogen	7664-41-7	300	J	100	50	1
	SM 4500-P F-2011		**ug/l**		**ug/l**	**ug/l**	
00227	Total Phosphorus as P (water)	7723-14-0	N.D.		100	50	1
	EPA 410.4		**ug/l**		**ug/l**	**ug/l**	
04001	Chemical Oxygen Demand	n.a.	40,300	J	50,000	12,800	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12892	Ammonia Nitrogen	EPA 350.1	1	19309107102A	11/05/2019 11:20	Jonathan Saul	1
00227	Total Phosphorus as P (water)	SM 4500-P F-2011	1	19309109101B	11/05/2019 14:56	Jonathan Saul	1
08263	Total Phos as P Prep (water)	SM 4500-P B(5)-2011	1	19309109101B	11/05/2019 09:35	Nancy J Shoop	1
04001	Chemical Oxygen Demand	EPA 410.4	1	19308400102B	11/04/2019 07:11	Susan A Engle	1

*=This limit was used in the evaluation of the final result

Environmental Analysis Request/Chain of Custody

eurofins | Lancaster Laboratories Environmental

For Eurofins Lancaster Laboratories Environmental use only

Acct. # 3074 Group # 207239 | Sample # 191061-65

COC # 594283

Client Information

Client: Arcadis	Acct. #:
Project Name/#: BMS Syracuse / 30033896	PWSID #:
Project Manager: Bill McCune	P.O. #:
Sampler: A. George, J. Sinay, E. Green	Quote #:
State where samples were collected: NY	For Compliance: Yes ☐ No ☐

Matrix: Soil ☐ Sediment ☐ Tissue ☐ | Water ☒ Potable ☐ Ground ☐ NPDES ☐ Surface ☐ | Other: ____

Analysis Requested — Preservation and Filtration Codes

For Lab Use Only
FSC:
SCR#: 250997

Preservation Codes
H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 P=H_3PO_4
F=Field Filtered O=Other

Remarks
Syracuse #225

Sample Identification	Collected Date	Collected Time	Grab	Composite	Total # of Containers	VOCs 8260C	SVOCs 8270D	Calvels 8015C	Alcohols	Methylene 8315A
BDA-12RX	11/1/19	1020	X		10	X	X	X	X	X
BDA-12T	11/1/19	1140	X		10	X	X	X	X	X
BDA-8WT	11/1/19	1000	X		10	X	X	X	X	X
BDA-8RX	11/1/19	1140	X		10	X	X	X	X	X
CHP-43RX	11/1/19	1027	X		5	X	X			
Trip blank	10/23/19		X		4	X		X	X	
RE 11-1-19										

Turnaround Time (TAT) Requested (please circle)
Standard Rush
(Rush TAT is subject to laboratory approval and surcharge.)

Requested TAT in business days: ____

E-mail address: William.McCune@arcadis.com

Data Package Options (circle if required)
Type I (EPA Level 3 Equivalent/non-CLP) Type VI (Raw Data Only)
Type III (Reduced non-CLP) NJ DKQP TX TRRP-13
NYSDEC Category A or B MA MCP CT RCP

Relinquished by	Date	Time	Received by	Date	Time
Ken J. Hunt	10-23-19	1050			
Josh Sinay	11/1/19	1400	R. English EDF Sys	11-1-19	14:00
R. English	11-1-19	19:00			
			Chi Wells	11/2/19	09:59

EDD Required? Yes No
If yes, format: Arcadis

Site-Specific QC (MS/MSD/Dup)? Yes No
(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier:
UPS ____ FedEx X Other ____

Temperature upon receipt 3.8 °C

Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
P^	Concentration difference between the primary and confirmation column > 40%. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

Sample Description: **BDA-12RX Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 11/02/2019 09:59
Collection Date/Time: 11/01/2019 10:20
SDG#: BMS84-01

ARCADIS U.S., Inc.
ELLE Sample #: GW 1191061
ELLE Group #: 2072391
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	20	0.7	1
11997	Acetonitrile	75-05-8	N.D.	100	16	1
11997	Benzene	71-43-2	N.D.	1	0.2	1
11997	Bromochloromethane	74-97-5	N.D.	5	0.2	1
11997	Bromodichloromethane	75-27-4	N.D.	1	0.2	1
11997	Bromoform	75-25-2	N.D.	4	1	1
11997	Bromomethane	74-83-9	N.D. J	1	0.3	1
11997	n-Butanol	71-36-3	N.D.	250	61	1
11997	2-Butanone	78-93-3	N.D.	10	0.3	1
11997	t-Butyl alcohol	75-65-0	N.D.	50	12	1
11997	n-Butylbenzene	104-51-8	N.D.	5	0.2	1
11997	sec-Butylbenzene	135-98-8	N.D.	5	0.2	1
11997	tert-Butylbenzene	98-06-6	N.D.	5	0.3	1
11997	Carbon Disulfide	75-15-0	0.3 J	5	0.2	1
11997	Carbon Tetrachloride	56-23-5	N.D.	1	0.2	1
11997	Chlorobenzene	108-90-7	N.D.	1	0.2	1
11997	Chlorodifluoromethane[1]	75-45-6	N.D.	5	2	1
11997	Chloroethane	75-00-3	N.D. J	1	0.2	1
11997	Chloroform	67-66-3	N.D.	1	0.2	1
11997	Chloromethane	74-87-3	N.D. J	1	0.2	1
11997	Cyclohexane	110-82-7	N.D.	5	1	1
11997	Cyclohexanone[1]	108-94-1	N.D.	100	25	1
11997	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	5	0.3	1
11997	Dibromochloromethane	124-48-1	N.D.	1	0.2	1
11997	1,2-Dibromoethane	106-93-4	N.D.	1	0.2	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	5	0.2	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	5	0.2	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	5	0.2	1
11997	Dichlorodifluoromethane	75-71-8	N.D. J	1	0.2	1
11997	1,1-Dichloroethane	75-34-3	N.D.	1	0.2	1
11997	1,2-Dichloroethane	107-06-2	N.D.	1	0.3	1
11997	1,1-Dichloroethene	75-35-4	N.D.	1	0.2	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	1	0.2	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	1	0.2	1
11997	1,2-Dichloropropane	78-87-5	N.D.	1	0.2	1
11997	cis-1,3-Dichloropropene	10061-01-5	N.D.	1	0.2	1
11997	trans-1,3-Dichloropropene	10061-02-6	N.D.	1	0.2	1
11997	1,4-Dioxane	123-91-1	N.D.	250	29	1
11997	Ethyl Acetate	141-78-6	N.D.	5	0.7	1
11997	Ethyl ether	60-29-7	N.D.	5	0.2	1
11997	Ethylbenzene	100-41-4	N.D.	1	0.4	1

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-12RX Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 11/02/2019 09:59
Collection Date/Time: 11/01/2019 10:20
SDG#: BMS84-01

ARCADIS U.S., Inc.
ELLE Sample #: GW 1191061
ELLE Group #: 2072391
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Freon 113	76-13-1	N.D.	10	0.2	1
11997	n-Heptane[1]	142-82-5	N.D.	5	2	1
11997	n-Hexane[1]	110-54-3	N.D.	5	2	1
11997	2-Hexanone	591-78-6	N.D.	10	0.3	1
11997	Isobutyl Alcohol	78-83-1	N.D.	250	36	1
11997	Isopropylbenzene	98-82-8	N.D.	5	0.2	1
11997	p-Isopropyltoluene	99-87-6	N.D.	5	0.2	1
11997	Methyl Acetate	79-20-9	N.D.	5	0.2	1
11997	Methyl Tertiary Butyl Ether	1634-04-4	0.3 J	1	0.2	1
11997	4-Methyl-2-pentanone	108-10-1	N.D.	10	0.5	1
11997	Methylcyclohexane	108-87-2	N.D.	5	0.5	1
11997	Methylene Chloride	75-09-2	N.D.	1	0.3	1
11997	Naphthalene	91-20-3	N.D.	5	1	1
11997	2-Nitropropane	79-46-9	N.D.	10	0.8	1
11997	Styrene	100-42-5	N.D.	5	0.2	1
11997	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	1	0.2	1
11997	Tetrachloroethene	127-18-4	N.D.	1	0.2	1
11997	Tetrahydrofuran	109-99-9	N.D.	10	0.7	1
11997	Toluene	108-88-3	N.D.	1	0.2	1
11997	1,2,3-Trichlorobenzene	87-61-6	N.D.	5	0.4	1
11997	1,2,4-Trichlorobenzene	120-82-1	N.D.	5	0.3	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	1	0.3	1
11997	1,1,2-Trichloroethane	79-00-5	N.D.	1	0.2	1
11997	Trichloroethene	79-01-6	N.D.	1	0.2	1
11997	Trichlorofluoromethane	75-69-4	N.D.	1	0.2	1
11997	1,2,4-Trimethylbenzene	95-63-6	N.D.	5	1	1
11997	1,3,5-Trimethylbenzene	108-67-8	N.D.	5	0.3	1
11997	Vinyl Chloride	75-01-4	N.D. J	1	0.2	1
11997	m+p-Xylene	179601-23-1	N.D.	5	1	1
11997	o-Xylene	95-47-6	N.D.	1	0.4	1
11997	Xylene (Total)	1330-20-7	N.D.	6	1	1

Project defined calibration criteria are not met. The calibration is compliant with the method defined criteria.

A Report Limit Verification (RLV) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The RLV standard shows adequate sensitivity at or below the reporting limit.

00882 VOA Interp. Library Search-10

The results from the volatile library search are listed on the attached FORM 1 - VOA-TIC. The qualifiers appearing in the "Q" column are defined at the end of the report.

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-12RX Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 11/02/2019 09:59
Collection Date/Time: 11/01/2019 10:20
SDG#: BMS84-01

ARCADIS U.S., Inc.
ELLE Sample #: GW 1191061
ELLE Group #: 2072391
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	Acenaphthene	83-32-9	N.D.	0.46	0.093	1
14241	Acenaphthylene	208-96-8	N.D.	0.46	0.093	1
14241	Acetophenone	98-86-2	N.D.	9.3	3.7	1
14241	Aniline	62-53-3	N.D.	9.3	2.8	1
14241	Anthracene	120-12-7	N.D.	0.46	0.093	1
14241	Atrazine	1912-24-9	N.D.	4.6	1.9	1
14241	Benzaldehyde	100-52-7	N.D.	9.3	2.8	1
14241	Benzo(a)anthracene	56-55-3	N.D.	0.46	0.093	1
14241	Benzo(a)pyrene	50-32-8	N.D.	0.46	0.093	1
14241	Benzo(b)fluoranthene	205-99-2	N.D.	0.46	0.093	1
14241	Benzo(g,h,i)perylene	191-24-2	N.D.	0.46	0.093	1
14241	Benzo(k)fluoranthene	207-08-9	N.D.	0.46	0.093	1
14241	Benzyl alcohol	100-51-6	N.D.	28	9.3	1
14241	1,1'-Biphenyl	92-52-4	N.D.	9.3	2.8	1
14241	4-Bromophenyl-phenylether	101-55-3	N.D.	1.9	0.46	1
14241	Butylbenzylphthalate	85-68-7	N.D.	4.6	1.9	1
14241	Di-n-butylphthalate	84-74-2	N.D.	4.6	1.9	1
14241	Caprolactam	105-60-2	350 D	100	46	10
14241	Carbazole	86-74-8	N.D.	1.9	0.46	1
14241	4-Chloro-3-methylphenol	59-50-7	N.D.	1.9	0.46	1
14241	4-Chloroaniline	106-47-8	N.D.	9.3	3.7	1
14241	bis(2-Chloroethoxy)methane	111-91-1	N.D.	1.9	0.46	1
14241	bis(2-Chloroethyl)ether	111-44-4	N.D.	1.9	0.46	1
14241	bis(2-Chloroisopropyl)ether[1]	39638-32-9	N.D.	1.9	0.46	1
	Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.					
14241	2-Chloronaphthalene	91-58-7	N.D.	0.93	0.37	1
14241	2-Chlorophenol	95-57-8	N.D.	1.9	0.46	1
14241	4-Chlorophenyl-phenylether	7005-72-3	N.D.	1.9	0.46	1
14241	Chrysene	218-01-9	N.D.	0.46	0.093	1
14241	Dibenz(a,h)anthracene	53-70-3	N.D.	0.46	0.093	1
14241	Dibenzofuran	132-64-9	N.D.	1.9	0.46	1
14241	3,3'-Dichlorobenzidine	91-94-1	N.D.	9.3	2.8	1
14241	2,4-Dichlorophenol	120-83-2	N.D.	1.9	0.46	1
14241	Dicyclohexylamine[1]	101-83-7	N.D.	9.3	9.3	1
14241	Diethylphthalate	84-66-2	N.D.	4.6	1.9	1
14241	N,N-Dimethylaniline[1]	121-69-7	N.D.	0.93	0.46	1
14241	2,4-Dimethylphenol	105-67-9	N.D.	9.3	2.8	1
14241	Dimethylphthalate	131-11-3	N.D.	4.6	1.9	1
14241	4,6-Dinitro-2-methylphenol	534-52-1	N.D.	20	7.4	1

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-12RX Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 11/02/2019 09:59
Collection Date/Time: 11/01/2019 10:20
SDG#: BMS84-01

ARCADIS U.S., Inc.
ELLE Sample #: GW 1191061
ELLE Group #: 2072391
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	2,4-Dinitrophenol	51-28-5	N.D.	28	13	1
14241	2,4-Dinitrotoluene	121-14-2	N.D.	4.6	0.93	1
14241	2,6-Dinitrotoluene	606-20-2	N.D.	1.9	0.46	1
14241	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	10	4.6	1
14241	Fluoranthene	206-44-0	N.D.	0.46	0.093	1
14241	Fluorene	86-73-7	N.D.	0.46	0.093	1
14241	Hexachlorobenzene	118-74-1	N.D.	0.46	0.093	1
14241	Hexachlorobutadiene	87-68-3	N.D.	1.9	0.46	1
14241	Hexachlorocyclopentadiene	77-47-4	N.D.	10	4.6	1
14241	Hexachloroethane	67-72-1	N.D.	4.6	0.93	1
14241	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.46	0.093	1
14241	Isophorone	78-59-1	N.D.	1.9	0.46	1
14241	2-Methylnaphthalene	91-57-6	N.D.	0.46	0.093	1
14241	2-Methylphenol	95-48-7	N.D.	1.9	0.46	1
14241	4-Methylphenol	65794-96-9	N.D.	1.9	0.46	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
14241	Naphthalene	91-20-3	0.14 J	0.46	0.093	1
14241	2-Nitroaniline	88-74-4	N.D.	6.5	1.9	1
14241	3-Nitroaniline	99-09-2	N.D.	6.5	2.8	1
14241	4-Nitroaniline	100-01-6	N.D.	2.8	0.84	1
14241	Nitrobenzene	98-95-3	N.D.	1.9	0.46	1
14241	2-Nitrophenol	88-75-5	N.D.	9.3	2.8	1
14241	4-Nitrophenol	100-02-7	N.D.	28	9.3	1
14241	N-Nitroso-di-n-propylamine	621-64-7	N.D.	2.8	0.65	1
14241	N-Nitrosodiphenylamine	86-30-6	N.D.	2.8	0.65	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.					
14241	Di-n-octylphthalate	117-84-0	N.D.	10	4.6	1
14241	Pentachlorophenol	87-86-5	N.D.	4.6	0.93	1
14241	Phenanthrene	85-01-8	N.D.	0.46	0.093	1
14241	Phenol	108-95-2	N.D.	1.9	0.46	1
14241	Pyrene	129-00-0	N.D.	0.46	0.093	1
14241	Pyridine	110-86-1	N.D.	4.6	1.9	1
14241	1,2,4,5-Tetrachlorobenzene	95-94-3	N.D.	1.9	0.46	1
14241	2,3,4,6-Tetrachlorophenol	58-90-2	N.D.	9.3	3.7	1
14241	2,4,5-Trichlorophenol	95-95-4	N.D.	1.9	0.46	1
14241	2,4,6-Trichlorophenol	88-06-2	N.D.	1.9	0.46	1
14241	Triethylamine[1]	121-44-8	N.D.	9.3	9.3	1

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-12RX Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 11/02/2019 09:59
Collection Date/Time: 11/01/2019 10:20
SDG#: BMS84-01

ARCADIS U.S., Inc.
ELLE Sample #: GW 1191061
ELLE Group #: 2072391
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result		Limit of Quantitation*	Method Detection Limit	Dilution Factor
	Summary. Since the recovery is high and the target analyte(s) was not detected in the sample, the data is reported.						
00886	**SVOA TIC Interpretive(25)**						
	The results from the semivolatile library search are listed on the attached FORM 1 - SV-TIC. The qualifiers appearing in the "Q" column are defined at the end of the report.						
Aldehydes & Ketones		**SW-846 8315A**	**ug/l**		**ug/l**	**ug/l**	
13022	Acetaldehyde[1]	75-07-0	N.D.		60	35	1
13022	Formaldehyde	50-00-0	22	J	50	20	1
	The response for a target analyte(s) in the initial calibration verification standard is outside the QC acceptance limits.						
GC Miscellaneous		**SW-846 8015D Rev.4, June 2003**	**ug/l**		**ug/l**	**ug/l**	
10603	Ethanol	64-17-5	N.D.	D2	1,000	150	1
12926	Ethylene glycol[1]	107-21-1	N.D.		10,000	5,000	1
10603	Isopropanol[1]	67-63-0	N.D.	D2	1,000	110	1
10603	Methanol	67-56-1	N.D.	D2	1,000	220	1
12926	Propylene glycol[1]	57-55-6	N.D.		10,000	2,000	1
	The response for tetramethylene glycol in the continuing calibration verification standard is outside the QC acceptance limits low. The following action was taken: The analysis was repeated and the continuing calibration verification standard bracketing the sample on the second trial is also outside the acceptance limits. This effect is attributed to the sample matrix and the data is reported.						

Sample Comments

State of New York Certification No. 10670
Trip blank vials were not received by the laboratory for this sample group.

[1] = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	Y193171AA	11/13/2019 15:44	Linda C Pape	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	Y193171AA	11/13/2019 15:43	Linda C Pape	1
14241	Semi-annual Groundwater BMS	SW-846 8270D	1	19311WAK026	11/09/2019 02:25	Ashley R Transue	1
14241	Semi-annual Groundwater BMS	SW-846 8270D	1	19311WAK026	11/09/2019 13:13	Holly B Ziegler	10
11010	8270D BNA Extraction	SW-846 3510C	1	19311WAK026	11/08/2019 09:00	Joshua S Ruth	1
13022	Short List Aldehydes- W 8315A	SW-846 8315A	1	193080009A	11/04/2019 18:51	Jessica L Miller	1
01013	Formaldehyde Extraction	SW-846 8315A	1	193080009A	11/04/2019 11:20	Shawn J McMullen	1
10603	Alcohols in Water	SW-846 8015D Rev.4, June 2003	1	193080008A	11/05/2019 05:05	Johanna C Kennedy	1

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-12RX Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 11/02/2019 09:59
Collection Date/Time: 11/01/2019 10:20
SDG#: BMS84-01

ARCADIS U.S., Inc.
ELLE Sample #: GW 1191061
ELLE Group #: 2072391
Matrix: Groundwater

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12926	Glycols in Water by 8015C/D	SW-846 8015D Rev.4, June 2003	1	193100032A	11/07/2019 00:52	Donald Brown	1

*=This limit was used in the evaluation of the final result

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
B12RX

Lab Name: Lancaster Laboratories Contract:_____
Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____
Matrix: (soil/water) WATER Lab Sample ID: 1191061
Sample wt/vol: 5.0 (g/mL)mL Lab File ID:HP09355.i/19nov13a.b/yn13s05.d
Level: (low/med) LOW Date Received: 11/02/19
% Moisture: not dec. Date Analyzed: 11/13/19
Column: (pack/cap) CAP Dilution Factor: 1.0
CONCENTRATION UNITS:
Number TICs found: 0 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	VOCTIC	Total VOC TICs		0	U
2.					
3.					
4.					
5.					
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page 1 of 1

FORM I VOA-TIC

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
B12RX

Lab Name: Lancaster Laboratories Contract:
Lab Code: LANCAS Case No.: SAS No.: SDG No.:
Matrix: (soil/water) WATER Lab Sample ID: 1191061
Sample wt/vol: 269 (g/mL) mL Lab File ID: lk0411.d
Level: (low/med) LOW Date Received: 11/02/19
% Moisture: Decanted: (Y/N) Date Extracted: 11/08/19
Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/09/19
Injection Volume: 1 (uL) Dilution Factor: 1
GPC Cleanup: N pH: Extraction: Sepf
CONCENTRATION UNITS:
Number TICs found: 7 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		Unknown	11.803	4	J N
2.		Unknown	12.102	5	J
3.	57-10-3	n-Hexadecanoic acid	14.482	4	J
4.	10544-50-0	Cyclic octaatomic sulfur	15.483	13	J
5.		Unknown	21.751	4	J
6.		Unknown	23.474	6	J
7.		Unknown	23.511	5	J
8.					
9.	SVOCTIC	Total SVOC TICs		41	J
10.					
11.					
12.					
13.					
14.					
15.					
16.					
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29.					
30.					

page 1 of 1

FORM I SV-1

Sample Description: **BDA-12T Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 11/02/2019 09:59
Collection Date/Time: 11/01/2019 11:40
SDG#: BMS84-02

ARCADIS U.S., Inc.
ELLE Sample #: GW 1191062
ELLE Group #: 2072391
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	20	0.7	1
11997	Acetonitrile	75-05-8	N.D.	100	16	1
11997	Benzene	71-43-2	N.D.	1	0.2	1
11997	Bromochloromethane	74-97-5	N.D.	5	0.2	1
11997	Bromodichloromethane	75-27-4	N.D.	1	0.2	1
11997	Bromoform	75-25-2	N.D.	4	1	1
11997	Bromomethane	74-83-9	N.D. J	1	0.3	1
11997	n-Butanol	71-36-3	N.D.	250	61	1
11997	2-Butanone	78-93-3	N.D.	10	0.3	1
11997	t-Butyl alcohol	75-65-0	N.D.	50	12	1
11997	n-Butylbenzene	104-51-8	N.D.	5	0.2	1
11997	sec-Butylbenzene	135-98-8	N.D.	5	0.2	1
11997	tert-Butylbenzene	98-06-6	N.D.	5	0.3	1
11997	Carbon Disulfide	75-15-0	N.D.	5	0.2	1
11997	Carbon Tetrachloride	56-23-5	N.D.	1	0.2	1
11997	Chlorobenzene	108-90-7	N.D.	1	0.2	1
11997	Chlorodifluoromethane[1]	75-45-6	N.D.	5	2	1
11997	Chloroethane	75-00-3	N.D. J	1	0.2	1
11997	Chloroform	67-66-3	N.D.	1	0.2	1
11997	Chloromethane	74-87-3	N.D. J	1	0.2	1
11997	Cyclohexane	110-82-7	N.D.	5	1	1
11997	Cyclohexanone[1]	108-94-1	N.D.	100	25	1
11997	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	5	0.3	1
11997	Dibromochloromethane	124-48-1	N.D.	1	0.2	1
11997	1,2-Dibromoethane	106-93-4	N.D.	1	0.2	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	5	0.2	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	5	0.2	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	5	0.2	1
11997	Dichlorodifluoromethane	75-71-8	N.D. J	1	0.2	1
11997	1,1-Dichloroethane	75-34-3	N.D.	1	0.2	1
11997	1,2-Dichloroethane	107-06-2	N.D.	1	0.3	1
11997	1,1-Dichloroethene	75-35-4	N.D.	1	0.2	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	1	0.2	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	1	0.2	1
11997	1,2-Dichloropropane	78-87-5	N.D.	1	0.2	1
11997	cis-1,3-Dichloropropene	10061-01-5	N.D.	1	0.2	1
11997	trans-1,3-Dichloropropene	10061-02-6	N.D.	1	0.2	1
11997	1,4-Dioxane	123-91-1	N.D.	250	29	1
11997	Ethyl Acetate	141-78-6	N.D.	5	0.7	1
11997	Ethyl ether	60-29-7	N.D.	5	0.2	1
11997	Ethylbenzene	100-41-4	N.D.	1	0.4	1

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-12T Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 11/02/2019 09:59
Collection Date/Time: 11/01/2019 11:40
SDG#: BMS84-02

ARCADIS U.S., Inc.
ELLE Sample #: GW 1191062
ELLE Group #: 2072391
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Freon 113	76-13-1	N.D.	10	0.2	1
11997	n-Heptane[1]	142-82-5	N.D.	5	2	1
11997	n-Hexane[1]	110-54-3	N.D.	5	2	1
11997	2-Hexanone	591-78-6	N.D.	10	0.3	1
11997	Isobutyl Alcohol	78-83-1	N.D.	250	36	1
11997	Isopropylbenzene	98-82-8	N.D.	5	0.2	1
11997	p-Isopropyltoluene	99-87-6	N.D.	5	0.2	1
11997	Methyl Acetate	79-20-9	N.D.	5	0.2	1
11997	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	1	0.2	1
11997	4-Methyl-2-pentanone	108-10-1	N.D.	10	0.5	1
11997	Methylcyclohexane	108-87-2	N.D.	5	0.5	1
11997	Methylene Chloride	75-09-2	N.D.	1	0.3	1
11997	Naphthalene	91-20-3	N.D.	5	1	1
11997	2-Nitropropane	79-46-9	N.D.	10	0.8	1
11997	Styrene	100-42-5	N.D.	5	0.2	1
11997	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	1	0.2	1
11997	Tetrachloroethene	127-18-4	N.D.	1	0.2	1
11997	Tetrahydrofuran	109-99-9	N.D.	10	0.7	1
11997	Toluene	108-88-3	N.D.	1	0.2	1
11997	1,2,3-Trichlorobenzene	87-61-6	N.D.	5	0.4	1
11997	1,2,4-Trichlorobenzene	120-82-1	N.D.	5	0.3	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	1	0.3	1
11997	1,1,2-Trichloroethane	79-00-5	N.D.	1	0.2	1
11997	Trichloroethene	79-01-6	N.D.	1	0.2	1
11997	Trichlorofluoromethane	75-69-4	N.D.	1	0.2	1
11997	1,2,4-Trimethylbenzene	95-63-6	N.D.	5	1	1
11997	1,3,5-Trimethylbenzene	108-67-8	N.D.	5	0.3	1
11997	Vinyl Chloride	75-01-4	N.D. J	1	0.2	1
11997	m+p-Xylene	179601-23-1	N.D.	5	1	1
11997	o-Xylene	95-47-6	N.D.	1	0.4	1
11997	Xylene (Total)	1330-20-7	N.D.	6	1	1

Project defined calibration criteria are not met. The calibration is compliant with the method defined criteria.

A Report Limit Verification (RLV) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The RLV standard shows adequate sensitivity at or below the reporting limit.

00882 VOA Interp. Library Search-10

The results from the volatile library search are listed on the attached FORM 1 - VOA-TIC. The qualifiers appearing in the "Q" column are defined at the end of the report.

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-12T Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 11/02/2019 09:59
Collection Date/Time: 11/01/2019 11:40
SDG#: BMS84-02

ARCADIS U.S., Inc.
ELLE Sample #: GW 1191062
ELLE Group #: 2072391
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	Acenaphthene	83-32-9	N.D.	0.47	0.094	1
14241	Acenaphthylene	208-96-8	N.D.	0.47	0.094	1
14241	Acetophenone	98-86-2	N.D.	9.4	3.8	1
14241	Aniline	62-53-3	N.D.	9.4	2.8	1
14241	Anthracene	120-12-7	N.D.	0.47	0.094	1
14241	Atrazine	1912-24-9	N.D.	4.7	1.9	1
14241	Benzaldehyde	100-52-7	N.D.	9.4	2.8	1
14241	Benzo(a)anthracene	56-55-3	N.D.	0.47	0.094	1
14241	Benzo(a)pyrene	50-32-8	N.D.	0.47	0.094	1
14241	Benzo(b)fluoranthene	205-99-2	N.D.	0.47	0.094	1
14241	Benzo(g,h,i)perylene	191-24-2	N.D.	0.47	0.094	1
14241	Benzo(k)fluoranthene	207-08-9	N.D.	0.47	0.094	1
14241	Benzyl alcohol	100-51-6	N.D.	28	9.4	1
14241	1,1'-Biphenyl	92-52-4	N.D.	9.4	2.8	1
14241	4-Bromophenyl-phenylether	101-55-3	N.D.	1.9	0.47	1
14241	Butylbenzylphthalate	85-68-7	N.D.	4.7	1.9	1
14241	Di-n-butylphthalate	84-74-2	N.D.	4.7	1.9	1
14241	Caprolactam	105-60-2	N.D.	10	4.7	1
14241	Carbazole	86-74-8	N.D.	1.9	0.47	1
14241	4-Chloro-3-methylphenol	59-50-7	N.D.	1.9	0.47	1
14241	4-Chloroaniline	106-47-8	N.D.	9.4	3.8	1
14241	bis(2-Chloroethoxy)methane	111-91-1	N.D.	1.9	0.47	1
14241	bis(2-Chloroethyl)ether	111-44-4	N.D.	1.9	0.47	1
14241	bis(2-Chloroisopropyl)ether[1]	39638-32-9	N.D.	1.9	0.47	1
	Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.					
14241	2-Chloronaphthalene	91-58-7	N.D.	0.94	0.38	1
14241	2-Chlorophenol	95-57-8	N.D.	1.9	0.47	1
14241	4-Chlorophenyl-phenylether	7005-72-3	N.D.	1.9	0.47	1
14241	Chrysene	218-01-9	N.D.	0.47	0.094	1
14241	Dibenz(a,h)anthracene	53-70-3	N.D.	0.47	0.094	1
14241	Dibenzofuran	132-64-9	N.D.	1.9	0.47	1
14241	3,3'-Dichlorobenzidine	91-94-1	N.D.	9.4	2.8	1
14241	2,4-Dichlorophenol	120-83-2	N.D.	1.9	0.47	1
14241	Dicyclohexylamine[1]	101-83-7	N.D.	9.4	9.4	1
14241	Diethylphthalate	84-66-2	N.D.	4.7	1.9	1
14241	N,N-Dimethylaniline[1]	121-69-7	N.D.	0.94	0.47	1
14241	2,4-Dimethylphenol	105-67-9	N.D.	9.4	2.8	1
14241	Dimethylphthalate	131-11-3	N.D.	4.7	1.9	1
14241	4,6-Dinitro-2-methylphenol	534-52-1	N.D.	20	7.5	1

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-12T Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 11/02/2019 09:59
Collection Date/Time: 11/01/2019 11:40
SDG#: BMS84-02

ARCADIS U.S., Inc.
ELLE Sample #: GW 1191062
ELLE Group #: 2072391
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	2,4-Dinitrophenol	51-28-5	N.D.	28	13	1
14241	2,4-Dinitrotoluene	121-14-2	N.D.	4.7	0.94	1
14241	2,6-Dinitrotoluene	606-20-2	N.D.	1.9	0.47	1
14241	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	10	4.7	1
14241	Fluoranthene	206-44-0	N.D.	0.47	0.094	1
14241	Fluorene	86-73-7	N.D.	0.47	0.094	1
14241	Hexachlorobenzene	118-74-1	N.D.	0.47	0.094	1
14241	Hexachlorobutadiene	87-68-3	N.D.	1.9	0.47	1
14241	Hexachlorocyclopentadiene	77-47-4	N.D.	10	4.7	1
14241	Hexachloroethane	67-72-1	N.D.	4.7	0.94	1
14241	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.47	0.094	1
14241	Isophorone	78-59-1	N.D.	1.9	0.47	1
14241	2-Methylnaphthalene	91-57-6	N.D.	0.47	0.094	1
14241	2-Methylphenol	95-48-7	N.D.	1.9	0.47	1
14241	4-Methylphenol	65794-96-9	N.D.	1.9	0.47	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
14241	Naphthalene	91-20-3	N.D.	0.47	0.094	1
14241	2-Nitroaniline	88-74-4	N.D.	6.6	1.9	1
14241	3-Nitroaniline	99-09-2	N.D.	6.6	2.8	1
14241	4-Nitroaniline	100-01-6	N.D.	2.8	0.85	1
14241	Nitrobenzene	98-95-3	N.D.	1.9	0.47	1
14241	2-Nitrophenol	88-75-5	N.D.	9.4	2.8	1
14241	4-Nitrophenol	100-02-7	N.D.	28	9.4	1
14241	N-Nitroso-di-n-propylamine	621-64-7	N.D.	2.8	0.66	1
14241	N-Nitrosodiphenylamine	86-30-6	N.D.	2.8	0.66	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.					
14241	Di-n-octylphthalate	117-84-0	N.D.	10	4.7	1
14241	Pentachlorophenol	87-86-5	N.D.	4.7	0.94	1
14241	Phenanthrene	85-01-8	N.D.	0.47	0.094	1
14241	Phenol	108-95-2	N.D.	1.9	0.47	1
14241	Pyrene	129-00-0	N.D.	0.47	0.094	1
14241	Pyridine	110-86-1	N.D.	4.7	1.9	1
14241	1,2,4,5-Tetrachlorobenzene	95-94-3	N.D.	1.9	0.47	1
14241	2,3,4,6-Tetrachlorophenol	58-90-2	N.D.	9.4	3.8	1
14241	2,4,5-Trichlorophenol	95-95-4	N.D.	1.9	0.47	1
14241	2,4,6-Trichlorophenol	88-06-2	N.D.	1.9	0.47	1
14241	Triethylamine[1]	121-44-8	N.D.	9.4	9.4	1

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-12T Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 11/02/2019 09:59
Collection Date/Time: 11/01/2019 11:40
SDG#: BMS84-02

ARCADIS U.S., Inc.
ELLE Sample #: GW 1191062
ELLE Group #: 2072391
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
	Summary. Since the recovery is high and the target analyte(s) was not detected in the sample, the data is reported.					
00886	**SVOA TIC Interpretive(25)**					
	The results from the semivolatile library search are listed on the attached FORM 1 - SV-TIC. The qualifiers appearing in the "Q" column are defined at the end of the report.					
Aldehydes & Ketones	**SW-846 8315A**		**ug/l**	**ug/l**	**ug/l**	
13022	Acetaldehyde[1]	75-07-0	N.D.	60	35	1
13022	Formaldehyde	50-00-0	N.D.	50	20	1
GC Miscellaneous	**SW-846 8015D Rev.4, June 2003**		**ug/l**	**ug/l**	**ug/l**	
10603	Ethanol	64-17-5	N.D. D2	1,000	150	1
12926	Ethylene glycol[1]	107-21-1	N.D.	10,000	5,000	1
10603	Isopropanol[1]	67-63-0	N.D. D2	1,000	110	1
10603	Methanol	67-56-1	N.D. D2	1,000	220	1
12926	Propylene glycol[1]	57-55-6	N.D.	10,000	2,000	1
	The response for tetramethylene glycol in the continuing calibration verification standard is outside the QC acceptance limits low. The following action was taken: The analysis was repeated and the continuing calibration verification standard bracketing the sample on the second trial is also outside the acceptance limits. This effect is attributed to the sample matrix and the data is reported.					

Sample Comments

State of New York Certification No. 10670
Trip blank vials were not received by the laboratory for this sample group.

[1] = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	Y193171AA	11/13/2019 16:06	Linda C Pape	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	Y193171AA	11/13/2019 16:05	Linda C Pape	1
14241	Semi-annual Groundwater BMS	SW-846 8270D	1	19311WAK026	11/09/2019 02:54	Ashley R Transue	1
11010	8270D BNA Extraction	SW-846 3510C	1	19311WAK026	11/08/2019 09:00	Joshua S Ruth	1
13022	Short List Aldehydes- W 8315A	SW-846 8315A	1	193080009A	11/04/2019 19:02	Jessica L Miller	1
01013	Formaldehyde Extraction	SW-846 8315A	1	193080009A	11/04/2019 11:20	Shawn J McMullen	1
10603	Alcohols in Water	SW-846 8015D Rev.4, June 2003	1	193080008A	11/05/2019 05:21	Johanna C Kennedy	1
12926	Glycols in Water by 8015C/D	SW-846 8015D Rev.4, June 2003	1	193100032A	11/07/2019 01:05	Donald Brown	1

*=This limit was used in the evaluation of the final result

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
BD12T

Lab Name: Lancaster Laboratories Contract:_____
Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____
Matrix: (soil/water) WATER Lab Sample ID: 1191062
Sample wt/vol: 5.0 (g/mL)mL Lab File ID:HP09355.i/19nov13a.b/yn13s06.d
Level: (low/med) LOW Date Received: 11/02/19
% Moisture: not dec. Date Analyzed: 11/13/19
Column: (pack/cap) CAP Dilution Factor: 1.0
CONCENTRATION UNITS:
Number TICs found: 0 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	VOCTIC	Total VOC TICs		0	U
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page 1 of 1

FORM I VOA-TIC

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
BD12T

Lab Name: Lancaster Laboratories Contract:
Lab Code: LANCAS Case No.: SAS No.: SDG No.:
Matrix: (soil/water) WATER Lab Sample ID: 1191062
Sample wt/vol: 265 (g/mL) mL Lab File ID: lk0412.d
Level: (low/med) LOW Date Received: 11/02/19
% Moisture: Decanted: (Y/N) Date Extracted: 11/08/19
Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/09/19
Injection Volume: 1 (uL) Dilution Factor: 1
GPC Cleanup: N pH: Extraction: Sepf
CONCENTRATION UNITS:
Number TICs found: 3 (ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 128-37-0	Butylated Hydroxytoluene	11.835	75	J N
2.	Unknown	22.618	9	J
3.	Unknown	22.714	4	J
4.				
5. SVOCTIC	Total SVOC TICs		89	J
6.				
7.				
8.				
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page 1 of 1

FORM I SV-1

Sample Description: **BDA-8WT Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 11/02/2019 09:59
Collection Date/Time: 11/01/2019 10:00
SDG#: BMS84-03

ARCADIS U.S., Inc.
ELLE Sample #: GW 1191063
ELLE Group #: 2072391
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	20	0.7	1
11997	Acetonitrile	75-05-8	N.D.	100	16	1
11997	Benzene	71-43-2	N.D.	1	0.2	1
11997	Bromochloromethane	74-97-5	N.D.	5	0.2	1
11997	Bromodichloromethane	75-27-4	N.D.	1	0.2	1
11997	Bromoform	75-25-2	N.D.	4	1	1
11997	Bromomethane	74-83-9	N.D. J	1	0.3	1
11997	n-Butanol	71-36-3	N.D.	250	61	1
11997	2-Butanone	78-93-3	N.D.	10	0.3	1
11997	t-Butyl alcohol	75-65-0	N.D.	50	12	1
11997	n-Butylbenzene	104-51-8	N.D.	5	0.2	1
11997	sec-Butylbenzene	135-98-8	N.D.	5	0.2	1
11997	tert-Butylbenzene	98-06-6	N.D.	5	0.3	1
11997	Carbon Disulfide	75-15-0	N.D.	5	0.2	1
11997	Carbon Tetrachloride	56-23-5	N.D.	1	0.2	1
11997	Chlorobenzene	108-90-7	N.D.	1	0.2	1
11997	Chlorodifluoromethane[1]	75-45-6	N.D.	5	2	1
11997	Chloroethane	75-00-3	N.D. J	1	0.2	1
11997	Chloroform	67-66-3	1	1	0.2	1
11997	Chloromethane	74-87-3	N.D. J	1	0.2	1
11997	Cyclohexane	110-82-7	N.D.	5	1	1
11997	Cyclohexanone[1]	108-94-1	N.D.	100	25	1
11997	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	5	0.3	1
11997	Dibromochloromethane	124-48-1	N.D.	1	0.2	1
11997	1,2-Dibromoethane	106-93-4	N.D.	1	0.2	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	5	0.2	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	5	0.2	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	5	0.2	1
11997	Dichlorodifluoromethane	75-71-8	N.D. J	1	0.2	1
11997	1,1-Dichloroethane	75-34-3	N.D.	1	0.2	1
11997	1,2-Dichloroethane	107-06-2	N.D.	1	0.3	1
11997	1,1-Dichloroethene	75-35-4	N.D.	1	0.2	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	1	0.2	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	1	0.2	1
11997	1,2-Dichloropropane	78-87-5	N.D.	1	0.2	1
11997	cis-1,3-Dichloropropene	10061-01-5	N.D.	1	0.2	1
11997	trans-1,3-Dichloropropene	10061-02-6	N.D.	1	0.2	1
11997	1,4-Dioxane	123-91-1	N.D.	250	29	1
11997	Ethyl Acetate	141-78-6	N.D.	5	0.7	1
11997	Ethyl ether	60-29-7	N.D.	5	0.2	1
11997	Ethylbenzene	100-41-4	N.D.	1	0.4	1

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-8WT Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 11/02/2019 09:59
Collection Date/Time: 11/01/2019 10:00
SDG#: BMS84-03

ARCADIS U.S., Inc.
ELLE Sample #: GW 1191063
ELLE Group #: 2072391
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Freon 113	76-13-1	N.D.	10	0.2	1
11997	n-Heptane[1]	142-82-5	N.D.	5	2	1
11997	n-Hexane[1]	110-54-3	N.D.	5	2	1
11997	2-Hexanone	591-78-6	N.D.	10	0.3	1
11997	Isobutyl Alcohol	78-83-1	N.D.	250	36	1
11997	Isopropylbenzene	98-82-8	N.D.	5	0.2	1
11997	p-Isopropyltoluene	99-87-6	N.D.	5	0.2	1
11997	Methyl Acetate	79-20-9	N.D.	5	0.2	1
11997	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	1	0.2	1
11997	4-Methyl-2-pentanone	108-10-1	N.D.	10	0.5	1
11997	Methylcyclohexane	108-87-2	N.D.	5	0.5	1
11997	Methylene Chloride	75-09-2	N.D.	1	0.3	1
11997	Naphthalene	91-20-3	N.D.	5	1	1
11997	2-Nitropropane	79-46-9	N.D.	10	0.8	1
11997	Styrene	100-42-5	N.D.	5	0.2	1
11997	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	1	0.2	1
11997	Tetrachloroethene	127-18-4	N.D.	1	0.2	1
11997	Tetrahydrofuran	109-99-9	N.D.	10	0.7	1
11997	Toluene	108-88-3	N.D.	1	0.2	1
11997	1,2,3-Trichlorobenzene	87-61-6	N.D.	5	0.4	1
11997	1,2,4-Trichlorobenzene	120-82-1	N.D.	5	0.3	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	1	0.3	1
11997	1,1,2-Trichloroethane	79-00-5	N.D.	1	0.2	1
11997	Trichloroethene	79-01-6	1	1	0.2	1
11997	Trichlorofluoromethane	75-69-4	N.D.	1	0.2	1
11997	1,2,4-Trimethylbenzene	95-63-6	N.D.	5	1	1
11997	1,3,5-Trimethylbenzene	108-67-8	N.D.	5	0.3	1
11997	Vinyl Chloride	75-01-4	N.D. J	1	0.2	1
11997	m+p-Xylene	179601-23-1	N.D.	5	1	1
11997	o-Xylene	95-47-6	N.D.	1	0.4	1
11997	Xylene (Total)	1330-20-7	N.D.	6	1	1

Project defined calibration criteria are not met. The calibration is compliant with the method defined criteria.

A Report Limit Verification (RLV) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The RLV standard shows adequate sensitivity at or below the reporting limit.

00882 VOA Interp. Library Search-10

The results from the volatile library search are listed on the attached FORM 1 - VOA-TIC. The qualifiers appearing in the "Q" column are defined at the end of the report.

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-8WT Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 11/02/2019 09:59
Collection Date/Time: 11/01/2019 10:00
SDG#: BMS84-03

ARCADIS U.S., Inc.
ELLE Sample #: GW 1191063
ELLE Group #: 2072391
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	Acenaphthene	83-32-9	N.D.	0.51	0.10	1
14241	Acenaphthylene	208-96-8	N.D.	0.51	0.10	1
14241	Acetophenone	98-86-2	N.D.	10	4.1	1
14241	Aniline	62-53-3	N.D.	10	3.1	1
14241	Anthracene	120-12-7	N.D.	0.51	0.10	1
14241	Atrazine	1912-24-9	N.D.	5.1	2.0	1
14241	Benzaldehyde	100-52-7	N.D.	10	3.1	1
14241	Benzo(a)anthracene	56-55-3	N.D.	0.51	0.10	1
14241	Benzo(a)pyrene	50-32-8	N.D.	0.51	0.10	1
14241	Benzo(b)fluoranthene	205-99-2	N.D.	0.51	0.10	1
14241	Benzo(g,h,i)perylene	191-24-2	N.D.	0.51	0.10	1
14241	Benzo(k)fluoranthene	207-08-9	N.D.	0.51	0.10	1
14241	Benzyl alcohol	100-51-6	N.D.	31	10	1
14241	1,1'-Biphenyl	92-52-4	N.D.	10	3.1	1
14241	4-Bromophenyl-phenylether	101-55-3	N.D.	2.0	0.51	1
14241	Butylbenzylphthalate	85-68-7	N.D.	5.1	2.0	1
14241	Di-n-butylphthalate	84-74-2	N.D.	5.1	2.0	1
14241	Caprolactam	105-60-2	N.D.	11	5.1	1
14241	Carbazole	86-74-8	N.D.	2.0	0.51	1
14241	4-Chloro-3-methylphenol	59-50-7	N.D.	2.0	0.51	1
14241	4-Chloroaniline	106-47-8	N.D.	10	4.1	1
14241	bis(2-Chloroethoxy)methane	111-91-1	N.D.	2.0	0.51	1
14241	bis(2-Chloroethyl)ether	111-44-4	N.D.	2.0	0.51	1
14241	bis(2-Chloroisopropyl)ether[1]	39638-32-9	N.D.	2.0	0.51	1
	Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.					
14241	2-Chloronaphthalene	91-58-7	N.D.	1.0	0.41	1
14241	2-Chlorophenol	95-57-8	N.D.	2.0	0.51	1
14241	4-Chlorophenyl-phenylether	7005-72-3	N.D.	2.0	0.51	1
14241	Chrysene	218-01-9	N.D.	0.51	0.10	1
14241	Dibenz(a,h)anthracene	53-70-3	N.D.	0.51	0.10	1
14241	Dibenzofuran	132-64-9	N.D.	2.0	0.51	1
14241	3,3'-Dichlorobenzidine	91-94-1	N.D.	10	3.1	1
14241	2,4-Dichlorophenol	120-83-2	N.D.	2.0	0.51	1
14241	Dicyclohexylamine[1]	101-83-7	N.D.	10	10	1
14241	Diethylphthalate	84-66-2	N.D.	5.1	2.0	1
14241	N,N-Dimethylaniline[1]	121-69-7	N.D.	1.0	0.51	1
14241	2,4-Dimethylphenol	105-67-9	N.D.	10	3.1	1
14241	Dimethylphthalate	131-11-3	N.D.	5.1	2.0	1
14241	4,6-Dinitro-2-methylphenol	534-52-1	N.D.	21	8.2	1

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-8WT Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 11/02/2019 09:59
Collection Date/Time: 11/01/2019 10:00
SDG#: BMS84-03

ARCADIS U.S., Inc.
ELLE Sample #: GW 1191063
ELLE Group #: 2072391
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	2,4-Dinitrophenol	51-28-5	N.D.	31	14	1
14241	2,4-Dinitrotoluene	121-14-2	N.D.	5.1	1.0	1
14241	2,6-Dinitrotoluene	606-20-2	N.D.	2.0	0.51	1
14241	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	11	5.1	1
14241	Fluoranthene	206-44-0	N.D.	0.51	0.10	1
14241	Fluorene	86-73-7	N.D.	0.51	0.10	1
14241	Hexachlorobenzene	118-74-1	N.D.	0.51	0.10	1
14241	Hexachlorobutadiene	87-68-3	N.D.	2.0	0.51	1
14241	Hexachlorocyclopentadiene	77-47-4	N.D.	11	5.1	1
14241	Hexachloroethane	67-72-1	N.D.	5.1	1.0	1
14241	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.51	0.10	1
14241	Isophorone	78-59-1	N.D.	2.0	0.51	1
14241	2-Methylnaphthalene	91-57-6	N.D.	0.51	0.10	1
14241	2-Methylphenol	95-48-7	N.D.	2.0	0.51	1
14241	4-Methylphenol	65794-96-9	N.D.	2.0	0.51	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
14241	Naphthalene	91-20-3	N.D.	0.51	0.10	1
14241	2-Nitroaniline	88-74-4	N.D.	7.1	2.0	1
14241	3-Nitroaniline	99-09-2	N.D.	7.1	3.1	1
14241	4-Nitroaniline	100-01-6	N.D.	3.1	0.92	1
14241	Nitrobenzene	98-95-3	N.D.	2.0	0.51	1
14241	2-Nitrophenol	88-75-5	N.D.	10	3.1	1
14241	4-Nitrophenol	100-02-7	N.D.	31	10	1
14241	N-Nitroso-di-n-propylamine	621-64-7	N.D.	3.1	0.71	1
14241	N-Nitrosodiphenylamine	86-30-6	N.D.	3.1	0.71	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.					
14241	Di-n-octylphthalate	117-84-0	N.D.	11	5.1	1
14241	Pentachlorophenol	87-86-5	N.D.	5.1	1.0	1
14241	Phenanthrene	85-01-8	N.D.	0.51	0.10	1
14241	Phenol	108-95-2	N.D.	2.0	0.51	1
14241	Pyrene	129-00-0	N.D.	0.51	0.10	1
14241	Pyridine	110-86-1	N.D.	5.1	2.0	1
14241	1,2,4,5-Tetrachlorobenzene	95-94-3	N.D.	2.0	0.51	1
14241	2,3,4,6-Tetrachlorophenol	58-90-2	N.D.	10	4.1	1
14241	2,4,5-Trichlorophenol	95-95-4	N.D.	2.0	0.51	1
14241	2,4,6-Trichlorophenol	88-06-2	N.D.	2.0	0.51	1
14241	Triethylamine[1]	121-44-8	N.D.	10	10	1

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-8WT Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 11/02/2019 09:59
Collection Date/Time: 11/01/2019 10:00
SDG#: BMS84-03

ARCADIS U.S., Inc.
ELLE Sample #: GW 1191063
ELLE Group #: 2072391
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor

Summary. Since the recovery is high and the target analyte(s) was not detected in the sample, the data is reported.

00886 SVOA TIC Interpretive(25)

The results from the semivolatile library search are listed on the attached FORM 1 - SV-TIC. The qualifiers appearing in the "Q" column are defined at the end of the report.

Aldehydes & Ketones	**SW-846 8315A**		**ug/l**	**ug/l**	**ug/l**	
13022	Acetaldehyde[1]	75-07-0	N.D.	60	35	1
13022	Formaldehyde	50-00-0	N.D.	50	20	1
GC Miscellaneous	**SW-846 8015D Rev.4, June 2003**		**ug/l**	**ug/l**	**ug/l**	
10603	Ethanol	64-17-5	N.D. D2	1,000	150	1
12926	Ethylene glycol[1]	107-21-1	N.D.	10,000	5,000	1
10603	Isopropanol[1]	67-63-0	N.D. D2	1,000	110	1
10603	Methanol	67-56-1	N.D. D2	1,000	220	1
12926	Propylene glycol[1]	57-55-6	N.D.	10,000	2,000	1

The response for tetramethylene glycol in the continuing calibration verification standard is outside the QC acceptance limits low. The following action was taken:
The analysis was repeated and the continuing calibration verification standard bracketing the sample on the second trial is also outside the acceptance limits. This effect is attributed to the sample matrix and the data is reported.

Sample Comments

State of New York Certification No. 10670
Trip blank vials were not received by the laboratory for this sample group.

[1] = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	Y193171AA	11/13/2019 16:28	Linda C Pape	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	Y193171AA	11/13/2019 16:27	Linda C Pape	1
14241	Semi-annual Groundwater BMS	SW-846 8270D	1	19311WAK026	11/09/2019 03:23	Ashley R Transue	1
11010	8270D BNA Extraction	SW-846 3510C	1	19311WAK026	11/08/2019 09:00	Joshua S Ruth	1
13022	Short List Aldehydes- W 8315A	SW-846 8315A	1	193080009A	11/04/2019 19:12	Jessica L Miller	1
01013	Formaldehyde Extraction	SW-846 8315A	1	193080009A	11/04/2019 11:20	Shawn J McMullen	1
10603	Alcohols in Water	SW-846 8015D Rev.4, June 2003	1	193080008A	11/05/2019 05:55	Johanna C Kennedy	1
12926	Glycols in Water by 8015C/D	SW-846 8015D Rev.4, June 2003	1	193100032A	11/07/2019 01:18	Donald Brown	1

*=This limit was used in the evaluation of the final result

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
BD8WT

Lab Name: Lancaster Laboratories Contract:_____
Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____
Matrix: (soil/water) WATER Lab Sample ID: 1191063
Sample wt/vol: 5.0 (g/mL)mL Lab File ID:HP09355.i/19nov13a.b/yn13s07.d
Level: (low/med) LOW Date Received: 11/02/19
% Moisture: not dec. Date Analyzed: 11/13/19
Column: (pack/cap) CAP Dilution Factor: 1.0
CONCENTRATION UNITS:
Number TICs found: 0 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	VOCTIC	Total VOC TICs		0	U
2.					
3.					
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page 1 of 1

FORM I VOA-TIC

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
BD8WT

Lab Name: Lancaster Laboratories Contract:
Lab Code: LANCAS Case No.: SAS No.: SDG No.:
Matrix: (soil/water) WATER Lab Sample ID: 1191063
Sample wt/vol: 245 (g/mL) mL Lab File ID: lk0413.d
Level: (low/med) LOW Date Received: 11/02/19
% Moisture: Decanted: (Y/N) Date Extracted: 11/08/19
Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/09/19
Injection Volume: 1 (uL) Dilution Factor: 1
GPC Cleanup: N pH: Extraction: Sepf
CONCENTRATION UNITS:
Number TICs found: 1 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		Unknown	3.208	4	J N
2.					
3.	SVOCTIC	Total SVOC TICs		4	J N
4.					
5.					
6.					
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page 1 of 1

FORM I SV-1

Sample Description: **BDA-8RX Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 11/02/2019 09:59
Collection Date/Time: 11/01/2019 11:40
SDG#: BMS84-04

ARCADIS U.S., Inc.
ELLE Sample #: GW 1191064
ELLE Group #: 2072391
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	20	0.7	1
11997	Acetonitrile	75-05-8	N.D.	100	16	1
11997	Benzene	71-43-2	N.D.	1	0.2	1
11997	Bromochloromethane	74-97-5	N.D.	5	0.2	1
11997	Bromodichloromethane	75-27-4	N.D.	1	0.2	1
11997	Bromoform	75-25-2	N.D.	4	1	1
11997	Bromomethane	74-83-9	N.D. J	1	0.3	1
11997	n-Butanol	71-36-3	N.D.	250	61	1
11997	2-Butanone	78-93-3	N.D.	10	0.3	1
11997	t-Butyl alcohol	75-65-0	N.D.	50	12	1
11997	n-Butylbenzene	104-51-8	N.D.	5	0.2	1
11997	sec-Butylbenzene	135-98-8	N.D.	5	0.2	1
11997	tert-Butylbenzene	98-06-6	N.D.	5	0.3	1
11997	Carbon Disulfide	75-15-0	N.D.	5	0.2	1
11997	Carbon Tetrachloride	56-23-5	N.D.	1	0.2	1
11997	Chlorobenzene	108-90-7	N.D.	1	0.2	1
11997	Chlorodifluoromethane[1]	75-45-6	N.D.	5	2	1
11997	Chloroethane	75-00-3	N.D. J	1	0.2	1
11997	Chloroform	67-66-3	N.D.	1	0.2	1
11997	Chloromethane	74-87-3	N.D. J	1	0.2	1
11997	Cyclohexane	110-82-7	N.D.	5	1	1
11997	Cyclohexanone[1]	108-94-1	N.D.	100	25	1
11997	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	5	0.3	1
11997	Dibromochloromethane	124-48-1	N.D.	1	0.2	1
11997	1,2-Dibromoethane	106-93-4	N.D.	1	0.2	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	5	0.2	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	5	0.2	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	5	0.2	1
11997	Dichlorodifluoromethane	75-71-8	N.D. J	1	0.2	1
11997	1,1-Dichloroethane	75-34-3	N.D.	1	0.2	1
11997	1,2-Dichloroethane	107-06-2	N.D.	1	0.3	1
11997	1,1-Dichloroethene	75-35-4	N.D.	1	0.2	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	1	0.2	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	1	0.2	1
11997	1,2-Dichloropropane	78-87-5	N.D.	1	0.2	1
11997	cis-1,3-Dichloropropene	10061-01-5	N.D.	1	0.2	1
11997	trans-1,3-Dichloropropene	10061-02-6	N.D.	1	0.2	1
11997	1,4-Dioxane	123-91-1	N.D.	250	29	1
11997	Ethyl Acetate	141-78-6	N.D.	5	0.7	1
11997	Ethyl ether	60-29-7	N.D.	5	0.2	1
11997	Ethylbenzene	100-41-4	N.D.	1	0.4	1

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-8RX Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 11/02/2019 09:59
Collection Date/Time: 11/01/2019 11:40
SDG#: BMS84-04

ARCADIS U.S., Inc.
ELLE Sample #: GW 1191064
ELLE Group #: 2072391
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Freon 113	76-13-1	N.D.	10	0.2	1
11997	n-Heptane[1]	142-82-5	N.D.	5	2	1
11997	n-Hexane[1]	110-54-3	N.D.	5	2	1
11997	2-Hexanone	591-78-6	N.D.	10	0.3	1
11997	Isobutyl Alcohol	78-83-1	N.D.	250	36	1
11997	Isopropylbenzene	98-82-8	N.D.	5	0.2	1
11997	p-Isopropyltoluene	99-87-6	N.D.	5	0.2	1
11997	Methyl Acetate	79-20-9	N.D.	5	0.2	1
11997	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	1	0.2	1
11997	4-Methyl-2-pentanone	108-10-1	N.D.	10	0.5	1
11997	Methylcyclohexane	108-87-2	N.D.	5	0.5	1
11997	Methylene Chloride	75-09-2	N.D.	1	0.3	1
11997	Naphthalene	91-20-3	N.D.	5	1	1
11997	2-Nitropropane	79-46-9	N.D.	10	0.8	1
11997	Styrene	100-42-5	N.D.	5	0.2	1
11997	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	1	0.2	1
11997	Tetrachloroethene	127-18-4	N.D.	1	0.2	1
11997	Tetrahydrofuran	109-99-9	N.D.	10	0.7	1
11997	Toluene	108-88-3	N.D.	1	0.2	1
11997	1,2,3-Trichlorobenzene	87-61-6	N.D.	5	0.4	1
11997	1,2,4-Trichlorobenzene	120-82-1	N.D.	5	0.3	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	1	0.3	1
11997	1,1,2-Trichloroethane	79-00-5	N.D.	1	0.2	1
11997	Trichloroethene	79-01-6	N.D.	1	0.2	1
11997	Trichlorofluoromethane	75-69-4	N.D.	1	0.2	1
11997	1,2,4-Trimethylbenzene	95-63-6	N.D.	5	1	1
11997	1,3,5-Trimethylbenzene	108-67-8	N.D.	5	0.3	1
11997	Vinyl Chloride	75-01-4	N.D. J	1	0.2	1
11997	m+p-Xylene	179601-23-1	N.D.	5	1	1
11997	o-Xylene	95-47-6	N.D.	1	0.4	1
11997	Xylene (Total)	1330-20-7	N.D.	6	1	1

Project defined calibration criteria are not met. The calibration is compliant with the method defined criteria.

A Report Limit Verification (RLV) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The RLV standard shows adequate sensitivity at or below the reporting limit.

00882 VOA Interp. Library Search-10

The results from the volatile library search are listed on the attached FORM 1 - VOA-TIC. The qualifiers appearing in the "Q" column are defined at the end of the report.

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-8RX Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 11/02/2019 09:59
Collection Date/Time: 11/01/2019 11:40
SDG#: BMS84-04

ARCADIS U.S., Inc.
ELLE Sample #: GW 1191064
ELLE Group #: 2072391
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	Acenaphthene	83-32-9	N.D.	0.51	0.10	1
14241	Acenaphthylene	208-96-8	N.D.	0.51	0.10	1
14241	Acetophenone	98-86-2	N.D.	10	4.1	1
14241	Aniline	62-53-3	N.D.	10	3.1	1
14241	Anthracene	120-12-7	N.D.	0.51	0.10	1
14241	Atrazine	1912-24-9	N.D.	5.1	2.0	1
14241	Benzaldehyde	100-52-7	N.D.	10	3.1	1
14241	Benzo(a)anthracene	56-55-3	N.D.	0.51	0.10	1
14241	Benzo(a)pyrene	50-32-8	N.D.	0.51	0.10	1
14241	Benzo(b)fluoranthene	205-99-2	N.D.	0.51	0.10	1
14241	Benzo(g,h,i)perylene	191-24-2	N.D.	0.51	0.10	1
14241	Benzo(k)fluoranthene	207-08-9	N.D.	0.51	0.10	1
14241	Benzyl alcohol	100-51-6	N.D.	31	10	1
14241	1,1'-Biphenyl	92-52-4	N.D.	10	3.1	1
14241	4-Bromophenyl-phenylether	101-55-3	N.D.	2.0	0.51	1
14241	Butylbenzylphthalate	85-68-7	N.D.	5.1	2.0	1
14241	Di-n-butylphthalate	84-74-2	N.D.	5.1	2.0	1
14241	Caprolactam	105-60-2	N.D.	11	5.1	1
14241	Carbazole	86-74-8	N.D.	2.0	0.51	1
14241	4-Chloro-3-methylphenol	59-50-7	N.D.	2.0	0.51	1
14241	4-Chloroaniline	106-47-8	N.D.	10	4.1	1
14241	bis(2-Chloroethoxy)methane	111-91-1	N.D.	2.0	0.51	1
14241	bis(2-Chloroethyl)ether	111-44-4	N.D.	2.0	0.51	1
14241	bis(2-Chloroisopropyl)ether[1]	39638-32-9	N.D.	2.0	0.51	1
	Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.					
14241	2-Chloronaphthalene	91-58-7	N.D.	1.0	0.41	1
14241	2-Chlorophenol	95-57-8	N.D.	2.0	0.51	1
14241	4-Chlorophenyl-phenylether	7005-72-3	N.D.	2.0	0.51	1
14241	Chrysene	218-01-9	N.D.	0.51	0.10	1
14241	Dibenz(a,h)anthracene	53-70-3	N.D.	0.51	0.10	1
14241	Dibenzofuran	132-64-9	N.D.	2.0	0.51	1
14241	3,3'-Dichlorobenzidine	91-94-1	N.D.	10	3.1	1
14241	2,4-Dichlorophenol	120-83-2	N.D.	2.0	0.51	1
14241	Dicyclohexylamine[1]	101-83-7	N.D.	10	10	1
14241	Diethylphthalate	84-66-2	N.D.	5.1	2.0	1
14241	N,N-Dimethylaniline[1]	121-69-7	N.D.	1.0	0.51	1
14241	2,4-Dimethylphenol	105-67-9	N.D.	10	3.1	1
14241	Dimethylphthalate	131-11-3	N.D.	5.1	2.0	1
14241	4,6-Dinitro-2-methylphenol	534-52-1	N.D.	21	8.2	1

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-8RX Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 11/02/2019 09:59
Collection Date/Time: 11/01/2019 11:40
SDG#: BMS84-04

ARCADIS U.S., Inc.
ELLE Sample #: GW 1191064
ELLE Group #: 2072391
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	2,4-Dinitrophenol	51-28-5	N.D.	31	14	1
14241	2,4-Dinitrotoluene	121-14-2	N.D.	5.1	1.0	1
14241	2,6-Dinitrotoluene	606-20-2	N.D.	2.0	0.51	1
14241	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	11	5.1	1
14241	Fluoranthene	206-44-0	N.D.	0.51	0.10	1
14241	Fluorene	86-73-7	N.D.	0.51	0.10	1
14241	Hexachlorobenzene	118-74-1	N.D.	0.51	0.10	1
14241	Hexachlorobutadiene	87-68-3	N.D.	2.0	0.51	1
14241	Hexachlorocyclopentadiene	77-47-4	N.D.	11	5.1	1
14241	Hexachloroethane	67-72-1	N.D.	5.1	1.0	1
14241	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.51	0.10	1
14241	Isophorone	78-59-1	N.D.	2.0	0.51	1
14241	2-Methylnaphthalene	91-57-6	N.D.	0.51	0.10	1
14241	2-Methylphenol	95-48-7	N.D.	2.0	0.51	1
14241	4-Methylphenol	65794-96-9	N.D.	2.0	0.51	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
14241	Naphthalene	91-20-3	N.D.	0.51	0.10	1
14241	2-Nitroaniline	88-74-4	N.D.	7.1	2.0	1
14241	3-Nitroaniline	99-09-2	N.D.	7.1	3.1	1
14241	4-Nitroaniline	100-01-6	N.D.	3.1	0.92	1
14241	Nitrobenzene	98-95-3	N.D.	2.0	0.51	1
14241	2-Nitrophenol	88-75-5	N.D.	10	3.1	1
14241	4-Nitrophenol	100-02-7	N.D.	31	10	1
14241	N-Nitroso-di-n-propylamine	621-64-7	N.D.	3.1	0.71	1
14241	N-Nitrosodiphenylamine	86-30-6	N.D.	3.1	0.71	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.					
14241	Di-n-octylphthalate	117-84-0	N.D.	11	5.1	1
14241	Pentachlorophenol	87-86-5	N.D.	5.1	1.0	1
14241	Phenanthrene	85-01-8	N.D.	0.51	0.10	1
14241	Phenol	108-95-2	N.D.	2.0	0.51	1
14241	Pyrene	129-00-0	N.D.	0.51	0.10	1
14241	Pyridine	110-86-1	N.D.	5.1	2.0	1
14241	1,2,4,5-Tetrachlorobenzene	95-94-3	N.D.	2.0	0.51	1
14241	2,3,4,6-Tetrachlorophenol	58-90-2	N.D.	10	4.1	1
14241	2,4,5-Trichlorophenol	95-95-4	N.D.	2.0	0.51	1
14241	2,4,6-Trichlorophenol	88-06-2	N.D.	2.0	0.51	1
14241	Triethylamine[1]	121-44-8	N.D.	10	10	1

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-8RX Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 11/02/2019 09:59
Collection Date/Time: 11/01/2019 11:40
SDG#: BMS84-04

ARCADIS U.S., Inc.
ELLE Sample #: GW 1191064
ELLE Group #: 2072391
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result		Limit of Quantitation*	Method Detection Limit	Dilution Factor
	Summary. Since the recovery is high and the target analyte(s) was not detected in the sample, the data is reported.						
00886	**SVOA TIC Interpretive(25)**						
	The results from the semivolatile library search are listed on the attached FORM 1 - SV-TIC. The qualifiers appearing in the "Q" column are defined at the end of the report.						
Aldehydes & Ketones	**SW-846 8315A**		**ug/l**		**ug/l**	**ug/l**	
13022	Acetaldehyde[1]	75-07-0	N.D.		60	35	1
13022	Formaldehyde	50-00-0	45	J	50	20	1
GC Miscellaneous	**SW-846 8015D Rev.4, June 2003**		**ug/l**		**ug/l**	**ug/l**	
10603	Ethanol	64-17-5	N.D.	D2	1,000	150	1
12926	Ethylene glycol[1]	107-21-1	N.D.		10,000	5,000	1
10603	Isopropanol[1]	67-63-0	N.D.	D2	1,000	110	1
10603	Methanol	67-56-1	N.D.	D2	1,000	220	1
12926	Propylene glycol[1]	57-55-6	N.D.		10,000	2,000	1

The response for tetramethylene glycol in the continuing calibration verification standard is outside the QC acceptance limits low. The following action was taken:
The analysis was repeated and the continuing calibration verification standard bracketing the sample on the second trial is also outside the acceptance limits. This effect is attributed to the sample matrix and the data is reported.

Sample Comments

State of New York Certification No. 10670
Trip blank vials were not received by the laboratory for this sample group.

[1] = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	Y193171AA	11/13/2019 16:50	Linda C Pape	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	Y193171AA	11/13/2019 16:49	Linda C Pape	1
14241	Semi-annual Groundwater BMS	SW-846 8270D	1	19311WAK026	11/09/2019 03:52	Ashley R Transue	1
11010	8270D BNA Extraction	SW-846 3510C	1	19311WAK026	11/08/2019 09:00	Joshua S Ruth	1
13022	Short List Aldehydes- W 8315A	SW-846 8315A	1	193080009A	11/04/2019 19:23	Jessica L Miller	1
01013	Formaldehyde Extraction	SW-846 8315A	1	193080009A	11/04/2019 11:20	Shawn J McMullen	1
10603	Alcohols in Water	SW-846 8015D Rev.4, June 2003	1	193080008A	11/05/2019 06:11	Johanna C Kennedy	1
12926	Glycols in Water by 8015C/D	SW-846 8015D Rev.4, June 2003	1	193100032A	11/07/2019 01:30	Donald Brown	1

*=This limit was used in the evaluation of the final result

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
BD8RX

Lab Name: Lancaster Laboratories Contract:_____
Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____
Matrix: (soil/water) WATER Lab Sample ID: 1191064
Sample wt/vol: 5.0 (g/mL)mL Lab File ID:HP09355.i/19nov13a.b/yn13s08.d
Level: (low/med) LOW Date Received: 11/02/19
% Moisture: not dec. Date Analyzed: 11/13/19
Column: (pack/cap) CAP Dilution Factor: 1.0
CONCENTRATION UNITS:
Number TICs found: 0 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	VOCTIC	Total VOC TICs		0	U
2.					
3.					
4.					
5.					
6.					
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10.					
11.					
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26.					
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28.					
29.					
30.					

page 1 of 1

FORM I VOA-TIC

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
BD8RX

Lab Name: Lancaster Laboratories Contract:
Lab Code: LANCAS Case No.: SAS No.: SDG No.:
Matrix: (soil/water) WATER Lab Sample ID: 1191064
Sample wt/vol: 245 (g/mL) mL Lab File ID: lk0414.d
Level: (low/med) LOW Date Received: 11/02/19
% Moisture: Decanted: (Y/N) Date Extracted: 11/08/19
Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/09/19
Injection Volume: 1 (uL) Dilution Factor: 1
GPC Cleanup: N pH: Extraction: Sepf
CONCENTRATION UNITS:
Number TICs found: 6 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		Unknown	3.208	5	J N
2.		Unknown	12.102	6	J
3.		Unknown	15.419	4	J
4.	10544-50-0	Cyclic octaatomic sulfur	15.499	36	J
5.		Unknown	20.617	7	J
6.		Unknown	22.982	48	J
7.					
8.	SVOCTIC	Total SVOC TICs		110	J
9.					
10.					
11.					
12.					
13.					
14.					
15.					
16.					
17.					
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30.					

Sample Description: **CHP-43RX Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 11/02/2019 09:59
Collection Date/Time: 11/01/2019 10:27
SDG#: BMS84-05

ARCADIS U.S., Inc.
ELLE Sample #: GW 1191065
ELLE Group #: 2072391
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	110 J	2,000	70	100
11997	Acetonitrile	75-05-8	N.D.	10,000	1,600	100
11997	Benzene	71-43-2	N.D.	100	20	100
11997	Bromochloromethane	74-97-5	N.D.	500	20	100
11997	Bromodichloromethane	75-27-4	N.D.	100	20	100
11997	Bromoform	75-25-2	N.D.	400	100	100
11997	Bromomethane	74-83-9	N.D. J	100	30	100
11997	n-Butanol	71-36-3	N.D.	25,000	6,100	100
11997	2-Butanone	78-93-3	N.D.	1,000	30	100
11997	t-Butyl alcohol	75-65-0	N.D.	5,000	1,200	100
11997	n-Butylbenzene	104-51-8	N.D.	500	20	100
11997	sec-Butylbenzene	135-98-8	N.D.	500	20	100
11997	tert-Butylbenzene	98-06-6	N.D.	500	30	100
11997	Carbon Disulfide	75-15-0	N.D.	500	20	100
11997	Carbon Tetrachloride	56-23-5	N.D.	100	20	100
11997	Chlorobenzene	108-90-7	N.D.	100	20	100
11997	Chlorodifluoromethane[1]	75-45-6	N.D.	500	200	100
11997	Chloroethane	75-00-3	N.D. J	100	20	100
11997	Chloroform	67-66-3	N.D.	100	20	100
11997	Chloromethane	74-87-3	N.D. J	100	20	100
11997	Cyclohexane	110-82-7	N.D.	500	100	100
11997	Cyclohexanone[1]	108-94-1	N.D.	10,000	2,500	100
11997	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	500	30	100
11997	Dibromochloromethane	124-48-1	N.D.	100	20	100
11997	1,2-Dibromoethane	106-93-4	N.D.	100	20	100
11997	1,2-Dichlorobenzene	95-50-1	N.D.	500	20	100
11997	1,3-Dichlorobenzene	541-73-1	N.D.	500	20	100
11997	1,4-Dichlorobenzene	106-46-7	N.D.	500	20	100
11997	Dichlorodifluoromethane	75-71-8	N.D. J	100	20	100
11997	1,1-Dichloroethane	75-34-3	N.D.	100	20	100
11997	1,2-Dichloroethane	107-06-2	N.D.	100	30	100
11997	1,1-Dichloroethene	75-35-4	N.D.	100	20	100
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	100	20	100
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	100	20	100
11997	1,2-Dichloropropane	78-87-5	N.D.	100	20	100
11997	cis-1,3-Dichloropropene	10061-01-5	N.D.	100	20	100
11997	trans-1,3-Dichloropropene	10061-02-6	N.D.	100	20	100
11997	1,4-Dioxane	123-91-1	N.D.	25,000	2,900	100
11997	Ethyl Acetate	141-78-6	N.D.	500	70	100
11997	Ethyl ether	60-29-7	N.D.	500	20	100
11997	Ethylbenzene	100-41-4	N.D.	100	40	100

*=This limit was used in the evaluation of the final result

Sample Description: **CHP-43RX Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 11/02/2019 09:59
Collection Date/Time: 11/01/2019 10:27
SDG#: BMS84-05

ARCADIS U.S., Inc.
ELLE Sample #: GW 1191065
ELLE Group #: 2072391
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Freon 113	76-13-1	N.D.	1,000	20	100
11997	n-Heptane[1]	142-82-5	N.D.	500	200	100
11997	n-Hexane[1]	110-54-3	N.D.	500	200	100
11997	2-Hexanone	591-78-6	N.D.	1,000	30	100
11997	Isobutyl Alcohol	78-83-1	N.D.	25,000	3,600	100
11997	Isopropylbenzene	98-82-8	N.D.	500	20	100
11997	p-Isopropyltoluene	99-87-6	N.D.	500	20	100
11997	Methyl Acetate	79-20-9	N.D.	500	20	100
11997	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	100	20	100
11997	4-Methyl-2-pentanone	108-10-1	N.D.	1,000	50	100
11997	Methylcyclohexane	108-87-2	N.D.	500	50	100
11997	Methylene Chloride	75-09-2	370,000 EJ	100	30	100
11997	Naphthalene	91-20-3	N.D.	500	100	100
11997	2-Nitropropane	79-46-9	N.D.	1,000	80	100
11997	Styrene	100-42-5	N.D.	500	20	100
11997	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	100	20	100
11997	Tetrachloroethene	127-18-4	N.D.	100	20	100
11997	Tetrahydrofuran	109-99-9	N.D.	1,000	70	100
11997	Toluene	108-88-3	N.D.	100	20	100
11997	1,2,3-Trichlorobenzene	87-61-6	N.D.	500	40	100
11997	1,2,4-Trichlorobenzene	120-82-1	N.D.	500	30	100
11997	1,1,1-Trichloroethane	71-55-6	N.D.	100	30	100
11997	1,1,2-Trichloroethane	79-00-5	N.D.	100	20	100
11997	Trichloroethene	79-01-6	N.D.	100	20	100
11997	Trichlorofluoromethane	75-69-4	N.D.	100	20	100
11997	1,2,4-Trimethylbenzene	95-63-6	N.D.	500	100	100
11997	1,3,5-Trimethylbenzene	108-67-8	N.D.	500	30	100
11997	Vinyl Chloride	75-01-4	N.D. J	100	20	100
11997	m+p-Xylene	179601-23-1	N.D.	500	100	100
11997	o-Xylene	95-47-6	N.D.	100	40	100
11997	Xylene (Total)	1330-20-7	N.D.	600	140	100

Preservation requirements were not met.
A preserved vial was submitted for analysis. However, the pH at the time of analysis was 13.

Preservation requirements were not met. The sample was received at pH <2 which is not the preservation specified for acrolein or acrylonitrile under the referenced method. The preservation criteria is pH of 4-5.

The concentration reported for methylene chloride is estimated since it exceeds the calibration range of the instrument. A further diluted analysis was performed from a previously opened container with headspace and/or outside of the method holding time. The result

*=This limit was used in the evaluation of the final result

Sample Description: **CHP-43RX Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 11/02/2019 09:59
Collection Date/Time: 11/01/2019 10:27
SDG#: BMS84-05

ARCADIS U.S., Inc.
ELLE Sample #: GW 1191065
ELLE Group #: 2072391
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
	for methylene chloride is 430,000 ug/l.					
00882	**VOA Interp. Library Search-10**					
	The results from the volatile library search are listed on the attached FORM 1 - VOA-TIC. The qualifiers appearing in the "Q" column are defined at the end of the report.					
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	Acenaphthene	83-32-9	N.D.	0.51	0.10	1
14241	Acenaphthylene	208-96-8	N.D.	0.51	0.10	1
14241	Acetophenone	98-86-2	N.D.	10	4.1	1
14241	Aniline	62-53-3	12	10	3.0	1
14241	Anthracene	120-12-7	N.D.	0.51	0.10	1
14241	Atrazine	1912-24-9	N.D.	5.1	2.0	1
14241	Benzaldehyde	100-52-7	N.D.	10	3.0	1
14241	Benzo(a)anthracene	56-55-3	N.D.	0.51	0.10	1
14241	Benzo(a)pyrene	50-32-8	N.D.	0.51	0.10	1
14241	Benzo(b)fluoranthene	205-99-2	N.D.	0.51	0.10	1
14241	Benzo(g,h,i)perylene	191-24-2	N.D.	0.51	0.10	1
14241	Benzo(k)fluoranthene	207-08-9	N.D.	0.51	0.10	1
14241	Benzyl alcohol	100-51-6	N.D.	30	10	1
14241	1,1'-Biphenyl	92-52-4	N.D.	10	3.0	1
14241	4-Bromophenyl-phenylether	101-55-3	N.D.	2.0	0.51	1
14241	Butylbenzylphthalate	85-68-7	N.D.	5.1	2.0	1
14241	Di-n-butylphthalate	84-74-2	N.D.	5.1	2.0	1
14241	Caprolactam	105-60-2	N.D.	11	5.1	1
14241	Carbazole	86-74-8	N.D.	2.0	0.51	1
14241	4-Chloro-3-methylphenol	59-50-7	N.D.	2.0	0.51	1
14241	4-Chloroaniline	106-47-8	N.D.	10	4.1	1
14241	bis(2-Chloroethoxy)methane	111-91-1	N.D.	2.0	0.51	1
14241	bis(2-Chloroethyl)ether	111-44-4	N.D.	2.0	0.51	1
14241	bis(2-Chloroisopropyl)ether[1]	39638-32-9	N.D.	2.0	0.51	1
	Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.					
14241	2-Chloronaphthalene	91-58-7	N.D.	1.0	0.41	1
14241	2-Chlorophenol	95-57-8	N.D.	2.0	0.51	1
14241	4-Chlorophenyl-phenylether	7005-72-3	N.D.	2.0	0.51	1
14241	Chrysene	218-01-9	N.D.	0.51	0.10	1
14241	Dibenz(a,h)anthracene	53-70-3	N.D.	0.51	0.10	1
14241	Dibenzofuran	132-64-9	N.D.	2.0	0.51	1
14241	3,3'-Dichlorobenzidine	91-94-1	N.D.	10	3.0	1
14241	2,4-Dichlorophenol	120-83-2	N.D.	2.0	0.51	1
14241	Dicyclohexylamine[1]	101-83-7	N.D.	10	10	1

*=This limit was used in the evaluation of the final result

Sample Description: **CHP-43RX Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 11/02/2019 09:59
Collection Date/Time: 11/01/2019 10:27
SDG#: BMS84-05

ARCADIS U.S., Inc.
ELLE Sample #: GW 1191065
ELLE Group #: 2072391
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	Diethylphthalate	84-66-2	N.D.	5.1	2.0	1
14241	N,N-Dimethylaniline[1]	121-69-7	0.68 J	1.0	0.51	1
14241	2,4-Dimethylphenol	105-67-9	N.D.	10	3.0	1
14241	Dimethylphthalate	131-11-3	N.D.	5.1	2.0	1
14241	4,6-Dinitro-2-methylphenol	534-52-1	N.D.	21	8.1	1
14241	2,4-Dinitrophenol	51-28-5	N.D.	30	14	1
14241	2,4-Dinitrotoluene	121-14-2	N.D.	5.1	1.0	1
14241	2,6-Dinitrotoluene	606-20-2	N.D.	2.0	0.51	1
14241	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	11	5.1	1
14241	Fluoranthene	206-44-0	N.D.	0.51	0.10	1
14241	Fluorene	86-73-7	N.D.	0.51	0.10	1
14241	Hexachlorobenzene	118-74-1	N.D.	0.51	0.10	1
14241	Hexachlorobutadiene	87-68-3	N.D.	2.0	0.51	1
14241	Hexachlorocyclopentadiene	77-47-4	N.D.	11	5.1	1
14241	Hexachloroethane	67-72-1	N.D.	5.1	1.0	1
14241	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.51	0.10	1
14241	Isophorone	78-59-1	N.D.	2.0	0.51	1
14241	2-Methylnaphthalene	91-57-6	N.D.	0.51	0.10	1
14241	2-Methylphenol	95-48-7	N.D.	2.0	0.51	1
14241	4-Methylphenol	65794-96-9	N.D.	2.0	0.51	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
14241	Naphthalene	91-20-3	N.D.	0.51	0.10	1
14241	2-Nitroaniline	88-74-4	N.D.	7.1	2.0	1
14241	3-Nitroaniline	99-09-2	N.D.	7.1	3.0	1
14241	4-Nitroaniline	100-01-6	N.D.	3.0	0.91	1
14241	Nitrobenzene	98-95-3	3.1	2.0	0.51	1
14241	2-Nitrophenol	88-75-5	N.D.	10	3.0	1
14241	4-Nitrophenol	100-02-7	N.D.	30	10	1
14241	N-Nitroso-di-n-propylamine	621-64-7	N.D.	3.0	0.71	1
14241	N-Nitrosodiphenylamine	86-30-6	N.D.	3.0	0.71	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.					
14241	Di-n-octylphthalate	117-84-0	N.D.	11	5.1	1
14241	Pentachlorophenol	87-86-5	N.D.	5.1	1.0	1
14241	Phenanthrene	85-01-8	N.D.	0.51	0.10	1
14241	Phenol	108-95-2	15	2.0	0.51	1
14241	Pyrene	129-00-0	N.D.	0.51	0.10	1
14241	Pyridine	110-86-1	N.D.	5.1	2.0	1
14241	1,2,4,5-Tetrachlorobenzene	95-94-3	N.D.	2.0	0.51	1

*=This limit was used in the evaluation of the final result

Sample Description: **CHP-43RX Grab Groundwater**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 11/02/2019 09:59
Collection Date/Time: 11/01/2019 10:27
SDG#: BMS84-05

ARCADIS U.S., Inc.
ELLE Sample #: GW 1191065
ELLE Group #: 2072391
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	2,3,4,6-Tetrachlorophenol	58-90-2	N.D.	10	4.1	1
14241	2,4,5-Trichlorophenol	95-95-4	N.D.	2.0	0.51	1
14241	2,4,6-Trichlorophenol	88-06-2	N.D.	2.0	0.51	1
14241	Triethylamine[1]	121-44-8	N.D.	10	10	1

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. Since the recovery is high and the target analyte(s) was not detected in the sample, the data is reported.

00886 SVOA TIC Interpretive(25)

The results from the semivolatile library search are listed on the attached FORM 1 - SV-TIC. The qualifiers appearing in the "Q" column are defined at the end of the report.

Sample Comments

State of New York Certification No. 10670
Trip blank vials were not received by the laboratory for this sample group.

[1] = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	L193183AA	11/15/2019 05:43	Don V Viray	100
01163	GC/MS VOA Water Prep	SW-846 5030C	1	L193183AA	11/15/2019 05:42	Don V Viray	100
14241	Semi-annual Groundwater BMS	SW-846 8270D	1	19311WAK026	11/09/2019 04:21	Ashley R Transue	1
11010	8270D BNA Extraction	SW-846 3510C	1	19311WAK026	11/08/2019 09:00	Joshua S Ruth	1

*=This limit was used in the evaluation of the final result

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
C43RX

Lab Name: Lancaster Laboratories Contract:_____
Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____
Matrix: (soil/water) WATER Lab Sample ID: 1191065
Sample wt/vol: 5.0 (g/mL)mL Lab File ID:HP09915.i/19nov14b.b/ln14s65.d
Level: (low/med) LOW Date Received: 11/02/19
% Moisture: not dec. Date Analyzed: 11/15/19
Column: (pack/cap) CAP Dilution Factor: 100.0
CONCENTRATION UNITS:
Number TICs found: 0 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	VOCTIC	Total VOC TICs		0	U
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					
16.					
17.					
18.					
19.					
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23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

page 1 of 1

FORM I VOA-TIC

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
C43RX

Lab Name: Lancaster Laboratories Contract:
Lab Code: LANCAS Case No.: SAS No.: SDG No.:
Matrix: (soil/water) WATER Lab Sample ID: 1191065
Sample wt/vol: 246 (g/mL) mL Lab File ID: lk0415.d
Level: (low/med) LOW Date Received: 11/02/19
% Moisture: Decanted: (Y/N) Date Extracted: 11/08/19
Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/09/19
Injection Volume: 1 (uL) Dilution Factor: 1
GPC Cleanup: N pH: Extraction: Sepf
CONCENTRATION UNITS:
Number TICs found: 20 (ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Unknown	4.550	12	J
2.	Unknown	4.614	13	J
3.1618-26-4	2,4-Dithiapentane	5.288	52	J
4.	Unknown	7.069	52	J
5.	Unknown	7.545	18	J
6.149-57-5	Hexanoic acid, 2-ethyl-	8.059	10	J
7.65-85-0	Benzoic acid	8.551	7	J
8.124-07-2	Octanoic acid	8.631	14	J
9.	Unknown	8.759	22	J
10.	Unknown	8.839	6	J
11.	Unknown	9.016	21	J
12.	Unknown	9.187	6	J
13.	Unknown	9.219	7	J
14.	Unknown	9.326	7	J
15.	Unknown	9.604	13	J
16.	Unknown	10.979	10	J
17.143-07-7	Dodecanoic acid	12.156	7	J
18.57-10-3	n-Hexadecanoic acid	14.482	8	J
19.	Unknown	14.525	15	J
20.	Unknown	21.377	11	J
21.				
22.SVOCTIC	Total SVOC TICs		310	J
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

N

ARCADIS Design & Consultancy for natural and built assets

Bristol-Myers Squibb

Thompson Road Investigation

Data Usability Summary Report

Syracuse, NY

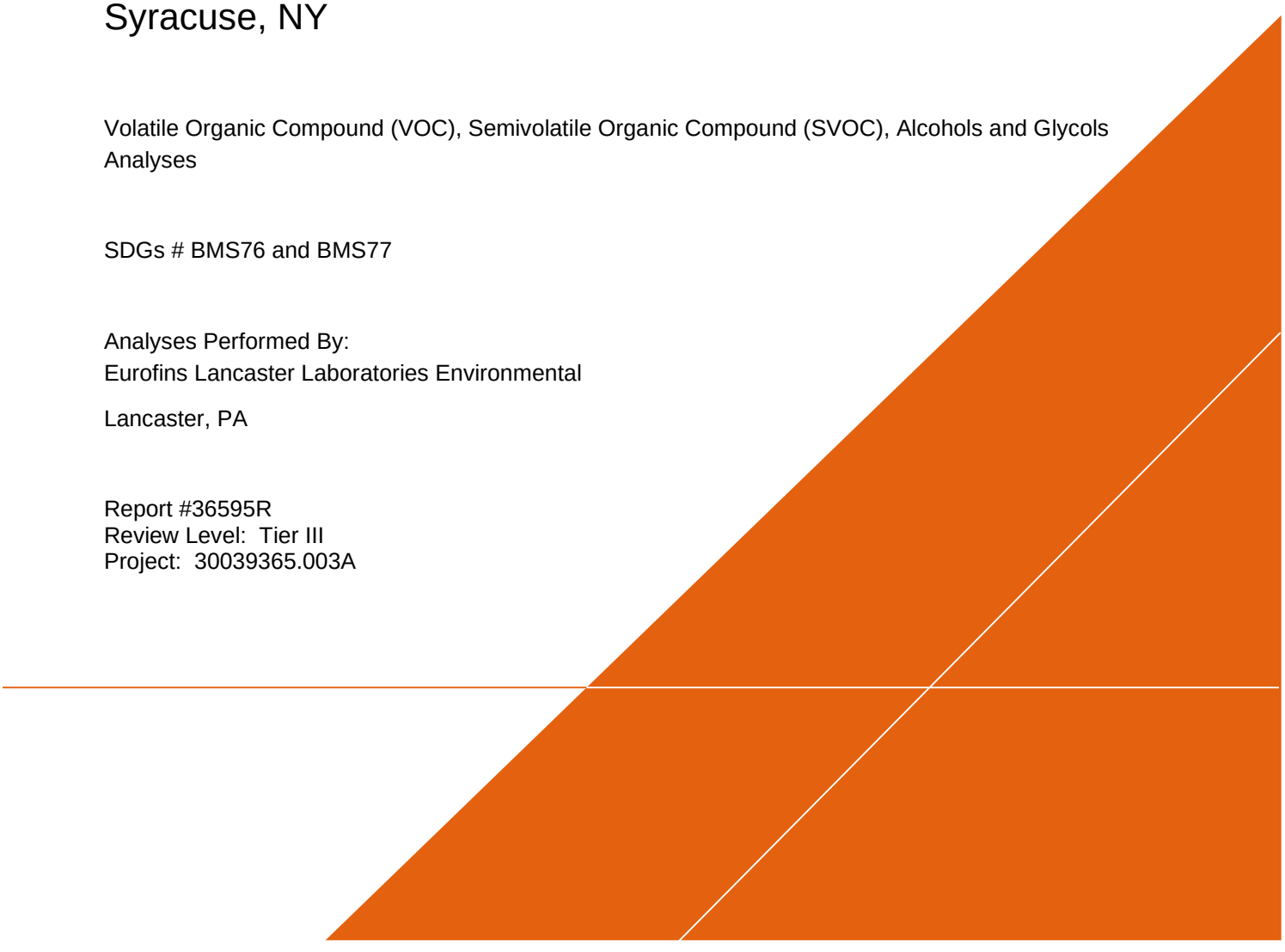
Volatile Organic Compound (VOC), Semivolatile Organic Compound (SVOC), Alcohols and Glycols Analyses

SDGs # BMS76 and BMS77

Analyses Performed By:
Eurofins Lancaster Laboratories Environmental

Lancaster, PA

Report #36595R
Review Level: Tier III
Project: 30039365.003A



SUMMARY

This data quality assessment summarizes the review of Sample Delivery Groups (SDGs) # BMS76 and BMS77 for samples collected in association with the with the Bristol-Myers Squibb Thompson Road Site. The review was conducted as a Tier III evaluation and included review of data package completeness. Only analytical data associated with constituents of concern were reviewed for this validation. Field documentation was not included in this review. Included with this assessment are the validation annotated sample result sheets, and chain of custody. Analyses were performed on the following samples:

SDG Number	Sample ID	Lab ID	Matrix	Sample Collection Date	Parent Sample	Analysis				
						VOC	SVOC	PFAS	MET	MISC
BMS76	BDA-17RX(9-11)	1123981	Soil	08/13/2019		X	X			X
	DUP-1-081319FD	1123982	Soil	08/13/2019	BDA-17RX(9-11)	X	X			X
	TRIP BLANK 1 08132019	1123983	Water	08/13/2019		X				X
	SUPPLYWATER-081319	1123984	Water	08/13/2019		X	X			X
BMS77	BDA-14RX (20.5-22.5)	1134881	Soil	08/23/2019		X	X			X
	TRIP BLANK 08232019	1134884	Water	08/23/2019		X				X

Note: Miscellaneous analyses include Alcohols and Glycols

ANALYTICAL DATA PACKAGE DOCUMENTATION

The table below is the evaluation of the data package completeness.

Items Reviewed	Reported		Performance Acceptable		Not Required
	No	Yes	No	Yes	
1. Sample receipt condition		X		X	
2. Requested analyses and sample results		X		X	
3. Master tracking list		X		X	
4. Methods of analysis		X		X	
5. Reporting limits		X		X	
6. Sample collection date		X		X	
7. Laboratory sample received date		X		X	
8. Sample preservation verification (as applicable)		X		X	
9. Sample preparation/extraction/analysis dates		X		X	
10. Fully executed Chain-of-Custody (COC) form		X		X	
11. Narrative summary of QA or sample problems provided		X		X	
12. Data Package Completeness and Compliance		X		X	

Note:
QA - Quality Assurance

List of Acronyms

%D: Percent Difference

%R: Percent Recovery

AC: Acceptable

ALC/GLY: Alcohols/Glycols

BAL: Blank Action Level

CCV: Continuing Calibration Verification

CRDL: Contract Required Detection Limit

D: Dilution

EIS: Extractable Internal Standard

FB: Field Blank

FD: Field Duplicate

ALD: Aldehydes

GC/ECD: Gas Chromatograph/Electron Capture Detector

GC/MS: Gas Chromatograph/Mass spectrometer

HT: Holding Time

ICP: Inductively Coupled Plasma

ICS: Interference Control Sample

ICV: Initial Calibration Verification

ISTD: Internal Standards

LabDup: Laboratory Duplicate

LCS: Lab Control Sample

LCSD: Lab Control Sample Duplicate

LL: Lower Control Limit

MB: Method Blank

MDL: Method Detection Limit

MET: Metals

MS: Matrix Spike

MSD: Matrix Spike Duplicate

N/A: Not Applicable

NC: Not Compliant

List of Acronyms, Continued

PAH: Polyaromatic Hydrocarbon

PCB: Polychlorinated Biphenyl

PEST: Pesticide

PFAS: Per- and Polyfluoroalkyl Substances

QA: Quality Assurance

QC: Quality Control

RB: Rinse Blank

RL: Reporting Limit

RPD: Relative Percent Difference

RRF: Relative Response Factor

RSD: Relative Standard Deviation

RT: Retention Time

SDG: Sample Delivery Group

SerDil: Serial Dilution

SIM: Single Ion Monitoring

SOP: Standard Operating Procedure

SSTD: Surrogate Standards

SVOC: Semivolatile Organic Compound

TB: Trip Blank

TIC: Tentatively Identified Compound

TOC: Total Organic Carbon

TOTDIS: Total and Dissolved

UL: Upper Control Limit

USEPA: United States Environmental Protection Agency

VOC: Volatile Organic Compound

ORGANIC ANALYSIS INTRODUCTION

Analyses were performed according to United States Environmental Protection Agency (USEPA) SW846 methods 8260C, 8270D, 8015D and 8315A. Data were reviewed in accordance with USEPA National Functional Guidelines of October 1999 and applicable EPA Region 2 SOPs.

The data review process is an evaluation of data on a technical basis rather than a determination of contract compliance. As such, the standards against which the data are being weighed may differ from those specified in the analytical method. It is assumed that the data package represents the best efforts of the laboratory and had already been subjected to adequate and sufficient quality review prior to submission.

During the review process, laboratory qualified and unqualified data are verified against the supporting documentation. Based on this evaluation, qualifier codes may be added, deleted, or modified by the data reviewer. Results are qualified with the following codes in accordance with USEPA National Functional Guidelines:

- Concentration (C) Qualifiers
  - U The compound was analyzed for but not detected. The associated value is the compound quantitation limit.
  - B The compound has been found in the sample as well as its associated blank, its presence in the sample may be suspect.
- Quantitation (Q) Qualifiers
  - E The compound was quantitated above the calibration range.
  - D Concentration is based on a diluted sample analysis.

- Validation Qualifiers
  - J The compound was positively identified; however, the associated numerical value is an estimated concentration only.
  - UJ The compound was not detected above the reported sample quantitation limit. However, the reported limit is approximate and may or may not represent the actual limit of quantitation.
  - JN The analysis indicates the presence of a compound for which there is presumptive evidence to make a tentative identification. The associated numerical value is an estimated concentration only.
  - UB Compound considered non-detect at the listed value due to associated blank contamination.
  - N The analysis indicates the presence of a compound for which there is presumptive evidence to make a tentative identification.
  - R The sample results are rejected.

Two facts should be noted by all data users. First, the "R" flag means that the associated value is unusable. In other words, due to significant quality control (QC) problems, the analysis is invalid and provides no information as to whether the compound is present or not. "R" values should not appear on data tables because they cannot be relied upon, even as a last resort. The second fact to keep in mind is

that no compound concentration, even if it has passed all QC tests, is guaranteed to be accurate. Strict QC serves to increase confidence in data but any value potentially contains error.

VOLATILE ORGANIC COMPOUND (VOC) ANALYSES

1. Holding Times

The specified holding times for the following methods are presented in the following table.

Method	Matrix	Holding Time	Preservation
SW-846 8260C	Water	14 days from collection to analysis (preserved) 7 days from collection to analysis (non-preserved)	Cool to <6 °C; preserved to a pH of less than 2 s.u.
	Soil	48 hours from collection to extraction and 14 days from extraction to analysis	Cool to <6 °C.

Note:

s.u. Standard units

All samples were analyzed within the specified holding time criteria.

2. Blank Contamination

Quality assurance (QA) blanks (i.e., method and rinse blanks) are prepared to identify any contamination which may have been introduced into the samples during sample preparation or field activity. Method blanks measure laboratory contamination. Rinse blanks measure contamination of samples during field operations.

A blank action level (BAL) of five times the concentration of a detected compound in an associated blank (common laboratory contaminant compounds are calculated at ten times) is calculated for QA blanks containing concentrations greater than the method detection limit (MDL). The BAL is compared to the associated sample results to determine the appropriate qualification of the sample results, if needed.

All compounds associated with the QA blanks exhibited a concentration less than the MDL, with the exception of the compounds listed in the following table. Sample results associated with QA blank contamination that were greater than the BAL resulted in the removal of the laboratory qualifier (B) of data. Sample results less than the BAL associated with the following sample locations were qualified as listed in the following table.

Sample Locations	Analytes	Sample Result	Qualification
SUPPLYWATER-081319	Methylene chloride	Detected sample results <RL and <BAL	"UB" at the RL

Note:

RL Reporting limit

3. Mass Spectrometer Tuning

Mass spectrometer performance was acceptable, and all analyses were performed within a 12-hour tune clock.

System performance and column resolution were acceptable.

4. Calibration

Satisfactory instrument calibration is established to ensure that the instrument is capable of producing acceptable quantitative data. An initial calibration demonstrates that the instrument is capable of acceptable performance at the beginning of an experimental sequence. The continuing calibration verifies that the instrument daily performance is satisfactory.

4.1 Initial Calibration

The method specifies percent relative standard deviation (%RSD) and relative response factor (RRF) limits for select compounds only. A technical review of the data applies limits to all compounds with no exceptions.

All target compounds associated with the initial calibration standards must exhibit a %RSD less than the control limit (15%) or a correlation coefficient greater than 0.99 and an RRF value greater than control limit (0.05).

4.2 Continuing Calibration

All target compounds associated with the continuing calibration standard must exhibit a percent difference (%D) less than the control limit (20%) and RRF value greater than control limit (0.05).

All compounds associated with the calibrations were within the specified control limits, with the exception of the compounds presented in the following table.

Sample Locations	Initial/Continuing	Compound	Criteria
DUP-1-081319FD	CCV %D	2-Hexanone	-27%
		Cyclohexanone	-31%
		1,2-Dibromo-3-chloropropane	-31%
BDA-17RX(9-11)	CCV %D	Dichlorodifluoromethane	22%
		Trichlorofluoromethane	22%
		1,2-Dibromo-3-chloropropane	-21%
TRIP BLANK 1 08132019 SUPPLYWATER-081319	CCV %D	2-Nitropropane	-34%
		Bromoform	-21%
		Chlorodifluoromethane	-37%
		Ethyl Ether	-26%
BDA-14RX (20.5-22.5)	CCV %D	Dichlorodifluoromethane	22%

Sample Locations	Initial/Continuing	Compound	Criteria
		1,1-Dichloroethene	24%
		Freon 113	37%
		Carbon Disulfide	25%
		n-Hexane	23%
		1,1,1-Trichloroethane	22%
		Cyclohexane	22%
		Carbon Tetrachloride	25%
		sec-Butylbenzene	23%
		p-Isopropyltoluene	23%
TRIP BLANK 08232019	CCV %D	Trichlorofluoromethane	-22%
		2-Nitropropane	-27%
		Dibromochloromethane	-21%

The criteria used to evaluate the initial and continuing calibration are presented in the following table. In the case of a calibration deviation, the sample results are qualified.

Initial/Continuing	Criteria	Sample Result	Qualification
Initial and Continuing Calibration	RRF <0.05	Non-detect	R
		Detect	J
	RRF <0.01[1]	Non-detect	R
		Detect	J
	RRF >0.05 or RRF >0.01[1]	Non-detect	No Action
		Detect	
Initial Calibration	%RSD > 15% or a correlation coefficient <0.99	Non-detect	UJ
		Detect	J
	%RSD >90%	Non-detect	R
		Detect	J
Continuing Calibration	%D >20% (increase in sensitivity)	Non-detect	No Action
		Detect	J

Initial/Continuing	Criteria	Sample Result	Qualification
	%D >20% (decrease in sensitivity)	Non-detect	UJ
		Detect	J
	%D >90% (increase/decrease in sensitivity)	Non-detect	R
		Detect	J

Note:

[1] RRF of 0.01 only applies to compounds which are typically poor responding compounds (i.e., ketones, 1,4-dioxane, etc.)

5. Surrogates/System Monitoring Compounds

All samples to be analyzed for organic compounds are spiked with surrogate compounds prior to sample preparation to evaluate overall laboratory performance and efficiency of the analytical technique. VOC analysis requires that all surrogates associated with the analysis exhibit recoveries within the laboratory-established acceptance limits.

All surrogate recoveries were within control limits.

6. Internal Standard Performance

Internal standard performance criteria ensure that the GC/MS sensitivity and response are stable during every sample analysis. The criteria require the internal standard compounds associated with the VOC exhibit area counts that are not greater than two times (+100%) or less than one-half (-50%) of the area counts of the associated continuing calibration standard.

Sample locations associated with internal standards exhibiting responses outside of the control limits are presented in the following table.

Sample Locations	Internal Standard	Response
DUP-1-081319FD BDA-14RX (20.5-22.5)	t-Butyl alcohol-d10	AC
	Chlorobenzene-d5	AC
	Fluorobenzene	AC
	1,4-Dichlorobenzene-d4	< LL but > 25%

Note:

AC Acceptable

The criteria used to evaluate the internal standard responses are presented in the following table. In the case of an internal standard deviation, the compounds quantitated under the deviant internal standard are qualified as documented in the table below.

Control limit	Sample Result	Qualification
> the upper control limit (UL)	Non-detect	No action

Control limit	Sample Result	Qualification
	Detect	J
< the lower control limit (LL) but > 25%	Non-detect	UJ
	Detect	J
< 25%	Non-detect	R
	Detect	J

Note:
Sample results were not qualified as rejected (R) due to the deviations listed above.

7. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Analysis

MS/MSD data are used to assess the precision and accuracy of the analytical method. The compounds used to perform the MS/MSD analysis must exhibit a percent recovery within the laboratory-established acceptance limits. The relative percent difference (RPD) between the MS/MSD recoveries must exhibit an RPD within the laboratory-established acceptance limits.

Note: The MS/MSD recovery control limits do not apply for MS/MSD performed on sample locations where the compound concentration detected in the parent sample exceeds the MS/MSD concentration by a factor of four or greater.

The MS/MSD analysis performed on a sample location BDA-14RX (20.5-22.5) exhibited recoveries above control limits for multiple compounds. Compounds that were detected in the parent sample analysis are qualified as estimated (J). Compounds not detected in the parent sample analysis were not qualified.

8. Laboratory Control Sample/Laboratory Control Sample Duplicate (LCS/LCSD) Analysis

The LCS/LCSD analysis is used to assess the precision and accuracy of the analytical method independent of matrix interferences. The compounds associated with the LCS/LCSD analysis must exhibit a percent recovery within the laboratory-established acceptance limits.

Sample locations associated with LCS/LCSD analysis exhibiting recoveries outside of the control limits presented in the following table.

Sample Locations	Compound	LCS Recovery	LCSD Recovery
DUP-1-081319FD	sec-Butylbenzene	>UL	AC
	cis-1,2-Dichloroethene	>UL	>UL
	Tetrachloroethene	>UL	>UL
BDA-17RX(9-11)	Acetone	>UL	>UL
	Tetrachloroethene	>UL	>UL
TRIP BLANK 1 08132019 SUPPLYWATER-081319	Acetone	>UL	>UL

The criteria used to evaluate the LCS/LCSD recoveries are presented in the following table. In the case of an LCS/LCSD deviation, the sample results are qualified as documented in the table below.

Control Limit	Sample Result	Qualification
> the upper control limit (UL)	Non-detect	No Action
	Detect	J
< the lower control limit (LL) but > 10%	Non-detect	UJ
	Detect	J
< 10%	Non-detect	R
	Detect	J

9. Field Duplicate Analysis

Field duplicate analysis is used to assess the overall precision of the field sampling procedures and analytical method. A control limit of 50% for water matrices is applied to the RPD between the parent sample and field duplicate. In the instance when the parent and/or duplicate sample concentrations are less than or equal to 5 times the RL, a control limit of two times the RL is applied for water matrices.

Results for duplicate samples are summarized in the following table.

Sample ID/Duplicate ID	Compound	Sample Result	Duplicate Result	RPD
BDA-17RX(9-11)/ DUP-1-081319FD	Acetone	0.015 J	0.019 J	AC
	Carbon disulfide	0.001 J	0.001 J	AC
	2-Butanone	0.009 U	0.003 J	AC

Notes:

AC Acceptable

U Not detected

The calculated RPDs between the parent sample and field duplicate were acceptable.

10. Compound Identification

Compounds are identified on the GC/MS by using the analytes relative retention time and ion spectra.

All identified compounds met the specified criteria.

Tentatively identified compounds (TICs) were identified in all sample locations associated with this SDG. VOC analysis requires that TICs be qualified as estimated (JN).

11. System Performance and Overall Assessment

Overall system performance was acceptable. Other than for those deviations specifically mentioned in this review, the overall data quality is within the guidelines specified in the method.

DATA VALIDATION CHECKLIST FOR VOCs

VOCs: SW-846 8260C	Reported		Performance Acceptable		Not Required
	No	Yes	No	Yes	
GAS CHROMATOGRAPHY/MASS SPECTROMETRY (GC/MS)					
Tier II Validation					
Holding times		X		X	
Reporting limits (units)		X		X	
Blanks					
A. Method blanks		X		X	
B. Equipment blanks					X
C. Trip blanks		X	X		
Laboratory Control Sample (LCS)		X	X		
Laboratory Control Sample Duplicate(LCSD)		X	X		
LCS/LCSD Precision (RPD)		X		X	
Matrix Spike (MS)		X	X		
Matrix Spike Duplicate(MSD)		X	X		
MS/MSD Precision (RPD)		X		X	
Field/Lab Duplicate (RPD)		X		X	
Surrogate Spike Recoveries		X		X	
Dilution Factor		X		X	
Moisture Content		X		X	
Tier III Validation					
System performance and column resolution		X		X	
Initial calibration %RSDs		X		X	
Continuing calibration RRFs		X		X	
Continuing calibration %Ds		X	X		
Instrument tune and performance check		X		X	
Ion abundance criteria for each instrument used		X		X	
Internal standard		X	X		
Compound identification and quantitation					
A. Reconstructed ion chromatograms		X		X	
B. Quantitation Reports		X		X	

VOCs: SW-846 8260C	Reported		Performance Acceptable		Not Required
	No	Yes	No	Yes	
GAS CHROMATOGRAPHY/MASS SPECTROMETRY (GC/MS)					
C. RT of sample compounds within the established RT windows		X		X	
D. Transcription/calculation errors present		X		X	
E. Reporting limits adjusted to reflect sample dilutions		X		X	

Notes:

%RSD Relative standard deviation

%R Percent recovery

RPD Relative percent difference

%D Percent difference

SEMI-VOLATILE ORGANIC COMPOUND (SVOC) ANALYSIS

1. Holding Times

The specified holding times for the following methods are presented in the following table.

Method	Matrix	Holding Time	Preservation
SW-846 8270D	Water	7 days from collection to extraction and 40 days from extraction to analysis	Cool to <6°C
	Soil	14 days from collection to extraction and 40 days from extraction to analysis	Cool to <6°C

All samples were analyzed within the specified holding time criteria.

2. Blank Contamination

Quality assurance (QA) blanks (i.e., method and rinse blanks) are prepared to identify any contamination which may have been introduced into the samples during sample preparation or field activity. Method blanks measure laboratory contamination. Rinse blanks measure contamination of samples during field operations.

A blank action level (BAL) of five times the concentration of a detected compound in an associated blank (common laboratory contaminant compounds are calculated at ten times) is calculated for QA blanks containing concentrations greater than the method detection limit (MDL). The BAL is compared to the associated sample results to determine the appropriate qualification of the sample results, if needed.

All compounds associated with the QA blanks exhibited a concentration less than the MDL, with the exception of the compounds listed in the following table. Sample results associated with QA blank contamination that were greater than the BAL resulted in the removal of the laboratory qualifier (B) of data. Sample results less than the BAL associated with the following sample locations were qualified as listed in the following table.

Sample Locations	Analytes	Sample Result	Qualification
BDA-14RX (20.5-22.5)	TIC: 3-Penten-2-one RT:2.699 TIC: Unknown RT:3.287	Detected sample results less than 5 times blank result	R

Note:

RL Reporting limit

3. Mass Spectrometer Tuning

Mass spectrometer performance was acceptable, and all analyses were performed within a 12-hour tune clock.

System performance and column resolution were acceptable.

4. Calibration

Satisfactory instrument calibration is established to ensure that the instrument is capable of producing acceptable quantitative data. An initial calibration demonstrates that the instrument is capable of acceptable performance at the beginning of an experimental sequence. The continuing calibration verifies that the instrument daily performance is satisfactory.

4.1 Initial Calibration

The method specifies percent relative standard deviation (%RSD) and relative response factor (RRF) limits for select compounds only. A technical review of the data applies limits to all compounds with no exceptions.

All target compounds associated with the initial calibration standards must exhibit a %RSD less than the control limit (20%) or a correlation coefficient greater than 0.99 and an RRF value greater than control limit (0.05).

4.2 Continuing Calibration

All target compounds associated with the continuing calibration standard must exhibit a percent difference (%D) less than the control limit (20%) and RRF value greater than control limit (0.05).

All compounds associated with the calibrations were within the specified control limits, with the exception of the compounds presented in the following table.

Sample Locations	Initial/Continuing	Compound	Criteria
DUP-1-081319FD BDA-17RX(9-11)	CCV %D	Di-n-octyl phthallate	24%
SUPPLYWATER-081319	CCV %D	Triethylamine	-31%

The criteria used to evaluate the initial and continuing calibration are presented in the following table. In the case of a calibration deviation, the sample results are qualified.

Initial/Continuing	Criteria	Sample Result	Qualification
Initial and Continuing Calibration	RRF <0.05	Non-detect	R
		Detect	J
	RRF <0.01[1]	Non-detect	R
		Detect	J
	RRF >0.05 or RRF >0.01[1]	Non-detect	No Action
		Detect	
Initial Calibration	%RSD > 15% or a correlation coefficient <0.99	Non-detect	UJ
		Detect	J
	%RSD >90%	Non-detect	R

Initial/Continuing	Criteria	Sample Result	Qualification
		Detect	J
Continuing Calibration	%D >20% (increase in sensitivity)	Non-detect	No Action
		Detect	J
	%D >20% (decrease in sensitivity)	Non-detect	UJ
		Detect	J
	%D >90% (increase/decrease in sensitivity)	Non-detect	R
		Detect	J

5. Surrogates/System Monitoring Compounds

All samples to be analyzed for organic compounds are spiked with surrogate compounds prior to sample preparation to evaluate overall laboratory performance and efficiency of the analytical technique. SVOC analysis requires that two of the three SVOC surrogate compounds within each fraction exhibit recoveries within the laboratory-established acceptance limits.

All surrogate recoveries were within control limits.

6. Internal Standard Performance

Internal standard performance criteria ensure that the GC/MS sensitivity and response are stable during every sample analysis. The criteria require the internal standard compounds associated with the SVOC exhibit area counts that are not greater than two times (+100%) or less than one-half (-50%) of the area counts of the associated continuing calibration standard.

All internal standard responses were within control limits.

7. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Analysis

MS/MSD data are used to assess the precision and accuracy of the analytical method. The compounds used to perform the MS/MSD analysis must exhibit a percent recovery within the laboratory-established acceptance limits. The relative percent difference (RPD) between the MS/MSD recoveries must exhibit an RPD within the laboratory-established acceptance limits.

Note: The MS/MSD recovery control limits do not apply for MS/MSD performed on sample locations where the compound concentration detected in the parent sample exceeds the MS/MSD concentration by a factor of four or greater.

Sample locations associated with the MS/MSD exhibiting recoveries outside of the control limits are presented in the following table.

Sample Locations	Compound	MS Recovery	MSD Recovery
BDA-14RX (20.5-22.5)	4,6-Dinitro-2-methylphenol	<LL but >10%	<LL but >10%
	Hexachlorocyclopentadiene	<10%	<10%

Note:

AC Acceptable

The criteria used to evaluate the MS/MSD recoveries are presented in the following table. In the case of an MS/MSD deviation, the sample results are qualified as documented in the table below.

Control Limit	Sample Result	Qualification
> the upper control limit (UL)	Non-detect	No Action
	Detect	J
< the lower control limit (LL) but > 10%	Non-detect	UJ
	Detect	J
< 10%	Non-detect	R
	Detect	J
Parent sample concentration > four times the MS/MSD spiking solution concentration.	Detect	No Action
	Non-detect	

8. Laboratory Control Sample/Laboratory Control Sample Duplicate (LCS/LCSD) Analysis

The LCS/LCSD analysis is used to assess the precision and accuracy of the analytical method independent of matrix interferences. The compounds associated with the LCS/LCSD analysis must exhibit a percent recovery within the laboratory-established acceptance limits.

Sample locations associated with LCS/LCSD analysis exhibiting recoveries outside of the control limits presented in the following table.

Sample Locations	Compound	LCS Recovery	LCSD Recovery
DUP-1-081319FD BDA-17RX(9-11)	N,N-Dimethylaniline	AC	<LL but >10%
	bis(2-Ethylhexyl)phthalate	>UL	AC
	Triethylamine	<LL but >10%	<LL but >10%
BDA-14RX (20.5-22.5)	Triethylamine	<LL but >10%	<LL but >10%
	2-Nitroaniline	>UL	NA
	1,2,4,5-Tetrachlorobenzene	>UL	NA
	2,3,4,6-Tetrachlorophenol	>UL	NA

The criteria used to evaluate the LCS/LCSD recoveries are presented in the following table. In the case of an LCS/LCSD deviation, the sample results are qualified as documented in the table below.

Control Limit	Sample Result	Qualification
> the upper control limit (UL)	Non-detect	No Action

Control Limit	Sample Result	Qualification
	Detect	J
< the lower control limit (LL) but > 10%	Non-detect	UJ
	Detect	J
< 10%	Non-detect	R
	Detect	J

9. Field Duplicate Analysis

Field duplicate analysis is used to assess the overall precision of the field sampling procedures and analytical method. A control limit of 50% for water matrices is applied to the RPD between the parent sample and field duplicate. In the instance when the parent and/or duplicate sample concentrations are less than or equal to 5 times the RL, a control limit of two times the RL is applied for water matrices.

Results for duplicate samples are summarized in the following table.

Sample ID/Duplicate ID	Compound	Sample Result	Duplicate Result	RPD
BDA-17RX(9-11)/ DUP-1-081319FD	Acenaphthene	9 J	89 U	AC
	Acenaphthylene	10 J	19 J	AC
	Anthracene	8 J	89 U	AC
	Benzo(a)anthracene	11 J	42 J	AC
	Benzo(a)pyrene	10 J	89 U	AC
	Benzo(b)fluoranthene	12 J	89 U	AC
	Benzo(g,h,i)perylene	12 J	89 U	AC
	Benzo(k)fluoranthene	12 J	89 U	AC
	Chrysene	12 J	74 J	AC
	Dibenz(a,h)anthracene	8 J	89 U	AC
	bis(2-Ethylhexyl)phthalate	110 J	1100	NC
	Fluoranthene	11 J	55 J	AC
	Fluorene	10 J	89 U	AC
	Hexachlorobenzene	12 J	89 U	AC
	Indeno(1,2,3-cd)pyrene	10 J	89 U	AC
	2-Methylnaphthalene	8 J	180 U	AC
	Naphthalene	9 J	89 U	AC

Sample ID/Duplicate ID	Compound	Sample Result	Duplicate Result	RPD
	Phenanthrene	12 J	20 J	AC
	Pyrene	14 J	58 J	AC

Notes:

AC Acceptable

U Not detected

The calculated RPDs between the parent sample and field duplicate were acceptable.

10. Compound Identification

Compounds are identified on the GC/MS by using the analytes relative retention time and ion spectra.

All identified compounds met the specified criteria.

Tentatively identified compounds (TICs) were identified in all sample locations associated with this SDG. SVOC analysis requires that TICs be qualified as estimated (JN).

11. System Performance and Overall Assessment

Overall system performance was acceptable. Other than for those deviations specifically mentioned in this review, the overall data quality is within the guidelines specified in the method.

DATA VALIDATION CHECKLIST FOR SVOCs

SVOCs: SW-846 8270D	Reported		Performance Acceptable		Not Required
	No	Yes	No	Yes	
GAS CHROMATOGRAPHY/MASS SPECTROMETRY (GC/MS)					
Tier II Validation					
Holding times		X		X	
Reporting limits (units)		X		X	
Blanks					
D. Method blanks		X		X	
E. Equipment blanks					X
Laboratory Control Sample (LCS) %R		X	X		
Laboratory Control Sample Duplicate (LCSD) %R		X	X		
LCS/LCSD Precision (RPD)		X		X	
Matrix Spike (MS) %R		X	X		
Matrix Spike Duplicate (MSD) %R		X	X		
MS/MSD Precision (RPD)		X		X	
Field/Lab Duplicate (RPD)		X	X		
Surrogate Spike Recoveries		X		X	
Dilution Factor		X		X	
Moisture Content		X		X	
Tier III Validation					
System performance and column resolution		X		X	
Initial calibration %RSDs		X		X	
Continuing calibration RRFs		X		X	
Continuing calibration %Ds		X	X		
Instrument tune and performance check		X		X	
Ion abundance criteria for each instrument used		X		X	
Internal standard		X		X	
Compound identification and quantitation					
F. Reconstructed ion chromatograms		X		X	
G. Quantitation Reports		X		X	
H. RT of sample compounds within the established RT windows		X		X	

SVOCs: SW-846 8270D		Reported		Performance Acceptable		Not Required
		No	Yes	No	Yes	
GAS CHROMATOGRAPHY/MASS SPECTROMETRY (GC/MS)						
I.	Quantitation transcriptions/calculations		X		X	
J.	Reporting limits adjusted to reflect sample dilutions		X		X	

Notes:

%RSD Relative standard deviation

%R Percent recovery

RPD Relative percent difference

%D Percent difference

ALCOHOL GC ANALYSES

1. Holding Times

The specified holding times for the following methods are presented in the following table.

Method	Matrix	Holding Time	Preservation
SW-846 8015	Water	14 days from collection to analysis	Cool to <6°C
	Soil		

All samples were analyzed within the specified holding time criteria.

2. Blank Contamination

Quality assurance (QA) blanks (i.e., method and rinse blanks) are prepared to identify any contamination which may have been introduced into the samples during sample preparation or field activity. Method blanks measure laboratory contamination. Rinse blanks measure contamination of samples during field operations.

A blank action level (BAL) of five times the concentration of a detected compound in an associated blank (common laboratory contaminant compounds are calculated at ten times) is calculated for QA blanks containing concentrations greater than the method detection limit (MDL). The BAL is compared to the associated sample results to determine the appropriate qualification of the sample results, if needed.

All compounds associated with the QA blanks exhibited a concentration less than the MDL, with the exception of the compounds listed in the following table. Sample results associated with QA blank contamination that were greater than the BAL resulted in the removal of the laboratory qualifier (B) of data. Sample results less than the BAL associated with the following sample locations were qualified as listed in the following table.

Sample Locations	Analytes	Sample Result	Qualification
SUPPLYWATER-081319	Methanol	Detected sample results <RL and <BAL	"UB" at the RL
BDA-17RX(9-11) DUP-1-081319FD	Methanol	Detected sample results >RL and <BAL	"UB" at detected sample concentration

Note:

RL Reporting limit

3. System Performance

System performance and column resolution were acceptable.

4. Calibration

Satisfactory instrument calibration is established to ensure that the instrument is capable of producing acceptable quantitative data. An initial calibration demonstrates that the instrument is capable of acceptable performance at the beginning of an experimental sequence. The continuing calibration verifies that the instrument daily performance is satisfactory.

4.1 Initial Calibration

A maximum RSD of 20% is allowed or a correlation coefficient greater than 0.99.

4.2 Continuing Calibration

All target compounds associated with the continuing calibration standard must exhibit a percent difference (%D) less than the control limit (20%).

All calibration criteria were within the control limits.

5. Surrogates/System Monitoring Compounds

All samples to be analyzed for organic compounds are spiked with surrogate compounds prior to sample preparation to evaluate overall laboratory performance and efficiency of the analytical technique. The analysis requires that the surrogate compound exhibits recovery within the laboratory-established acceptance limits.

All surrogate recoveries were within control limits.

6. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Analysis

MS/MSD data are used to assess the precision and accuracy of the analytical method. The compounds used to perform the MS/MSD analysis must exhibit a percent recovery within the laboratory-established acceptance limits. The relative percent difference (RPD) between the MS/MSD recoveries must exhibit an RPD within the laboratory-established acceptance limits.

Note: The MS/MSD recovery control limits do not apply for MS/MSD performed on sample locations where the compound concentration detected in the parent sample exceeds the MS/MSD concentration by a factor of four or greater.

The MS/MSD exhibited acceptable recoveries and RPD between the MS/MSD recoveries.

7. Laboratory Control Sample/Laboratory Control Sample Duplicate (LCS/LCSD) Analysis

The LCS/LCSD analysis is used to assess the precision and accuracy of the analytical method independent of matrix interferences. The compounds associated with the LCS/LCSD analysis must exhibit a percent recovery within the laboratory-established acceptance limits.

All compounds associated with the LCS/LCSD analysis exhibited recoveries within the control limits.

8. Field Duplicate Analysis

Field duplicate analysis is used to assess the overall precision of the field sampling procedures and analytical method. A control limit of 50% for water matrices is applied to the RPD between the parent sample and field duplicate. In the instance when the parent and/or duplicate sample concentrations are less than or equal to 5 times the RL, a control limit of two times the RL is applied for water matrices.

Results for duplicate samples are summarized in the following table.

Sample ID/Duplicate ID	Compound	Sample Result	Duplicate Result	RPD
BDA-17RX(9-11)/ DUP-1-081319FD	All compounds	U	U	AC

Notes:

AC	Acceptable
U	Not detected

The calculated RPDs between the parent sample and field duplicate were acceptable.

9. Compound Identification

The retention times of all quantitated peaks must fall within the calculated retention time windows.

All identified compounds met the specified criteria.

10. System Performance and Overall Assessment

Overall system performance was acceptable. Other than for those deviations specifically mentioned in this review, the overall data quality is within the guidelines specified in the method.

DATA VALIDATION CHECKLIST FOR GENERAL GC

ALC/GLY: SW846 8015	Reported		Performance Acceptable		Not Required
	No	Yes	No	Yes	
GAS CHROMATOGRAPHY (GC/FID)					
Tier II Validation					
Holding times		X		X	
Reporting limits (units)		X		X	
Blanks					
A. Method blanks		X		X	
B. Trip blanks		X	X		
C. Equipment blanks					X
Laboratory Control Sample (LCS) %R		X		X	
Laboratory Control Sample Duplicate(LCSD) %R		X		X	
LCS/LCSD Precision (RPD)		X		X	
Matrix Spike (MS) %R		X		X	
Matrix Spike Duplicate(MSD) %R		X		X	
MS/MSD Precision (RPD)		X		X	
Field/Lab Duplicate (RPD)		X		X	
Surrogate Spike Recoveries		X		X	
Dilution Factor		X		X	
Moisture Content		X		X	
Tier III Validation					
Initial calibration %RSDs		X		X	
Continuing calibration %Ds		X		X	
System performance and column resolution		X		X	
Compound identification and quantitation					
A. Quantitation Reports		X		X	
D. RT of sample compounds within the established RT windows		X		X	
C. Pattern identification		X		X	
D. Transcription/calculation errors present		X		X	
E. Reporting limits adjusted to reflect sample dilutions		X		X	

Notes:

%RSD – relative standard deviation
%R - percent recovery

ALC/GLY: SW846 8015	Reported		Performance Acceptable		Not Required
	No	Yes	No	Yes	
GAS CHROMATOGRAPHY (GC/FID)					

RPD - relative percent difference
%D – difference

SAMPLE COMPLIANCE REPORT

Sample Delivery Group (SDG)	Sampling Date	Protocol	Sample ID	Matrix	Compliancy[1]					Noncompliance
					VOC	SVOC	PFAS	MET	MISC	
BMS76	08/13/2019	SW846	BDA-17RX(9-11)	Soil	No	No	-	-	No	VOC: CCV %D SVOC: LCS/LCSD %R ALC: TB
	08/13/2019	SW846	DUP-1-081319FD	Soil	No	No	-	-	No	VOC: CCV %D, ISTD %R SVOC: LCS/LCSD %R, FD ALC: TB
	08/13/2019	SW846	TRIP BLANK 1 08132019	Water	No	-	-	-	-	VOC: CCV %D
	08/13/2019	SW846	SUPPLYWATER-081319	Water	No	Yes	-	-	No	VOC: CCV %D, TB ALC: TB
BMS77	08/23/2019	SW846	BDA-14RX (20.5-22.5)	Water	No	No	-	-	Yes	VOC: ISTD %R SVOC: LCS/LCSD %R, MS/MSD %R
	08/23/2019	SW846	TRIP BLANK 08232019	Water	No	-	-	-	-	VOC: CCV %D

Note:

1 Samples which are compliant with no added validation qualifiers are listed as "yes". Samples which are non-compliant or which have added qualifiers are listed as "no". A "no" designation does not necessarily indicate that the data have been rejected or are otherwise unusable.

VALIDATION PERFORMED BY: Jeffrey L. Davin

SIGNATURE: 

DATE: May 1, 2020

PEER REVIEW: Dennis K. Capria

DATE: May 4, 2020

CHAIN OF CUSTODY

CORRECTED SAMPLE ANALYSIS DATA SHEETS (FOLLOWING 43 PAGES)

Environmental Analysis Request/Chain of Custody

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For Eurofins Lancaster Laboratories Environmental use only
Acct. # 30074 Group # 2058610 Sample # 1123981-84

COC #589463

Client Information

Client: Arcadis - US
Acct. #:
Project Name/#: BMS Syracuse
PWSID #:
Project Manager: William McCune
P.O. #: 247282
Sampler: Even Green
Quote #:
State where samples were collected: New York
For Compliance: Yes ☐ No ☐

Matrix

Soil ☒ Sediment ☐ Tissue ☐ | Water: Potable ☐ Ground ☐ NPDES ☐ Surface ☒ | Other: ☐

Sample Identification	Collected Date	Collected Time	Grab	Composite	Total # of Containers	Moisture	SVOA 8270D (miranda)	Alcohols in Soil	Glycols in soil by GMSC	VOCs-Soil by 8260C	VOCs-SmL water by 8260C	Alcohols in water	Glycols in water by GMSC			Remarks
										0	H	H				
BDA-17RX (9-11)	8/13/19	08:30	X		6	X	X	X	X	X						
DUP-1-081319	8/13/19	— : —	X		6	X	X	X	X	X						
Trip Blank 1	8/13/19	— : —			3						X	X	X			
SUPPLYwater-081319	8/13/19	1400	X		9						X	X	X			

TA Syracuse #225

8/13-19 EG

Analysis Requested

Preservation and Filtration Codes

For Lab Use Only

FSC:
SCR#: 247282

Preservation Codes

H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 P=H_3PO_4
F=Field Filtered O=Other

Remarks

Turnaround Time (TAT) Requested (please circle)

Standard Rush

(Rush TAT is subject to laboratory approval and surcharge.)

Requested TAT in business days: 10

E-mail address: William.McCune@Arcadis.com

Data Package Options (circle if required)

Type I (EPA Level 3 Equivalent/non-CLP)
Type VI (Raw Data Only)
Type III (Reduced non-CLP)
NJ DKQP
TX TRRP-13
NYSDEC Category A or B
MA MCP
CT RCP

Relinquished by	Date	Time	Received by	Date	Time
Edwin Hernandez	8/8/19	11:50		8/8/19	11:50
	8/17/19	17:30	TA SYR	8/17/19	1730
TA SYR	8-13-19	19:00			
				8/14/19	1010

EDD Required? Yes No
If yes, format:

Site-Specific QC (MS/MSD/Dup)? Yes No
(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier: UPS ____ FedEx X Other ____

Temperature upon receipt 1.8 °C

eurofins | Lancaster Laboratories Environmental

Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
P^	Concentration difference between the primary and confirmation column > 40%. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

Sample Description: **BDA-17RX(9-11) Grab Soil**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 08/14/2019 10:10
Collection Date/Time: 08/13/2019 08:30
SDG#: BMS76-01

ARCADIS U.S., Inc.
ELLE Sample #: SW 1123981
ELLE Group #: 2058610
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Limit of Quantitation*	Dry Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**mg/kg**	**mg/kg**	**mg/kg**	
11995	Acetone	67-64-1	0.015 J	0.019	0.006	0.88
11995	Acetonitrile	75-05-8	N.D.	0.095	0.024	0.88
11995	Benzene	71-43-2	N.D.	0.005	0.0005	0.88
11995	Bromochloromethane	74-97-5	N.D.	0.005	0.0006	0.88
11995	Bromodichloromethane	75-27-4	N.D.	0.005	0.0004	0.88
11995	Bromoform	75-25-2	N.D.	0.009	0.005	0.88
11995	Bromomethane	74-83-9	N.D.	0.005	0.0007	0.88
11995	n-Butanol	71-36-3	N.D.	0.24	0.053	0.88
11995	2-Butanone	78-93-3	N.D.	0.009	0.0009	0.88
11995	t-Butyl alcohol	75-65-0	N.D.	0.095	0.014	0.88
11995	n-Butylbenzene	104-51-8	N.D.	0.008	0.003	0.88
11995	sec-Butylbenzene	135-98-8	N.D.	0.005	0.002	0.88
11995	tert-Butylbenzene	98-06-6	N.D.	0.005	0.0008	0.88
11995	Carbon Disulfide	75-15-0	0.001 J	0.005	0.0006	0.88
11995	Carbon Tetrachloride	56-23-5	N.D.	0.005	0.0005	0.88
11995	Chlorobenzene	108-90-7	N.D.	0.005	0.0005	0.88
11995	Chlorodifluoromethane[1]	75-45-6	N.D.	0.009	0.002	0.88
11995	Chloroethane	75-00-3	N.D.	0.005	0.0009	0.88
11995	Chloroform	67-66-3	N.D.	0.005	0.0006	0.88
11995	Chloromethane	74-87-3	N.D.	0.005	0.0006	0.88
11995	Cyclohexane	110-82-7	N.D.	0.005	0.0005	0.88
11995	Cyclohexanone[1]	108-94-1	N.D.	0.24	0.024	0.88
11995	1,2-Dibromo-3-chloropropane	96-12-8	N.D. J	0.005	0.0005	0.88
11995	Dibromochloromethane	124-48-1	N.D.	0.005	0.0005	0.88
11995	1,2-Dibromoethane	106-93-4	N.D.	0.005	0.0004	0.88
11995	1,2-Dichlorobenzene	95-50-1	N.D.	0.005	0.0005	0.88
11995	1,3-Dichlorobenzene	541-73-1	N.D.	0.005	0.0005	0.88
11995	1,4-Dichlorobenzene	106-46-7	N.D.	0.005	0.0004	0.88
11995	Dichlorodifluoromethane	75-71-8	N.D.	0.005	0.0006	0.88
11995	1,1-Dichloroethane	75-34-3	N.D.	0.005	0.0005	0.88
11995	1,2-Dichloroethane	107-06-2	N.D.	0.005	0.0006	0.88
11995	1,1-Dichloroethene	75-35-4	N.D.	0.005	0.0005	0.88
11995	cis-1,2-Dichloroethene	156-59-2	N.D.	0.005	0.0005	0.88
11995	trans-1,2-Dichloroethene	156-60-5	N.D.	0.005	0.0005	0.88
11995	1,2-Dichloropropane	78-87-5	N.D.	0.005	0.0005	0.88
11995	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.005	0.0004	0.88
11995	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.005	0.0005	0.88
11995	1,4-Dioxane	123-91-1	N.D.	0.24	0.035	0.88
11995	Ethyl Acetate	141-78-6	N.D.	0.005	0.0009	0.88
11995	Ethyl Ether[1]	60-29-7	N.D.	0.005	0.0009	0.88
11995	Ethylbenzene	100-41-4	N.D.	0.005	0.0004	0.88

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-17RX(9-11) Grab Soil**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 08/14/2019 10:10
Collection Date/Time: 08/13/2019 08:30
SDG#: BMS76-01

ARCADIS U.S., Inc.
ELLE Sample #: SW 1123981
ELLE Group #: 2058610
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Limit of Quantitation*	Dry Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**mg/kg**	**mg/kg**	**mg/kg**	
11995	Freon 113	76-13-1	N.D.	0.009	0.0006	0.88
11995	n-Heptane[1]	142-82-5	N.D.	0.008	0.003	0.88
11995	n-Hexane[1]	110-54-3	N.D.	0.005	0.0005	0.88
11995	2-Hexanone	591-78-6	N.D.	0.009	0.0009	0.88
11995	Isobutyl Alcohol	78-83-1	N.D.	0.24	0.036	0.88
11995	Isopropylbenzene	98-82-8	N.D.	0.005	0.0004	0.88
11995	p-Isopropyltoluene	99-87-6	N.D.	0.005	0.002	0.88
11995	Methyl Acetate	79-20-9	N.D.	0.005	0.0009	0.88
11995	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.005	0.0005	0.88
11995	4-Methyl-2-pentanone	108-10-1	N.D.	0.009	0.0009	0.88
11995	Methylcyclohexane	108-87-2	N.D.	0.005	0.0006	0.88
11995	Methylene Chloride	75-09-2	N.D.	0.005	0.002	0.88
11995	Naphthalene	91-20-3	N.D.	0.005	0.002	0.88
11995	2-Nitropropane	79-46-9	N.D.	0.009	0.002	0.88
11995	Styrene	100-42-5	N.D.	0.005	0.0004	0.88
11995	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.005	0.0004	0.88
11995	Tetrachloroethene	127-18-4	N.D.	0.005	0.0005	0.88
11995	Tetrahydrofuran[1]	109-99-9	N.D.	0.008	0.0009	0.88
11995	Toluene	108-88-3	N.D.	0.005	0.0006	0.88
11995	1,2,3-Trichlorobenzene	87-61-6	N.D.	0.009	0.005	0.88
11995	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.009	0.005	0.88
11995	1,1,1-Trichloroethane	71-55-6	N.D.	0.005	0.0006	0.88
11995	1,1,2-Trichloroethane	79-00-5	N.D.	0.005	0.0005	0.88
11995	Trichloroethene	79-01-6	N.D.	0.005	0.0005	0.88
11995	Trichlorofluoromethane	75-69-4	N.D.	0.005	0.0007	0.88
11995	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.005	0.0005	0.88
11995	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.005	0.0005	0.88
11995	Vinyl Chloride	75-01-4	N.D.	0.005	0.0006	0.88
11995	m+p-Xylene	179601-23-1	N.D.	0.005	0.0009	0.88
11995	o-Xylene	95-47-6	N.D.	0.005	0.0004	0.88
11995	Xylene (Total)	1330-20-7	N.D.	0.009	0.001	0.88

A Method Detection Limit (MDL) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The MDL standard shows adequate sensitivity at or below the reporting limit.

The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the TNI/DoD Standards. The following analytes are accepted based on this allowance: Acetone

12027 VOA Interp. Library Search-20

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-17RX(9-11) Grab Soil**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 08/14/2019 10:10
Collection Date/Time: 08/13/2019 08:30
SDG#: BMS76-01

ARCADIS U.S., Inc.
ELLE Sample #: SW 1123981
ELLE Group #: 2058610
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Limit of Quantitation*	Dry Method Detection Limit	Dilution Factor
	The results from the volatile library search are listed on the attached FORM 1 - VOA-TIC. The qualifiers appearing in the "Q" column are defined at the end of the report.					
GC/MS Semivolatiles	**SW-846 8270D**		**ug/kg**	**ug/kg**	**ug/kg**	
10726	Acenaphthene	83-32-9	9 J	18	4	1
10726	Acenaphthylene	208-96-8	10 J	18	4	1
10726	Acetophenone	98-86-2	N.D.	53	18	1
10726	Aniline	62-53-3	N.D.	530	180	1
10726	Anthracene	120-12-7	8 J	18	4	1
10726	Atrazine	1912-24-9	N.D.	460	210	1
10726	Benzaldehyde	100-52-7	N.D.	180	71	1
10726	Benzo(a)anthracene	56-55-3	11 J	18	7	1
10726	Benzo(a)pyrene	50-32-8	10 J	18	4	1
10726	Benzo(b)fluoranthene	205-99-2	12 J	18	4	1
10726	Benzo(g,h,i)perylene	191-24-2	12 J	18	4	1
10726	Benzo(k)fluoranthene	207-08-9	12 J	18	4	1
10726	Benzyl alcohol	100-51-6	N.D.	530	180	1
10726	1,1'-Biphenyl	92-52-4	N.D.	39	18	1
10726	4-Bromophenyl-phenylether	101-55-3	N.D.	53	25	1
10726	Butylbenzylphthalate	85-68-7	N.D.	180	71	1
10726	Di-n-butylphthalate	84-74-2	N.D.	180	71	1
10726	Caprolactam	105-60-2	N.D.	180	35	1
10726	Carbazole	86-74-8	N.D.	39	18	1
10726	4-Chloro-3-methylphenol	59-50-7	N.D.	53	25	1
10726	4-Chloroaniline	106-47-8	N.D.	180	35	1
10726	bis(2-Chloroethoxy)methane	111-91-1	N.D.	39	18	1
10726	bis(2-Chloroethyl)ether	111-44-4	N.D.	53	25	1
10726	bis(2-Chloroisopropyl)ether[1]	39638-32-9	N.D.	46	21	1
	Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.					
10726	2-Chloronaphthalene	91-58-7	N.D.	35	7	1
10726	2-Chlorophenol	95-57-8	N.D.	39	18	1
10726	4-Chlorophenyl-phenylether	7005-72-3	N.D.	46	21	1
10726	Chrysene	218-01-9	12 J	18	4	1
10726	Dibenz(a,h)anthracene	53-70-3	8 J	18	7	1
10726	Dibenzofuran	132-64-9	N.D.	39	18	1
10726	3,3'-Dichlorobenzidine	91-94-1	N.D.	350	110	1
10726	2,4-Dichlorophenol	120-83-2	N.D.	46	21	1
10726	Dicyclohexylamine[1]	101-83-7	N.D.	2,100	710	1
10726	Diethylphthalate	84-66-2	N.D.	180	71	1
10726	N,N-Dimethylaniline[1]	121-69-7	N.D. ~~Z~~ J	180	35	1
10726	2,4-Dimethylphenol	105-67-9	N.D.	71	32	1

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-17RX(9-11) Grab Soil**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 08/14/2019 10:10
Collection Date/Time: 08/13/2019 08:30
SDG#: BMS76-01

ARCADIS U.S., Inc.
ELLE Sample #: SW 1123981
ELLE Group #: 2058610
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Limit of Quantitation*	Dry Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/kg**		**ug/kg**	**ug/kg**	
10726	Dimethylphthalate	131-11-3	N.D.		180	71	1
10726	4,6-Dinitro-2-methylphenol	534-52-1	N.D.		530	250	1
10726	2,4-Dinitrophenol	51-28-5	N.D.		1,100	350	1
10726	2,4-Dinitrotoluene	121-14-2	N.D.		180	71	1
10726	2,6-Dinitrotoluene	606-20-2	N.D.		53	25	1
10726	bis(2-Ethylhexyl)phthalate	117-81-7	110	J	180	71	1
10726	Fluoranthene	206-44-0	11	J	18	4	1
10726	Fluorene	86-73-7	10	J	18	4	1
10726	Hexachlorobenzene	118-74-1	12	J	18	7	1
10726	Hexachlorobutadiene	87-68-3	N.D.		81	39	1
10726	Hexachlorocyclopentadiene	77-47-4	N.D.	~~K3~~	530	210	1
10726	Hexachloroethane	67-72-1	N.D.		180	35	1
10726	Indeno(1,2,3-cd)pyrene	193-39-5	10	J	18	4	1
10726	Isophorone	78-59-1	N.D.		39	18	1
10726	2-Methylnaphthalene	91-57-6	8	J	35	4	1
10726	2-Methylphenol	95-48-7	N.D.		71	18	1
10726	4-Methylphenol	65794-96-9	N.D.		53	18	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.						
10726	Naphthalene	91-20-3	9	J	18	7	1
10726	2-Nitroaniline	88-74-4	N.D.		53	18	1
10726	3-Nitroaniline	99-09-2	N.D.		180	71	1
10726	4-Nitroaniline	100-01-6	N.D.		180	71	1
10726	Nitrobenzene	98-95-3	N.D.		71	28	1
10726	2-Nitrophenol	88-75-5	N.D.		60	28	1
10726	4-Nitrophenol	100-02-7	N.D.		530	180	1
10726	N-Nitroso-di-n-propylamine	621-64-7	N.D.		53	25	1
10726	N-Nitrosodiphenylamine	86-30-6	N.D.		39	18	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.						
10726	Di-n-octylphthalate	117-84-0	N.D.		180	71	1
10726	Pentachlorophenol	87-86-5	N.D.		180	71	1
10726	Phenanthrene	85-01-8	12	J	18	4	1
10726	Phenol[1]	108-95-2	N.D.		39	18	1
10726	Pyrene	129-00-0	14	J	18	4	1
10726	Pyridine	110-86-1	N.D.		180	71	1
10726	1,2,4,5-Tetrachlorobenzene	95-94-3	N.D.		39	18	1
10726	2,3,4,6-Tetrachlorophenol	58-90-2	N.D.		180	71	1
10726	2,4,5-Trichlorophenol	95-95-4	N.D.		71	32	1
10726	2,4,6-Trichlorophenol	88-06-2	N.D.		60	28	1

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-17RX(9-11) Grab Soil**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 08/14/2019 10:10
Collection Date/Time: 08/13/2019 08:30
SDG#: BMS76-01

ARCADIS U.S., Inc.
ELLE Sample #: SW 1123981
ELLE Group #: 2058610
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Limit of Quantitation*	Dry Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/kg**	**ug/kg**	**ug/kg**	
10726	Triethylamine[1]	121-44-8	N.D. ~~Z~~ J	5,300	1,800	1

Z=The stated QC limits are advisory only until sufficient data points can be obtained to calculate statistical limits.

The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the TNI/DoD Standards. The following analytes are accepted based on this allowance: 4-Nitrophenol, Butylbenzylphthalate, Di-n-octylphthalate and bis(2-Ethylhexyl)phthalate

00886 SVOA TIC Interpretive(25)

The results from the semivolatile library search are listed on the attached FORM 1 - SV-TIC. The qualifiers appearing in the "Q" column are defined at the end of the report.

GC Miscellaneous	**SW-846 8015C Feb 2007 Rev 3**		**mg/kg**	**mg/kg**	**mg/kg**	
12925	Ethylene glycol	107-21-1	N.D.	11	5.3	1
12925	Propylene glycol[1]	57-55-6	N.D.	11	5.3	1

The response for tetramethylene glycol in the continuing calibration verification standard is outside the QC acceptance limits high. The following action was taken:
The analysis was repeated and the continuing calibration verification standard bracketing the sample on the second trial is also outside the acceptance limits high for tetramethylene glycol.
This effect is attributed to the sample matrix and the data is reported.

GC Miscellaneous	**SW-846 8015D Rev.4, June 2003**		**mg/kg**	**mg/kg**	**mg/kg**	
10604	Ethanol (by Direct Injection)[1]	64-17-5	N.D. ~~D2~~	1.1	0.13	1
10604	Isopropanol[1]	67-63-0	N.D. ~~D2~~	1.1	0.049	1
10604	Methanol (by Direct Injection)[1]	67-56-1	1.4 ~~D2~~ UB	1.1	0.21	1
Wet Chemistry	**SM 2540 G-2011 %Moisture Calc**		**%**	**%**	**%**	
00111	Moisture[1]	n.a.	6.4	0.50	0.50	1

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-17RX(9-11) Grab Soil**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 08/14/2019 10:10
Collection Date/Time: 08/13/2019 08:30
SDG#: BMS76-01

ARCADIS U.S., Inc.
ELLE Sample #: SW 1123981
ELLE Group #: 2058610
Matrix: Soil

Sample Comments

State of New York Certification No. 10670

[1] = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Eurofins Lancaster Laboratories Environmental, LLC is responsible only for the certified testing of samples. We are not directly responsible for the integrity of the sample prior to laboratory receipt. Any reported concentrations less than 200 ug/kg may be biased low if they were not collected according to EPA 5035/5035A specifications.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11995	VOCs- Solid by 8260C/D	SW-846 8260C	1	B192351AA	08/23/2019 15:06	Linda C Pape	0.88
06176	GC/MS - LL DIH2O Prep	SW-846 5035A	1	201922654537	08/14/2019 15:28	Rebecca Williams	1
06176	GC/MS - LL DIH2O Prep	SW-846 5035A	2	201922654537	08/14/2019 15:28	Rebecca Williams	1
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	201922654537	08/13/2019 08:30	Client Supplied	1
10726	SVOA 8270D/E (microwave)	SW-846 8270D	1	19234SLE026	08/24/2019 19:27	Linda M Hartenstine	1
10813	BNA Soil Microwave APP IX	SW-846 3546	2	19234SLE026	08/23/2019 09:00	Logan M Brosemer	1
12925	Glycols in Soil by 8015C/D	SW-846 8015C Feb 2007 Rev 3	1	192280045A	08/16/2019 22:19	Donald Brown	1
10604	Alcohols in Soil	SW-846 8015D Rev.4, June 2003	1	192270015A	08/15/2019 17:04	Johanna C Kennedy	1
13121	Glycol Solids Ext. 8015C/D	SW-846 8015C Feb 2007 Rev 3	3	192280045A	08/16/2019 18:25	Donald Brown	1
00380	Solids Extraction for Alcohols	SW-846 8015D Rev 4 06/2003 Mod	1	192270015A	08/15/2019 11:45	Johanna C Kennedy	1
00111	Moisture	SM 2540 G-2011 %Moisture Calc	1	19232820006A	08/21/2019 11:08	William C Schwebel	1

*=This limit was used in the evaluation of the final result

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
MS761

Lab Name: Lancaster Laboratories Contract:_____
Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____
Matrix: (soil/water) SOIL Lab Sample ID: 1123981
Sample wt/vol: 5.32 (g/mL) g Lab File ID: HP09953.i/19aug22a.b/bg22s41.d
Level: (low/med) LOW Date Received: 08/14/19
% Moisture: not dec. 6.4 Date Analyzed: 08/22/19
Column: (pack/cap) CAP Dilution Factor: 1.0
CONCENTRATION UNITS:
Number TICs found: 0 (mg/L or mg/Kg) mg/Kg

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	VOCTIC	Total VOC TICs		0	U
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page 1 of 1

FORM I VOA-TIC

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
MS761

Lab Name: Lancaster Laboratories Contract:
Lab Code: LANCAS Case No.: SAS No.: SDG No.:
Matrix: (soil/water) SOIL Lab Sample ID: 1123981
Sample wt/vol: 30.2 (g/mL) g Lab File ID: gh1515.d
Level: (low/med) LOW Date Received: 08/14/19
% Moisture: 6.4 Decanted: (Y/N) Date Extracted: 08/23/19
Concentrated Extract Volume: 1000 (uL) Date Analyzed: 08/24/19
Injection Volume: 1 (uL) Dilution Factor: 1
GPC Cleanup: N pH: Extraction: Mic
CONCENTRATION UNITS:
Number TICs found: 3 (ug/L or ug/Kg) ug/Kg

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		Unknown	3.616	200	J N
2.	301-02-0	9-Octadecenamide, (Z)-	13.151	680	J
3.		Unknown	15.451	160	J
4.					
5.	SVOCTIC	Total SVOC TICs		1000	J
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page 1 of 1

FORM I SV-1

Sample Description: **DUP-1-081319 Grab Soil**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 08/14/2019 10:10
Collection Date/Time: 08/13/2019
SDG#: BMS76-02FD

ARCADIS U.S., Inc.
ELLE Sample #: SW 1123982
ELLE Group #: 2058610
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Limit of Quantitation*	Dry Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**mg/kg**	**mg/kg**	**mg/kg**	
11995	Acetone	67-64-1	0.019 J	0.020	0.006	0.93
11995	Acetonitrile	75-05-8	N.D.	0.10	0.025	0.93
11995	Benzene	71-43-2	N.D.	0.005	0.0005	0.93
11995	Bromochloromethane	74-97-5	N.D.	0.005	0.0006	0.93
11995	Bromodichloromethane	75-27-4	N.D.	0.005	0.0004	0.93
11995	Bromoform	75-25-2	N.D.	0.010	0.005	0.93
11995	Bromomethane	74-83-9	N.D.	0.005	0.0007	0.93
11995	n-Butanol	71-36-3	N.D.	0.25	0.057	0.93
11995	2-Butanone	78-93-3	0.003 J	0.010	0.001	0.93
11995	t-Butyl alcohol	75-65-0	N.D.	0.10	0.015	0.93
11995	n-Butylbenzene	104-51-8	N.D. J	0.008	0.003	0.93
11995	sec-Butylbenzene	135-98-8	N.D. J	0.005	0.002	0.93
11995	tert-Butylbenzene	98-06-6	N.D. J	0.005	0.0008	0.93
11995	Carbon Disulfide	75-15-0	0.001 J	0.005	0.0006	0.93
11995	Carbon Tetrachloride	56-23-5	N.D.	0.005	0.0005	0.93
11995	Chlorobenzene	108-90-7	N.D.	0.005	0.0005	0.93
11995	Chlorodifluoromethane[1]	75-45-6	N.D.	0.010	0.002	0.93
11995	Chloroethane	75-00-3	N.D.	0.005	0.001	0.93
11995	Chloroform	67-66-3	N.D.	0.005	0.0006	0.93
11995	Chloromethane	74-87-3	N.D.	0.005	0.0006	0.93
11995	Cyclohexane	110-82-7	N.D.	0.005	0.0005	0.93
11995	Cyclohexanone[1]	108-94-1	N.D. J	0.25	0.025	0.93
11995	1,2-Dibromo-3-chloropropane	96-12-8	N.D. J	0.005	0.0005	0.93
11995	Dibromochloromethane	124-48-1	N.D.	0.005	0.0005	0.93
11995	1,2-Dibromoethane	106-93-4	N.D.	0.005	0.0004	0.93
11995	1,2-Dichlorobenzene	95-50-1	N.D. J	0.005	0.0005	0.93
11995	1,3-Dichlorobenzene	541-73-1	N.D. J	0.005	0.0005	0.93
11995	1,4-Dichlorobenzene	106-46-7	N.D. J	0.005	0.0004	0.93
11995	Dichlorodifluoromethane	75-71-8	N.D.	0.005	0.0006	0.93
11995	1,1-Dichloroethane	75-34-3	N.D.	0.005	0.0005	0.93
11995	1,2-Dichloroethane	107-06-2	N.D.	0.005	0.0006	0.93
11995	1,1-Dichloroethene	75-35-4	N.D.	0.005	0.0005	0.93
11995	cis-1,2-Dichloroethene	156-59-2	N.D.	0.005	0.0005	0.93
11995	trans-1,2-Dichloroethene	156-60-5	N.D.	0.005	0.0005	0.93
11995	1,2-Dichloropropane	78-87-5	N.D.	0.005	0.0005	0.93
11995	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.005	0.0004	0.93
11995	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.005	0.0005	0.93
11995	1,4-Dioxane	123-91-1	N.D.	0.25	0.037	0.93
11995	Ethyl Acetate	141-78-6	N.D.	0.005	0.001	0.93
11995	Ethyl Ether[1]	60-29-7	N.D.	0.005	0.001	0.93
11995	Ethylbenzene	100-41-4	N.D.	0.005	0.0004	0.93

*=This limit was used in the evaluation of the final result

Sample Description: **DUP-1-081319 Grab Soil**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 08/14/2019 10:10
Collection Date/Time: 08/13/2019
SDG#: BMS76-02FD

ARCADIS U.S., Inc.
ELLE Sample #: SW 1123982
ELLE Group #: 2058610
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Limit of Quantitation*	Dry Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**mg/kg**	**mg/kg**	**mg/kg**	
11995	Freon 113	76-13-1	N.D.	0.010	0.0006	0.93
11995	n-Heptane[1]	142-82-5	N.D.	0.008	0.003	0.93
11995	n-Hexane[1]	110-54-3	N.D.	0.005	0.0005	0.93
11995	2-Hexanone	591-78-6	N.D. J	0.010	0.001	0.93
11995	Isobutyl Alcohol	78-83-1	N.D.	0.25	0.038	0.93
11995	Isopropylbenzene	98-82-8	N.D.	0.005	0.0004	0.93
11995	p-Isopropyltoluene	99-87-6	N.D. J	0.005	0.002	0.93
11995	Methyl Acetate	79-20-9	N.D.	0.005	0.001	0.93
11995	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.005	0.0005	0.93
11995	4-Methyl-2-pentanone	108-10-1	N.D.	0.010	0.001	0.93
11995	Methylcyclohexane	108-87-2	N.D.	0.005	0.0006	0.93
11995	Methylene Chloride	75-09-2	N.D.	0.005	0.002	0.93
11995	Naphthalene	91-20-3	N.D. J	0.005	0.002	0.93
11995	2-Nitropropane	79-46-9	N.D.	0.010	0.002	0.93
11995	Styrene	100-42-5	N.D.	0.005	0.0004	0.93
11995	1,1,2,2-Tetrachloroethane	79-34-5	N.D. J	0.005	0.0004	0.93
11995	Tetrachloroethene	127-18-4	N.D.	0.005	0.0005	0.93
11995	Tetrahydrofuran[1]	109-99-9	N.D.	0.008	0.001	0.93
11995	Toluene	108-88-3	N.D.	0.005	0.0006	0.93
11995	1,2,3-Trichlorobenzene	87-61-6	N.D. J	0.010	0.005	0.93
11995	1,2,4-Trichlorobenzene	120-82-1	N.D. J	0.010	0.005	0.93
11995	1,1,1-Trichloroethane	71-55-6	N.D.	0.005	0.0006	0.93
11995	1,1,2-Trichloroethane	79-00-5	N.D.	0.005	0.0005	0.93
11995	Trichloroethene	79-01-6	N.D.	0.005	0.0005	0.93
11995	Trichlorofluoromethane	75-69-4	N.D.	0.005	0.0007	0.93
11995	1,2,4-Trimethylbenzene	95-63-6	N.D. J	0.005	0.0005	0.93
11995	1,3,5-Trimethylbenzene	108-67-8	N.D. J	0.005	0.0005	0.93
11995	Vinyl Chloride	75-01-4	N.D.	0.005	0.0006	0.93
11995	m+p-Xylene	179601-23-1	N.D.	0.005	0.001	0.93
11995	o-Xylene	95-47-6	N.D.	0.005	0.0004	0.93
11995	Xylene (Total)	1330-20-7	N.D.	0.010	0.001	0.93

Project defined calibration criteria are not met. The calibration is compliant with the method defined criteria.

A Method Detection Limit (MDL) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The MDL standard shows adequate sensitivity at or below the reporting limit.

The recovery for the sample internal standard is outside the QC acceptance limits. The following action was taken: The sample was re-analyzed and the QC is again outside of the acceptance limits, indicating a matrix effect.

*=This limit was used in the evaluation of the final result

Sample Description: **DUP-1-081319 Grab Soil**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 08/14/2019 10:10
Collection Date/Time: 08/13/2019
SDG#: BMS76-02FD

ARCADIS U.S., Inc.
ELLE Sample #: SW 1123982
ELLE Group #: 2058610
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Limit of Quantitation*	Dry Method Detection Limit	Dilution Factor
	The data is reported from the initial trial.						
12027	**VOA Interp. Library Search-20**						
	The results from the volatile library search are listed on the attached FORM 1 - VOA-TIC. The qualifiers appearing in the "Q" column are defined at the end of the report.						
GC/MS Semivolatiles	**SW-846 8270D**		**ug/kg**		**ug/kg**	**ug/kg**	
10726	Acenaphthene	83-32-9	N.D.		89	18	5
10726	Acenaphthylene	208-96-8	19	J	89	18	5
10726	Acetophenone	98-86-2	N.D.		270	89	5
10726	Aniline	62-53-3	N.D.		2,700	890	5
10726	Anthracene	120-12-7	N.D.		89	18	5
10726	Atrazine	1912-24-9	N.D.		2,300	1,100	5
10726	Benzaldehyde	100-52-7	N.D.		890	360	5
10726	Benzo(a)anthracene	56-55-3	42	J	89	36	5
10726	Benzo(a)pyrene	50-32-8	N.D.		89	18	5
10726	Benzo(b)fluoranthene	205-99-2	N.D.		89	18	5
10726	Benzo(g,h,i)perylene	191-24-2	N.D.		89	18	5
10726	Benzo(k)fluoranthene	207-08-9	N.D.		89	18	5
10726	Benzyl alcohol	100-51-6	N.D.		2,700	890	5
10726	1,1'-Biphenyl	92-52-4	N.D.		200	89	5
10726	4-Bromophenyl-phenylether	101-55-3	N.D.		270	130	5
10726	Butylbenzylphthalate	85-68-7	N.D.		890	360	5
10726	Di-n-butylphthalate	84-74-2	N.D.		890	360	5
10726	Caprolactam	105-60-2	N.D.		890	180	5
10726	Carbazole	86-74-8	N.D.		200	89	5
10726	4-Chloro-3-methylphenol	59-50-7	N.D.		270	130	5
10726	4-Chloroaniline	106-47-8	N.D.		890	180	5
10726	bis(2-Chloroethoxy)methane	111-91-1	N.D.		200	89	5
10726	bis(2-Chloroethyl)ether	111-44-4	N.D.		270	130	5
10726	bis(2-Chloroisopropyl)ether[1]	39638-32-9	N.D.		230	110	5
	Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.						
10726	2-Chloronaphthalene	91-58-7	N.D.		180	36	5
10726	2-Chlorophenol	95-57-8	N.D.		200	89	5
10726	4-Chlorophenyl-phenylether	7005-72-3	N.D.		230	110	5
10726	Chrysene	218-01-9	74	J	89	18	5
10726	Dibenz(a,h)anthracene	53-70-3	N.D.		89	36	5
10726	Dibenzofuran	132-64-9	N.D.		200	89	5
10726	3,3'-Dichlorobenzidine	91-94-1	N.D.		1,800	540	5
10726	2,4-Dichlorophenol	120-83-2	N.D.		230	110	5
10726	Dicyclohexylamine[1]	101-83-7	N.D.		11,000	3,600	5

*=This limit was used in the evaluation of the final result

Sample Description: **DUP-1-081319 Grab Soil**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 08/14/2019 10:10
Collection Date/Time: 08/13/2019
SDG#: BMS76-02FD

ARCADIS U.S., Inc.
ELLE Sample #: SW 1123982
ELLE Group #: 2058610
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Limit of Quantitation*	Dry Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/kg**	**ug/kg**	**ug/kg**	
10726	Diethylphthalate	84-66-2	N.D.	890	360	5
10726	N,N-Dimethylaniline[1]	121-69-7	N.D. ~~Z~~ J	890	180	5
10726	2,4-Dimethylphenol	105-67-9	N.D.	360	160	5
10726	Dimethylphthalate	131-11-3	N.D.	890	360	5
10726	4,6-Dinitro-2-methylphenol	534-52-1	N.D.	2,700	1,300	5
10726	2,4-Dinitrophenol	51-28-5	N.D.	5,400	1,800	5
10726	2,4-Dinitrotoluene	121-14-2	N.D.	890	360	5
10726	2,6-Dinitrotoluene	606-20-2	N.D.	270	130	5
10726	bis(2-Ethylhexyl)phthalate	117-81-7	1,100 J	890	360	5
10726	Fluoranthene	206-44-0	55 J	89	18	5
10726	Fluorene	86-73-7	N.D.	89	18	5
10726	Hexachlorobenzene	118-74-1	N.D.	89	36	5
10726	Hexachlorobutadiene	87-68-3	N.D.	410	200	5
10726	Hexachlorocyclopentadiene	77-47-4	N.D. ~~K3~~	2,700	1,100	5
10726	Hexachloroethane	67-72-1	N.D.	890	180	5
10726	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	89	18	5
10726	Isophorone	78-59-1	N.D.	200	89	5
10726	2-Methylnaphthalene	91-57-6	N.D.	180	18	5
10726	2-Methylphenol	95-48-7	N.D.	360	89	5
10726	4-Methylphenol	65794-96-9	N.D.	270	89	5
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
10726	Naphthalene	91-20-3	N.D.	89	36	5
10726	2-Nitroaniline	88-74-4	N.D.	270	89	5
10726	3-Nitroaniline	99-09-2	N.D.	890	360	5
10726	4-Nitroaniline	100-01-6	N.D.	890	360	5
10726	Nitrobenzene	98-95-3	N.D.	360	140	5
10726	2-Nitrophenol	88-75-5	N.D.	300	140	5
10726	4-Nitrophenol	100-02-7	N.D.	2,700	890	5
10726	N-Nitroso-di-n-propylamine	621-64-7	N.D.	270	130	5
10726	N-Nitrosodiphenylamine	86-30-6	N.D.	200	89	5
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.					
10726	Di-n-octylphthalate	117-84-0	N.D.	890	360	5
10726	Pentachlorophenol	87-86-5	N.D.	890	360	5
10726	Phenanthrene	85-01-8	20 J	89	18	5
10726	Phenol[1]	108-95-2	N.D.	200	89	5
10726	Pyrene	129-00-0	58 J	89	18	5
10726	Pyridine	110-86-1	N.D.	890	360	5
10726	1,2,4,5-Tetrachlorobenzene	95-94-3	N.D.	200	89	5

*=This limit was used in the evaluation of the final result

Sample Description: DUP-1-081319 Grab Soil
BMS Syracuse

Project Name: Bristol-Myers Squibb

Submittal Date/Time: 08/14/2019 10:10
Collection Date/Time: 08/13/2019
SDG#: BMS76-02FD

ARCADIS U.S., Inc.
ELLE Sample #: SW 1123982
ELLE Group #: 2058610
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Limit of Quantitation*	Dry Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/kg**	**ug/kg**	**ug/kg**	
10726	2,3,4,6-Tetrachlorophenol	58-90-2	N.D.	890	360	5
10726	2,4,5-Trichlorophenol	95-95-4	N.D.	360	160	5
10726	2,4,6-Trichlorophenol	88-06-2	N.D.	300	140	5
10726	Triethylamine[1]	121-44-8	N.D. ~~Z~~ J	27,000	8,900	5

Z=The stated QC limits are advisory only until sufficient data points can be obtained to calculate statistical limits.

The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the TNI/DoD Standards. The following analytes are accepted based on this allowance: 4-Nitrophenol, Butylbenzylphthalate, Di-n-octylphthalate and bis(2-Ethylhexyl)phthalate

Reporting limits were raised due to interference from the sample matrix.

00886 SVOA TIC Interpretive(25)

The results from the semivolatile library search are listed on the attached FORM 1 - SV-TIC. The qualifiers appearing in the "Q" column are defined at the end of the report.

GC Miscellaneous	**SW-846 8015C Feb 2007 Rev 3**		**mg/kg**	**mg/kg**	**mg/kg**	
12925	Ethylene glycol	107-21-1	N.D.	11	5.4	1
12925	Propylene glycol[1]	57-55-6	N.D.	11	5.4	1

The response for tetramethylene glycol in the continuing calibration verification standard is outside the QC acceptance limits high. The following action was taken:
The analysis was repeated and the continuing calibration verification standard bracketing the sample on the second trial is also outside the acceptance limits high for tetramethylene glycol.
This effect is attributed to the sample matrix and the data is reported.

GC Miscellaneous	**SW-846 8015D Rev.4, June 2003**		**mg/kg**	**mg/kg**	**mg/kg**	
10604	Ethanol (by Direct Injection)[1]	64-17-5	N.D. D2	1.1	0.13	1
10604	Isopropanol[1]	67-63-0	N.D. D2	1.1	0.050	1
10604	Methanol (by Direct Injection)[1]	67-56-1	1.1 D2 UB	1.1	0.22	1
Wet Chemistry	**SM 2540 G-2011 %Moisture Calc**		**%**	**%**	**%**	
00111	Moisture[1]	n.a.	8.0	0.50	0.50	1

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

*=This limit was used in the evaluation of the final result

Sample Description: **DUP-1-081319 Grab Soil**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 08/14/2019 10:10
Collection Date/Time: 08/13/2019
SDG#: BMS76-02FD

ARCADIS U.S., Inc.
ELLE Sample #: SW 1123982
ELLE Group #: 2058610
Matrix: Soil

Sample Comments

State of New York Certification No. 10670

[1] = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Eurofins Lancaster Laboratories Environmental, LLC is responsible only for the certified testing of samples. We are not directly responsible for the integrity of the sample prior to laboratory receipt. Any reported concentrations less than 200 ug/kg may be biased low if they were not collected according to EPA 5035/5035A specifications.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11995	VOCs- Solid by 8260C/D	SW-846 8260C	1	B192342AA	08/22/2019 16:40	Linda C Pape	0.93
06176	GC/MS - LL DIH2O Prep	SW-846 5035A	1	201922654537	08/14/2019 15:28	Rebecca Williams	1
06176	GC/MS - LL DIH2O Prep	SW-846 5035A	2	201922654537	08/14/2019 15:28	Rebecca Williams	1
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	201922654537	08/13/2019 00:00	Client Supplied	1
10726	SVOA 8270D/E (microwave)	SW-846 8270D	1	19234SLE026	08/24/2019 19:51	Linda M Hartenstine	5
10813	BNA Soil Microwave APP IX	SW-846 3546	2	19234SLE026	08/23/2019 09:00	Logan M Brosemer	1
12925	Glycols in Soil by 8015C/D	SW-846 8015C Feb 2007 Rev 3	1	192280045A	08/16/2019 22:32	Donald Brown	1
10604	Alcohols in Soil	SW-846 8015D Rev.4, June 2003	1	192270015A	08/15/2019 17:21	Johanna C Kennedy	1
13121	Glycol Solids Ext. 8015C/D	SW-846 8015C Feb 2007 Rev 3	3	192280045A	08/16/2019 18:25	Donald Brown	1
00380	Solids Extraction for Alcohols	SW-846 8015D Rev 4 06/2003 Mod	1	192270015A	08/15/2019 11:45	Johanna C Kennedy	1
00111	Moisture	SM 2540 G-2011 %Moisture Calc	1	19232820006A	08/21/2019 11:08	William C Schwebel	1

*=This limit was used in the evaluation of the final result

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
MS762

Lab Name: Lancaster Laboratories Contract:_____
Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____
Matrix: (soil/water) SOIL Lab Sample ID: 1123982
Sample wt/vol: 5.38 (g/mL) g Lab File ID: HP09953.i/19aug22a.b/bg22s42.d
Level: (low/med) LOW Date Received: 08/14/19
% Moisture: not dec. 8 Date Analyzed: 08/22/19
Column: (pack/cap) CAP Dilution Factor: 1.0
CONCENTRATION UNITS:
Number TICs found: 0 (mg/L or mg/Kg) mg/Kg

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	VOCTIC	Total VOC TICs		0	U
2.					
3.					
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page 1 of 1

FORM I VOA-TIC

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
MS762

Lab Name: Lancaster Laboratories Contract:
Lab Code: LANCAS Case No.: SAS No.: SDG No.:
Matrix: (soil/water) SOIL Lab Sample ID: 1123982
Sample wt/vol: 30.4 (g/mL) g Lab File ID: gh1516.d
Level: (low/med) LOW Date Received: 08/14/19
% Moisture: 8 Decanted: (Y/N) Date Extracted: 08/23/19
Concentrated Extract Volume: 1000 (uL) Date Analyzed: 08/24/19
Injection Volume: 1 (uL) Dilution Factor: 5
GPC Cleanup: N pH: Extraction: Mic
CONCENTRATION UNITS:
Number TICs found: 3 (ug/L or ug/Kg) ug/Kg

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	1.103-23-1	Hexanedioic acid, bis(2-ethy	11.851	3000	J N
2.		Unknown	14.198	970	J
3.		Unknown	14.492	1100	J
4.					
5.	SVOCTIC	Total SVOC TICs		5100	J
6.					
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page 1 of 1

FORM I SV-1

Sample Description: **Trip Blank 1 Water**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 08/14/2019 10:10
Collection Date/Time: 08/13/2019
SDG#: BMS76-03TB

ARCADIS U.S., Inc.
ELLE Sample #: WW 1123983
ELLE Group #: 2058610
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	20	0.7	1
11997	Acetonitrile	75-05-8	N.D.	100	16	1
11997	Benzene	71-43-2	N.D.	1	0.2	1
11997	Bromochloromethane	74-97-5	N.D.	5	0.2	1
11997	Bromodichloromethane	75-27-4	N.D.	1	0.2	1
11997	Bromoform	75-25-2	N.D. J	4	1	1
11997	Bromomethane	74-83-9	N.D.	1	0.3	1
11997	n-Butanol	71-36-3	N.D.	250	61	1
11997	2-Butanone	78-93-3	N.D.	10	0.3	1
11997	t-Butyl alcohol	75-65-0	N.D.	50	12	1
11997	n-Butylbenzene	104-51-8	N.D.	5	0.2	1
11997	sec-Butylbenzene	135-98-8	N.D.	5	0.2	1
11997	tert-Butylbenzene	98-06-6	N.D.	5	0.3	1
11997	Carbon Disulfide	75-15-0	N.D.	5	0.2	1
11997	Carbon Tetrachloride	56-23-5	N.D.	1	0.2	1
11997	Chlorobenzene	108-90-7	N.D.	1	0.2	1
11997	Chlorodifluoromethane[1]	75-45-6	N.D. J	5	2	1
11997	Chloroethane	75-00-3	N.D.	1	0.2	1
11997	Chloroform	67-66-3	N.D.	1	0.2	1
11997	Chloromethane	74-87-3	N.D.	1	0.2	1
11997	Cyclohexane	110-82-7	N.D.	5	1	1
11997	Cyclohexanone[1]	108-94-1	N.D.	100	25	1
11997	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	5	0.3	1
11997	Dibromochloromethane	124-48-1	N.D.	1	0.2	1
11997	1,2-Dibromoethane	106-93-4	N.D.	1	0.2	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	5	0.2	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	5	0.2	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	5	0.2	1
11997	Dichlorodifluoromethane	75-71-8	N.D.	1	0.2	1
11997	1,1-Dichloroethane	75-34-3	N.D.	1	0.2	1
11997	1,2-Dichloroethane	107-06-2	N.D.	1	0.3	1
11997	1,1-Dichloroethene	75-35-4	N.D.	1	0.2	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	1	0.2	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	1	0.2	1
11997	1,2-Dichloropropane	78-87-5	N.D.	1	0.2	1
11997	cis-1,3-Dichloropropene	10061-01-5	N.D.	1	0.2	1
11997	trans-1,3-Dichloropropene	10061-02-6	N.D.	1	0.2	1
11997	1,4-Dioxane	123-91-1	N.D.	250	29	1
11997	Ethyl Acetate	141-78-6	N.D.	5	0.7	1
11997	Ethyl ether	60-29-7	N.D. J	5	0.2	1
11997	Ethylbenzene	100-41-4	N.D.	1	0.4	1

*=This limit was used in the evaluation of the final result

Sample Description: **Trip Blank 1 Water**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 08/14/2019 10:10
Collection Date/Time: 08/13/2019
SDG#: BMS76-03TB

ARCADIS U.S., Inc.
ELLE Sample #: WW 1123983
ELLE Group #: 2058610
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Freon 113	76-13-1	N.D.	10	0.2	1
11997	n-Heptane[1]	142-82-5	N.D.	5	2	1
11997	n-Hexane[1]	110-54-3	N.D.	5	2	1
11997	2-Hexanone	591-78-6	N.D.	10	0.3	1
11997	Isobutyl Alcohol	78-83-1	N.D.	250	36	1
11997	Isopropylbenzene	98-82-8	N.D.	5	0.2	1
11997	p-Isopropyltoluene	99-87-6	N.D.	5	0.2	1
11997	Methyl Acetate	79-20-9	N.D.	5	0.2	1
11997	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	1	0.2	1
11997	4-Methyl-2-pentanone	108-10-1	N.D.	10	0.5	1
11997	Methylcyclohexane	108-87-2	N.D.	5	0.5	1
11997	Methylene Chloride	75-09-2	0.5 J	1	0.3	1
11997	Naphthalene	91-20-3	N.D.	5	1	1
11997	2-Nitropropane	79-46-9	N.D. J	10	0.8	1
11997	Styrene	100-42-5	N.D.	5	0.2	1
11997	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	1	0.2	1
11997	Tetrachloroethene	127-18-4	N.D.	1	0.2	1
11997	Tetrahydrofuran	109-99-9	N.D.	10	0.7	1
11997	Toluene	108-88-3	N.D.	1	0.2	1
11997	1,2,3-Trichlorobenzene	87-61-6	N.D.	5	0.4	1
11997	1,2,4-Trichlorobenzene	120-82-1	N.D.	5	0.3	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	1	0.3	1
11997	1,1,2-Trichloroethane	79-00-5	N.D.	1	0.2	1
11997	Trichloroethene	79-01-6	N.D.	1	0.2	1
11997	Trichlorofluoromethane	75-69-4	N.D.	1	0.2	1
11997	1,2,4-Trimethylbenzene	95-63-6	N.D.	5	1	1
11997	1,3,5-Trimethylbenzene	108-67-8	N.D.	5	0.3	1
11997	Vinyl Chloride	75-01-4	N.D.	1	0.2	1
11997	m+p-Xylene	179601-23-1	N.D.	5	1	1
11997	o-Xylene	95-47-6	N.D.	1	0.4	1
11997	Xylene (Total)	1330-20-7	N.D.	6	1	1

Project defined calibration criteria are not met. The calibration is compliant with the method defined criteria.

A Method Detection Limit (MDL) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The MDL standard shows adequate sensitivity at or below the reporting limit.

12027 VOA Interp. Library Search-20

The results from the volatile library search are listed on the attached FORM 1 - VOA-TIC. The qualifiers appearing in the "Q" column are defined at the end of the report.

*=This limit was used in the evaluation of the final result

Sample Description: **Trip Blank 1 Water**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 08/14/2019 10:10
Collection Date/Time: 08/13/2019
SDG#: BMS76-03TB

ARCADIS U.S., Inc.
ELLE Sample #: WW 1123983
ELLE Group #: 2058610
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result		Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC Miscellaneous	**SW-846 8015C Feb 2007 Rev 3**		**mg/l**		**mg/l**	**mg/l**	
12926	Ethylene glycol	107-21-1	N.D.		10	5.0	1
12926	Propylene glycol[1]	57-55-6	N.D.		10	2.0	1
GC Miscellaneous	**SW-846 8015C Feb 2007 Rev 3**		**ug/l**		**ug/l**	**ug/l**	
10603	Ethanol	64-17-5	N.D.	D2	1,000	150	1
10603	Isopropanol[1]	67-63-0	N.D.	D2	1,000	110	1
10603	Methanol	67-56-1	950	JD2	1,000	220	1

The requirement for no headspace at the time of analysis was not met. The container used for the testing had headspace at the time of analysis.

Sample Comments

State of New York Certification No. 10670

[1] = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	4192381AA	08/26/2019 12:23	Corie Mellinger	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	4192381AA	08/26/2019 12:22	Corie Mellinger	1
10603	Alcohols in Water	SW-846 8015C Feb 2007 Rev 3	1	192270013A	08/15/2019 13:26	Johanna C Kennedy	1
12926	Glycols in Water by 8015C/D	SW-846 8015C Feb 2007 Rev 3	1	192340031A	08/23/2019 00:21	Donald Brown	1

*=This limit was used in the evaluation of the final result

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
MS763

Lab Name: Lancaster Laboratories Contract:_____
Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____
Matrix: (soil/water) WATER Lab Sample ID: 1123983
Sample wt/vol: 5.0 (g/mL)mL Lab File ID:HP23297.i/19aug26a.b/4g26s05.d
Level: (low/med) LOW Date Received: 08/14/19
% Moisture: not dec. Date Analyzed: 08/26/19
Column: (pack/cap) CAP Dilution Factor: 1.0
CONCENTRATION UNITS:
Number TICs found: 0 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	VOCTIC	Total VOC TICs		0	U
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page 1 of 1

FORM I VOA-TIC

Sample Description: **SupplyWater-081319 Grab Surface Water**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 08/14/2019 10:10
Collection Date/Time: 08/13/2019 14:00
SDG#: BMS76-04

ARCADIS U.S., Inc.
ELLE Sample #: WW 1123984
ELLE Group #: 2058610
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	1 J	20	0.7	1
11997	Acetonitrile	75-05-8	N.D.	100	16	1
11997	Benzene	71-43-2	N.D.	1	0.2	1
11997	Bromochloromethane	74-97-5	N.D.	5	0.2	1
11997	Bromodichloromethane	75-27-4	N.D.	1	0.2	1
11997	Bromoform	75-25-2	N.D. J	4	1	1
11997	Bromomethane	74-83-9	N.D.	1	0.3	1
11997	n-Butanol	71-36-3	N.D.	250	61	1
11997	2-Butanone	78-93-3	N.D.	10	0.3	1
11997	t-Butyl alcohol	75-65-0	N.D.	50	12	1
11997	n-Butylbenzene	104-51-8	N.D.	5	0.2	1
11997	sec-Butylbenzene	135-98-8	N.D.	5	0.2	1
11997	tert-Butylbenzene	98-06-6	N.D.	5	0.3	1
11997	Carbon Disulfide	75-15-0	N.D.	5	0.2	1
11997	Carbon Tetrachloride	56-23-5	N.D.	1	0.2	1
11997	Chlorobenzene	108-90-7	N.D.	1	0.2	1
11997	Chlorodifluoromethane[1]	75-45-6	N.D. J	5	2	1
11997	Chloroethane	75-00-3	N.D.	1	0.2	1
11997	Chloroform	67-66-3	N.D.	1	0.2	1
11997	Chloromethane	74-87-3	N.D.	1	0.2	1
11997	Cyclohexane	110-82-7	N.D.	5	1	1
11997	Cyclohexanone[1]	108-94-1	N.D.	100	25	1
11997	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	5	0.3	1
11997	Dibromochloromethane	124-48-1	N.D.	1	0.2	1
11997	1,2-Dibromoethane	106-93-4	N.D.	1	0.2	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	5	0.2	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	5	0.2	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	5	0.2	1
11997	Dichlorodifluoromethane	75-71-8	N.D.	1	0.2	1
11997	1,1-Dichloroethane	75-34-3	N.D.	1	0.2	1
11997	1,2-Dichloroethane	107-06-2	N.D.	1	0.3	1
11997	1,1-Dichloroethene	75-35-4	N.D.	1	0.2	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	1	0.2	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	1	0.2	1
11997	1,2-Dichloropropane	78-87-5	N.D.	1	0.2	1
11997	cis-1,3-Dichloropropene	10061-01-5	N.D.	1	0.2	1
11997	trans-1,3-Dichloropropene	10061-02-6	N.D.	1	0.2	1
11997	1,4-Dioxane	123-91-1	N.D.	250	29	1
11997	Ethyl Acetate	141-78-6	N.D.	5	0.7	1
11997	Ethyl ether	60-29-7	N.D. J	5	0.2	1
11997	Ethylbenzene	100-41-4	N.D.	1	0.4	1

*=This limit was used in the evaluation of the final result

Sample Description: **SupplyWater-081319 Grab Surface Water**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 08/14/2019 10:10
Collection Date/Time: 08/13/2019 14:00
SDG#: BMS76-04

ARCADIS U.S., Inc.
ELLE Sample #: WW 1123984
ELLE Group #: 2058610
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Freon 113	76-13-1	N.D.	10	0.2	1
11997	n-Heptane[1]	142-82-5	N.D.	5	2	1
11997	n-Hexane[1]	110-54-3	N.D.	5	2	1
11997	2-Hexanone	591-78-6	N.D.	10	0.3	1
11997	Isobutyl Alcohol	78-83-1	N.D.	250	36	1
11997	Isopropylbenzene	98-82-8	N.D.	5	0.2	1
11997	p-Isopropyltoluene	99-87-6	N.D.	5	0.2	1
11997	Methyl Acetate	79-20-9	N.D.	5	0.2	1
11997	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	1	0.2	1
11997	4-Methyl-2-pentanone	108-10-1	N.D.	10	0.5	1
11997	Methylcyclohexane	108-87-2	N.D.	5	0.5	1
11997	Methylene Chloride	75-09-2	1 ~~0.6 J~~ UB	1	0.3	1
11997	Naphthalene	91-20-3	N.D.	5	1	1
11997	2-Nitropropane	79-46-9	N.D. J	10	0.8	1
11997	Styrene	100-42-5	N.D.	5	0.2	1
11997	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	1	0.2	1
11997	Tetrachloroethene	127-18-4	N.D.	1	0.2	1
11997	Tetrahydrofuran	109-99-9	N.D.	10	0.7	1
11997	Toluene	108-88-3	N.D.	1	0.2	1
11997	1,2,3-Trichlorobenzene	87-61-6	N.D.	5	0.4	1
11997	1,2,4-Trichlorobenzene	120-82-1	N.D.	5	0.3	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	1	0.3	1
11997	1,1,2-Trichloroethane	79-00-5	N.D.	1	0.2	1
11997	Trichloroethene	79-01-6	N.D.	1	0.2	1
11997	Trichlorofluoromethane	75-69-4	N.D.	1	0.2	1
11997	1,2,4-Trimethylbenzene	95-63-6	N.D.	5	1	1
11997	1,3,5-Trimethylbenzene	108-67-8	N.D.	5	0.3	1
11997	Vinyl Chloride	75-01-4	N.D.	1	0.2	1
11997	m+p-Xylene	179601-23-1	N.D.	5	1	1
11997	o-Xylene	95-47-6	N.D.	1	0.4	1
11997	Xylene (Total)	1330-20-7	N.D.	6	1	1

Project defined calibration criteria are not met. The calibration is compliant with the method defined criteria.

A Method Detection Limit (MDL) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The MDL standard shows adequate sensitivity at or below the reporting limit.

The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the TNI/DoD Standards. The following analytes are accepted based on this

*=This limit was used in the evaluation of the final result

Sample Description: **SupplyWater-081319 Grab Surface Water**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 08/14/2019 10:10
Collection Date/Time: 08/13/2019 14:00
SDG#: BMS76-04

ARCADIS U.S., Inc.
ELLE Sample #: WW 1123984
ELLE Group #: 2058610
Matrix: Surface Water

allowance: acetone.

12027 VOA Interp. Library Search-20

The results from the volatile library search are listed on the attached FORM 1 - VOA-TIC. The qualifiers appearing in the "Q" column are defined at the end of the report.

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	Acenaphthene	83-32-9	N.D.	0.51	0.10	1
14241	Acenaphthylene	208-96-8	N.D.	0.51	0.10	1
14241	Acetophenone	98-86-2	N.D.	10	4.0	1
14241	Aniline	62-53-3	N.D.	10	3.0	1
14241	Anthracene	120-12-7	N.D.	0.51	0.10	1
14241	Atrazine	1912-24-9	N.D.	5.1	2.0	1
14241	Benzaldehyde	100-52-7	N.D.	10	3.0	1
14241	Benzo(a)anthracene	56-55-3	N.D.	0.51	0.10	1
14241	Benzo(a)pyrene	50-32-8	N.D.	0.51	0.10	1
14241	Benzo(b)fluoranthene	205-99-2	N.D.	0.51	0.10	1
14241	Benzo(g,h,i)perylene	191-24-2	N.D.	0.51	0.10	1
14241	Benzo(k)fluoranthene	207-08-9	N.D.	0.51	0.10	1
14241	Benzyl alcohol	100-51-6	N.D.	30	10	1
14241	1,1'-Biphenyl	92-52-4	N.D.	10	3.0	1
14241	4-Bromophenyl-phenylether	101-55-3	N.D.	2.0	0.51	1
14241	Butylbenzylphthalate	85-68-7	N.D.	5.1	2.0	1
14241	Di-n-butylphthalate	84-74-2	N.D.	5.1	2.0	1
14241	Caprolactam	105-60-2	N.D.	11	5.1	1
14241	Carbazole	86-74-8	N.D.	2.0	0.51	1
14241	4-Chloro-3-methylphenol	59-50-7	N.D.	2.0	0.51	1
14241	4-Chloroaniline	106-47-8	N.D.	10	4.0	1
14241	bis(2-Chloroethoxy)methane	111-91-1	N.D.	2.0	0.51	1
14241	bis(2-Chloroethyl)ether	111-44-4	N.D.	2.0	0.51	1
14241	bis(2-Chloroisopropyl)ether[1]	39638-32-9	N.D.	2.0	0.51	1
	Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.					
14241	2-Chloronaphthalene	91-58-7	N.D.	1.0	0.40	1
14241	2-Chlorophenol	95-57-8	N.D.	2.0	0.51	1
14241	4-Chlorophenyl-phenylether	7005-72-3	N.D.	2.0	0.51	1
14241	Chrysene	218-01-9	N.D.	0.51	0.10	1
14241	Dibenz(a,h)anthracene	53-70-3	N.D.	0.51	0.10	1
14241	Dibenzofuran	132-64-9	N.D.	2.0	0.51	1
14241	3,3'-Dichlorobenzidine	91-94-1	N.D.	10	3.0	1
14241	2,4-Dichlorophenol	120-83-2	N.D.	2.0	0.51	1
14241	Dicyclohexylamine[1]	101-83-7	N.D. ~~Z~~	10	10	1

*=This limit was used in the evaluation of the final result

Sample Description: **SupplyWater-081319 Grab Surface Water**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 08/14/2019 10:10
Collection Date/Time: 08/13/2019 14:00
SDG#: BMS76-04

ARCADIS U.S., Inc.
ELLE Sample #: WW 1123984
ELLE Group #: 2058610
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	Diethylphthalate	84-66-2	N.D.	5.1	2.0	1
14241	N,N-Dimethylaniline[1]	121-69-7	N.D. ~~Z~~	1.0	0.51	1
14241	2,4-Dimethylphenol	105-67-9	N.D.	10	3.0	1
14241	Dimethylphthalate	131-11-3	N.D.	5.1	2.0	1
14241	4,6-Dinitro-2-methylphenol	534-52-1	N.D.	21	8.1	1
14241	2,4-Dinitrophenol	51-28-5	N.D.	30	14	1
14241	2,4-Dinitrotoluene	121-14-2	N.D.	5.1	1.0	1
14241	2,6-Dinitrotoluene	606-20-2	N.D.	2.0	0.51	1
14241	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	11	5.1	1
14241	Fluoranthene	206-44-0	N.D.	0.51	0.10	1
14241	Fluorene	86-73-7	N.D.	0.51	0.10	1
14241	Hexachlorobenzene	118-74-1	N.D.	0.51	0.10	1
14241	Hexachlorobutadiene	87-68-3	N.D.	2.0	0.51	1
14241	Hexachlorocyclopentadiene	77-47-4	N.D.	11	5.1	1
14241	Hexachloroethane	67-72-1	N.D.	5.1	1.0	1
14241	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.51	0.10	1
14241	Isophorone	78-59-1	N.D.	2.0	0.51	1
14241	2-Methylnaphthalene	91-57-6	N.D.	0.51	0.10	1
14241	2-Methylphenol	95-48-7	N.D.	2.0	0.51	1
14241	4-Methylphenol	65794-96-9	N.D.	2.0	0.51	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
14241	Naphthalene	91-20-3	N.D.	0.51	0.10	1
14241	2-Nitroaniline	88-74-4	N.D.	7.1	2.0	1
14241	3-Nitroaniline	99-09-2	N.D.	7.1	3.0	1
14241	4-Nitroaniline	100-01-6	N.D.	3.0	0.91	1
14241	Nitrobenzene	98-95-3	N.D.	2.0	0.51	1
14241	2-Nitrophenol	88-75-5	N.D.	10	3.0	1
14241	4-Nitrophenol	100-02-7	N.D.	30	10	1
14241	N-Nitroso-di-n-propylamine	621-64-7	N.D.	3.0	0.71	1
14241	N-Nitrosodiphenylamine	86-30-6	N.D.	3.0	0.71	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.					
14241	Di-n-octylphthalate	117-84-0	N.D.	11	5.1	1
14241	Pentachlorophenol	87-86-5	N.D.	5.1	1.0	1
14241	Phenanthrene	85-01-8	N.D.	0.51	0.10	1
14241	Phenol	108-95-2	N.D.	2.0	0.51	1
14241	Pyrene	129-00-0	N.D.	0.51	0.10	1
14241	Pyridine	110-86-1	N.D.	5.1	2.0	1
14241	1,2,4,5-Tetrachlorobenzene	95-94-3	N.D.	2.0	0.51	1

*=This limit was used in the evaluation of the final result

Sample Description: **SupplyWater-081319 Grab Surface Water**
BMS Syracuse

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 08/14/2019 10:10
Collection Date/Time: 08/13/2019 14:00
SDG#: BMS76-04

ARCADIS U.S., Inc.
ELLE Sample #: WW 1123984
ELLE Group #: 2058610
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	2,3,4,6-Tetrachlorophenol	58-90-2	N.D.	10	4.0	1
14241	2,4,5-Trichlorophenol	95-95-4	N.D.	2.0	0.51	1
14241	2,4,6-Trichlorophenol	88-06-2	N.D.	2.0	0.51	1
14241	Triethylamine[1]	121-44-8	N.D. ~~Z~~	10	10	1

Z=The stated QC limits are advisory only until sufficient data points can be obtained to calculate statistical limits.

00886 SVOA TIC Interpretive(25)

The results from the semivolatile library search are listed on the attached FORM 1 - SV-TIC. The qualifiers appearing in the "Q" column are defined at the end of the report.

GC Miscellaneous	**SW-846 8015C Feb 2007 Rev 3**		**mg/l**	**mg/l**	**mg/l**	
12926	Ethylene glycol	107-21-1	N.D.	10	5.0	1
12926	Propylene glycol[1]	57-55-6	N.D.	10	2.0	1
GC Miscellaneous	**SW-846 8015C Feb 2007 Rev 3**		**ug/l**	**ug/l**	**ug/l**	
10603	Ethanol	64-17-5	N.D. D2	1,000	150	1
10603	Isopropanol[1]	67-63-0	N.D. D2	1,000	110	1
10603	Methanol	67-56-1 1000	~~240~~ JD2 UB	1,000	220	1

Sample Comments

State of New York Certification No. 10670

[1] = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	4192381AA	08/26/2019 12:46	Corie Mellinger	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	4192381AA	08/26/2019 12:45	Corie Mellinger	1
14241	Semi-annual Groundwater BMS	SW-846 8270D	1	19231WAG026	08/24/2019 01:06	Ashley R Transue	1
11010	8270D BNA Extraction	SW-846 3510C	1	19231WAG026	08/20/2019 02:00	Mathias Okpo	1
10603	Alcohols in Water	SW-846 8015C Feb 2007 Rev 3	1	192270013A	08/15/2019 13:43	Johanna C Kennedy	1
12926	Glycols in Water by 8015C/D	SW-846 8015C Feb 2007 Rev 3	1	192340031A	08/23/2019 00:34	Donald Brown	1

*=This limit was used in the evaluation of the final result

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
MS764

Lab Name: Lancaster Laboratories Contract:_____
Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____
Matrix: (soil/water) WATER Lab Sample ID: 1123984
Sample wt/vol: 5.0 (g/mL)mL Lab File ID:HP23297.i/19aug26a.b/4g26s06.d
Level: (low/med) LOW Date Received: 08/14/19
% Moisture: not dec. Date Analyzed: 08/26/19
Column: (pack/cap) CAP Dilution Factor: 1.0
CONCENTRATION UNITS:
Number TICs found: 0 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	VOCTIC	Total VOC TICs		0	U
2.					
3.					
4.					
5.					
6.					
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page 1 of 1

FORM I VOA-TIC

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
MS764

Lab Name: Lancaster Laboratories Contract:
Lab Code: LANCAS Case No.: SAS No.: SDG No.:
Matrix: (soil/water) WATER Lab Sample ID: 1123984
Sample wt/vol: 247 (g/mL) mL Lab File ID: lh1211.d
Level: (low/med) LOW Date Received: 08/14/19
% Moisture: Decanted: (Y/N) Date Extracted: 08/20/19
Concentrated Extract Volume: 1000 (uL) Date Analyzed: 08/24/19
Injection Volume: 1 (uL) Dilution Factor: 1
GPC Cleanup: N pH: Extraction: Sepf
CONCENTRATION UNITS:
Number TICs found: 5 (ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 124-07-2	Octanoic acid	8.417	13	J N
2.	Unknown	9.385	5	J
3. 143-07-7	Dodecanoic acid	11.979	10	J
4. 57-10-3	n-Hexadecanoic acid	14.279	14	J
5. 593-39-5	6-Octadecenoic acid, (Z)-	15.322	29	J
6.				
7. SVOCTIC	Total SVOC TICs		71	J
8.				
9.				
10.				
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page 1 of 1

FORM I SV-1

3074 2066823 1134881-4 – LANCASTER –

ARCADIS

ID#:

CHAIN OF CUSTODY & LABORATORY ANALYSIS REQUEST FORM

Page 1 of 1

Lab Work Order #: 247282

Send Results to:

Contact & Company Name: William McCune Arcadis-US	Telephone: (315) – 420-4344
Address: 110 W. Fayette #300	Fax:
City: Syracuse State: NY Zip: 13202	E-mail Address: William.McCune@Arcadis.com
Project Name/Location (City, State): BMS Phase IIRI (Syracuse, NY)	Project #: 30033396
Sampler's Printed Name: Evan Green	Sampler's Signature:

Sample ID	Collection Date	Collection Time	Type (✓) Comp	Type (✓) Grab	Matrix	Preservative	Filtered (✓)	# of Containers	Container Information	Moisture	SVOA 8270 (microwave)	Alcohols in soil (Methods)	Glycols in soil by 8015C	VOCs-Soil/1D NYS 8260C	PARAMETER ANALYSIS & METHOD			
BDA-114RX (20.5-22.5)	8/23/19	1020		X	SO			1		X	X	X	X	X				
BDA-114RX (20.5-22.5) MS	8/23/19	1020		X	SO			1		X	X	X	X	X				
BDA-114RX (20.5-22.5 MSD	8/23/19	1020		X	SO			1		X	X	X	X	X				

F/G

Keys

Preservation Key:
A. H_2SO_4
B. HCL
C. HNO_3
D. NaOH
E. None
F. Other: MeOH
G. Other: DI
H. Other: _____

Container Information Key:
1. 40 ml Vial
2. 1 L Amber
3. 250 ml Plastic
4. 500 ml Plastic
5. Encore
6. 2 oz. Glass
7. 4 oz. Glass
8. 8 oz. Glass
9. Other: _____
10. Other: _____

Matrix Key:
SO - Soil | SE - Sediment | NL - NAPL/Oil
W - Water | SL - Sludge | SW - Sample Wipe
T - Tissue | A - Air | Other: _____

REMARKS

Re-
8-23-19

Syracuse
#225

Special Instructions/Comments: – Samples are not for permit Compliance
– Data Package to be submitted as NYSDEC Category B

☐ Special QA/QC Instructions(✓):

Laboratory Information and Receipt		Relinquished By	Received By	Relinquished By	Laboratory Received By
Lab Name: Eurofins Lancaster Laboratories Environmental	Cooler Custody Seal (✓)	Printed Name: Evan Green	Printed Name: R English	Printed Name:	Printed Name: Jessenia Colon Martinez
☐ Cooler packed with ice (✓)	☒ Intact ☐ Not Intact	Signature:	Signature:	Signature:	Signature:
Specify Turnaround Requirements: Standard (10 days)	Sample Receipt:	Firm: Arcadis	Firm/Courier: Eurofins Lanc	Firm/Courier:	Firm: ELLE
Shipping Tracking #:	Condition/Cooler Temp: 3.7	Date/Time: 8/23/19 1630	Date/Time: 8-23-19, 1630	Date/Time:	Date/Time: 8-24-19 9:20

20730826 CofC AR Form 08.27.2015

Distribution: WHITE – Laboratory returns with results YELLOW – Lab copy PINK – Retained by Arcadis

eurofins | Lancaster Laboratories Environmental

Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
P^	Concentration difference between the primary and confirmation column > 40%. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

Sample Description: **BDA-14RX (20.5-22.5) Grab Soil**
BMS Phase II RI - Syracuse, NY

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 08/24/2019 09:20
Collection Date/Time: 08/23/2019 10:20
SDG#: BMS77-01BKG

ARCADIS U.S., Inc.
ELLE Sample #: SW 1134881
ELLE Group #: 2060623
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Limit of Quantitation*	Dry Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/kg**	**ug/kg**	**ug/kg**	
11995	Acetone	67-64-1	39 J	17	5	0.79
11995	Acetonitrile	75-05-8	N.D.	86	21	0.79
11995	Benzene	71-43-2	N.D.	4	0.4	0.79
11995	Bromochloromethane	74-97-5	N.D.	4	0.5	0.79
11995	Bromodichloromethane	75-27-4	N.D.	4	0.3	0.79
11995	Bromoform	75-25-2	N.D.	9	4	0.79
11995	Bromomethane	74-83-9	N.D.	4	0.6	0.79
11995	n-Butanol	71-36-3	N.D.	210	48	0.79
11995	2-Butanone	78-93-3	N.D.	9	0.9	0.79
11995	t-Butyl alcohol	75-65-0	N.D.	86	13	0.79
11995	n-Butylbenzene	104-51-8	N.D. J	7	3	0.79
11995	sec-Butylbenzene	135-98-8	N.D. J	4	2	0.79
11995	tert-Butylbenzene	98-06-6	N.D. J	4	0.7	0.79
11995	Carbon Disulfide	75-15-0	1 J	4	0.5	0.79
11995	Carbon Tetrachloride	56-23-5	N.D.	4	0.4	0.79
11995	Chlorobenzene	108-90-7	N.D.	4	0.4	0.79
11995	Chlorodifluoromethane[1]	75-45-6	N.D.	9	2	0.79
11995	Chloroethane	75-00-3	N.D.	4	0.9	0.79
11995	Chloroform	67-66-3	N.D.	4	0.5	0.79
11995	Chloromethane	74-87-3	N.D.	4	0.5	0.79
11995	Cyclohexane	110-82-7	0.7 J	4	0.4	0.79
11995	Cyclohexanone[1]	108-94-1	N.D.	210	21	0.79
11995	1,2-Dibromo-3-chloropropane	96-12-8	N.D. J	4	0.4	0.79
11995	Dibromochloromethane	124-48-1	N.D.	4	0.4	0.79
11995	1,2-Dibromoethane	106-93-4	N.D.	4	0.3	0.79
11995	1,2-Dichlorobenzene	95-50-1	N.D. J	4	0.4	0.79
11995	1,3-Dichlorobenzene	541-73-1	N.D. J	4	0.4	0.79
11995	1,4-Dichlorobenzene	106-46-7	N.D. J	4	0.3	0.79
11995	Dichlorodifluoromethane	75-71-8	N.D.	4	0.5	0.79
11995	1,1-Dichloroethane	75-34-3	N.D.	4	0.4	0.79
11995	1,2-Dichloroethane	107-06-2	N.D.	4	0.5	0.79
11995	1,1-Dichloroethene	75-35-4	N.D.	4	0.4	0.79
11995	cis-1,2-Dichloroethene	156-59-2	N.D.	4	0.4	0.79
11995	trans-1,2-Dichloroethene	156-60-5	N.D.	4	0.4	0.79
11995	1,2-Dichloropropane	78-87-5	N.D.	4	0.4	0.79
11995	cis-1,3-Dichloropropene	10061-01-5	N.D.	4	0.3	0.79
11995	trans-1,3-Dichloropropene	10061-02-6	N.D.	4	0.4	0.79
11995	1,4-Dioxane	123-91-1	N.D.	210	32	0.79
11995	Ethyl Acetate	141-78-6	N.D.	4	0.9	0.79
11995	Ethyl Ether[1]	60-29-7	N.D.	4	0.9	0.79
11995	Ethylbenzene	100-41-4	N.D.	4	0.3	0.79

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-14RX (20.5-22.5) Grab Soil**
BMS Phase II RI - Syracuse, NY

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 08/24/2019 09:20
Collection Date/Time: 08/23/2019 10:20
SDG#: BMS77-01BKG

ARCADIS U.S., Inc.
ELLE Sample #: SW 1134881
ELLE Group #: 2060623
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Limit of Quantitation*	Dry Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/kg**	**ug/kg**	**ug/kg**	
11995	Freon 113	76-13-1	N.D.	9	0.5	0.79
11995	n-Heptane[1]	142-82-5	4 J	7	3	0.79
11995	n-Hexane[1]	110-54-3	1 J	4	0.4	0.79
11995	2-Hexanone	591-78-6	N.D.	9	0.9	0.79
11995	Isobutyl Alcohol	78-83-1	N.D.	210	33	0.79
11995	Isopropylbenzene	98-82-8	N.D.	4	0.3	0.79
11995	p-Isopropyltoluene	99-87-6	N.D. J	4	2	0.79
11995	Methyl Acetate	79-20-9	2 J	4	0.9	0.79
11995	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	4	0.4	0.79
11995	4-Methyl-2-pentanone	108-10-1	N.D.	9	0.9	0.79
11995	Methylcyclohexane	108-87-2	3 J	4	0.5	0.79
11995	Methylene Chloride	75-09-2	N.D.	4	2	0.79
11995	Naphthalene	91-20-3	N.D. J	4	2	0.79
11995	2-Nitropropane	79-46-9	N.D.	9	2	0.79
11995	Styrene	100-42-5	N.D.	4	0.3	0.79
11995	1,1,2,2-Tetrachloroethane	79-34-5	N.D. J	4	0.3	0.79
11995	Tetrachloroethene	127-18-4	N.D.	4	0.4	0.79
11995	Tetrahydrofuran[1]	109-99-9	N.D.	7	0.9	0.79
11995	Toluene	108-88-3	N.D.	4	0.5	0.79
11995	1,2,3-Trichlorobenzene	87-61-6	N.D. J	9	4	0.79
11995	1,2,4-Trichlorobenzene	120-82-1	N.D. J	9	4	0.79
11995	1,1,1-Trichloroethane	71-55-6	N.D.	4	0.5	0.79
11995	1,1,2-Trichloroethane	79-00-5	N.D.	4	0.4	0.79
11995	Trichloroethene	79-01-6	N.D.	4	0.4	0.79
11995	Trichlorofluoromethane	75-69-4	N.D.	4	0.6	0.79
11995	1,2,4-Trimethylbenzene	95-63-6	N.D. J	4	0.4	0.79
11995	1,3,5-Trimethylbenzene	108-67-8	N.D. J	4	0.4	0.79
11995	Vinyl Chloride	75-01-4	N.D.	4	0.5	0.79
11995	m+p-Xylene	179601-23-1	N.D.	4	0.9	0.79
11995	o-Xylene	95-47-6	N.D.	4	0.3	0.79
11995	Xylene (Total)	1330-20-7	N.D.	9	1	0.79

The recovery for the sample internal standard is outside the QC acceptance limits. The internal standard recovery was outside of acceptance limits in the background, matrix spike, and matrix spike duplicate indicating a matrix effect.

The referenced method allows a maximum of 20% of the analytes in the calibration to exceed the 20% Drift continuing calibration verification criteria. The reported concentration in the associated sample(s) is considered to be estimated. Therefore the result for the following analyte(s) is estimated:
Carbon Disulfide, n-Hexane, Cyclohexane

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-14RX (20.5-22.5) Grab Soil**
BMS Phase II RI - Syracuse, NY

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 08/24/2019 09:20
Collection Date/Time: 08/23/2019 10:20
SDG#: BMS77-01BKG

ARCADIS U.S., Inc.
ELLE Sample #: SW 1134881
ELLE Group #: 2060623
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Limit of Quantitation*	Dry Method Detection Limit	Dilution Factor
12027	**VOA Interp. Library Search-20**					
	The results from the volatile library search are listed on the attached FORM 1 - VOA-TIC. The qualifiers appearing in the "Q" column are defined at the end of the report.					
GC/MS Semivolatiles	**SW-846 8270D**		**ug/kg**	**ug/kg**	**ug/kg**	
10726	Acenaphthene	83-32-9	N.D.	18	4	1
10726	Acenaphthylene	208-96-8	N.D.	18	4	1
10726	Acetophenone	98-86-2	N.D.	53	18	1
10726	Aniline	62-53-3	N.D.	530	180	1
10726	Anthracene	120-12-7	6 J	18	4	1
10726	Atrazine	1912-24-9	N.D.	460	210	1
10726	Benzaldehyde	100-52-7	N.D.	180	71	1
10726	Benzo(a)anthracene	56-55-3	N.D.	18	7	1
10726	Benzo(a)pyrene	50-32-8	N.D.	18	4	1
10726	Benzo(b)fluoranthene	205-99-2	7 J	18	4	1
10726	Benzo(g,h,i)perylene	191-24-2	N.D.	18	4	1
10726	Benzo(k)fluoranthene	207-08-9	N.D.	18	4	1
10726	Benzyl alcohol	100-51-6	N.D.	530	180	1
10726	1,1'-Biphenyl	92-52-4	N.D.	39	18	1
10726	4-Bromophenyl-phenylether	101-55-3	N.D.	53	25	1
10726	Butylbenzylphthalate	85-68-7	N.D.	180	71	1
10726	Di-n-butylphthalate	84-74-2	N.D.	180	71	1
10726	Caprolactam	105-60-2	N.D.	180	36	1
10726	Carbazole	86-74-8	N.D.	39	18	1
10726	4-Chloro-3-methylphenol	59-50-7	N.D.	53	25	1
10726	4-Chloroaniline	106-47-8	N.D.	180	36	1
10726	bis(2-Chloroethoxy)methane	111-91-1	N.D.	39	18	1
10726	bis(2-Chloroethyl)ether	111-44-4	N.D.	53	25	1
10726	bis(2-Chloroisopropyl)ether[1]	39638-32-9	N.D.	46	21	1
	Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.					
10726	2-Chloronaphthalene	91-58-7	N.D.	36	7	1
10726	2-Chlorophenol	95-57-8	N.D.	39	18	1
10726	4-Chlorophenyl-phenylether	7005-72-3	N.D.	46	21	1
10726	Chrysene	218-01-9	7 J	18	4	1
10726	Dibenz(a,h)anthracene	53-70-3	N.D.	18	7	1
10726	Dibenzofuran	132-64-9	N.D.	39	18	1
10726	3,3'-Dichlorobenzidine	91-94-1	N.D.	360	110	1
10726	2,4-Dichlorophenol	120-83-2	N.D.	46	21	1
10726	Dicyclohexylamine[1]	101-83-7	N.D.	2,100	710	1
10726	Diethylphthalate	84-66-2	N.D.	180	71	1

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-14RX (20.5-22.5) Grab Soil**
BMS Phase II RI - Syracuse, NY

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 08/24/2019 09:20
Collection Date/Time: 08/23/2019 10:20
SDG#: BMS77-01BKG

ARCADIS U.S., Inc.
ELLE Sample #: SW 1134881
ELLE Group #: 2060623
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Limit of Quantitation*	Dry Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/kg**	**ug/kg**	**ug/kg**	
10726	N,N-Dimethylaniline[1]	121-69-7	N.D.	180	36	1
10726	2,4-Dimethylphenol	105-67-9	N.D.	71	32	1
10726	Dimethylphthalate	131-11-3	N.D.	180	71	1
10726	4,6-Dinitro-2-methylphenol	534-52-1	N.D. J	530	250	1
10726	2,4-Dinitrophenol	51-28-5	N.D.	1,100	360	1
10726	2,4-Dinitrotoluene	121-14-2	N.D.	180	71	1
10726	2,6-Dinitrotoluene	606-20-2	N.D.	53	25	1
10726	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	180	71	1
10726	Fluoranthene	206-44-0	6 J	18	4	1
10726	Fluorene	86-73-7	5 J	18	4	1
10726	Hexachlorobenzene	118-74-1	N.D.	18	7	1
10726	Hexachlorobutadiene	87-68-3	N.D.	82	39	1
10726	Hexachlorocyclopentadiene	77-47-4	~~N.D. K3~~ R	~~530~~	~~210~~	1
10726	Hexachloroethane	67-72-1	N.D.	180	36	1
10726	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	18	4	1
10726	Isophorone	78-59-1	N.D.	39	18	1
10726	2-Methylnaphthalene	91-57-6	4 J	36	4	1
10726	2-Methylphenol	95-48-7	N.D.	71	18	1
10726	4-Methylphenol	65794-96-9	N.D.	53	18	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
10726	Naphthalene	91-20-3	N.D.	18	7	1
10726	2-Nitroaniline	88-74-4	N.D.	53	18	1
10726	3-Nitroaniline	99-09-2	N.D.	180	71	1
10726	4-Nitroaniline	100-01-6	N.D.	180	71	1
10726	Nitrobenzene	98-95-3	N.D.	71	28	1
10726	2-Nitrophenol	88-75-5	N.D.	60	28	1
10726	4-Nitrophenol	100-02-7	N.D.	530	180	1
10726	N-Nitroso-di-n-propylamine	621-64-7	N.D.	53	25	1
10726	N-Nitrosodiphenylamine	86-30-6	N.D.	39	18	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.					
10726	Di-n-octylphthalate	117-84-0	N.D.	180	71	1
10726	Pentachlorophenol	87-86-5	N.D.	180	71	1
10726	Phenanthrene	85-01-8	8 J	18	4	1
10726	Phenol[1]	108-95-2	N.D.	39	18	1
10726	Pyrene	129-00-0	9 J	18	4	1
10726	Pyridine	110-86-1	N.D.	180	71	1
10726	1,2,4,5-Tetrachlorobenzene	95-94-3	N.D.	39	18	1
10726	2,3,4,6-Tetrachlorophenol	58-90-2	N.D.	180	71	1

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-14RX (20.5-22.5) Grab Soil**
BMS Phase II RI - Syracuse, NY

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 08/24/2019 09:20
Collection Date/Time: 08/23/2019 10:20
SDG#: BMS77-01BKG

ARCADIS U.S., Inc.
ELLE Sample #: SW 1134881
ELLE Group #: 2060623
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Limit of Quantitation*	Dry Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/kg**	**ug/kg**	**ug/kg**	
10726	2,4,5-Trichlorophenol	95-95-4	N.D.	71	32	1
10726	2,4,6-Trichlorophenol	88-06-2	N.D.	60	28	1
10726	Triethylamine[1]	121-44-8	N.D. J	5,300	1,800	1

The stated QC limits for Triethylamine are advisory only until sufficient data points can be obtained to calculate statistical limits.

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. Since the recovery is high and the target analyte(s) was not detected in the sample, the data is reported.

00886 SVOA TIC Interpretive(25)

The results from the semivolatile library search are listed on the attached FORM 1 - SV-TIC. The qualifiers appearing in the "Q" column are defined at the end of the report.

GC Miscellaneous	**SW-846 8015C Feb 2007 Rev 3**		**mg/kg**	**mg/kg**	**mg/kg**	
12925	Ethylene glycol	107-21-1	N.D.	11	5.4	1
12925	Propylene glycol[1]	57-55-6	N.D.	11	5.4	1
GC Miscellaneous	**SW-846 8015D Rev.4, June 2003**		**ug/kg**	**ug/kg**	**ug/kg**	
10604	Ethanol (by Direct Injection)[1]	64-17-5	N.D. D2	1,100	130	1
10604	Isopropanol[1]	67-63-0	N.D. D2	1,100	50	1
10604	Methanol (by Direct Injection)[1]	67-56-1	N.D. D2	1,100	220	1
Wet Chemistry	**SM 2540 G-2011 %Moisture Calc**		**%**	**%**	**%**	
00111	Moisture[1]	n.a.	7.2	0.50	0.50	1

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

Sample Comments

State of New York Certification No. 10670

[1] = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Eurofins Lancaster Laboratories Environmental, LLC is responsible only for the certified testing of samples. We are not directly responsible for the integrity of the sample prior to laboratory receipt. Any reported concentrations less than 200 ug/kg may be biased low if they were not collected according to EPA 5035/5035A specifications.

*=This limit was used in the evaluation of the final result

Sample Description: **BDA-14RX (20.5-22.5) Grab Soil**
BMS Phase II RI - Syracuse, NY

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 08/24/2019 09:20
Collection Date/Time: 08/23/2019 10:20
SDG#: BMS77-01BKG

ARCADIS U.S., Inc.
ELLE Sample #: SW 1134881
ELLE Group #: 2060623
Matrix: Soil

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11995	VOCs- Solid by 8260C/D	SW-846 8260C	1	B192481AA	09/05/2019 15:02	Linda C Pape	0.79
06176	GC/MS - LL DIH2O Prep	SW-846 5035A	1	201923654667	08/24/2019 19:15	Rebecca Williams	1
06176	GC/MS - LL DIH2O Prep	SW-846 5035A	2	201923654667	08/24/2019 19:15	Rebecca Williams	1
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	201923654667	08/23/2019 10:20	Client Supplied	1
10726	SVOA 8270D/E (microwave)	SW-846 8270D	1	19240SLC026	08/31/2019 06:12	Brandon K Cordova	1
10813	BNA Soil Microwave APP IX	SW-846 3546	1	19240SLC026	08/29/2019 07:00	Joshua S Ruth	1
12925	Glycols in Soil by 8015C/D	SW-846 8015C Feb 2007 Rev 3	1	192410029A	08/30/2019 00:03	Donald Brown	1
10604	Alcohols in Soil	SW-846 8015D Rev.4, June 2003	1	192410001A	08/29/2019 18:02	Johanna C Kennedy	1
13121	Glycol Solids Ext. 8015C/D	SW-846 8015C Feb 2007 Rev 3	1	192410029A	08/29/2019 19:19	Donald Brown	1
00380	Solids Extraction for Alcohols	SW-846 8015D Rev 4 06/2003 Mod	1	192410001A	08/29/2019 14:30	Johanna C Kennedy	1
00111	Moisture	SM 2540 G-2011 %Moisture Calc	1	19241820005A	08/30/2019 11:43	William C Schwebel	1

*=This limit was used in the evaluation of the final result

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
00271

Lab Name: Lancaster Laboratories Contract:_____
Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____
Matrix: (soil/water) SOIL Lab Sample ID: 1134881
Sample wt/vol: 6.29 (g/mL) g Lab File ID: HP09953.i/19sep05a.b/bs05s05.d
Level: (low/med) LOW Date Received: 08/24/19
% Moisture: not dec. 7.2 Date Analyzed: 09/05/19
Column: (pack/cap) CAP Dilution Factor: 1.0
CONCENTRATION UNITS:
Number TICs found: 1 (ug/L or ug/Kg) ug/Kg

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		Unknown	1.95	10	J N
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3.	VOCTIC	Total VOC TICs		10	J N
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page 1 of 1

FORM I VOA-TIC

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
00271

Lab Name: Lancaster Laboratories Contract:
Lab Code: LANCAS Case No.: SAS No.: SDG No.:
Matrix: (soil/water) SOIL Lab Sample ID: 1134881
Sample wt/vol: 30.34(g/mL) g Lab File ID: gh2169.d
Level: (low/med) LOW Date Received: 08/24/19
% Moisture: 7.2 Decanted: (Y/N) Date Extracted: 08/29/19
Concentrated Extract Volume: 1000 (uL) Date Analyzed: 08/31/19
Injection Volume: 1 (uL) Dilution Factor: 1
GPC Cleanup: N pH: Extraction: Mic
CONCENTRATION UNITS:
Number TICs found: 6 (ug/L or ug/Kg) ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q	
~~1.141-79-7~~	~~3-Penten-2-one, 4-methyl-~~	~~2.699~~	~~140~~	~~JB~~	R
~~2.~~	~~Unknown~~	~~3.287~~	~~8300~~	~~JB~~	R
3.	Unknown	4.904	260	J	
4.1193-18-6	2-Cyclohexen-1-one, 3-methyl	5.287	170	J	
5.	Unknown	9.504	150	J	
6.112-84-5	13-Docosenamide, (Z)-	12.798	260	J	
7.					
8.SVOCTIC	Total SVOC TICs		9300	JB	N
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page 1 of 1

FORM I SV-1

Sample Description: **Trip Blank Water**
BMS Phase II RI - Syracuse, NY

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 08/24/2019 09:20
Collection Date/Time: 08/23/2019
SDG#: BMS77-02TB

ARCADIS U.S., Inc.
ELLE Sample #: WW 1134884
ELLE Group #: 2060623
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	20	0.7	1
11997	Acetonitrile	75-05-8	N.D.	100	16	1
11997	Benzene	71-43-2	N.D.	1	0.2	1
11997	Bromochloromethane	74-97-5	N.D.	5	0.2	1
11997	Bromodichloromethane	75-27-4	N.D.	1	0.2	1
11997	Bromoform	75-25-2	N.D.	4	1	1
11997	Bromomethane	74-83-9	N.D.	1	0.3	1
11997	n-Butanol	71-36-3	N.D.	250	61	1
11997	2-Butanone	78-93-3	N.D.	10	0.3	1
11997	t-Butyl alcohol	75-65-0	N.D.	50	12	1
11997	n-Butylbenzene	104-51-8	N.D.	5	0.2	1
11997	sec-Butylbenzene	135-98-8	N.D.	5	0.2	1
11997	tert-Butylbenzene	98-06-6	N.D.	5	0.3	1
11997	Carbon Disulfide	75-15-0	N.D.	5	0.2	1
11997	Carbon Tetrachloride	56-23-5	N.D.	1	0.2	1
11997	Chlorobenzene	108-90-7	N.D.	1	0.2	1
11997	Chlorodifluoromethane[1]	75-45-6	N.D.	5	2	1
11997	Chloroethane	75-00-3	N.D.	1	0.2	1
11997	Chloroform	67-66-3	N.D.	1	0.2	1
11997	Chloromethane	74-87-3	N.D.	1	0.2	1
11997	Cyclohexane	110-82-7	N.D.	5	1	1
11997	Cyclohexanone[1]	108-94-1	N.D.	100	25	1
11997	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	5	0.3	1
11997	Dibromochloromethane	124-48-1	N.D. J	1	0.2	1
11997	1,2-Dibromoethane	106-93-4	N.D.	1	0.2	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	5	0.2	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	5	0.2	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	5	0.2	1
11997	Dichlorodifluoromethane	75-71-8	N.D.	1	0.2	1
11997	1,1-Dichloroethane	75-34-3	N.D.	1	0.2	1
11997	1,2-Dichloroethane	107-06-2	N.D.	1	0.3	1
11997	1,1-Dichloroethene	75-35-4	N.D.	1	0.2	1
11997	cis-1,2-Dichloroethene	156-59-2	N.D.	1	0.2	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	1	0.2	1
11997	1,2-Dichloropropane	78-87-5	N.D.	1	0.2	1
11997	cis-1,3-Dichloropropene	10061-01-5	N.D.	1	0.2	1
11997	trans-1,3-Dichloropropene	10061-02-6	N.D.	1	0.2	1
11997	1,4-Dioxane	123-91-1	N.D.	250	29	1
11997	Ethyl Acetate	141-78-6	N.D.	5	0.7	1
11997	Ethyl ether	60-29-7	N.D.	5	0.2	1
11997	Ethylbenzene	100-41-4	N.D.	1	0.4	1

*=This limit was used in the evaluation of the final result

Sample Description: **Trip Blank Water**
BMS Phase II RI - Syracuse, NY

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 08/24/2019 09:20
Collection Date/Time: 08/23/2019
SDG#: BMS77-02TB

ARCADIS U.S., Inc.
ELLE Sample #: WW 1134884
ELLE Group #: 2060623
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Freon 113	76-13-1	N.D.	10	0.2	1
11997	n-Heptane[1]	142-82-5	N.D.	5	2	1
11997	n-Hexane[1]	110-54-3	N.D.	5	2	1
11997	2-Hexanone	591-78-6	N.D.	10	0.3	1
11997	Isobutyl Alcohol	78-83-1	N.D.	250	36	1
11997	Isopropylbenzene	98-82-8	N.D.	5	0.2	1
11997	p-Isopropyltoluene	99-87-6	N.D.	5	0.2	1
11997	Methyl Acetate	79-20-9	N.D.	5	0.2	1
11997	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	1	0.2	1
11997	4-Methyl-2-pentanone	108-10-1	N.D.	10	0.5	1
11997	Methylcyclohexane	108-87-2	N.D.	5	0.5	1
11997	Methylene Chloride	75-09-2	0.6 J	1	0.3	1
11997	Naphthalene	91-20-3	N.D.	5	1	1
11997	2-Nitropropane	79-46-9	N.D. J	10	0.8	1
11997	Styrene	100-42-5	N.D.	5	0.2	1
11997	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	1	0.2	1
11997	Tetrachloroethene	127-18-4	N.D.	1	0.2	1
11997	Tetrahydrofuran	109-99-9	N.D.	10	0.7	1
11997	Toluene	108-88-3	N.D.	1	0.2	1
11997	1,2,3-Trichlorobenzene	87-61-6	N.D.	5	0.4	1
11997	1,2,4-Trichlorobenzene	120-82-1	N.D.	5	0.3	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	1	0.3	1
11997	1,1,2-Trichloroethane	79-00-5	N.D.	1	0.2	1
11997	Trichloroethene	79-01-6	N.D.	1	0.2	1
11997	Trichlorofluoromethane	75-69-4	N.D. J	1	0.2	1
11997	1,2,4-Trimethylbenzene	95-63-6	N.D.	5	1	1
11997	1,3,5-Trimethylbenzene	108-67-8	N.D.	5	0.3	1
11997	Vinyl Chloride	75-01-4	N.D.	1	0.2	1
11997	m+p-Xylene	179601-23-1	N.D.	5	1	1
11997	o-Xylene	95-47-6	N.D.	1	0.4	1
11997	Xylene (Total)	1330-20-7	N.D.	6	1	1

A Method Detection Limit (MDL) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The MDL standard shows adequate sensitivity at or below the reporting limit.

Project defined calibration criteria are not met. The calibration is compliant with the method defined criteria.

12027 VOA Interp. Library Search-20

The results from the volatile library search are listed on the attached FORM 1 - VOA-TIC. The qualifiers appearing in the "Q" column are defined at the end of the report.

*=This limit was used in the evaluation of the final result

Sample Description: **Trip Blank Water**
BMS Phase II RI - Syracuse, NY

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 08/24/2019 09:20
Collection Date/Time: 08/23/2019
SDG#: BMS77-02TB

ARCADIS U.S., Inc.
ELLE Sample #: WW 1134884
ELLE Group #: 2060623
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC Miscellaneous	**SW-846 8015C Feb 2007 Rev 3**		**mg/l**	**mg/l**	**mg/l**	
12926	Ethylene glycol	107-21-1	N.D.	10	5.0	1
12926	Propylene glycol[1]	57-55-6	N.D.	10	2.0	1
GC Miscellaneous	**SW-846 8015D Rev.4, June 2003**		**ug/l**	**ug/l**	**ug/l**	
10603	Ethanol	64-17-5	N.D. D2	1,000	150	1
10603	Isopropanol[1]	67-63-0	N.D. D2	1,000	110	1
10603	Methanol	67-56-1	N.D. D2	1,000	220	1

Sample Comments

State of New York Certification No. 10670

[1] = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	4192473AA	09/04/2019 22:39	Don V Viray	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	4192473AA	09/04/2019 22:38	Don V Viray	1
12926	Glycols in Water by 8015C/D	SW-846 8015C Feb 2007 Rev 3	1	192470045A	09/05/2019 00:15	Donald Brown	1
10603	Alcohols in Water	SW-846 8015D Rev.4, June 2003	1	192460015A	09/03/2019 14:27	Johanna C Kennedy	1

*=This limit was used in the evaluation of the final result

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
00272

Lab Name: Lancaster Laboratories Contract:_____
Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____
Matrix: (soil/water) WATER Lab Sample ID: 1134884
Sample wt/vol: 5.0 (g/mL)mL Lab File ID:HP23297.i/19sep04b.b/4s04s64.d
Level: (low/med) LOW Date Received: 08/24/19
% Moisture: not dec. Date Analyzed: 09/04/19
Column: (pack/cap) CAP Dilution Factor: 1.0
CONCENTRATION UNITS:
Number TICs found: 0 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	VOCTIC	Total VOC TICs		0	U
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page 1 of 1

FORM I VOA-TIC