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Bristol-Myers Squibb Company

BUILDING 25/25N SOIL EXCAVATION SUMMARY REPORT

Syracuse North Campus Restoration Area

NYSDEC BCP Site #C734138

March 2020

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I, *Mark Gravelding, certify that I am currently a New York State registered Professional Engineer and that this Building 25/25N Area Soil Excavation Summary Report was prepared in accordance with all applicable statutes and regulations and in substantial conformance with the DER Technical Guidance for Site Investigation and Remediation (DER-10).*

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ACRONYMS AND ABBREVIATIONS

Arcadis	Arcadis of New York, Inc.
BDA	Brownfield Development Area
bgs	below ground surface
BMS	Bristol-Myers Squibb Company
CAMP	Community Air Monitoring Plan
Eurofins	Eurofins Lancaster Laboratories in Lancaster, PA
FSAP	Field Sampling and Analysis Plan
LNAPL	light non-aqueous phase liquid
mg/L	milligrams per liter
NYSDEC	New York State Department of Environmental Conservation
PCB	Polychlorinated biphenyls
PID	photoionization detector
QAPP	Quality Assurance Project Plan
SCO	Soil Cleanup Objective
SVOC	Semi-volatile organic compound(s)
TAL	Target analyte list
TIC	tentatively identified compounds
TOGS	Technical Guidance Series
TPH	Total petroleum hydrocarbons
ug/kg	micrograms per kilogram
ug/L	micrograms per litter
USEPA	United States Environmental Protection Agency
VOC	volatile organic compound(s)

1 INTRODUCTION

This *Building 25/25N Soil Excavation Summary Report* has been developed for the Bristol-Myers Squibb Company (BMS) to document observations and sampling activities performed by Arcadis of New York, Inc. (Arcadis) in connection with soil excavation during the August 2018 demolition of Building 25/25N at the Syracuse North Campus Restoration Area, which is also referred to as the Brownfield Development Area (BDA). The BDA is part of the BMS Facility located at 6000 Thompson Road in East Syracuse, New York. The layout of the BDA and BMS Facility are shown on Figure 1.

2 BUILDING 25/25N DEMOLITION AND SOIL EXCAVATION ACTIVITIES

Field activities were conducted in accordance with relevant project remedial investigation work plans, including the Field Sampling and Analysis Plan (FSAP), Quality Assurance Project Plan (QAPP), and Community Air Monitoring Plan (CAMP).

A summary of each part of the demolition and excavation activities performed by Gorick Construction of Binghamton, New York and observed by Arcadis is provided below.

2.1 Building 25 Brine Tank Vault

As described in the Building 25 Demolition Brine Tank Vault and Drain Sumps Plan (Attachment 1), on September 6, 2018, two sections (opposite corners) of the former Building 25 brine tank vault concrete floor were removed as part of building demolition activities. The vault formerly contained two approximate 2,900-gallon aboveground tanks used to store a methanol/acetone mixture. The vault floor was situated near the water table. Soil removed from beneath the slab in both locations was stained gray and was segregated for field screening for the presence of volatile organic compounds (VOC) using a photoionization detector (PID) equipped with an 11.7 electron volt lamp. A sample of the gray-stained soil (BLDG 25-UNDER SLAB 1) was collected, which had a PID reading of 0.7 ppm (location on Figure 2).

The sample was submitted to TestAmerica Laboratories, Inc. of Amherst, New York for analysis in accordance with the following United States Environmental Protection Agency (USEPA) SW-846 methods:

- VOC, including tentatively identified compounds (TIC) – 8260C
- Semi-volatile organic compounds (SVOC), including TIC – 8270D
- Glycols and alcohols – 8015D
- Aldehydes – 8315A
- Total petroleum hydrocarbons (TPH) gasoline, diesel, and oil-range – 8015D

Analytical results are presented in Table 1. Acetone was detected at a concentration of 0.032 mg/kg which was below both the Unrestricted and Commercial Soil Cleanup Objectives (SCO) from 6 NYCRR Part 375-6.8.

Formaldehyde was detected at a concentration of 13 mg/kg. Diesel range TPH and Acetaldehyde were detected at estimated concentrations of 9.8J mg/kg and 0.29JB mg/kg, respectively. The New York State Department of Environmental Conservation (NYSDEC) has not established SCOs for these compounds.

None of the analyzed parameters were detected at concentrations above their respective Unrestricted or Commercial SCOs.

2.2 Building 25N Tank Vault

On September 10, 2018, the former Building 25N tank vault concrete floor slab was removed as part of the building demolition activities. Arcadis observed clean fill under the slab with no visual impacts or odors. Soil sample BLDG 25N-UNDER SLAB 1 was collected from beneath the former slab of the Building 25N Vault (shown on Figure 2) and submitted to Eurofins Lancaster Laboratories in Lancaster, PA (Eurofins) for analysis in accordance with the following USEPA SW-846 methods:

- VOC, including TIC – 8260C
- SVOC, including TIC – 8270D
- Glycols and alcohols – 8015D
- Aldehydes – 8315A
- TPH gasoline, diesel, and oil-range – 8015D

Analytical results of this soil sample are summarized in Table 1. Estimated concentrations of five VOC and five SVOC were observed at concentrations below their respective laboratory method limits of quantitation.

Estimated concentrations of Acetaldehyde at 0.590J mg/kg, Formaldehyde at 1.2J mg/kg, Diesel C10-C28 at 5.6J mg/kg, and Gasoline C6-C10 at 0.8J mg/kg were detected below their respective laboratory method limits of quantitation. NYSDEC has not established SCOs for these compounds.

None of the analyzed parameters were detected at concentrations above their respective Unrestricted or Commercial SCOs.

2.3 Building 25 Former Brine Tanks Vault Remediation

Following the Building 25 brine tank vault removal, BMS submitted a proposed work plan to the NYSDEC on September 20, 2018, which NYSDEC approved by letter dated September 21, 2018 (Attachment 2).

On September 28, 2018, Gorick continued with removal of the former Building 25 brine tanks vault slab floor and inspection of the underlying soil. Accumulated water in the vault was pumped out and sent to the BMS wastewater pre-treatment facility. Gray-stained soil within the vault footprint was removed to a depth up to approximately 12 inches below the slab. The stained soils were staged in roll-off containers for off-site disposal.

During excavation of the stained soil, less than a quart of a yellowish light non-aqueous phase liquid (LNAPL) was observed entering the excavation and floating on the water surface. Excavation was halted, the limited LNAPL encountered was collected with sorbent material and submitted as a sample (identified

as BLD 25-LNAPL-1) to Eurofins. A sample of the water accumulated in the excavation (identified as BLD 25-SW-1) was also submitted for analysis in accordance with the following USEPA SW-846 methods:

- VOC, including TIC – 8260C
- SVOC, including TIC – 8270D
- Glycols and alcohols – 8015D
- Aldehydes – 8315A
- TPH gasoline, diesel, and oil-range – 8015D
- Target analyte list (TAL) metals – 6010C and 7470A

The analytical results of the water sample (Table 2) contained:

- Acetone at 400 micrograms per liter (ug/L)
- Benzene at 1.0 ug/L
- Methylene Chloride at 6.0 ug/L
- Trichlorofluoromethane at 9.0 ug/L
- 3&4-Methylphenol at 1.9J ug/L
- Phenol at 51 ug/L
- Antimony at 0.0331J mg/L
- Iron at 1.37 mg/L
- Sodium at 719 mg/L

Each of these listed detections are at, or above, the corresponding compound specific NYSDEC TOGS 1.1.1 groundwater standard.

The LNAPL sample was submitted for analysis in accordance with the following USEPA SW-846 methods:

- TPH fingerprint – 8015D
- VOC, including TIC – 8260C
- SVOC, including TIC – 8270D
- Polychlorinated biphenyls (PCB) – 8082A

The LNAPL sample analytical results are summarized in Table 3. The sample results identified detections of 11 VOC, three SVOC and various unidentified TICs. The GC fingerprint for this sample is most similar to the laboratory's Motor Oil Composite reference chromatogram.

Based on the result, work continued with removal of the stained soil in the base of the vault. Accumulated water in the vault was temporarily contained prior to being discharged to the plant wastewater pre-

treatment plant based on the above analytical results. No additional LNAPL was encountered in the excavation. After visual inspection, the water in the frac tank was discharged to the BMS wastewater pre-treatment facility. Stained soil was temporarily staged on top of plastic sheeting next to the excavation and then loaded into roll-off containers for off-site disposal.

On October 31, 2018, two post excavation soil samples (East Vault Floor and West Vault Floor) were collected from the sub-slab soil in the area of the former Building 25 brine tank vault prior to backfilling and submitted to Eurofins for analysis in accordance with the following USEPA SW-846 methods:

- VOC, including TIC – 8260C
- SVOC, including TIC – 8270D
- Glycols and alcohols – 8015D
- Aldehydes – 8315A
- TPH gasoline, diesel, and oil-range – 8015D

Analytical results can be found in Table 1. None of the analyzed parameters were detected at concentrations above their respective Unrestricted or Commercial SCOs.

On November 1, 2018, an 8-inch diameter slotted HDPE sump was installed at the bottom of the Building 25 brine tank vault excavation prior to backfilling. This sump was installed for short term monitoring of potential LNAPL accumulations. Following the installation of the sump, backfilling of the vault was completed on November 1, 2018. On November 2, 2018 a vac truck drained and developed the sump installed in the Building 25 brine tank excavation. No LNAPL was encountered. Water collected from the sump was discharged to the BMS wastewater pre-treatment facility. The sump was periodically checked for the presence of LNAPL through May of 2019 when restoration of surface completed the activities in this area. BMS will have the sump removed, as it has served it's intended function.

CAMP performed during this work is summarized in the Building 25 CAMP Summary (Attachment 3).

2.4 Building 25 Sump 1 and Sump 2

On September 28, 2018, as outlined in Attachment 1 and 2, two test pits were excavated adjacent to each of the two former cleanout trap sump structures associated with building floor drains and connecting buried sewer lines. The sumps were adjacent to the former brine tank vault and the Phase 1 temporary monitoring well location T-42, which exhibited acetone impacts to soil at the water table (8 to 10 feet below ground surface [bgs]) and in groundwater (well screen 6 to 16 feet bgs). The test pit limits are shown on Figure 2. Soil from the test pits was field screened for discoloration, odor, texture and using a PID beginning at surface grade and extending through the depth of the water table. One soil sample was selected from each test pit (Test Pit #1 and Test Pit #2) and submitted to Eurofins for analysis in accordance with the following USEPA SW-846 methods:

- VOC, including TIC – 8260C
- SVOC, including TIC – 8270D

- Glycols and alcohols – 8015D
- Aldehydes – 8315A
- TPH gasoline, diesel, and oil-range – 8015D

Analytical results can be found in Table 1. None of the analyzed parameters were detected at concentrations above their respective Unrestricted or Commercial SCOs.

Based on field observations, the test pits were backfilled with the original materials.

3 SITE RESTORATION

Gorick Construction of Binghamton, New York, conducted the final grading and restoration of the demolition area in the Spring of 2019 with imported topsoil previously approved by NYSDEC for restoration of the Building 25/25N area.

4 LABORATORY ANALYTICAL REPORTS AND DATA SUMMARY USABILITY REPORTS

Laboratory analytical reports are provided in Attachment 4, with Level 4 laboratory analytical reports provided electronically in Attachment 5. Data Usability Summary Reports are provided in Attachment 6.

5 WASTE CHARACTERIZATION AND DISPOSAL

Three representative samples of the removed soil deposited in the seven roll-off containers was collected for waste characterization purposes. These samples were analyzed for Toxicity Characteristic Leaching Procedure (TCLP) analysis of volatile organic compounds, semi-volatile organic compounds, and metals, and for total PCB, and reactivity. Laboratory analysis was conducted at TestAmerica.

Results of the waste characterization samples showed that soils removed from the excavation boundary were non-hazardous. An estimated total of 105 tons of soil in the seven roll-off containers were transported under a Bill of Lading for disposal at the High Acres facility in Fairport, New York (Attachment 7).

TABLES

Table 1
Soil Sample Analytical Results

Building 25/25N Soil Excavation Summary Report
Site #C734138: BMS Syracuse North Campus Restoration Area

Location ID: Sample Depth(feet): Date Collected:	Unrestricted Use SCO	Restricted Use SCO Commercial	Units	UNDER SLAB 1 0 - 0.5 09/06/18	BLDG 25N-UNDER SLAB 1 0 - 0.5 09/10/18	Test Pit-1 10 - 12 09/28/18	Test Pit-2 10 - 12 09/28/18	East Floor Vault 18 10/31/18	West Floor Vault 18 10/31/18
Volatile Organic Compounds - USEPA SW-846 Method 8260B/C									
1,1,1-Trichloroethane	0.68	500	mg/kg	0.0045 U	0.004 U	0.004 U [0.004 U]	0.004 U	0.004 U	0.003 U
1,1,2,2-Tetrachloroethane	- -	- -	mg/kg	0.0045 U	0.004 U	0.004 U [0.004 U]	0.004 U	0.004 U	0.003 U
1,1,2-trichloro-1,2,2-trifluoroethane	- -	- -	mg/kg	0.0045 U	0.008 U	0.008 U [0.009 U]	0.008 U	0.008 U	0.007 U
1,1,2-Trichloroethane	- -	- -	mg/kg	0.0045 U	0.004 U	0.004 U [0.004 U]	0.004 U	0.004 U	0.003 U
1,1-Dichloroethane	0.27	240	mg/kg	0.0045 U	0.004 U	0.004 U [0.004 U]	0.004 U	0.004 U	0.003 U
1,1-Dichloroethene	0.33	500	mg/kg	0.0045 U	0.004 U	0.004 U [0.004 U]	0.004 U	0.004 U	0.003 U
1,2,3-Trichlorobenzene	- -	- -	mg/kg	0.0045 U	0.008 U	0.008 U [0.009 U]	0.008 U	0.008 U	0.007 U
1,2,4-Trichlorobenzene	- -	- -	mg/kg	0.0045 U	0.008 U	0.008 U [0.009 U]	0.008 U	0.008 U	0.007 U
1,2,4-Trimethylbenzene	3.6	190	mg/kg	0.0045 U	0.004 U	0.004 U [0.004 U]	0.004 U	0.0004 J	0.003 U
1,2-Dibromo-3-chloropropane	- -	- -	mg/kg	0.0045 U	0.004 U	0.004 UJ [0.004 U]	0.004 U	0.004 U	0.003 U
1,2-Dibromoethane	- -	- -	mg/kg	0.0045 U	0.004 U	0.004 U [0.004 U]	0.004 U	0.004 U	0.003 U
1,2-Dichlorobenzene	1.1	500	mg/kg	0.0045 U	0.004 U	0.004 U [0.004 U]	0.004 U	0.004 U	0.003 U
1,2-Dichloroethane	0.02	30	mg/kg	0.0045 U	0.004 U	0.004 U [0.004 U]	0.004 U	0.004 U	0.003 U
1,2-Dichloropropane	- -	- -	mg/kg	0.0045 U	0.004 U	0.004 U [0.004 U]	0.004 U	0.004 U	0.003 U
1,3,5-Trimethylbenzene	8.4	190	mg/kg	0.0045 U	0.004 U	0.004 U [0.004 U]	0.004 U	0.004 U	0.003 U
1,3-Dichlorobenzene	2.4	280	mg/kg	0.0045 U	0.004 U	0.004 U [0.004 U]	0.004 U	0.004 U	0.003 U
1,4-Dichlorobenzene	1.8	130	mg/kg	0.0045 U	0.004 U	0.004 U [0.004 U]	0.004 U	0.004 U	0.003 U
1,4-Dioxane	0.1	130	mg/kg	0.091 UJ	0.21 U	0.2 U [0.22 U]	0.21 U	0.19 U	0.17 U
2-Hexanone	- -	- -	mg/kg	0.023 U	0.008 UJ	0.008 UJ [0.009 U]	0.008 U	0.008 U	0.007 U
2-Nitropropane	- -	- -	mg/kg	0.0091 U	0.008 UJ	0.008 UJ [0.009 U]	0.008 U	0.008 U	0.007 U
Acetone	0.05	500	mg/kg	0.032	0.006 J	0.031 [0.031]	0.04	0.027	0.014 U
Acetonitrile	- -	- -	mg/kg	0.045 U	0.083 U	0.079 U [0.088 U]	0.083 U	0.077 U	0.068 U
Benzene	0.06	44	mg/kg	0.0045 U	0.004 U	0.004 U [0.004 U]	0.004 U	0.004 U	0.003 U
Bromochloromethane	- -	- -	mg/kg	0.0045 U	0.004 U	0.004 U [0.004 U]	0.004 U	0.004 U	0.003 U
Bromodichloromethane	- -	- -	mg/kg	0.0045 U	0.004 U	0.004 U [0.004 U]	0.004 U	0.004 U	0.003 U
Bromoform	- -	- -	mg/kg	0.0045 U	0.008 U	0.008 UJ [0.009 U]	0.008 U	0.008 U	0.007 U
Bromomethane	- -	- -	mg/kg	0.0045 U	0.004 U	0.004 U [0.004 U]	0.004 U	0.004 U	0.003 U
Carbon Disulfide	- -	- -	mg/kg	0.0045 U	0.004 U	0.0005 J [0.002 J]	0.002 J	0.004 U	0.003 U
Carbon Tetrachloride	0.76	22	mg/kg	0.0045 U	0.004 U	0.004 U [0.004 U]	0.004 U	0.004 U	0.003 U
Chlorobenzene	1.1	500	mg/kg	0.0045 U	0.004 U	0.004 U [0.004 U]	0.004 U	0.004 U	0.003 U
Chlorodifluoromethane	- -	- -	mg/kg	0.0045 U	0.008 U	0.008 U [0.009 U]	0.008 U	0.008 U	0.007 U
Chloroethane	- -	- -	mg/kg	0.0045 U	0.004 U	0.004 U [0.004 U]	0.004 U	0.004 U	0.003 U
Chloroform	0.37	350	mg/kg	0.0045 U	0.004 U	0.004 U [0.004 U]	0.004 U	0.004 U	0.003 U
Chloromethane	- -	- -	mg/kg	0.0045 U	0.004 U	0.004 U [0.004 U]	0.004 U	0.004 U	0.003 U
cis-1,2-Dichloroethene	0.25	500	mg/kg	0.0045 U	0.004 U	0.004 U [0.004 U]	0.004 U	0.004 U	0.003 U
cis-1,3-Dichloropropene	- -	- -	mg/kg	0.0045 U	0.004 U	0.004 U [0.004 U]	0.004 U	0.004 U	0.003 U
Cyclohexane	- -	- -	mg/kg	0.0045 U	0.004 U	0.004 U [0.004 U]	0.004 U	0.0005 J	0.003 U
Cyclohexanone	- -	- -	mg/kg	0.045 U	0.21 U	0.2 U [0.22 U]	0.21 U	0.19 U	0.17 U
Dibromochloromethane	- -	- -	mg/kg	0.0045 U	0.004 U	0.004 U [0.004 U]	0.004 U	0.004 U	0.003 U
Dichlorodifluoromethane	- -	- -	mg/kg	0.0045 U	0.004 U	0.004 U [0.004 U]	0.004 U	0.004 U	0.003 U
Ethyl acetate	- -	- -	mg/kg	0.0045 U	0.004 U	0.004 U [0.004 U]	0.004 U	0.004 U	0.003 U
Ethyl ether	- -	- -	mg/kg	0.023 U	0.004 U	0.004 U [0.004 U]	0.004 U	0.004 U	0.003 U
Ethylbenzene	1	390	mg/kg	0.0045 U	0.004 U	0.004 U [0.004 U]	0.004 U	0.0007 J	0.003 U

See Notes on Page 5.

Table 1
Soil Sample Analytical Results

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Site #C734138: BMS Syracuse North Campus Restoration Area

Location ID: Sample Depth(feet): Date Collected:	Unrestricted Use SCO	Restricted Use SCO Commercial	Units	UNDER SLAB 1 0 - 0.5 09/06/18	BLDG 25N-UNDER SLAB 1 0 - 0.5 09/10/18	Test Pit-1 10 - 12 09/28/18	Test Pit-2 10 - 12 09/28/18	East Floor Vault 18 10/31/18	West Floor Vault 18 10/31/18
Volatile Organic Compounds - USEPA SW-846 Method 8260B/C (cont'd)									
Isobutanol	- -	- -	mg/kg	0.18 U	0.21 U	0.2 U [0.22 U]	0.21 U	0.19 U	0.17 U
Isopropylbenzene	- -	- -	mg/kg	0.0045 U	0.004 U	0.004 U [0.004 U]	0.004 U	0.004 U	0.003 U
m,p-Xylene	- -	- -	mg/kg	0.0091 U	0.004 U	0.004 U [0.004 U]	0.004 U	0.001 J	0.003 U
Methyl acetate	- -	- -	mg/kg	0.023 U	0.004 U	0.004 U [0.004 U]		0.004 U	0.003 U
Methyl ethyl ketone (MEK, 2-butanone)	0.12	500	mg/kg	0.023 U	0.005 J	0.002 J [0.004 J]	0.004 J	0.001 J	0.002 J
Methyl isobutyl ketone (MIBK, 4-methyl-2-pentanone)	- -	- -	mg/kg	0.023 U	0.008 U	0.008 U [0.009 U]	0.008 U	0.002 J	0.007 U
Methyl tert-butyl ether	0.93	500	mg/kg	0.0045 U	0.004 U	0.004 U [0.004 U]	0.004 U	0.004 U	0.003 U
Methylcyclohexane	- -	- -	mg/kg	0.0045 U	0.004 U	0.004 U [0.004 U]	0.004 U	0.004 U	0.003 U
Methylene Chloride	0.05	500	mg/kg	0.0045 U	0.004 U	0.004 U [0.004 U]	0.004 U	0.004 U	0.003 U
Naphthalene	12	500	mg/kg	0.0045 U	0.004 U	0.004 U [0.004 U]	0.004 U	0.004 U	0.003 U
n-Butanol	- -	- -	mg/kg	0.045 U	0.21 U	0.2 U [0.22 U]	0.21 U	0.19 U	0.17 U
n-Butylbenzene	12	500	mg/kg	0.0045 U	0.007 U	0.006 U [0.007 U]	0.007 U	0.006 U	0.005 U
N-Heptane	- -	- -	mg/kg	0.091 U	0.007 U	0.006 U [0.007 U]	0.007 U	0.006 U	0.005 U
n-Hexane	- -	- -	mg/kg	0.045 U	0.0008 J	0.004 U [0.004 U]	0.004 U	0.0007 J	0.0008 J
o-Xylene	- -	- -	mg/kg	0.0045 U	0.004 U	0.004 U [0.004 U]	0.004 U	0.0009 J	0.003 U
p-Isopropyltoluene	- -	- -	mg/kg	0.0045 U	0.004 U	0.004 U [0.004 U]	0.004 U	0.004 U	0.003 U
sec-Butylbenzene	11	500	mg/kg	0.0045 U	0.004 U	0.004 U [0.004 U]	0.004 U	0.004 U	0.003 U
Styrene	- -	- -	mg/kg	0.0045 U	0.004 U	0.004 U [0.004 U]	0.004 U	0.004 U	0.003 U
tert-Butylbenzene	5.9	500	mg/kg	0.0045 U	0.004 U	0.004 U [0.004 U]	0.004 U	0.004 U	0.003 U
Tertiary butyl alcohol	- -	- -	mg/kg	0.045 U	0.083 U	0.079 U [0.088 U]	0.083 U	0.077 U	0.068 U
Tetrachloroethene	1.3	150	mg/kg	0.0045 U	0.004 U	0.004 U [0.004 U]	0.004 U	0.004 U	0.003 U
Tetrahydrofuran	- -	- -	mg/kg	0.0091 U	0.007 U	0.006 U [0.007 U]	0.007 U	0.008	0.01
Toluene	0.7	500	mg/kg	0.0045 U	0.0006 J	0.004 U [0.004 U]	0.004 U	0.002 J	0.001 J
trans-1,2-Dichloroethene	0.19	500	mg/kg	0.0045 U	0.004 U	0.004 U [0.004 U]	0.004 U	0.0006 J	0.003 U
trans-1,3-Dichloropropene	- -	- -	mg/kg	0.0045 U	0.004 U	0.004 U [0.004 U]	0.004 U	0.004 U	0.003 U
Trichloroethene	0.47	200	mg/kg	0.0045 U	0.002 J	0.004 U [0.004 U]	0.004 U	0.004 J	0.0008 J
Trichlorofluoromethane	- -	- -	mg/kg	0.0045 U	0.004 U	0.004 U [0.004 U]	0.004 U	0.004 U	0.003 U
Vinyl Chloride	0.02	13	mg/kg	0.0045 U	0.004 U	0.004 U [0.004 U]	0.004 U	0.004 U	0.003 U
Xylenes (total)	0.26	500	mg/kg	0.0091 U	0.004 U	0.004 U [0.004 U]	0.004 U	0.002 J	0.003 U
Volatile Organic Compounds - TIC - USEPA SW-846 Method 8260B/C									
2,3-Dimethylpentane	- -	- -	mg/kg	NA	NA	NA	0.008 J	NA	NA
3-Ethylpentane	- -	- -	mg/kg	NA	NA	NA	0.005 J	NA	NA
Decamethyltetrasiloxane	- -	- -	mg/kg	NA	0.007 JN	NA	NA	NA	NA
Diphenyl ether	- -	- -	mg/kg	NA	NA	NA	0.009 J	NA	NA
Octamethyl-trisiloxane	- -	- -	mg/kg	NA	0.005 JN	NA	NA	NA	NA
Total VOC TICs	- -	- -	mg/kg	NA	0.012 JN	0 U [0.011 J]	0.021 J	0 U	0 U
Semivolatile Organic Compounds - USEPA SW-846 Method 8270C/D									
1,1'-Biphenyl	- -	- -	mg/kg	0.94 U	0.043 U	0.042 UJ [0.044 U]	0.045 U	0.04 U	0.04 U
1,2,4,5-Tetrachlorobenzene	- -	- -	mg/kg	0.94 U	0.043 U	0.042 U [0.044 U]	0.045 U	0.04 U	0.04 U
2,2-Oxybis(1-Chloropropane)	- -	- -	mg/kg	0.94 U	NA	NA	NA	NA	NA
2,3,4,6-Tetrachlorophenol	- -	- -	mg/kg	0.94 U	0.19 U	0.19 U [0.2 U]	0.21 U	0.18 U	0.18 U
2,4,5-Trichlorophenol	- -	- -	mg/kg	*0.94 U*	0.058 U	0.058 U [0.06 U]	0.062 U	0.055 U	0.055 U
2,4,6-Trichlorophenol	- -	- -	mg/kg	0.94 U	0.058 U	0.058 U [0.06 U]	0.062 U	0.055 U	0.055 U

See Notes on Page 5.

Table 1
Soil Sample Analytical Results

Building 25/25N Soil Excavation Summary Report
Site #C734138: BMS Syracuse North Campus Restoration Area

Location ID: Sample Depth(feet): Date Collected:	Unrestricted Use SCO	Restricted Use SCO Commercial	Units	UNDER SLAB 1 0 - 0.5 09/06/18	BLDG 25N-UNDER SLAB 1 0 - 0.5 09/10/18	Test Pit-1 10 - 12 09/28/18	Test Pit-2 10 - 12 09/28/18	East Floor Vault 18 10/31/18	West Floor Vault 18 10/31/18
Semivolatile Organic Compounds - USEPA SW-846 Method 8270C/D (cont'd)									
2,4-Dichlorophenol	- -	- -	mg/kg	0.94 U	0.043 U	0.042 U [0.044 U]	0.045 U	0.04 U	0.04 U
2,4-Dimethylphenol	- -	- -	mg/kg	0.94 U	0.043 U	0.042 U [0.044 U]	0.045 U	0.04 U	0.04 U
2,4-Dinitrophenol	- -	- -	mg/kg	9.2 U	1.2 U	1.2 U [1.2 U]	1.2 U	1.1 U	1.1 U
2,4-Dinitrotoluene	- -	- -	mg/kg	0.94 U	0.19 U	0.19 UJ [0.2 U]	0.21 U	0.18 U	0.18 U
2,6-Dinitrotoluene	- -	- -	mg/kg	0.94 U	0.058 U	0.058 UJ [0.06 U]	0.062 U	0.055 U	0.055 U
2-Chloronaphthalene	- -	- -	mg/kg	0.94 U	0.039 U	0.038 UJ [0.04 U]	0.041 U	0.037 U	0.037 U
2-Chlorophenol	- -	- -	mg/kg	0.94 U	0.043 U	0.042 UJ [0.044 U]	0.045 U	0.04 U	0.04 U
2-Methylnaphthalene	- -	- -	mg/kg	0.94 U	0.039 U	0.038 U [0.04 U]	0.041 U	0.037 U	0.037 U
2-Nitroaniline	- -	- -	mg/kg	1.8 U	0.058 U	0.058 U [0.06 U]	0.062 U	0.055 U	0.055 U
2-Nitrophenol	- -	- -	mg/kg	0.94 U	0.043 U	0.042 U [0.044 U]	0.045 U	0.04 U	0.04 U
3&4-Methylphenol	- -	- -	mg/kg	1.8 U	0.058 U	0.058 UJ [0.06 U]	0.062 U	0.055 U	0.055 U
3,3'-Dichlorobenzidine	- -	- -	mg/kg	1.8 U	0.39 U		0.41 U	0.37 U	0.37 U
3-Nitroaniline	- -	- -	mg/kg	1.8 U	0.19 U	0.19 U [0.2 U]	0.21 U	0.18 U	0.18 U
4,6-Dinitro-2-methylphenol	- -	- -	mg/kg	1.8 U	0.58 U	0.58 U [0.6 U]	0.62 U	0.55 U	0.55 U
4-Bromophenyl-phenylether	- -	- -	mg/kg	0.94 U	0.058 U	0.058 UJ [0.06 U]	0.062 U	0.055 U	0.055 U
4-Chloro-3-Methylphenol	- -	- -	mg/kg	0.94 U	0.043 U	0.042 U [0.044 U]	0.045 U	0.04 U	0.04 U
4-Chloroaniline	- -	- -	mg/kg	*0.94 U*	0.19 U	0.19 U [0.2 U]	0.21 U	0.18 U	0.18 U
4-Chlorophenyl-phenylether	- -	- -	mg/kg	0.94 U	0.043 U	0.042 U [0.044 U]	0.045 U	0.04 U	0.04 U
4-Methylphenol	0.33	500	mg/kg	1.8 U	NA	NA	NA	NA	NA
4-Nitroaniline	- -	- -	mg/kg	1.8 U	0.19 U	0.19 U [0.2 U]	0.21 U	0.18 U	0.18 U
4-Nitrophenol	- -	- -	mg/kg	1.8 U	0.58 U	0.58 U [0.6 U]	0.62 U	0.55 U	0.55 U
Acenaphthene	20	500	mg/kg	0.94 U	0.019 U	0.019 U [0.02 U]	0.021 U	0.018 U	0.018 U
Acenaphthylene	100	500	mg/kg	0.94 U	0.019 U	0.019 U [0.02 U]	0.021 U	0.018 U	0.018 U
Acetophenone	- -	- -	mg/kg	0.94 U	0.058 U	0.058 U [0.06 U]	0.062 U	0.055 U	0.055 U
Aniline	- -	- -	mg/kg	1.8 U	0.58 U	0.58 U [0.6 U]	0.62 U	0.55 U	0.55 U
Anthracene	100	500	mg/kg	0.94 U	0.019 U	0.012 J [0.02 U]	0.021 U	0.018 U	0.018 U
Atrazine	- -	- -	mg/kg	0.94 U	0.19 U	0.19 U [0.2 U]	0.21 U	0.18 U	0.18 U
Benzaldehyde	- -	- -	mg/kg	0.94 U	0.19 U	0.19 UJ [0.2 U]	0.21 U	0.18 U	0.18 U
Benzo(a)anthracene	1	5.6	mg/kg	0.94 U	0.019 U	0.05 [0.02 U]	0.021 U	0.018 U	0.018 U
Benzo(a)pyrene	1	1	mg/kg	0.94 U	0.019 U	0.052 [0.02 U]	0.021 U	0.018 U	0.018 U
Benzo(b)fluoranthene	1	5.6	mg/kg	0.94 U	0.011 J	0.074 [0.02 U]	0.021 U	0.018 U	0.018 U
Benzo(g,h,i)perylene	100	500	mg/kg	0.94 U	0.019 U	0.037 [0.02 U]	0.021 U	0.018 U	0.018 U
Benzo(k)fluoranthene	0.8	56	mg/kg	0.94 U	0.019 U	0.03 J [0.02 U]	0.021 U	0.018 U	0.018 U
Benzyl Alcohol	- -	- -	mg/kg	1.8 U	0.58 U	0.58 UJ [0.6 U]	0.62 U	0.55 U	0.55 U
bis(2-Chloroethoxy)methane	- -	- -	mg/kg	0.94 U	0.043 U	0.042 U [0.044 U]	0.045 U	0.04 U	0.04 U
bis(2-Chloroethyl)ether	- -	- -	mg/kg	0.94 U	0.058 U	0.058 U [0.06 U]	0.062 U	0.055 U	0.055 U
bis(2-Chloroisopropyl)ether	- -	- -	mg/kg	NA	0.043 U	0.042 U [0.044 U]	0.045 U	0.04 U	0.04 U
bis(2-Ethylhexyl)phthalate	- -	- -	mg/kg	0.94 U	0.19 U	0.19 UJ [0.2 U]	0.21 U	0.18 U	0.18 U
Butylbenzylphthalate	- -	- -	mg/kg	0.94 U	0.19 U	0.19 UJ [0.2 U]	0.21 U	0.18 U	0.18 U
Caprolactam	- -	- -	mg/kg	0.94 U	0.19 U	0.19 U [0.2 U]	0.21 U	0.18 U	0.18 U
Carbazole	- -	- -	mg/kg	0.94 U	0.043 U	0.042 UJ [0.044 U]	0.045 U	0.04 U	0.04 U
Chrysene	1	56	mg/kg	0.94 U	0.008 J	0.057 J [0.02 U]	0.021 U	0.018 U	0.018 U
Dibenzo(a,h)anthracene	0.33	0.56	mg/kg	0.94 U	0.019 U	0.007 J [0.02 U]	0.021 U	0.018 U	0.018 U

See Notes on Page 5.

Table 1
Soil Sample Analytical Results

Building 25/25N Soil Excavation Summary Report
Site #C734138: BMS Syracuse North Campus Restoration Area

Location ID: Sample Depth(feet): Date Collected:	Unrestricted Use SCO	Restricted Use SCO Commercial	Units	UNDER SLAB 1 0 - 0.5 09/06/18	BLDG 25N-UNDER SLAB 1 0 - 0.5 09/10/18	Test Pit-1 10 - 12 09/28/18	Test Pit-2 10 - 12 09/28/18	East Floor Vault 18 10/31/18	West Floor Vault 18 10/31/18
Semivolatile Organic Compounds - USEPA SW-846 Method 8270C/D (cont'd)									
Dibenzofuran	7	350	mg/kg	0.94 U	0.043 U	0.042 UJ [0.044 U]	0.045 U	0.04 U	0.04 U
Dicyclohexylamine	- -	- -	mg/kg	17 U	2.3 U	2.3 U [2.4 U]	2.5 U	2.2 U	2.2 U
Diethylphthalate	- -	- -	mg/kg	0.94 U	0.19 U	0.19 UJ [0.2 U]	0.21 U	0.18 U	0.18 U
Dimethylphthalate	- -	- -	mg/kg	0.94 U	0.19 U	0.19 UJ [0.2 U]	0.21 U	0.18 U	0.18 U
Di-n-Butylphthalate	- -	- -	mg/kg	0.94 U	0.19 U	0.19 UJ [0.2 U]	0.21 U	0.18 U	0.18 U
Di-n-Octylphthalate	- -	- -	mg/kg	0.94 U	0.19 U	0.19 U [0.2 U]	0.21 U	0.18 U	0.18 U
Fluoranthene	100	500	mg/kg	0.94 U	0.008 J	0.11 J [0.02 U]	0.021 U	0.018 U	0.018 U
Fluorene	30	500	mg/kg	0.94 U	0.019 U	0.019 UJ [0.02 U]	0.021 U	0.018 U	0.018 U
Hexachlorobenzene	0.33	6	mg/kg	0.94 U	0.019 U	0.019 UJ [0.02 U]	0.021 U	0.018 U	0.018 U
Hexachlorobutadiene	- -	- -	mg/kg	0.94 U	0.058 U	0.058 U [0.06 U]	0.062 U	0.055 U	0.055 U
Hexachlorocyclopentadiene	- -	- -	mg/kg	0.94 U	0.58 UJ	0.58 UJ [0.6 U]	0.62 U	0.55 UK3	0.55 U
Hexachloroethane	- -	- -	mg/kg	0.94 U	0.19 U	0.19 UJ [0.2 U]	0.21 U	0.18 U	0.18 U
Indeno(1,2,3-cd)pyrene	0.5	5.6	mg/kg	0.94 U	0.019 U	0.032 [0.02 U]	0.021 U	0.018 U	0.018 U
Isophorone	- -	- -	mg/kg	0.94 U	0.043 U	0.042 U [0.044 U]	0.045 U	0.04 U	0.04 U
n,n-dimethylaniline	- -	- -	mg/kg	NA	0.19 U	0.19 U [0.2 U]	0.21 U	0.18 U	0.18 U
Naphthalene	12	500	mg/kg	0.94 U	0.019 U	0.019 U [0.02 U]	0.021 U	0.018 U	0.018 U
Nitrobenzene	- -	- -	mg/kg	0.94 U	0.078 U	0.077 U [0.08 U]	0.082 U	0.074 U	0.073 U
N-Nitroso-di-n-propylamine	- -	- -	mg/kg	0.94 U	0.058 U	0.058 U [0.06 U]	0.062 U	0.055 U	0.055 U
N-Nitrosodiphenylamine	- -	- -	mg/kg	0.94 U	0.043 U	0.042 U [0.044 U]	0.045 U	0.04 U	0.04 U
o-Cresol (2-Methylphenol)	0.33	500	mg/kg	0.94 U	0.078 U	0.077 U [0.08 U]	0.082 U	0.074 U	0.073 U
Pentachlorophenol	0.8	6.7	mg/kg	*1.8 U*	0.19 U	0.19 U [0.2 U]	0.21 U	0.18 U	0.18 U
Phenanthrene	100	500	mg/kg	0.94 U	0.008 J	0.037 [0.02 U]	0.021 U	0.018 U	0.018 U
Phenol	0.33	500	mg/kg	0.94 U	0.058 U	0.058 U [0.06 U]	0.062 U	0.055 U	0.055 U
Pyrene	100	500	mg/kg	0.94 U	0.011 J	0.087 [0.02 U]	0.021 U	0.018 U	0.018 U
Pyridine	- -	- -	mg/kg	1.8 U	0.19 U	0.19 U [0.2 U]	0.21 U	0.18 U	0.18 U
Triethylamine	- -	- -	mg/kg	NA	R	5.8 U [6 U]	6.2 U	5.5 U	5.5 U
Semivolatile Organic Compounds - TIC - USEPA SW-846 Method 8270C/D									
2,5-Dimethylfuran	- -	- -	mg/kg	NA	NA	NA	NA	R	R
3-Penten-2-one	- -	- -	mg/kg	NA	0.17 JN	NA	NA	NA	NA
4-Hydroxy-2-butanone	- -	- -	mg/kg	NA	NA	NA	1.9 J	NA	NA
9-Octadecenamide, (Z)-	- -	- -	mg/kg	NA	NA	NA	NA	0.56 J	0.22 J
Benzene Derivative	- -	- -	mg/kg	4 JN	NA	NA	NA	NA	NA
Cyclic octaatomic sulfur	- -	- -	mg/kg	8.3 JN	NA	NA	6.1 J	NA	NA
Hexadecanoic Acid	- -	- -	mg/kg	NA	NA	NA	NA	0.15 J	NA
Hexasiloxane, tetradecamethyl-	- -	- -	mg/kg	NA	0.34 JN	NA	NA	NA	NA
Ketamine	- -	- -	mg/kg	NA	NA	0.67 J	NA	NA	NA
Lenthionine	- -	- -	mg/kg	NA	NA	0.66 J [2 J]	2.3 J	NA	NA
Mesityl Oxide	- -	- -	mg/kg	NA	NA	NA	NA	R	R
Tetrahydrofuran	- -	- -	mg/kg	NA	NA	R [R]	R	NA	NA
Trimethylbenzene isomer1	- -	- -	mg/kg	3.6 JN	NA	NA	NA	NA	NA
Unknown1	- -	- -	mg/kg	0.75 JN	460 JN	R [R]	R	58 J	56 J
Unknown2	- -	- -	mg/kg	NA	5 JN	8.8 J [2.8 J]	8.4 J	0.99 J	2 J
Unknown3	- -	- -	mg/kg	NA	4.4 JN	2.8 J [2.7 J]	4.4 J	0.37 J	0.41 J

See Notes on Page 5.

Table 1
Soil Sample Analytical Results

Building 25/25N Soil Excavation Summary Report
Site #C734138: BMS Syracuse North Campus Restoration Area

Location ID: Sample Depth(feet): Date Collected:	Unrestricted Use SCO	Restricted Use SCO Commercial	Units	UNDER SLAB 1 0 - 0.5 09/06/18	BLDG 25N-UNDER SLAB 1 0 - 0.5 09/10/18	Test Pit-1 10 - 12 09/28/18	Test Pit-2 10 - 12 09/28/18	East Floor Vault 18 10/31/18	West Floor Vault 18 10/31/18
Semivolatile Organic Compounds-TICs - USEPA SW-846 Method 8270C/D (cont'd)									
Unknown4	- -	- -	mg/kg	NA	1.7 JN	1.8 J [2.4 J]	2.4 J	R	R
Unknown5	- -	- -	mg/kg	NA	1.2 JN	1.2 J [2.4 J]	2.2 J	R	R
Unknown6	- -	- -	mg/kg	NA	1.2 JN	0.97 J [2.3 J]	1.6 J	R	R
Unknown7	- -	- -	mg/kg	NA	0.89 JN	0.8 J [2.3 J]	1.3 J	R	NA
Unknown8	- -	- -	mg/kg	NA	0.87 JN	0.71 J [1.6 J]	1.2 J	R	NA
Unknown9	- -	- -	mg/kg	NA	0.84 JN	0.71 J [1.5 J]	1.2 J	NA	NA
Unknown10	- -	- -	mg/kg	NA	0.72 JN	0.69 J [1.5 J]	1.1 J	NA	NA
Unknown11	- -	- -	mg/kg	NA	0.64 JN	0.6 J [1.3 J]	1 J	NA	NA
Unknown12	- -	- -	mg/kg	NA	0.3 JN	0.59 J [1.2 J]	1 J	NA	NA
Unknown13	- -	- -	mg/kg	NA	0.29 JN	0.53 J [1.2 J]	0.98 J	NA	NA
Unknown14	- -	- -	mg/kg	NA	0.23 JN	0.53 J [1.1 J]	0.91 J	NA	NA
Unknown15	- -	- -	mg/kg	NA	0.2 JN	0.53 J [1.1 J]	0.82 J	NA	NA
Unknown16	- -	- -	mg/kg	NA	0.19 JN	0.48 J [0.99 J]	0.61 J	NA	NA
Unknown17	- -	- -	mg/kg	NA	NA	0.45 J [0.79 J]	NA	NA	NA
Total SVOC TICs	- -	- -	mg/kg	NA	480 JN	24.1 J [37.5 J]	39 J	59.77 J	58.63 J
Inorganics - USEPA SW-846 Methods 6010B/C, 7471A, or 9012A/B									
Percent Moisture	- -	- -	%	NA	15.7	14.0 [17.7]	19.8	9.60	9.70
Miscellaneous									
Acetaldehyde	- -	- -	mg/kg	0.29 UBJ	0.59 J	2.3 [0.61 J]	3	7.4	6.1
Diesel C10-C28	- -	- -	mg/kg	9.8 J	5.6 J	9.5 J [5.4 J]	6.2 J	40	54
Ethanol	- -	- -	mg/kg	1.1 U	1.2 U	1.2 U [1.2 U]	1.2 UD2	1.1 UD2	1.1 UD2
Ethylene glycol	- -	- -	mg/kg	6.3 U	12 U	12 U [12 U]	12 U	11 U	11 U
Formaldehyde	- -	- -	mg/kg	13 J	1.2 J	5.4 [36]	38	4.6	5
Gasoline C6-C10	- -	- -	mg/kg	1.4 U	0.8 J	0.9 U [0.2 J]	0.2 J	2 U	0.7 U
Glutaraldehyde	- -	- -	mg/kg	1.1 UJ	NA	NA	NA	NA	NA
Isopropyl alcohol	- -	- -	mg/kg	1.1 U	1.2 U	1.2 U [1.2 U]	1.2 U	1.1 U	1.1 U
Methanol	- -	- -	mg/kg	1.1 U	1.2 U	1.2 U [1.2 U]	1.2 U	0.9 J	0.78 J
Oil C28-C40	- -	- -	mg/kg	19 U	14 U	31 [14 U]	15 U	13 U	13 U
Propylene Glycol	- -	- -	mg/kg	6.3 U	12 U	12 U [12 U]	12 U	11 U	11 U

Notes:
1. Unrestricted use and restricted commercial use SCO are from 6 NYCRR Part 375-6.8.
2. Samples were collected by Arcadis.
3. Soil samples were analyzed by Eurofins Lancaster Laboratories in Lancaster, PA with the exception of BLDG 25-UNDER SLAB 1 which was analyzed by TestAmerica Laboratories, Inc. of Amherst, NY.
4. Black text = Constituent detected.
5. mg/kg = milligrams per kilogram.
6. TIC = tentatively identified compounds.
7. B = Analyte was detected in the blank and sample.
8. NA = Not Analyzed.
9. J = Estimated value. Result is greater than the MDL but less than the RL.
10. N = Presumptive evidence of a compound.
11. U = Constituent not detected at a concentration above the reported detection limit.
12. R = Rejected result.
13. [ ] = Duplicate sample.

Table 2
Tank Vault Water Sample Analytical Results

Building 25/25N Soil Excavation Summary Report
Site #C734138: BMS Syracuse North Campus Restoration Area

Date Collected: / Location ID:	NYSDEC TOGS 1.1.1 (GW Standard)	Units	09/28/18 BLD 25-SW-1
Volatile Organic Compounds - USEPA SW-846 Method 8260B/C			
1,1,1-Trichloroethane	5	ug/L	1 U
1,1,2,2-Tetrachloroethane	5	ug/L	1 U
1,1,2-trichloro-1,2,2-trifluoroethane	5	ug/L	10 U
1,1,2-Trichloroethane	1	ug/L	1 U
1,1-Dichloroethane	5	ug/L	1 U
1,1-Dichloroethene	5	ug/L	1 U
1,2,3-Trichlorobenzene	5	ug/L	5 U
1,2,4-Trichlorobenzene	5	ug/L	5 U
1,2,4-Trimethylbenzene	5	ug/L	5 U
1,2-Dibromo-3-chloropropane	0.04	ug/L	5 U
1,2-Dibromoethane	0.0006	ug/L	1 U
1,2-Dichlorobenzene	3	ug/L	5 U
1,2-Dichloroethane	0.6	ug/L	1 U
1,2-Dichloropropane	1	ug/L	1 U
1,3,5-Trimethylbenzene	5	ug/L	5 U
1,3-Dichlorobenzene	3	ug/L	5 U
1,4-Dichlorobenzene	3	ug/L	5 U
1,4-Dioxane	1	ug/L	250 U
2-Hexanone	50	ug/L	1 J
2-Nitropropane	- -	ug/L	10 U
Acetone	50	ug/L	**400**
Acetonitrile	- -	ug/L	100 U
Benzene	1	ug/L	**1**
Bromochloromethane	5	ug/L	5 U
Bromodichloromethane	50	ug/L	1 U
Bromoform	50	ug/L	4 U
Bromomethane	5	ug/L	1 U
Carbon Disulfide	60	ug/L	0.6 J
Carbon Tetrachloride	5	ug/L	1 U
Chlorobenzene	5	ug/L	0.3 J
Chlorodifluoromethane	5	ug/L	5 U
Chloroethane	5	ug/L	1 U
Chloroform	7	ug/L	1 U
Chloromethane	5	ug/L	1 U
cis-1,2-Dichloroethene	5	ug/L	1 U
cis-1,3-Dichloropropene	0.4	ug/L	1 U
Cyclohexane	- -	ug/L	0.6 J
Cyclohexanone	- -	ug/L	100 U
Dibromochloromethane	50	ug/L	1 U
Dichlorodifluoromethane	5	ug/L	1 U
Ethyl acetate	- -	ug/L	5 U
Ethyl ether	- -	ug/L	5 U
Ethylbenzene	5	ug/L	0.5 J
Isobutanol	- -	ug/L	250 U
Isopropylbenzene	5	ug/L	5 U
m,p-Xylene	5	ug/L	1 J
Methyl acetate	- -	ug/L	5 U
Methyl ethyl ketone (MEK, 2-butanone)	50	ug/L	9 J
Methyl isobutyl ketone (MIBK, 4-methyl-2-pentanone)	50	ug/L	22
Methyl tert-butyl ether	10	ug/L	1 U
Methylcyclohexane	- -	ug/L	0.4 J
Methylene Chloride	5	ug/L	**6**
Naphthalene	10	ug/L	5 U
n-Butanol	50	ug/L	250 U
n-Butylbenzene	5	ug/L	5 U
N-Heptane	- -	ug/L	5 U
n-Hexane	- -	ug/L	5 U
o-Xylene	5	ug/L	0.7 J
p-Isopropyltoluene	5	ug/L	5 U
sec-Butylbenzene	5	ug/L	5 U
Styrene	5	ug/L	5 U
tert-Butylbenzene	5	ug/L	5 U
Tertiary butyl alcohol	- -	ug/L	31 J
Tetrachloroethene	5	ug/L	1 U
Tetrahydrofuran	50	ug/L	7 J

See Notes on Page 4.

Table 2
Tank Vault Water Sample Analytical Results

Building 25/25N Soil Excavation Summary Report
Site #C734138: BMS Syracuse North Campus Restoration Area

Date Collected: / Location ID:	NYSDEC TOGS 1.1.1 (GW Standard)	Units	09/28/18 BLD 25-SW-1
Volatile Organic Compounds - USEPA SW-846 Method 8260B/C (cont'd)			
Toluene	5	ug/L	3
trans-1,2-Dichloroethene	5	ug/L	1 U
trans-1,3-Dichloropropene	0.4	ug/L	1 U
Trichloroethene	5	ug/L	1 U
Trichlorofluoromethane	5	ug/L	**9 J**
Vinyl Chloride	2	ug/L	1 U
Xylenes (total)	5	ug/L	2 J
Volatile Organic Compounds - TIC - USEPA SW-846 Method 8260B/C			
Silane, fluorotrimethyl-	- -	ug/L	190 J
Silanol, trimethyl-	- -	ug/L	190 J
Unknown1	- -	ug/L	31 J
Unknown2	- -	ug/L	7 J
Total VOC TICs	- -	ug/L	420 J
Semivolatile Organic Compounds - USEPA SW-846 Method 8270C/D			
1,1'-Biphenyl	5	ug/L	10 U
1,2,4,5-Tetrachlorobenzene	5	ug/L	2.0 U
1,4-Dioxane	1	ug/L	5
2,3,4,6-Tetrachlorophenol	1	ug/L	10 U
2,4,5-Trichlorophenol	1	ug/L	2.0 U
2,4,6-Trichlorophenol	1	ug/L	2.0 U
2,4-Dichlorophenol	1	ug/L	2.0 U
2,4-Dimethylphenol	1	ug/L	10 U
2,4-Dinitrophenol	1	ug/L	30 U
2,4-Dinitrotoluene	5	ug/L	5.0 U
2,6-Dinitrotoluene	5	ug/L	2.0 U
2-Chloronaphthalene	10	ug/L	1.0 U
2-Chlorophenol	1	ug/L	2.0 U
2-Methylnaphthalene	- -	ug/L	0.24 J
2-Nitroaniline	5	ug/L	7.1 U
2-Nitrophenol	1	ug/L	10 U
3&4-Methylphenol	1	ug/L	**1.9 J**
3,3'-Dichlorobenzidine	5	ug/L	10 U
3-Nitroaniline	5	ug/L	7.1 U
4,6-Dinitro-2-methylphenol	1	ug/L	21 U
4-Bromophenyl-phenylether	- -	ug/L	2.0 U
4-Chloro-3-Methylphenol	1	ug/L	2.0 U
4-Chloroaniline	5	ug/L	10 U
4-Chlorophenyl-phenylether	- -	ug/L	2.0 U
4-Nitroaniline	5	ug/L	3.0 U
4-Nitrophenol	1	ug/L	30 U
Acenaphthene	20	ug/L	0.50 U
Acenaphthylene	- -	ug/L	0.50 U
Acetophenone	- -	ug/L	10 U
Aniline	5	ug/L	10 U
Anthracene	50	ug/L	0.50 U
Atrazine	7.5	ug/L	5.0 U
Benzaldehyde	- -	ug/L	10 U
Benzo(a)anthracene	0.002	ug/L	0.50 U
Benzo(a)pyrene	0	ug/L	0.50 U
Benzo(b)fluoranthene	0.002	ug/L	0.50 U
Benzo(g,h,i)perylene	- -	ug/L	0.50 U
Benzo(k)fluoranthene	0.002	ug/L	0.50 U
Benzyl Alcohol	- -	ug/L	12 J
bis(2-Chloroethoxy)methane	5	ug/L	2.0 U
bis(2-Chloroethyl)ether	1	ug/L	2.0 U
bis(2-Chloroisopropyl)ether	- -	ug/L	2.0 U
bis(2-Ethylhexyl)phthalate	5	ug/L	11 U
Butylbenzylphthalate	50	ug/L	5.0 U
Caprolactam	- -	ug/L	11 U
Carbazole	- -	ug/L	2.0 U
Chrysene	0.002	ug/L	0.50 U
Dibenzo(a,h)anthracene	- -	ug/L	0.50 U
Dibenzofuran	- -	ug/L	2.0 U
Dicyclohexylamine	- -	ug/L	10 UJ
Diethylphthalate	50	ug/L	5.0 U

See Notes on Page 4.

Table 2
Tank Vault Water Sample Analytical Results

Building 25/25N Soil Excavation Summary Report
Site #C734138: BMS Syracuse North Campus Restoration Area

Date Collected: / Location ID:	NYSDEC TOGS 1.1.1 (GW Standard)	Units	09/28/18 BLD 25-SW-1
Semivolatile Organic Compounds - USEPA SW-846 Method 8270C/D (cont'd)			
Dimethylphthalate	50	ug/L	5.0 U
Di-n-Butylphthalate	50	ug/L	5.0 U
Di-n-Octylphthalate	50	ug/L	11 U
Fluoranthene	50	ug/L	0.50 U
Fluorene	50	ug/L	0.50 U
Hexachlorobenzene	0.04	ug/L	0.50 U
Hexachlorobutadiene	0.5	ug/L	2.0 U
Hexachlorocyclopentadiene	5	ug/L	11 U
Hexachloroethane	5	ug/L	5.0 U
Indeno(1,2,3-cd)pyrene	0.002	ug/L	0.50 U
Isophorone	50	ug/L	2.0 U
n,n-dimethylaniline	1	ug/L	0.95 J
Naphthalene	10	ug/L	0.20 J
Nitrobenzene	0.4	ug/L	2.0 U
N-Nitroso-di-n-propylamine	- -	ug/L	3.0 U
N-Nitrosodiphenylamine	50	ug/L	3.0 U
o-Cresol (2-Methylphenol)	1	ug/L	2.0 U
Pentachlorophenol	1	ug/L	5.0 U
Phenanthrene	50	ug/L	0.50 U
Phenol	1	ug/L	**51**
Pyrene	50	ug/L	0.50 U
Pyridine	50	ug/L	5.0 U
Triethylamine	- -	ug/L	89 J
Semivolatile Organic Compounds - TIC - USEPA SW-846 Method 8270C/D			
3-Eicosene, (E)-	- -	ug/L	38 J
Docosane	- -	ug/L	23 J
Heneicosane	- -	ug/L	68 J
Heneicosane, 11-pentyl-	- -	ug/L	56 J
Heptadecane, 9-octyl	- -	ug/L	55 J
Hexacosane	- -	ug/L	23 J
Hexadecane, 1-chloro-	- -	ug/L	23 J
n-Heptadecylcyclohexane	- -	ug/L	30 J
Tetracosane	- -	ug/L	82 J
Unknown1	- -	ug/L	4,700 J
Unknown10	- -	ug/L	330 J
Unknown11	- -	ug/L	82 J
Unknown12	- -	ug/L	65 J
Unknown13	- -	ug/L	43 J
Unknown14	- -	ug/L	41 J
Unknown15	- -	ug/L	33 J
Unknown16	- -	ug/L	32 J
Unknown2	- -	ug/L	32 J
Unknown3	- -	ug/L	31 J
Unknown4	- -	ug/L	31 J
Unknown5	- -	ug/L	27 J
Unknown6	- -	ug/L	24 J
Unknown7	- -	ug/L	24 J
Unknown8	- -	ug/L	23 J
Unknown9	- -	ug/L	23 J
Total SVOC TICs	- -	ug/L	5,900 J
Inorganics - USEPA SW-846 Methods 6010B/C, 7471A/B (mercury)			
Aluminum	- -	ug/L	1,030
Antimony	3	ug/L	**33.1 J**
Arsenic	25	ug/L	50.0 U
Barium	1,000	ug/L	70.3
Beryllium	3	ug/L	5.00 U
Cadmium	5	ug/L	1.70 J
Calcium	- -	ug/L	109,000
Chromium	50	ug/L	7.00 J
Cobalt	- -	ug/L	3.40 J
Copper	200	ug/L	23.4
Iron	300	ug/L	**1,370**
Lead	25	ug/L	7.90 J
Magnesium	35,000	ug/L	13,300
Manganese	300	ug/L	36.4

See Notes on Page 4.

Table 2
Tank Vault Water Sample Analytical Results

Building 25/25N Soil Excavation Summary Report
Site #C734138: BMS Syracuse North Campus Restoration Area

Date Collected: / Location ID:	NYSDEC TOGS 1.1.1 (GW Standard)	Units	09/28/18 BLD 25-SW-1
Inorganics - USEPA SW-846 Methods 6010B/C, 7471A/B (mercury) (cont'd)			
Mercury	0.7	ug/L	0.0750 J
Nickel	100	ug/L	13.4
Potassium	- -	ug/L	80,700
Selenium	10	ug/L	50.0 U
Silver	50	ug/L	10.0 U
Sodium	20,000	ug/L	**719,000**
Thallium	0.5	ug/L	30.0 U
Vanadium	- -	ug/L	6.90 J
Zinc	2,000	ug/L	69.9
Miscellaneous			
Acetaldehyde	8	ug/L	60 U
Diesel C10-C28	- -	ug/L	500,000
Ethanol	- -	mg/L	1 U
Ethylene glycol	0.05	mg/L	10 U
Formaldehyde	8	ug/L	50 U
Gasoline C6-C10	- -	ug/L	340
Glutaraldehyde	- -	ug/L	50 U
Isopropyl alcohol	- -	mg/L	1 U
Methanol	- -	mg/L	0.57 J
Oil C28-C40	- -	ug/L	220,000
Propylene Glycol	1	mg/L	10 U

Notes:
1. Samples were collected by Arcadis.
2. Samples were analyzed by Eurofins Lancaster Laboratories Environmental in Lancaster, PA.
3. Black text = Constituent detected.
4. Shaded and bold results indicate an exceedance of NYSDEC TOGS 1.1.1.
5. ug/L = micrograms per liter.
6. mg/L = milligrams per liter.
7. TIC = tentatively identified compound.
8. J = Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL).
9. NA = Not Analyzed.

Table 3
Light Non-Aqueous Phase Liquid Sample Analytical Results

Building 25/25N Soil Excavation Summary Report
Site #C734138: BMS Syracuse North Campus Restoration Area

Date Collected: / Sample Name:	Units	09/28/18 BLD 25-LNAPL-1
PCBs - USEPA SW-846 Method 8082/A		
Aroclor-1016	ug/kg	2,500 U
Aroclor-1221	ug/kg	2,500 U
Aroclor-1232	ug/kg	2,500 U
Aroclor-1242	ug/kg	2,500 U
Aroclor-1248	ug/kg	2,500 U
Aroclor-1254	ug/kg	2,500 U
Aroclor-1260	ug/kg	2,500 U
Aroclor-1262	ug/kg	2,500 U
Aroclor-1268	ug/kg	2,500 U
Total PCBs	ug/kg	2,500 U
Volatile Organic Compounds - USEPA SW-846 Method 8260B/C		
1,1,1-Trichloroethane	ug/kg	2,500 U
1,1,2,2-Tetrachloroethane	ug/kg	2,500 U
1,1,2-trichloro-1,2,2-trifluoroethane	ug/kg	5,000 U
1,1,2-Trichloroethane	ug/kg	2,500 U
1,1-Dichloroethane	ug/kg	2,500 U
1,1-Dichloroethene	ug/kg	2,500 U
1,2,3-Trichlorobenzene	ug/kg	5,000 U
1,2,4-Trichlorobenzene	ug/kg	5,000 U
1,2,4-Trimethylbenzene	ug/kg	4,400
1,2-Dibromo-3-chloropropane	ug/kg	2,500 U
1,2-Dibromoethane	ug/kg	2,500 U
1,2-Dichlorobenzene	ug/kg	2,500 U
1,2-Dichloroethane	ug/kg	2,500 U
1,2-Dichloropropane	ug/kg	2,500 U
1,3,5-Trimethylbenzene	ug/kg	1,300 J
1,3-Dichlorobenzene	ug/kg	2,500 U
1,4-Dichlorobenzene	ug/kg	2,500 U
1,4-Dioxane	ug/kg	130,000 U
2-Hexanone	ug/kg	5,000 U
2-Nitropropane	ug/kg	5,000 U
Acetone	ug/kg	10,000 U
Acetonitrile	ug/kg	50,000 U
Benzene	ug/kg	2,500 U
Bromochloromethane	ug/kg	2,500 U
Bromodichloromethane	ug/kg	2,500 U
Bromoform	ug/kg	5,000 U
Bromomethane	ug/kg	2,500 U
Carbon Disulfide	ug/kg	2,500 U
Carbon Tetrachloride	ug/kg	2,500 U
Chlorobenzene	ug/kg	2,500 U
Chloroethane	ug/kg	2,500 U
Chloroform	ug/kg	2,500 U
Chloromethane	ug/kg	2,500 U
cis-1,2-Dichloroethene	ug/kg	2,500 U
cis-1,3-Dichloropropene	ug/kg	2,500 U
Cyclohexane	ug/kg	340 J
Cyclohexanone	ug/kg	130,000 U
Dibromochloromethane	ug/kg	2,500 U
Dichlorodifluoromethane	ug/kg	2,500 U
Ethyl acetate	ug/kg	2,500 U
Ethyl ether	ug/kg	2,500 U
Ethylbenzene	ug/kg	780 J
Isobutane	ug/kg	130,000 U
Isopropyl benzene	ug/kg	300 J
map-Xylene	ug/kg	2,600
Methyl acetate	ug/kg	2,500 U
Methyl ethyl ketone (MEK, 2-butanone)	ug/kg	5,000 U
Methyl isobutyl ketone (MIBK, 4-methyl-2-pentanone)	ug/kg	5,000 U
Methyl tert-butyl ether	ug/kg	2,500 U
Methylcyclohexane	ug/kg	4,600
Methylene Chloride	ug/kg	2,500 U
Naphthalene	ug/kg	2,500 U

See Notes on Page 4.

Table 3
Light Non-Aqueous Phase Liquid Sample Analytical Results

Building 25/25N Soil Excavation Summary Report
Site #C734138: BMS Syracuse North Campus Restoration Area

Date Collected: / Sample Name:	Units	09/28/18 BLD 25-LNAPL-1
Volatile Organic Compounds - USEPA SW-846 Method 8260B/C (cont'd)		
n-Butanol	ug/kg	130,000 U
n-Butylbenzene	ug/kg	4,000 U
N-Heptane	ug/kg	28,000
n-Hexane	ug/kg	7,700
o-Xylene	ug/kg	1,100 J
p-Isopropyl toluene	ug/kg	2,500 U
sec-Butylbenzene	ug/kg	2,500 U
Styrene	ug/kg	2,500 U
tert-Butylbenzene	ug/kg	2,500 U
Tertiary butyl alcohol	ug/kg	50,000 U
Tetrachloroethene	ug/kg	2,500 U
Tetrahydrofuran	ug/kg	4,000 U
Toluene	ug/kg	970 J
trans-1,2-Dichloroethene	ug/kg	2,500 U
trans-1,3-Dichloropropene	ug/kg	2,500 U
Trichloroethene	ug/kg	2,500 U
Trichlorofluoromethane	ug/kg	2,100 J
Vinyl Chloride	ug/kg	2,500 U
Xylenes (total)	ug/kg	3,700
Volatile Organic Compounds - TIC - USEPA SW-846 Method 8260B/C		
(3-methyl-2-butenyl)-Benzene	ug/kg	9,300 J
1-Methyl-2-isopropylbenzene	ug/kg	14,000 J
2-Methylheptane	ug/kg	13,000 J
2-Methylnaphthalene	ug/kg	17,000 J
3-Methylheptane	ug/kg	10,000 J
3-Methylnonane	ug/kg	8,100 J
3-Methyloctane	ug/kg	15,000 J
n-Decani	ug/kg	36,000 J
n-Octane	ug/kg	31,000 J
Nonane	ug/kg	47,000 J
N-Tridecane	ug/kg	15,000 J
n-Undecane	ug/kg	11,000 J
Unknown1	ug/kg	20,000 J
Unknown2	ug/kg	14,000 J
Unknown3	ug/kg	12,000 J
Unknown4	ug/kg	12,000 J
Unknown5	ug/kg	11,000 J
Unknown6	ug/kg	11,000 J
Unknown7	ug/kg	9,500 J
Unknown8	ug/kg	7,400 J
Total VOC TICs	ug/kg	330,000 J
Semivolatile Organic Compounds - USEPA SW-846 Method 8270C/D		
1,1'-Biphenyl	ug/kg	11,000 U
1,2,4,5-Tetrachlorobenzene	ug/kg	11,000 U
2,3,4,6-Tetrachlorophenol	ug/kg	50,000 U
2,4,5-Trichlorophenol	ug/kg	15,000 U
2,4,6-Trichlorophenol	ug/kg	15,000 U
2,4-Dichlorophenol	ug/kg	11,000 U
2,4-Dimethylphenol	ug/kg	11,000 U
2,4-Dinitrophenol	ug/kg	300,000 U
2,4-Dinitrotoluene	ug/kg	50,000 U
2,6-Dinitrotoluene	ug/kg	15,000 U
2-Chloronaphthalene	ug/kg	10,000 U
2-Chlorophenol	ug/kg	11,000 U
2-Methylnaphthalene	ug/kg	4,200 J
2-Nitroaniline	ug/kg	15,000 U
2-Nitrophenol	ug/kg	11,000 U
3&4-Methylphenol	ug/kg	15,000 U
3,3'-Dichlorobenzidine	ug/kg	100,000 U
3-Nitroaniline	ug/kg	50,000 U
4,6-Dinitro-2-methylphenol	ug/kg	150,000 U
4-Bromophenyl-phenylether	ug/kg	15,000 U
4-Chloro-3-Methylphenol	ug/kg	11,000 U

See Notes on Page 4.

Table 3
Light Non-Aqueous Phase Liquid Sample Analytical Results

Building 25/25N Soil Excavation Summary Report
Site #C734138: BMS Syracuse North Campus Restoration Area

Date Collected: / Sample Name:	Units	09/28/18 BLD 25-LNAPL-1
Semivolatile Organic Compounds - USEPA SW-846 Method 8270C/D (cont'd)		
4-Chloroaniline	ug/kg	50,000 U
4-Chlorophenyl-phenylether	ug/kg	11,000 U
4-Nitroaniline	ug/kg	50,000 U
4-Nitrophenol	ug/kg	150,000 U
Acenaphthene	ug/kg	1,800 J
Acenaphthylene	ug/kg	5,000 U
Acetophenone	ug/kg	15,000 U
Aniline	ug/kg	150,000 U
Anthracene	ug/kg	5,000 U
Atrazine	ug/kg	50,000 U
Benzaldehyde	ug/kg	50,000 U
Benzo(a)anthracene	ug/kg	5,000 U
Benzo(a)pyrene	ug/kg	5,000 U
Benzo(b)fluoranthene	ug/kg	5,000 U
Benzo(g,h,i)perylene	ug/kg	5,000 U
Benzo(k)fluoranthene	ug/kg	5,000 U
Benzyl Alcohol	ug/kg	150,000 U
bis(2-Chloroethoxy)methane	ug/kg	11,000 U
bis(2-Chloroethyl)ether	ug/kg	15,000 U
bis(2-Chloroisopropyl)ether	ug/kg	11,000 U
bis(2-Ethylhexyl)phthalate	ug/kg	50,000 U
Butylbenzylphthalate	ug/kg	50,000 U
Caprolactam	ug/kg	50,000 U
Carbazole	ug/kg	11,000 U
Chrysene	ug/kg	5,000 U
Dibenzo(a,h)anthracene	ug/kg	5,000 U
Dibenzofuran	ug/kg	11,000 U
Dicyclohexylamine	ug/kg	600,000 U
Diethylphthalate	ug/kg	50,000 U
Dimethylphthalate	ug/kg	50,000 U
Di-n-Butylphthalate	ug/kg	50,000 U
Di-n-Octylphthalate	ug/kg	50,000 U
Fluoranthene	ug/kg	5,000 U
Fluorene	ug/kg	5,000 U
Hexachlorobenzene	ug/kg	5,000 U
Hexachlorobutadiene	ug/kg	15,000 U
Hexachlorocyclopentadiene	ug/kg	150,000 U
Hexachloroethane	ug/kg	50,000 U
Indeno(1,2,3-cd)pyrene	ug/kg	5,000 U
Isophorone	ug/kg	11,000 U
n,n-dimethylaniline	ug/kg	50,000 U
Naphthalene	ug/kg	5,000 U
Nitrobenzene	ug/kg	20,000 U
N-Nitroso-di-n-propylamine	ug/kg	15,000 U
N-Nitrosodiphenylamine	ug/kg	11,000 U
o-Cresol (2-Methylphenol)	ug/kg	20,000 U
Pentachlorophenol	ug/kg	50,000 U
Phenanthrene	ug/kg	1,900 J
Phenol	ug/kg	15,000 U
Pyrene	ug/kg	5,000 U
Pyridine	ug/kg	50,000 U
Triethylamine	ug/kg	1,500,000 U
Semivolatile Organic Compounds - TIC - USEPA SW-846 Method 8270C/D		
9-Octyleicosane	ug/kg	300,000 J
Heneicosane	ug/kg	270,000 J
Heneicosane, 11-decyl-	ug/kg	220,000 J
Heptadecane, 9-octyl	ug/kg	260,000 J
Octacosane	ug/kg	250,000 J
Octadecane	ug/kg	280,000 J
Tricosane	ug/kg	260,000 J
Unknown1	ug/kg	910,000 J
Unknown2	ug/kg	350,000 J
Unknown3	ug/kg	310,000 J

See Notes on Page 4.

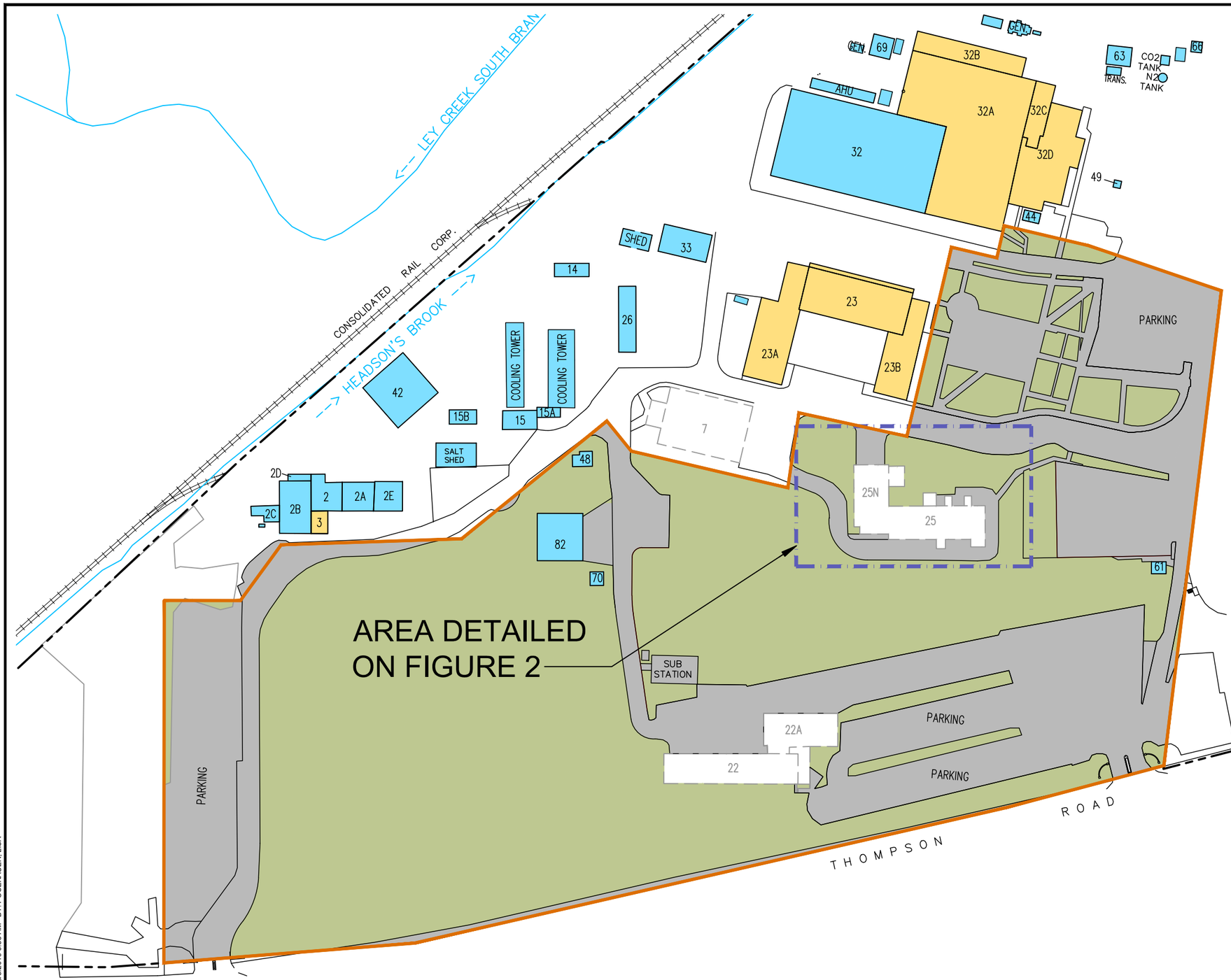
Table 3
Light Non-Aqueous Phase Liquid Sample Analytical Results

Building 25/25N Soil Excavation Summary Report
Site #C734138: BMS Syracuse North Campus Restoration Area

Date Collected: / Sample Name:	Units	09/28/18 BLD 25-LNAPL-1
Semivolatile Organic Compounds - TIC - USEPA SW-846 Method 8270C/D (cont'd)		
Unknown4	ug/kg	290,000 J
Unknown5	ug/kg	230,000 J
Unknown6	ug/kg	220,000 J
Unknown7	ug/kg	210,000 J
Unknown8	ug/kg	210,000 J
Total SVOC TICs	ug/kg	4,600,000 J

Notes:
1. Samples were collected by Arcadis.
2. Samples were analyzed by Eurofins Lancaster Laboratories Environmental in Lancaster, PA.
3. PCBs = Polychlorinated biphenyls.
3. Black text = Constituent detected.
4. ug/kg = micrograms per kilogram.
5. TIC = tentatively identified compound.
6. J = Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL).
7. U = Constituent not detected at a concentration above the reported detection limit.

FIGURES



LEGEND:

- BROWNFIELD DEVELOPMENT AREA BOUNDARY
- APPROXIMATE PROPERTY LINE, BRISTOL-MYERS SQUIBB
- OCCUPIED BUILDING
- UNOCCUPIED BUILDING / STRUCTURE
- DEMOLISHED BUILDING
- PAVED OR CONCRETE AREA
- UNPAVED AREA
- EXISTING RAILROAD

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.

0 160' 320'

GRAPHIC SCALE

SITE #C734138: BMS SYRACUSE
NORTH CAMPUS RESTORATION AREA
EAST SYRACUSE, NY
BUILDING 25/25N SOIL EXCAVATION SUMMARY REPORT

SITE PLAN

ARCADIS Design & Consultancy for natural and built assets

FIGURE 1

CITY: SYRACUSE, NY DIV/GROUP: EBC-IM/DV DB/LD: L.POSENAUER PM/TM: LYR: ON=*;OFF=REF; (FRZ)
C:\Users\lposenauer\BIM 360\Arcadis\ANA - BRISTOL-MYERS COMPANY\Project Files\TECHNICAL SUPPORT 2019\B0087363.0003\01-DWG\BLDG25-25N_SESP_FIG01-SITE PLAN.dwg LAYOUT: 1 SAVED: 8/8/2019 9:31 AM ACADVER: 23.0S (LMS TECH) PAGESETUP: C-LB-PDF PLOTSTYLETABLE: PLTFULL.CTB PLOTTED: 8/8/2019 9:33 AM BY: POSENAUER, LISA
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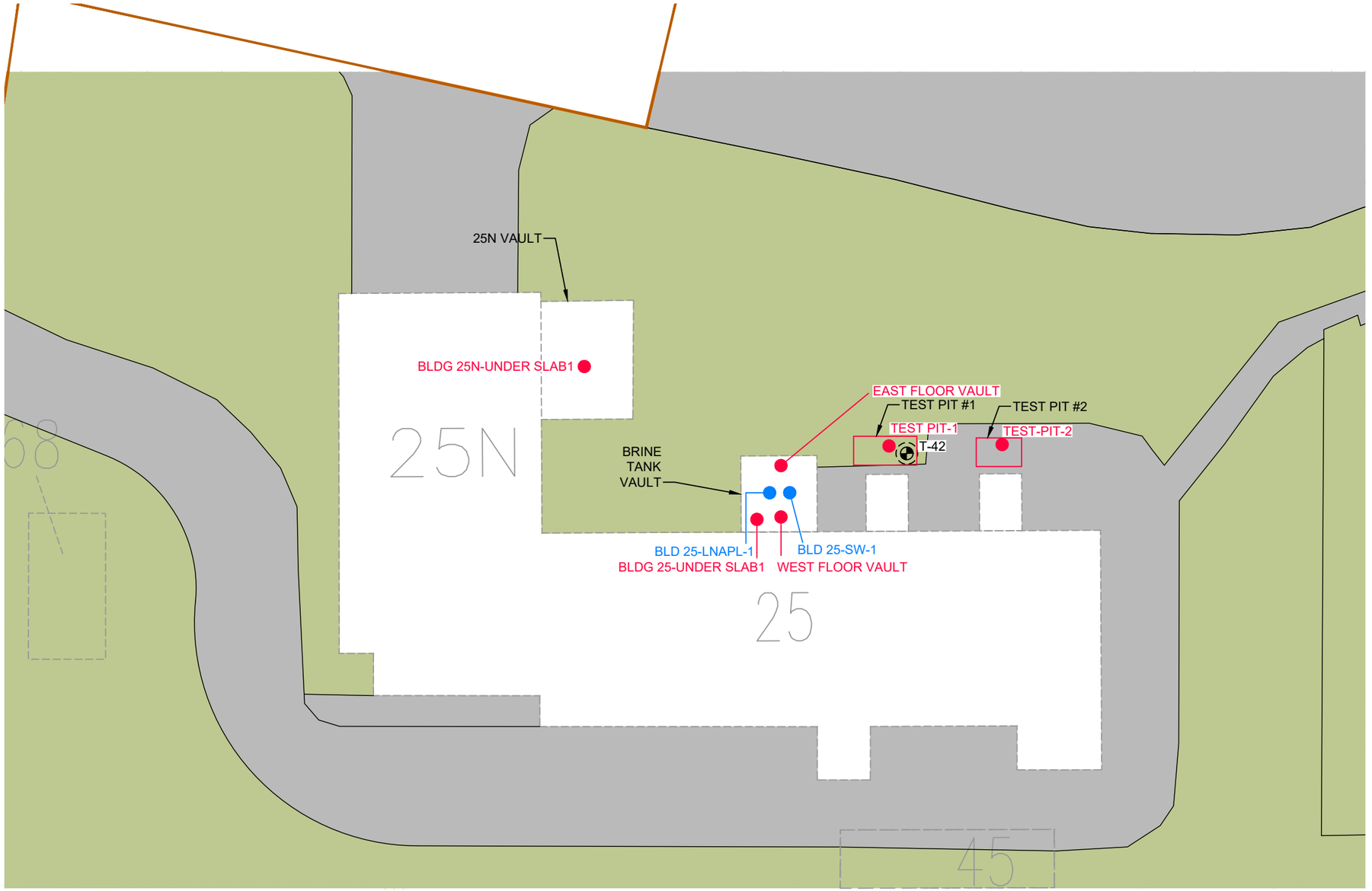
BMS-X-BASE



LEGEND:

- BROWNFIELD DEVELOPEMENT AREA BOUNDARY
- DEMOLISHED BUILDING
- PAVED OR CONCRETE AREA
- UNPAVED AREA
- SOIL SAMPLE
- WASTE CHARACTERIZATION SAMPLE
- DECOMMISSIONED 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.
2. SAMPLE LOCATIONS AND ELEVATION SURVEY BY CT MALE ASSOCIATES, SYRACUSE, NY.

0 30’ 60’

GRAPHIC SCALE

SITE #C734138: BMS SYRACUSE
NORTH CAMPUS RESTORATION AREA
EAST SYRACUSE, NY
BUILDING 25/25N SOIL EXCAVATION SUMMARY REPORT

TEST PITS AND SAMPLING 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: LYR: ON=*;OFF=REF; (FRZ)
C:\Users\lposenauer\BIM 360\Arcadis\ANA - BRISTOL-MYERS COMPANY\Project Files\TECHNICAL SUPPORT 2019\B0087363.003801-DWG\BLDG25-25N_SESP_FIG02-SAMPLING LOCATIONS.dwg LAYOUT: 2 SAVED: 8/8/2019 9:41 AM ACADVER: 23.0S (LMS TECH) PAGESETUP: C-LB-PDF
PLOTSTYLETABLE: PLTFULL.CTB PLOTTED: 8/19/2019 1:17 PM BY: POSENAUER, LISA
XREFS:
BMS-X-BASE

ATTACHMENT 1

Building 25 Demo Brine Tanks Vault and Drain Sumps Plan

Bristol-Myers Squibb Company (BMS)
NYSDEC BCP Site #C734138
Syracuse North Campus Restoration Area – East Syracuse, New York

Building 25 Demolition – Former Brine Tanks Vault Plan

On September 6, 2018, two sections (opposite corners) of the former Building 25 brine tanks vault concrete slab floor were removed as part of building demolition activities. Prior to demolition, the vault contained two approximate 2,900-gallon aboveground tanks formerly used to store a methanol/acetone mixture. The slab is situated near the water table, and water entered as soil was removed for inspection. Soil removed from beneath the slab in both locations was stained gray and was segregated for field screening for the presence of volatile organic compounds (VOC) using a photoionization detector (PID) equipped with an 11.7 electron volt lamp. The soil sample exhibited a PID reading of 0.7 ppmv.

A sample of the gray-stained soil was collected and submitted to TestAmerica Laboratories, Inc. of Amherst, NY for analysis in accordance with the following USEPA SW-846 methods:

- VOC, including tentatively identified compounds (TIC) – 8260C
- Semi-volatile organic compounds (SVOC), including TIC – 8270D
- Glycols and alcohols – 8015D
- Aldehydes – 8315A
- Total petroleum hydrocarbons (TPH) gasoline, diesel, and oil-range – 8015D

The laboratory report is attached and a listing of detections is provided below:

Constituent	CAS Number	Result (mg/kg)	SCO Commercial	SCO PGW	SCO Unrestricted
VOC targets					
Acetone	67-64-1	0.032	500	0.05	0.05
VOC TIC		None			
SVOC targets		No detects			
SVOC TIC					
Cyclic octaatomic sulfur (octasulfur)	10544-50-0	8.3 JN	na	na	na
Unknowns (total)		8.35 JN			
Glycols and alcohols		No detects			
Aldehydes					
Formaldehyde	50-00-0	13	na	na	na
Acetaldehyde	75-07-0	0.29 JB (in blank at 0.154, MDL 0.11)	na	na	na
Total Petroleum Hydrocarbons (TPH)					
Gasoline range		No detects			
Diesel range	na	9.8 J	na	na	na
Oil range		No detects			

Based on the analytical results, it is proposed to continue with removal of the former brine tanks vault slab floor and inspection of the underlying soil. As done previously, accumulated water in the vault will be pumped out, and sent to the BMS wastewater pre-treatment plant. Gray-stained soil within the vault footprint will be removed to a depth up to approximately 12 inches below the slab; this depth is not expected to extend beneath the foundation footings and is expected to be below the water table. The gray-stained soil will be staged in a roll-off container for off-site commercial disposal. To document soil conditions remaining, a soil sample will be collected from the base of the excavation and submitted for laboratory analysis as identified above.

Building 25 Demolition –Floor Drain Trap Sumps Plan

It is also proposed to dig a test pit adjacent to each of the two former cleanout trap sump structures associated with building floor drains and connecting buried sewer lines (see photos below). The sumps are adjacent to the former brine tanks vault and Phase 1 temporary monitoring well location T-42, which exhibited acetone impacts to soil at the water table (8 to 10 feet bgs) and groundwater (well screen 6 to 16 feet bgs). Soil samples will be field screened for discoloration, odor, texture and PID from the test pits beginning at surface grade and extending through the depth of the water table. Based on field screening, a soil sample will be selected from each test pit and submitted for analysis in accordance with the following USEPA SW-846 methods:

- VOC, including tentatively identified compounds (TIC) – 8260C
- Semi-volatile organic compounds (SVOC), including TIC – 8270D
- Glycols and alcohols – 8015D
- Aldehydes – 8315A
- Total petroleum hydrocarbons (TPH) gasoline, diesel, and oil-range – 8015D

Unless significant presumed contamination is detected by field screening, the test pits will be immediately refilled with the removed materials and Gorick will proceed with final grading of the demolition area.

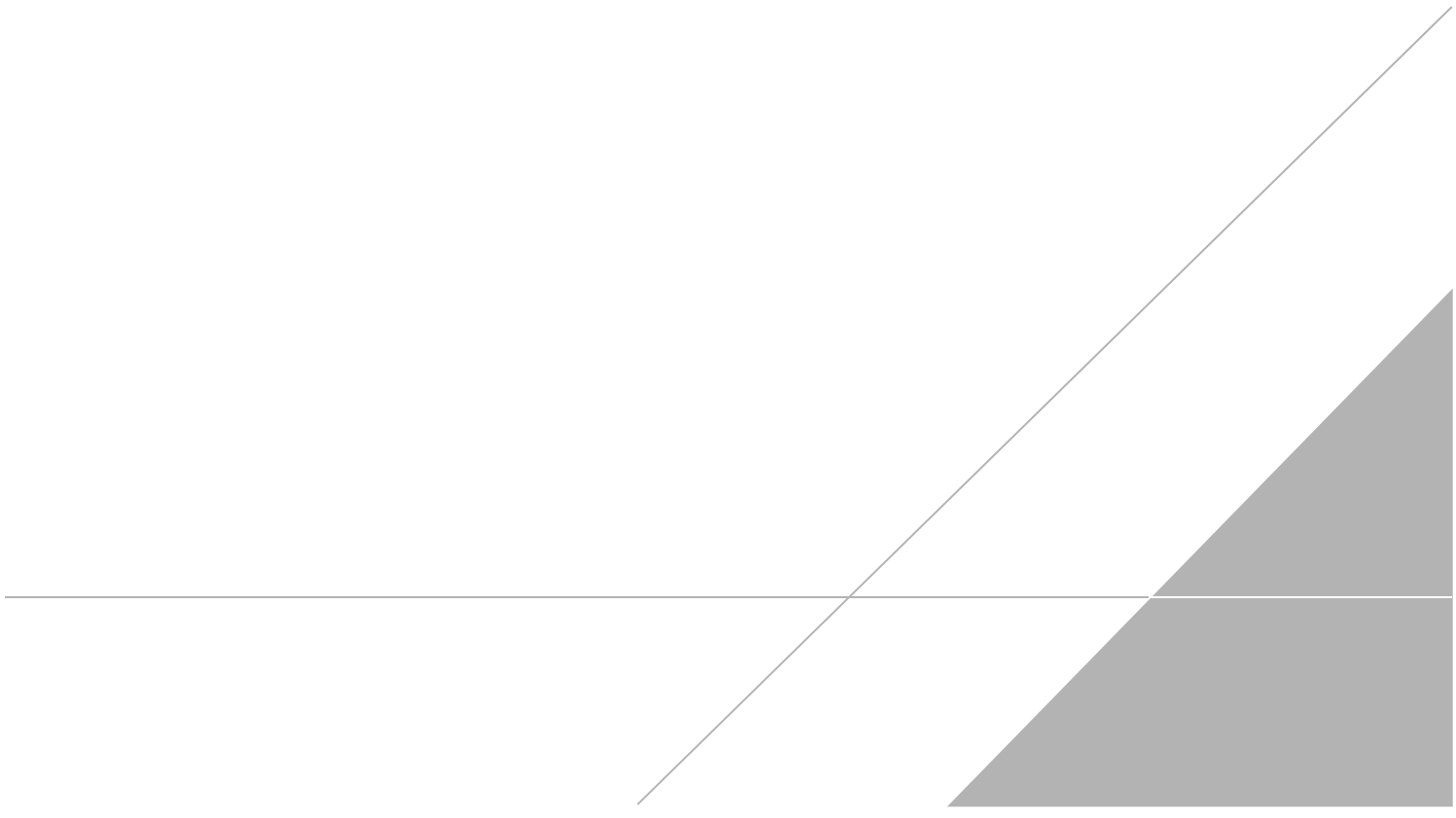
Former location of brine tanks vault (foreground) and floor drain trap sumps (background), looking south

Former location of floor drain trap sumps (foreground) and brine tanks vault (background), looking north

All field work will be conducted in accordance with existing project remedial investigation work plans, including the Field Sampling and Analysis Plan (FSAP), Quality Assurance Project Plan (QAPP), and Community Air Monitoring Plan (CAMP).

ATTACHMENT 2

Building 25 Demo Brine Tanks Vault Plan Addendum



Bristol-Myers Squibb Company (BMS)
NYSDEC BCP Site #C734138
Syracuse North Campus Restoration Area – East Syracuse, New York

Building 25 Demolition – Former Brine Tanks Vault Plan Addendum

As identified in the September 2018 Monthly Progress Report, remediation work commenced in the former Building 25 brine tanks vault on September 28, 2018. The work was conducted in accordance with the work plan submitted to the New York State Department of Environmental Conservation (NYSDEC) and New York State Department of Health (NYSDOH) on September 20 and approved by the NYSDEC by letter dated September 21, 2018.

Gorick Construction, Inc. (Gorick) pumped accumulated water out of the vault, removed the remaining vault floor concrete slab, and initiated excavation of the underlying stained soil. After removing approximately 12 inches of soil from most of the vault footprint (total approximately 10 cubic yards), a small quantity (estimate less than a quart total) of a yellowish oily substance was observed leaching in near the west wall of the excavation and floating as a film on the water surface. Work was halted, the oily liquid was collected with sorbent material, and grab samples of the water and oily liquid were submitted to Eurofins Lancaster Environmental Laboratories of Lancaster, PA for analysis. The water sample was submitted for analysis in accordance with the following USEPA SW-846 methods:

- Volatile organic compounds (VOC), including tentatively identified compounds (TIC) – 8260C
- Semi-volatile organic compounds (SVOC), including TIC – 8270D
- Glycols and alcohols – 8015D
- Aldehydes – 8315A
- Total petroleum hydrocarbons (TPH) gasoline, diesel, and oil-range – 8015D
- Target analyte list (TAL) metals – 6010C and 7470A

The oily liquid sample was submitted for analysis in accordance with the following USEPA SW-846 methods:

- TPH fingerprint – 8015D
- VOC, including TIC – 8260C
- SVOC, including TIC – 8270D
- Polychlorinated biphenyls (PCB) - 8082A

A preliminary laboratory report is attached. The oily liquid was reported to be most similar to a motor oil (i.e., lubricating oil).

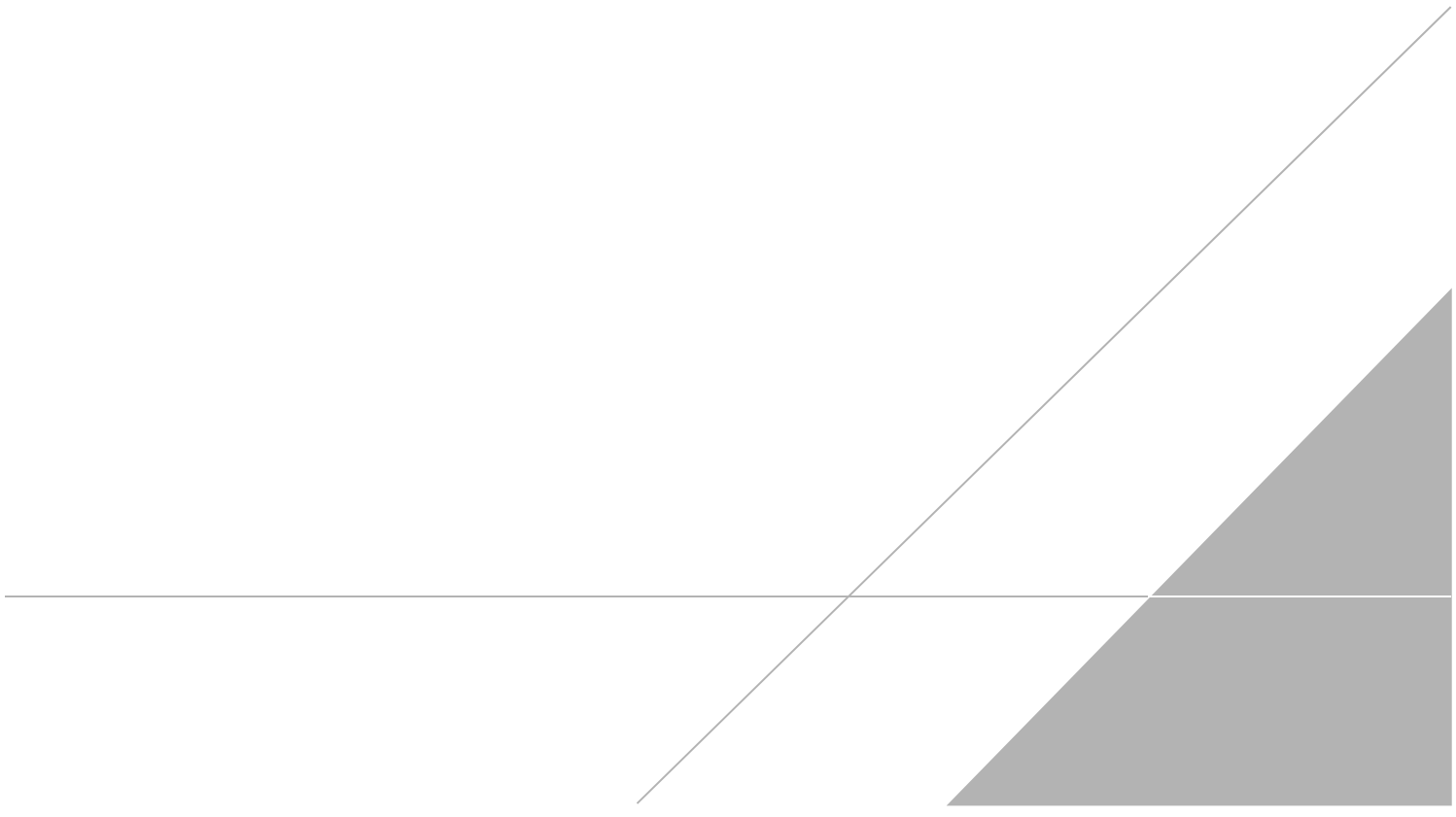
Based on the analytical results, it is proposed to continue with removal of the stained soil in the base of the vault. Accumulated water in the vault will be pumped to a frac tank. Oily liquid (if any) that flows into the excavation will be collected either in the excavation or in the frac tank. Water in the frac tank will be discharged to the BMS wastewater pre-treatment plant and accumulated oily liquid (if any) will be placed in a DOT-approved drum. Stained soil within the vault footprint will be removed to the extent practical. If appropriate based on conditions observed, the excavation may be extended into the basement area adjoining the vault. As done previously, stained soil will be temporarily staged on top of plastic sheeting next to the excavation and then loaded into a roll-off container for off-site commercial landfill disposal. As previously planned, at least one soil sample will be collected from the base of the excavation prior to backfilling and submitted for laboratory analysis for VOC, SVOC, glycols, alcohols, aldehydes, and TPH in accordance with the methods previously used for the stained soil.

If oily liquid is still flowing into the excavation after removal of the stained soil, then a monitoring well will be installed during backfilling. The monitoring well will be installed in a manner to allow for future gauging and removal of separate phase oil, if any. The frequency of monitoring would be determined based on conditions encountered and as set forth in a supplemental work plan addendum.

All field work will be conducted in accordance with existing project remedial investigation work plans, including the Field Sampling and Analysis Plan (FSAP), Quality Assurance Project Plan (QAPP), and Community Air Monitoring Plan (CAMP).

ATTACHMENT 3

CAMP Summary October 31, 2018 to November 2, 2018



Bristol-Myers Squibb Company (BMS)
NYSDEC BCP Site #C734138
Syracuse North Campus Restoration Area – East Syracuse, New York

Building 25 Demolition – Former Brine Tanks Vault Soil Excavation

Community Air Monitoring Plan (CAMP) Summary

Week Day	Date	Wind Direction	Temperature	Precipitation
Wednesday	Oct. 31	north	40s to 50s	Cloudy with spotty showers all day
Thursday	Nov. 01	south-southeast	40s to 50s	Persistent light rain all day
Friday	Nov. 02	south-southeast	40s to 50s	Morning drizzle clearing to warm, partly cloudy

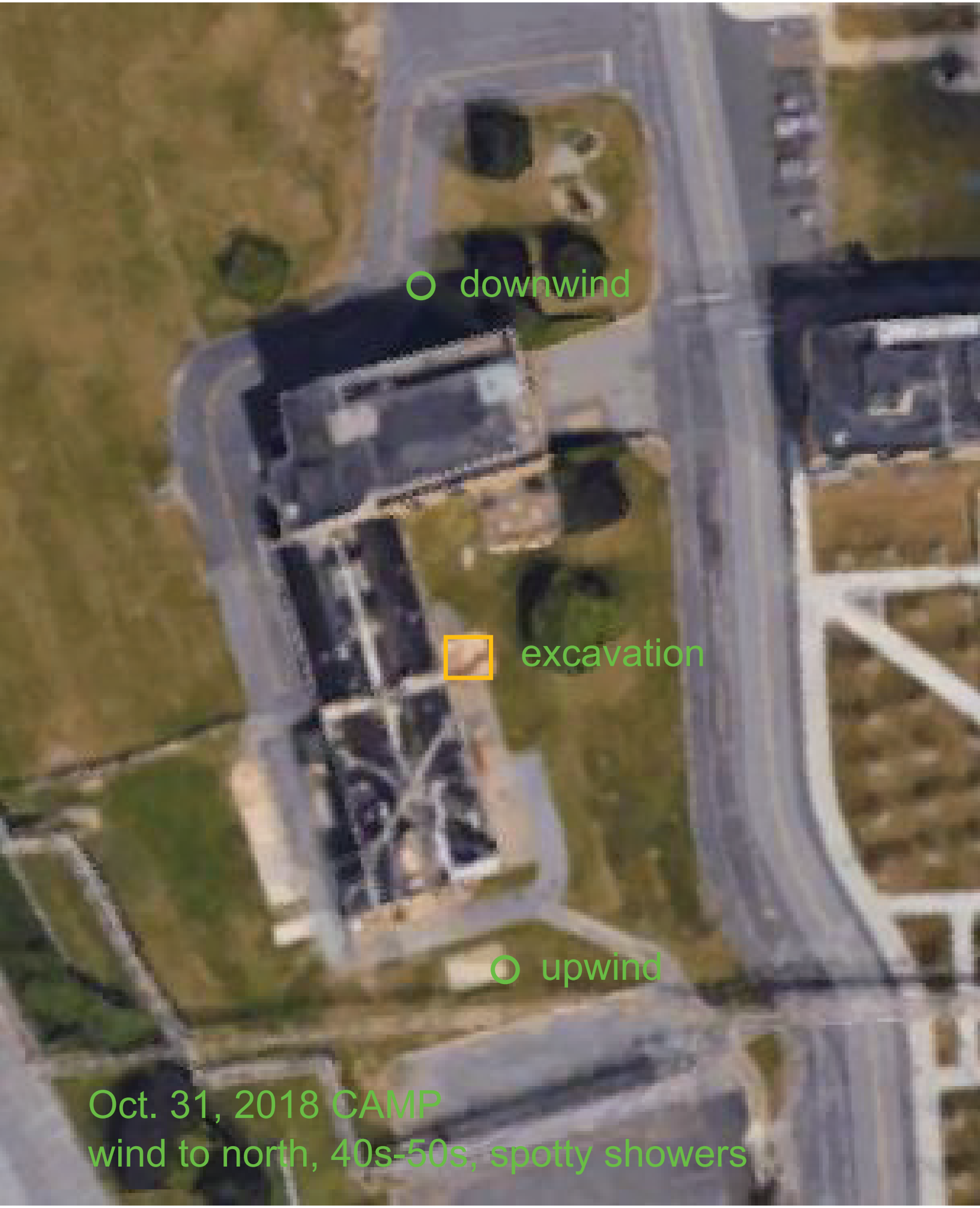
- One upwind and one downwind stations for dust (PM-10 particulates) and VOC (PID w/ 11.7 eV lamp). Note that dust monitoring was not conducted on Thursday due to persistent rain.
- See attached figures for locations of excavation and monitoring stations.
- No exceedances of action levels of 150 ug/m^3 for PM-10 particulates or 5 ppmv for VOC, as measured as 15-minute time-weighted averages of downwind readings greater than upwind (background).
- The maximum discrete PID headspace reading of a sample of excavated soil was 2.2 ppmv and discrete work zone PID readings were consistently non-detect or less than 1 ppmv.
- Monitoring data attached and summarized below.

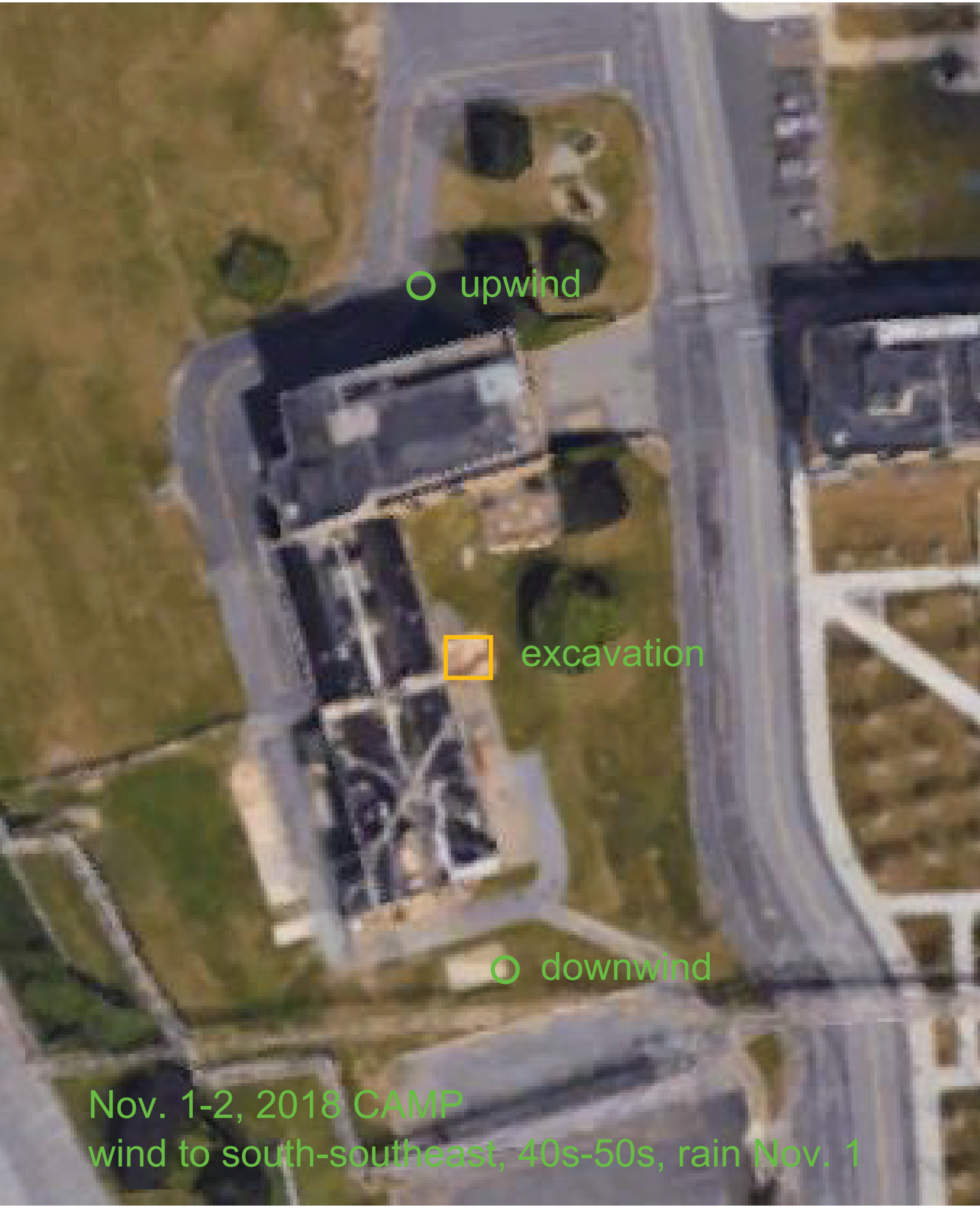
Monitoring Station	Dust (PM-10) Maximum (discrete) (ug/m^3)	VOC Maximum (discrete) (ppmv)	Site Activities
Upwind – Oct. 31	18	0.6	Dewater vault, excavate and stockpile stained soil.
Downwind – Oct. 31	60	0.7*	
Upwind – Nov. 1	No data - rain	5.5	Install recovery well, backfill excavation, transfer staged soil to roll-off containers, process frac tank water.
Downwind – Nov. 1	No data - rain	0.2	
Upwind – Nov. 2	33	11.7	Pump soil/gravel out of recovery well, surface grading, transfer staged soil to roll-off containers, rinse frac tank.
Downwind – Nov. 2	114	0.0	

* Note – The downwind PID on October 31 logged an artifact elevated reading for two minutes in the afternoon; no alarm registered on the unit and no source was evident in the work area.

Attachments:

- Figure of CAMP station locations – Oct. 31
- Figure of CAMP station locations – Nov. 1-2
- Upwind PID logged data Oct. 31
- Downwind PID logged data Oct. 31
- Upwind dust logged data Oct. 31
- Downwind dust logged data Oct. 31
- Upwind PID logged data Nov. 1 (two parts)
- Downwind PID logged data Nov. 1 (two parts)
- Upwind PID logged data Nov. 2
- Downwind PID logged data Nov. 2
- Upwind dust logged data Nov. 2
- Downwind dust logged data Nov. 2


downwind
excavation
upwind
Oct. 31, 2018 CAMP
wind to north, 40s-50s, spotty showers


upwind
excavation
downwind
Nov. 1-2, 2018 CAMP
wind to south-southeast, 40s-50s, rain Nov. 1

PID_FA01729_upwind_10_31_18

18/10/31 11:01

Summary

Unit Name	MiniRAE 3000(PGM-7320)
Unit SN	592-913005
Unit Firmware Ver	V2.16
Running Mode	Hygiene Mode
Datalog Mode	Auto
Diagnostic Mode	No
Stop Reason	Power Down
Site ID	12345678
User ID	12345678
Begin	10/31/2018 11:01:51
End	10/31/2018 15:00:00
Sample Period(s)	60
Number of Records	238
Sensor	PID(ppm)
Sensor SN	S023030337R6
Measure Type	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	100.0
Measurement Gas	Isobutylene
Calibration Time	10/26/2018 15:20
Peak	0.6
Min	0.0
Average	0.3

Datalog

Index	Date/Time	PID(ppm) (Avg)	PID(ppm) (Max)	PID(ppm) (Real)
001	10/31/2018 11:02:51	0.0	0.0	0.0
002	10/31/2018 11:03:51	0.0	0.0	0.0
003	10/31/2018 11:04:51	0.0	0.0	0.0
004	10/31/2018 11:05:51	0.0	0.0	0.0
005	10/31/2018 11:06:51	0.0	0.0	0.0
006	10/31/2018 11:07:51	0.0	0.0	0.0

007	10/31/2018 11:08:51	0.0	0.0	0.0
008	10/31/2018 11:09:51	0.0	0.0	0.0
009	10/31/2018 11:10:51	0.0	0.0	0.0
010	10/31/2018 11:11:51	0.0	0.0	0.0
011	10/31/2018 11:12:51	0.0	0.0	0.0
012	10/31/2018 11:13:51	0.0	0.0	0.0
013	10/31/2018 11:14:51	0.0	0.0	0.0
014	10/31/2018 11:15:51	0.0	0.0	0.0
015	10/31/2018 11:16:51	0.0	0.0	0.0
016	10/31/2018 11:17:51	0.0	0.0	0.0
017	10/31/2018 11:18:51	0.0	0.0	0.0
018	10/31/2018 11:19:51	0.0	0.4	0.1
019	10/31/2018 11:20:51	0.3	1.7	0.0
020	10/31/2018 11:21:51	0.3	0.8	0.4
021	10/31/2018 11:22:51	0.4	0.5	0.4
022	10/31/2018 11:23:51	0.4	0.5	0.5
023	10/31/2018 11:24:51	0.5	0.6	0.3
024	10/31/2018 11:25:51	0.5	0.6	0.6
025	10/31/2018 11:26:51	0.6	0.7	0.6
026	10/31/2018 11:27:51	0.6	0.6	0.6
027	10/31/2018 11:28:51	0.6	0.6	0.6
028	10/31/2018 11:29:51	0.6	0.6	0.6
029	10/31/2018 11:30:51	0.6	0.6	0.6
030	10/31/2018 11:31:51	0.6	0.6	0.6
031	10/31/2018 11:32:51	0.6	0.6	0.6
032	10/31/2018 11:33:51	0.6	0.6	0.6
033	10/31/2018 11:34:51	0.6	0.6	0.6
034	10/31/2018 11:35:51	0.6	0.6	0.6
035	10/31/2018 11:36:51	0.6	0.6	0.6
036	10/31/2018 11:37:51	0.6	0.6	0.6
037	10/31/2018 11:38:51	0.6	0.6	0.6
038	10/31/2018 11:39:51	0.6	0.6	0.6
039	10/31/2018 11:40:51	0.6	0.6	0.6
040	10/31/2018 11:41:51	0.6	0.6	0.6
041	10/31/2018 11:42:51	0.6	0.6	0.6
042	10/31/2018 11:43:51	0.6	0.6	0.6
043	10/31/2018 11:44:51	0.6	0.6	0.6
044	10/31/2018 11:45:51	0.6	0.6	0.6
045	10/31/2018 11:46:51	0.6	0.6	0.6
046	10/31/2018 11:47:51	0.6	0.6	0.6
047	10/31/2018 11:48:51	0.6	0.6	0.6
048	10/31/2018 11:49:51	0.6	0.6	0.6
049	10/31/2018 11:50:51	0.6	0.6	0.6
050	10/31/2018 11:51:51	0.6	0.6	0.6
051	10/31/2018 11:52:51	0.6	0.6	0.5
052	10/31/2018 11:53:51	0.6	0.6	0.6
053	10/31/2018 11:54:51	0.6	0.6	0.6
054	10/31/2018 11:55:51	0.6	0.6	0.6

055	10/31/2018 11:56:51	0.6	0.6	0.5
056	10/31/2018 11:57:51	0.6	0.6	0.6
057	10/31/2018 11:58:51	0.6	0.6	0.6
058	10/31/2018 11:59:51	0.6	0.6	0.6
059	10/31/2018 12:00:51	0.6	0.6	0.6
060	10/31/2018 12:01:51	0.6	0.6	0.6
061	10/31/2018 12:02:51	0.6	0.6	0.5
062	10/31/2018 12:03:51	0.6	0.6	0.6
063	10/31/2018 12:04:51	0.5	0.6	0.5
064	10/31/2018 12:05:51	0.5	0.6	0.6
065	10/31/2018 12:06:51	0.5	0.6	0.5
066	10/31/2018 12:07:51	0.5	0.5	0.5
067	10/31/2018 12:08:51	0.5	0.5	0.5
068	10/31/2018 12:09:51	0.5	0.5	0.5
069	10/31/2018 12:10:51	0.5	0.5	0.5
070	10/31/2018 12:11:51	0.5	0.5	0.5
071	10/31/2018 12:12:51	0.5	0.5	0.5
072	10/31/2018 12:13:51	0.5	0.5	0.5
073	10/31/2018 12:14:51	0.5	0.5	0.5
074	10/31/2018 12:15:51	0.5	0.5	0.5
075	10/31/2018 12:16:51	0.5	0.5	0.5
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077	10/31/2018 12:18:51	0.5	0.5	0.5
078	10/31/2018 12:19:51	0.5	0.5	0.5
079	10/31/2018 12:20:51	0.5	0.5	0.5
080	10/31/2018 12:21:51	0.5	0.5	0.5
081	10/31/2018 12:22:51	0.5	0.5	0.5
082	10/31/2018 12:23:51	0.5	0.5	0.5
083	10/31/2018 12:24:51	0.5	0.5	0.5
084	10/31/2018 12:25:51	0.5	0.5	0.5
085	10/31/2018 12:26:51	0.5	0.5	0.5
086	10/31/2018 12:27:51	0.5	0.5	0.5
087	10/31/2018 12:28:51	0.5	0.5	0.5
088	10/31/2018 12:29:51	0.5	0.6	0.5
089	10/31/2018 12:30:51	0.5	0.5	0.5
090	10/31/2018 12:31:51	0.5	0.5	0.5
091	10/31/2018 12:32:51	0.5	0.5	0.5
092	10/31/2018 12:33:51	0.5	0.6	0.5
093	10/31/2018 12:34:51	0.5	0.5	0.5
094	10/31/2018 12:35:51	0.5	0.5	0.5
095	10/31/2018 12:36:51	0.5	0.5	0.5
096	10/31/2018 12:37:51	0.5	0.5	0.5
097	10/31/2018 12:38:51	0.5	0.6	0.5
098	10/31/2018 12:39:51	0.5	0.6	0.5
099	10/31/2018 12:40:51	0.5	0.5	0.5
100	10/31/2018 12:41:51	0.5	0.6	0.5
101	10/31/2018 12:42:51	0.5	0.5	0.5
102	10/31/2018 12:43:51	0.5	0.5	0.5

103	10/31/2018 12:44:51	0.5	0.6	0.5
104	10/31/2018 12:45:51	0.5	0.5	0.5
105	10/31/2018 12:46:51	0.5	0.5	0.5
106	10/31/2018 12:47:51	0.5	0.5	0.5
107	10/31/2018 12:48:51	0.5	0.5	0.5
108	10/31/2018 12:49:51	0.5	0.5	0.5
109	10/31/2018 12:50:51	0.5	0.6	0.4
110	10/31/2018 12:51:51	0.4	0.5	0.4
111	10/31/2018 12:52:51	0.4	0.5	0.4
112	10/31/2018 12:53:51	0.4	0.5	0.5
113	10/31/2018 12:54:51	0.4	0.5	0.4
114	10/31/2018 12:55:51	0.4	0.5	0.4
115	10/31/2018 12:56:51	0.4	0.5	0.4
116	10/31/2018 12:57:51	0.4	0.5	0.4
117	10/31/2018 12:58:51	0.4	0.5	0.4
118	10/31/2018 12:59:51	0.4	0.4	0.4
119	10/31/2018 13:00:51	0.4	0.5	0.4
120	10/31/2018 13:01:51	0.4	0.5	0.5
121	10/31/2018 13:02:51	0.4	0.5	0.4
122	10/31/2018 13:03:51	0.4	0.4	0.4
123	10/31/2018 13:04:51	0.4	0.4	0.4
124	10/31/2018 13:05:51	0.4	0.4	0.4
125	10/31/2018 13:06:51	0.4	0.4	0.4
126	10/31/2018 13:07:51	0.4	0.4	0.4
127	10/31/2018 13:08:51	0.4	0.4	0.4
128	10/31/2018 13:09:51	0.4	0.4	0.4
129	10/31/2018 13:10:51	0.4	0.4	0.4
130	10/31/2018 13:11:51	0.4	0.4	0.4
131	10/31/2018 13:12:51	0.4	0.4	0.4
132	10/31/2018 13:13:51	0.4	0.4	0.3
133	10/31/2018 13:14:51	0.4	0.4	0.3
134	10/31/2018 13:15:51	0.4	0.4	0.4
135	10/31/2018 13:16:51	0.3	0.4	0.3
136	10/31/2018 13:17:51	0.3	0.3	0.3
137	10/31/2018 13:18:51	0.3	0.3	0.3
138	10/31/2018 13:19:51	0.3	0.3	0.3
139	10/31/2018 13:20:51	0.3	0.3	0.3
140	10/31/2018 13:21:51	0.3	0.3	0.3
141	10/31/2018 13:22:51	0.3	0.3	0.3
142	10/31/2018 13:23:51	0.3	0.3	0.3
143	10/31/2018 13:24:51	0.3	0.3	0.3
144	10/31/2018 13:25:51	0.3	0.3	0.3
145	10/31/2018 13:26:51	0.3	0.3	0.3
146	10/31/2018 13:27:51	0.3	0.3	0.3
147	10/31/2018 13:28:51	0.3	0.3	0.3
148	10/31/2018 13:29:51	0.3	0.3	0.3
149	10/31/2018 13:30:51	0.3	0.3	0.3
150	10/31/2018 13:31:51	0.2	0.3	0.2

151	10/31/2018 13:32:51	0.2	0.3	0.2
152	10/31/2018 13:33:51	0.2	0.3	0.3
153	10/31/2018 13:34:51	0.2	0.3	0.2
154	10/31/2018 13:35:51	0.2	0.3	0.2
155	10/31/2018 13:36:51	0.2	0.3	0.2
156	10/31/2018 13:37:51	0.2	0.3	0.2
157	10/31/2018 13:38:51	0.2	0.3	0.2
158	10/31/2018 13:39:51	0.2	0.2	0.2
159	10/31/2018 13:40:51	0.2	0.2	0.2
160	10/31/2018 13:41:51	0.2	0.2	0.2
161	10/31/2018 13:42:51	0.2	0.2	0.2
162	10/31/2018 13:43:51	0.2	0.2	0.2
163	10/31/2018 13:44:51	0.2	0.2	0.2
164	10/31/2018 13:45:51	0.2	0.2	0.2
165	10/31/2018 13:46:51	0.2	0.2	0.2
166	10/31/2018 13:47:51	0.2	0.2	0.2
167	10/31/2018 13:48:51	0.2	0.2	0.2
168	10/31/2018 13:49:51	0.2	0.2	0.2
169	10/31/2018 13:50:51	0.2	0.2	0.2
170	10/31/2018 13:51:51	0.2	0.2	0.2
171	10/31/2018 13:52:51	0.2	0.2	0.2
172	10/31/2018 13:53:51	0.2	0.2	0.2
173	10/31/2018 13:54:51	0.2	0.2	0.2
174	10/31/2018 13:55:51	0.2	0.2	0.2
175	10/31/2018 13:56:51	0.2	0.2	0.2
176	10/31/2018 13:57:51	0.2	0.2	0.2
177	10/31/2018 13:58:51	0.2	0.2	0.2
178	10/31/2018 13:59:51	0.2	0.2	0.2
179	10/31/2018 14:00:51	0.2	0.2	0.2
180	10/31/2018 14:01:51	0.2	0.2	0.2
181	10/31/2018 14:02:51	0.2	0.2	0.2
182	10/31/2018 14:03:51	0.2	0.2	0.2
183	10/31/2018 14:04:51	0.2	0.2	0.2
184	10/31/2018 14:05:51	0.2	0.2	0.2
185	10/31/2018 14:06:51	0.2	0.2	0.2
186	10/31/2018 14:07:51	0.2	0.2	0.2
187	10/31/2018 14:08:51	0.2	0.2	0.2
188	10/31/2018 14:09:51	0.2	0.2	0.2
189	10/31/2018 14:10:51	0.2	0.2	0.2
190	10/31/2018 14:11:51	0.2	0.2	0.2
191	10/31/2018 14:12:51	0.2	0.2	0.2
192	10/31/2018 14:13:51	0.2	0.2	0.2
193	10/31/2018 14:14:51	0.2	0.2	0.2
194	10/31/2018 14:15:51	0.2	0.2	0.2
195	10/31/2018 14:16:51	0.2	0.3	0.2
196	10/31/2018 14:17:51	0.2	0.2	0.2
197	10/31/2018 14:18:51	0.2	0.2	0.2
198	10/31/2018 14:19:51	0.2	0.2	0.2

PID_FA01729_upwind_10_31_18

199	10/31/2018 14:20:51	0.2	0.2	0.2
200	10/31/2018 14:21:51	0.2	0.2	0.2
201	10/31/2018 14:22:51	0.2	0.2	0.2
202	10/31/2018 14:23:51	0.2	0.2	0.2
203	10/31/2018 14:24:51	0.2	0.2	0.2
204	10/31/2018 14:25:51	0.2	0.2	0.2
205	10/31/2018 14:26:51	0.2	0.2	0.2
206	10/31/2018 14:27:51	0.2	0.3	0.2
207	10/31/2018 14:28:51	0.2	0.2	0.2
208	10/31/2018 14:29:51	0.2	0.2	0.2
209	10/31/2018 14:30:51	0.2	0.2	0.2
210	10/31/2018 14:31:51	0.2	0.2	0.2
211	10/31/2018 14:32:51	0.2	0.3	0.2
212	10/31/2018 14:33:51	0.2	0.2	0.2
213	10/31/2018 14:34:51	0.2	0.2	0.2
214	10/31/2018 14:35:51	0.2	0.2	0.2
215	10/31/2018 14:36:51	0.2	0.2	0.2
216	10/31/2018 14:37:51	0.2	0.2	0.2
217	10/31/2018 14:38:51	0.2	0.2	0.2
218	10/31/2018 14:39:51	0.2	0.2	0.2
219	10/31/2018 14:40:51	0.2	0.2	0.2
220	10/31/2018 14:41:51	0.2	0.2	0.2
221	10/31/2018 14:42:51	0.2	0.2	0.2
222	10/31/2018 14:43:51	0.2	0.2	0.2
223	10/31/2018 14:44:51	0.2	0.3	0.2
224	10/31/2018 14:45:51	0.2	0.2	0.2
225	10/31/2018 14:46:51	0.2	0.3	0.2
226	10/31/2018 14:47:51	0.2	0.3	0.2
227	10/31/2018 14:48:51	0.2	0.3	0.3
228	10/31/2018 14:49:51	0.2	0.3	0.2
229	10/31/2018 14:50:51	0.2	0.3	0.3
230	10/31/2018 14:51:51	0.2	0.3	0.2
231	10/31/2018 14:52:51	0.2	0.3	0.3
232	10/31/2018 14:53:51	0.2	0.3	0.2
233	10/31/2018 14:54:51	0.3	0.3	0.2
234	10/31/2018 14:55:51	0.2	0.3	0.3
235	10/31/2018 14:56:51	0.2	0.3	0.2
236	10/31/2018 14:57:51	0.2	0.3	0.2
237	10/31/2018 14:58:51	0.2	0.3	0.3
238	10/31/2018 14:59:51	0.2	0.3	0.3
Peak		0.6	1.7	0.6
Min		0.0	0.0	0.0
Average		0.3	0.4	0.3

****

TWA/STEL

Index	Date/Time	PID(ppm) (TWA)	PID(ppm) (STEL)

001	10/31/2018 11:02:51	0.0	---
002	10/31/2018 11:03:51	0.0	---
003	10/31/2018 11:04:51	0.0	---
004	10/31/2018 11:05:51	0.0	---
005	10/31/2018 11:06:51	0.0	---
006	10/31/2018 11:07:51	0.0	---
007	10/31/2018 11:08:51	0.0	---
008	10/31/2018 11:09:51	0.0	---
009	10/31/2018 11:10:51	0.0	---
010	10/31/2018 11:11:51	0.0	---
011	10/31/2018 11:12:51	0.0	---
012	10/31/2018 11:13:51	0.0	---
013	10/31/2018 11:14:51	0.0	---
014	10/31/2018 11:15:51	0.0	---
015	10/31/2018 11:16:51	0.0	0.0
016	10/31/2018 11:17:51	0.0	0.0
017	10/31/2018 11:18:51	0.0	0.0
018	10/31/2018 11:19:51	0.0	0.0
019	10/31/2018 11:20:51	0.0	0.0
020	10/31/2018 11:21:51	0.0	0.0
021	10/31/2018 11:22:51	0.0	0.1
022	10/31/2018 11:23:51	0.0	0.1
023	10/31/2018 11:24:51	0.0	0.1
024	10/31/2018 11:25:51	0.0	0.2
025	10/31/2018 11:26:51	0.0	0.2
026	10/31/2018 11:27:51	0.0	0.2
027	10/31/2018 11:28:51	0.0	0.3
028	10/31/2018 11:29:51	0.0	0.3
029	10/31/2018 11:30:51	0.0	0.4
030	10/31/2018 11:31:51	0.0	0.4
031	10/31/2018 11:32:51	0.0	0.4
032	10/31/2018 11:33:51	0.0	0.5
033	10/31/2018 11:34:51	0.0	0.5
034	10/31/2018 11:35:51	0.0	0.5
035	10/31/2018 11:36:51	0.0	0.6
036	10/31/2018 11:37:51	0.0	0.6
037	10/31/2018 11:38:51	0.0	0.6
038	10/31/2018 11:39:51	0.0	0.6
039	10/31/2018 11:40:51	0.0	0.6
040	10/31/2018 11:41:51	0.0	0.6
041	10/31/2018 11:42:51	0.0	0.6
042	10/31/2018 11:43:51	0.0	0.6
043	10/31/2018 11:44:51	0.0	0.6
044	10/31/2018 11:45:51	0.0	0.6
045	10/31/2018 11:46:51	0.0	0.6
046	10/31/2018 11:47:51	0.0	0.6
047	10/31/2018 11:48:51	0.0	0.6
048	10/31/2018 11:49:51	0.0	0.6

049	10/31/2018 11:50:51	0.0	0.6
050	10/31/2018 11:51:51	0.0	0.6
051	10/31/2018 11:52:51	0.0	0.6
052	10/31/2018 11:53:51	0.0	0.6
053	10/31/2018 11:54:51	0.0	0.6
054	10/31/2018 11:55:51	0.0	0.6
055	10/31/2018 11:56:51	0.0	0.6
056	10/31/2018 11:57:51	0.0	0.6
057	10/31/2018 11:58:51	0.0	0.6
058	10/31/2018 11:59:51	0.0	0.6
059	10/31/2018 12:00:51	0.0	0.6
060	10/31/2018 12:01:51	0.0	0.6
061	10/31/2018 12:02:51	0.1	0.6
062	10/31/2018 12:03:51	0.1	0.6
063	10/31/2018 12:04:51	0.1	0.6
064	10/31/2018 12:05:51	0.1	0.6
065	10/31/2018 12:06:51	0.1	0.6
066	10/31/2018 12:07:51	0.1	0.6
067	10/31/2018 12:08:51	0.1	0.6
068	10/31/2018 12:09:51	0.1	0.6
069	10/31/2018 12:10:51	0.1	0.6
070	10/31/2018 12:11:51	0.1	0.6
071	10/31/2018 12:12:51	0.1	0.6
072	10/31/2018 12:13:51	0.1	0.6
073	10/31/2018 12:14:51	0.1	0.6
074	10/31/2018 12:15:51	0.1	0.6
075	10/31/2018 12:16:51	0.1	0.6
076	10/31/2018 12:17:51	0.1	0.5
077	10/31/2018 12:18:51	0.1	0.5
078	10/31/2018 12:19:51	0.1	0.5
079	10/31/2018 12:20:51	0.1	0.5
080	10/31/2018 12:21:51	0.1	0.5
081	10/31/2018 12:22:51	0.1	0.5
082	10/31/2018 12:23:51	0.1	0.5
083	10/31/2018 12:24:51	0.1	0.5
084	10/31/2018 12:25:51	0.1	0.5
085	10/31/2018 12:26:51	0.1	0.5
086	10/31/2018 12:27:51	0.1	0.5
087	10/31/2018 12:28:51	0.1	0.5
088	10/31/2018 12:29:51	0.1	0.5
089	10/31/2018 12:30:51	0.1	0.5
090	10/31/2018 12:31:51	0.1	0.5
091	10/31/2018 12:32:51	0.1	0.5
092	10/31/2018 12:33:51	0.1	0.5
093	10/31/2018 12:34:51	0.1	0.5
094	10/31/2018 12:35:51	0.1	0.5
095	10/31/2018 12:36:51	0.1	0.5
096	10/31/2018 12:37:51	0.1	0.5

097	10/31/2018 12:38:51	0.1	0.5
098	10/31/2018 12:39:51	0.1	0.5
099	10/31/2018 12:40:51	0.1	0.5
100	10/31/2018 12:41:51	0.1	0.5
101	10/31/2018 12:42:51	0.1	0.5
102	10/31/2018 12:43:51	0.1	0.5
103	10/31/2018 12:44:51	0.1	0.5
104	10/31/2018 12:45:51	0.1	0.5
105	10/31/2018 12:46:51	0.1	0.5
106	10/31/2018 12:47:51	0.1	0.5
107	10/31/2018 12:48:51	0.1	0.5
108	10/31/2018 12:49:51	0.1	0.5
109	10/31/2018 12:50:51	0.1	0.5
110	10/31/2018 12:51:51	0.1	0.5
111	10/31/2018 12:52:51	0.1	0.5
112	10/31/2018 12:53:51	0.1	0.5
113	10/31/2018 12:54:51	0.1	0.5
114	10/31/2018 12:55:51	0.1	0.5
115	10/31/2018 12:56:51	0.1	0.5
116	10/31/2018 12:57:51	0.1	0.5
117	10/31/2018 12:58:51	0.1	0.5
118	10/31/2018 12:59:51	0.1	0.5
119	10/31/2018 13:00:51	0.1	0.5
120	10/31/2018 13:01:51	0.1	0.5
121	10/31/2018 13:02:51	0.1	0.5
122	10/31/2018 13:03:51	0.1	0.5
123	10/31/2018 13:04:51	0.1	0.4
124	10/31/2018 13:05:51	0.1	0.4
125	10/31/2018 13:06:51	0.1	0.4
126	10/31/2018 13:07:51	0.1	0.4
127	10/31/2018 13:08:51	0.1	0.4
128	10/31/2018 13:09:51	0.1	0.4
129	10/31/2018 13:10:51	0.1	0.4
130	10/31/2018 13:11:51	0.1	0.4
131	10/31/2018 13:12:51	0.1	0.4
132	10/31/2018 13:13:51	0.1	0.4
133	10/31/2018 13:14:51	0.1	0.4
134	10/31/2018 13:15:51	0.1	0.4
135	10/31/2018 13:16:51	0.1	0.4
136	10/31/2018 13:17:51	0.1	0.4
137	10/31/2018 13:18:51	0.1	0.4
138	10/31/2018 13:19:51	0.1	0.4
139	10/31/2018 13:20:51	0.1	0.4
140	10/31/2018 13:21:51	0.1	0.4
141	10/31/2018 13:22:51	0.1	0.4
142	10/31/2018 13:23:51	0.1	0.4
143	10/31/2018 13:24:51	0.1	0.4
144	10/31/2018 13:25:51	0.1	0.3

145	10/31/2018 13:26:51	0.1	0.3
146	10/31/2018 13:27:51	0.1	0.3
147	10/31/2018 13:28:51	0.1	0.3
148	10/31/2018 13:29:51	0.1	0.3
149	10/31/2018 13:30:51	0.1	0.3
150	10/31/2018 13:31:51	0.1	0.3
151	10/31/2018 13:32:51	0.1	0.3
152	10/31/2018 13:33:51	0.1	0.3
153	10/31/2018 13:34:51	0.1	0.3
154	10/31/2018 13:35:51	0.1	0.3
155	10/31/2018 13:36:51	0.1	0.3
156	10/31/2018 13:37:51	0.1	0.3
157	10/31/2018 13:38:51	0.1	0.3
158	10/31/2018 13:39:51	0.1	0.3
159	10/31/2018 13:40:51	0.1	0.3
160	10/31/2018 13:41:51	0.1	0.3
161	10/31/2018 13:42:51	0.1	0.2
162	10/31/2018 13:43:51	0.1	0.2
163	10/31/2018 13:44:51	0.1	0.2
164	10/31/2018 13:45:51	0.1	0.2
165	10/31/2018 13:46:51	0.1	0.2
166	10/31/2018 13:47:51	0.1	0.2
167	10/31/2018 13:48:51	0.1	0.2
168	10/31/2018 13:49:51	0.1	0.2
169	10/31/2018 13:50:51	0.1	0.2
170	10/31/2018 13:51:51	0.1	0.2
171	10/31/2018 13:52:51	0.1	0.2
172	10/31/2018 13:53:51	0.1	0.2
173	10/31/2018 13:54:51	0.1	0.2
174	10/31/2018 13:55:51	0.1	0.2
175	10/31/2018 13:56:51	0.1	0.2
176	10/31/2018 13:57:51	0.1	0.2
177	10/31/2018 13:58:51	0.1	0.2
178	10/31/2018 13:59:51	0.1	0.2
179	10/31/2018 14:00:51	0.1	0.2
180	10/31/2018 14:01:51	0.1	0.2
181	10/31/2018 14:02:51	0.1	0.2
182	10/31/2018 14:03:51	0.1	0.2
183	10/31/2018 14:04:51	0.1	0.2
184	10/31/2018 14:05:51	0.1	0.2
185	10/31/2018 14:06:51	0.1	0.2
186	10/31/2018 14:07:51	0.1	0.2
187	10/31/2018 14:08:51	0.1	0.2
188	10/31/2018 14:09:51	0.1	0.2
189	10/31/2018 14:10:51	0.1	0.2
190	10/31/2018 14:11:51	0.1	0.2
191	10/31/2018 14:12:51	0.1	0.2
192	10/31/2018 14:13:51	0.1	0.2

193	10/31/2018 14:14:51	0.1	0.2
194	10/31/2018 14:15:51	0.1	0.2
195	10/31/2018 14:16:51	0.2	0.2
196	10/31/2018 14:17:51	0.2	0.2
197	10/31/2018 14:18:51	0.2	0.2
198	10/31/2018 14:19:51	0.2	0.2
199	10/31/2018 14:20:51	0.2	0.2
200	10/31/2018 14:21:51	0.2	0.2
201	10/31/2018 14:22:51	0.2	0.2
202	10/31/2018 14:23:51	0.2	0.2
203	10/31/2018 14:24:51	0.2	0.2
204	10/31/2018 14:25:51	0.2	0.2
205	10/31/2018 14:26:51	0.2	0.2
206	10/31/2018 14:27:51	0.2	0.2
207	10/31/2018 14:28:51	0.2	0.2
208	10/31/2018 14:29:51	0.2	0.2
209	10/31/2018 14:30:51	0.2	0.2
210	10/31/2018 14:31:51	0.2	0.2
211	10/31/2018 14:32:51	0.2	0.2
212	10/31/2018 14:33:51	0.2	0.2
213	10/31/2018 14:34:51	0.2	0.2
214	10/31/2018 14:35:51	0.2	0.2
215	10/31/2018 14:36:51	0.2	0.2
216	10/31/2018 14:37:51	0.2	0.2
217	10/31/2018 14:38:51	0.2	0.2
218	10/31/2018 14:39:51	0.2	0.2
219	10/31/2018 14:40:51	0.2	0.2
220	10/31/2018 14:41:51	0.2	0.2
221	10/31/2018 14:42:51	0.2	0.2
222	10/31/2018 14:43:51	0.2	0.2
223	10/31/2018 14:44:51	0.2	0.2
224	10/31/2018 14:45:51	0.2	0.2
225	10/31/2018 14:46:51	0.2	0.2
226	10/31/2018 14:47:51	0.2	0.2
227	10/31/2018 14:48:51	0.2	0.2
228	10/31/2018 14:49:51	0.2	0.2
229	10/31/2018 14:50:51	0.2	0.2
230	10/31/2018 14:51:51	0.2	0.2
231	10/31/2018 14:52:51	0.2	0.2
232	10/31/2018 14:53:51	0.2	0.2
233	10/31/2018 14:54:51	0.2	0.2
234	10/31/2018 14:55:51	0.2	0.2
235	10/31/2018 14:56:51	0.2	0.2
236	10/31/2018 14:57:51	0.2	0.2
237	10/31/2018 14:58:51	0.2	0.2
238	10/31/2018 14:59:51	0.2	0.3

PID_Downwind_10_31_18

18/10/31 10:56

Summary

Unit Name	MiniRAE 3000(PGM-7320)
Unit SN	592-912589
Unit Firmware Ver	V1.20A
Running Mode	Hygiene Mode
Measure Type	Avg; Max; Real
Datalog Mode	Continuous
Datalog Type	Auto
Diagnostic Mode	No
Stop Reason	Power Down
Site ID	12345678
User ID	12345678
Begin	10/31/2018 10:56:51
End	10/31/2018 14:54:59
Sample Period(s)	60
Number of Records	238
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	10/26/2018 15:00
Peak	1610612.736
Min	0.000
Average	12759.173

Datalog

Index	Date/Time	VOC(ppm) (Avg)	VOC(ppm) (Max)	VOC(ppm) (Real)
001	10/31/2018 10:57:51	0.718	0.874	0.708
002	10/31/2018 10:58:51	0.521	0.697	0.459
003	10/31/2018 10:59:51	0.494	0.669	0.425
004	10/31/2018 11:00:51	0.425	0.590	0.406
005	10/31/2018 11:01:51	0.372	0.594	0.347
006	10/31/2018 11:02:51	0.375	0.510	0.414

		PID_Downwind_10_31_18		
007	10/31/2018 11:03:51	0.285	0.463	0.275
008	10/31/2018 11:04:51	0.173	0.291	0.110
009	10/31/2018 11:05:51	0.194	0.346	0.204
010	10/31/2018 11:06:51	0.161	0.314	0.030
011	10/31/2018 11:07:51	0.159	0.349	0.106
012	10/31/2018 11:08:51	0.127	0.313	0.231
013	10/31/2018 11:09:51	0.080	0.294	0.116
014	10/31/2018 11:10:51	0.115	0.274	0.052
015	10/31/2018 11:11:51	0.093	0.237	0.011
016	10/31/2018 11:12:51	0.059	0.162	0.133
017	10/31/2018 11:13:51	0.090	0.205	0.048
018	10/31/2018 11:14:51	0.062	0.194	0.053
019	10/31/2018 11:15:51	0.075	0.211	0.104
020	10/31/2018 11:16:51	0.071	0.245	0.038
021	10/31/2018 11:17:51	0.067	0.162	0.027
022	10/31/2018 11:18:51	0.063	0.217	0.217
023	10/31/2018 11:19:51	0.055	0.200	0.000
024	10/31/2018 11:20:51	0.027	0.112	0.058
025	10/31/2018 11:21:51	0.042	0.106	0.087
026	10/31/2018 11:22:51	0.045	0.174	0.000
027	10/31/2018 11:23:51	0.044	0.208	0.139
028	10/31/2018 11:24:51	0.047	0.185	0.119
029	10/31/2018 11:25:51	0.012	0.109	0.000
030	10/31/2018 11:26:51	0.042	0.168	0.017
031	10/31/2018 11:27:51	0.021	0.172	0.035
032	10/31/2018 11:28:51	0.015	0.104	0.000
033	10/31/2018 11:29:51	0.031	0.097	0.000
034	10/31/2018 11:30:51	0.058	0.200	0.041
035	10/31/2018 11:31:51	0.028	0.137	0.000
036	10/31/2018 11:32:51	0.023	0.107	0.107
037	10/31/2018 11:33:51	0.014	0.134	0.000
038	10/31/2018 11:34:51	0.026	0.132	0.132
039	10/31/2018 11:35:51	0.048	0.207	0.012
040	10/31/2018 11:36:51	0.054	0.187	0.000
041	10/31/2018 11:37:51	0.037	0.214	0.000
042	10/31/2018 11:38:51	0.006	0.090	0.000
043	10/31/2018 11:39:51	0.038	0.176	0.054
044	10/31/2018 11:40:51	0.028	0.181	0.000
045	10/31/2018 11:41:51	0.028	0.138	0.000
046	10/31/2018 11:42:51	0.025	0.113	0.028
047	10/31/2018 11:43:51	0.070	0.182	0.050
048	10/31/2018 11:44:51	0.017	0.168	0.000
049	10/31/2018 11:45:51	0.005	0.049	0.000
050	10/31/2018 11:46:51	0.018	0.074	0.013
051	10/31/2018 11:47:51	0.024	0.108	0.000
052	10/31/2018 11:48:51	0.052	0.151	0.079
053	10/31/2018 11:49:51	0.032	0.147	0.000
054	10/31/2018 11:50:51	0.017	0.078	0.000

		PID_Downwind_10_31_18		
055	10/31/2018 11:51:51	0.038	0.135	0.004
056	10/31/2018 11:52:51	0.030	0.140	0.000
057	10/31/2018 11:53:51	0.048	0.170	0.037
058	10/31/2018 11:54:51	0.016	0.089	0.029
059	10/31/2018 11:55:51	0.028	0.161	0.031
060	10/31/2018 11:56:51	0.036	0.126	0.006
061	10/31/2018 11:57:51	0.032	0.118	0.118
062	10/31/2018 11:58:51	0.034	0.112	0.011
063	10/31/2018 11:59:51	0.034	0.107	0.045
064	10/31/2018 12:00:51	0.041	0.173	0.043
065	10/31/2018 12:01:51	0.028	0.107	0.055
066	10/31/2018 12:02:51	0.025	0.108	0.041
067	10/31/2018 12:03:51	0.046	0.210	0.128
068	10/31/2018 12:04:51	0.033	0.151	0.000
069	10/31/2018 12:05:51	0.017	0.071	0.018
070	10/31/2018 12:06:51	0.031	0.136	0.000
071	10/31/2018 12:07:51	0.048	0.191	0.065
072	10/31/2018 12:08:51	0.022	0.104	0.104
073	10/31/2018 12:09:51	0.043	0.146	0.114
074	10/31/2018 12:10:51	0.039	0.132	0.022
075	10/31/2018 12:11:51	0.023	0.104	0.009
076	10/31/2018 12:12:51	0.033	0.111	0.020
077	10/31/2018 12:13:51	0.039	0.139	0.004
078	10/31/2018 12:14:51	0.032	0.125	0.048
079	10/31/2018 12:15:51	0.026	0.096	0.000
080	10/31/2018 12:16:51	0.031	0.115	0.047
081	10/31/2018 12:17:51	0.015	0.097	0.001
082	10/31/2018 12:18:51	0.022	0.106	0.065
083	10/31/2018 12:19:51	0.026	0.135	0.085
084	10/31/2018 12:20:51	0.033	0.100	0.052
085	10/31/2018 12:21:51	0.009	0.052	0.009
086	10/31/2018 12:22:51	0.018	0.078	0.025
087	10/31/2018 12:23:51	0.010	0.135	0.004
088	10/31/2018 12:24:51	0.030	0.140	0.000
089	10/31/2018 12:25:51	0.023	0.103	0.055
090	10/31/2018 12:26:51	0.030	0.085	0.040
091	10/31/2018 12:27:51	0.020	0.096	0.000
092	10/31/2018 12:28:51	0.018	0.085	0.000
093	10/31/2018 12:29:51	0.017	0.089	0.006
094	10/31/2018 12:30:51	0.020	0.104	0.009
095	10/31/2018 12:31:51	0.017	0.077	0.000
096	10/31/2018 12:32:51	0.017	0.097	0.067
097	10/31/2018 12:33:51	0.027	0.111	0.000
098	10/31/2018 12:34:51	0.014	0.051	0.048
099	10/31/2018 12:35:51	0.017	0.082	0.031
100	10/31/2018 12:36:51	0.004	0.038	0.033
101	10/31/2018 12:37:51	0.026	0.087	0.064
102	10/31/2018 12:38:51	0.016	0.073	0.000

PID_Downwind_10_31_18

103	10/31/2018	12:39:51	0.012	0.068	0.000	
104	10/31/2018	12:40:51	0.007	0.035	0.000	
105	10/31/2018	12:41:51	0.010	0.045	0.002	
106	10/31/2018	12:42:51	0.011	0.061	0.000	
107	10/31/2018	12:43:51	0.002	0.022	0.022	
108	10/31/2018	12:44:51	0.018	0.074	0.000	
109	10/31/2018	12:45:51	0.008	0.032	0.022	
110	10/31/2018	12:46:51	0.002	0.023	0.000	
111	10/31/2018	12:47:51	0.013	0.071	0.000	
112	10/31/2018	12:48:51	0.005	0.030	0.000	
113	10/31/2018	12:49:51	0.006	0.055	0.000	
114	10/31/2018	12:50:51	0.015	0.063	0.000	
115	10/31/2018	12:51:51	0.014	0.050	0.000	
116	10/31/2018	12:52:51	0.007	0.031	0.000	
117	10/31/2018	12:53:51	0.008	0.037	0.009	
118	10/31/2018	12:54:51	0.005	0.033	0.006	
119	10/31/2018	12:55:51	0.002	0.012	0.000	
120	10/31/2018	12:56:51	0.001	0.012	0.000	
121	10/31/2018	12:57:51	0.004	0.021	0.021	
122	10/31/2018	12:58:51	0.001	0.018	0.000	
123	10/31/2018	12:59:51	0.004	0.029	0.000	
124	10/31/2018	13:00:51	0.006	0.032	0.009	
125	10/31/2018	13:01:51	0.001	0.019	0.019	
126	10/31/2018	13:02:51	0.000	0.019	0.001	
127	10/31/2018	13:03:51	0.001	0.014	0.000	
128	10/31/2018	13:04:51	0.002	0.015	0.000	
129	10/31/2018	13:05:51	0.001	0.013	0.000	
130	10/31/2018	13:06:51	0.002	0.017	0.000	
131	10/31/2018	13:07:51	0.000	335544.320		1610612.736
132	10/31/2018	13:08:51	0.000	301989.888		1426063.360
133	10/31/2018	13:09:51	0.000	0.000	0.000	
134	10/31/2018	13:10:51	0.000	0.000	0.000	
135	10/31/2018	13:11:51	0.001	0.010	0.000	
136	10/31/2018	13:12:51	0.001	0.015	0.000	
137	10/31/2018	13:13:51	0.000	0.000	0.000	
138	10/31/2018	13:14:51	0.000	0.000	0.000	
139	10/31/2018	13:15:51	0.000	0.007	0.000	
140	10/31/2018	13:16:51	0.000	0.000	0.000	
141	10/31/2018	13:17:51	0.000	0.000	0.000	
142	10/31/2018	13:18:51	0.000	0.000	0.000	
143	10/31/2018	13:19:51	0.000	0.000	0.000	
144	10/31/2018	13:20:51	0.000	0.000	0.000	
145	10/31/2018	13:21:51	0.000	0.000	0.000	
146	10/31/2018	13:22:51	0.000	0.000	0.000	
147	10/31/2018	13:23:51	0.000	0.000	0.000	
148	10/31/2018	13:24:51	0.000	0.000	0.000	
149	10/31/2018	13:25:51	0.000	0.000	0.000	
150	10/31/2018	13:26:51	0.000	0.000	0.000	

		PID_Downwind_10_31_18		
151	10/31/2018 13:27:51	0.000	0.000	0.000
152	10/31/2018 13:28:51	0.000	0.000	0.000
153	10/31/2018 13:29:51	0.000	0.000	0.000
154	10/31/2018 13:30:51	0.000	0.000	0.000
155	10/31/2018 13:31:51	0.000	0.000	0.000
156	10/31/2018 13:32:51	0.000	0.000	0.000
157	10/31/2018 13:33:51	0.000	0.000	0.000
158	10/31/2018 13:34:51	0.000	0.000	0.000
159	10/31/2018 13:35:51	0.000	0.000	0.000
160	10/31/2018 13:36:51	0.000	0.000	0.000
161	10/31/2018 13:37:51	0.000	0.000	0.000
162	10/31/2018 13:38:51	0.000	0.000	0.000
163	10/31/2018 13:39:51	0.000	0.000	0.000
164	10/31/2018 13:40:51	0.000	0.000	0.000
165	10/31/2018 13:41:51	0.000	0.000	0.000
166	10/31/2018 13:42:51	0.000	0.000	0.000
167	10/31/2018 13:43:51	0.000	0.000	0.000
168	10/31/2018 13:44:51	0.000	0.000	0.000
169	10/31/2018 13:45:51	0.000	0.000	0.000
170	10/31/2018 13:46:51	0.000	0.000	0.000
171	10/31/2018 13:47:51	0.000	0.000	0.000
172	10/31/2018 13:48:51	0.000	0.000	0.000
173	10/31/2018 13:49:51	0.000	0.000	0.000
174	10/31/2018 13:50:51	0.000	0.000	0.000
175	10/31/2018 13:51:51	0.000	0.000	0.000
176	10/31/2018 13:52:51	0.000	0.000	0.000
177	10/31/2018 13:53:51	0.000	0.000	0.000
178	10/31/2018 13:54:51	0.000	0.000	0.000
179	10/31/2018 13:55:51	0.000	0.000	0.000
180	10/31/2018 13:56:51	0.000	0.000	0.000
181	10/31/2018 13:57:51	0.000	0.000	0.000
182	10/31/2018 13:58:51	0.000	0.000	0.000
183	10/31/2018 13:59:51	0.000	0.000	0.000
184	10/31/2018 14:00:51	0.000	0.000	0.000
185	10/31/2018 14:01:51	0.000	0.000	0.000
186	10/31/2018 14:02:51	0.000	0.000	0.000
187	10/31/2018 14:03:51	0.000	0.000	0.000
188	10/31/2018 14:04:51	0.000	0.000	0.000
189	10/31/2018 14:05:51	0.000	0.000	0.000
190	10/31/2018 14:06:51	0.000	0.000	0.000
191	10/31/2018 14:07:51	0.000	0.000	0.000
192	10/31/2018 14:08:51	0.000	0.000	0.000
193	10/31/2018 14:09:51	0.000	0.000	0.000
194	10/31/2018 14:10:51	0.000	0.000	0.000
195	10/31/2018 14:11:51	0.000	0.000	0.000
196	10/31/2018 14:12:51	0.000	0.000	0.000
197	10/31/2018 14:13:51	0.000	0.000	0.000
198	10/31/2018 14:14:51	0.000	0.000	0.000

		PID_Downwind_10_31_18		
199	10/31/2018 14:15:51	0.000	0.000	0.000
200	10/31/2018 14:16:51	0.000	0.000	0.000
201	10/31/2018 14:17:51	0.000	0.000	0.000
202	10/31/2018 14:18:51	0.000	0.000	0.000
203	10/31/2018 14:19:51	0.000	0.000	0.000
204	10/31/2018 14:20:51	0.000	0.000	0.000
205	10/31/2018 14:21:51	0.000	0.000	0.000
206	10/31/2018 14:22:51	0.000	0.000	0.000
207	10/31/2018 14:23:51	0.000	0.000	0.000
208	10/31/2018 14:24:51	0.000	0.000	0.000
209	10/31/2018 14:25:51	0.000	0.000	0.000
210	10/31/2018 14:26:51	0.000	0.000	0.000
211	10/31/2018 14:27:51	0.000	0.000	0.000
212	10/31/2018 14:28:51	0.000	0.000	0.000
213	10/31/2018 14:29:51	0.000	0.000	0.000
214	10/31/2018 14:30:51	0.000	0.000	0.000
215	10/31/2018 14:31:51	0.000	0.000	0.000
216	10/31/2018 14:32:51	0.000	0.000	0.000
217	10/31/2018 14:33:51	0.000	0.000	0.000
218	10/31/2018 14:34:51	0.000	0.000	0.000
219	10/31/2018 14:35:51	0.000	0.000	0.000
220	10/31/2018 14:36:51	0.000	0.000	0.000
221	10/31/2018 14:37:51	0.000	0.000	0.000
222	10/31/2018 14:38:51	0.000	0.000	0.000
223	10/31/2018 14:39:51	0.000	0.000	0.000
224	10/31/2018 14:40:51	0.000	0.000	0.000
225	10/31/2018 14:41:51	0.000	0.000	0.000
226	10/31/2018 14:42:51	0.000	0.000	0.000
227	10/31/2018 14:43:51	0.000	0.000	0.000
228	10/31/2018 14:44:51	0.000	0.000	0.000
229	10/31/2018 14:45:51	0.000	0.000	0.000
230	10/31/2018 14:46:51	0.000	0.000	0.000
231	10/31/2018 14:47:51	0.000	0.000	0.000
232	10/31/2018 14:48:51	0.000	0.000	0.000
233	10/31/2018 14:49:51	0.000	0.000	0.000
234	10/31/2018 14:50:51	0.000	0.000	0.000
235	10/31/2018 14:51:51	0.000	0.000	0.000
236	10/31/2018 14:52:51	0.000	0.000	0.000
237	10/31/2018 14:53:51	0.000	0.000	0.000
238	10/31/2018 14:54:51	0.000	0.000	0.000
Peak		0.718	335544.320	1610612.736
Min		0.000	0.000	0.000
Average		0.031	2678.796	12759.173

****

TWA/STEL

Index	Date/Time	VOC(ppm) (TWA)	VOC(ppm) (STEL)

PID_Downwind_10_31_18

001	10/31/2018 10:57:51	0.001	---
002	10/31/2018 10:58:51	0.002	---
003	10/31/2018 10:59:51	0.003	---
004	10/31/2018 11:00:51	0.004	---
005	10/31/2018 11:01:51	0.005	---
006	10/31/2018 11:02:51	0.006	---
007	10/31/2018 11:03:51	0.006	---
008	10/31/2018 11:04:51	0.007	---
009	10/31/2018 11:05:51	0.007	---
010	10/31/2018 11:06:51	0.007	---
011	10/31/2018 11:07:51	0.007	---
012	10/31/2018 11:08:51	0.008	---
013	10/31/2018 11:09:51	0.008	---
014	10/31/2018 11:10:51	0.008	---
015	10/31/2018 11:11:51	0.008	0.260
016	10/31/2018 11:12:51	0.008	0.221
017	10/31/2018 11:13:51	0.008	0.194
018	10/31/2018 11:14:51	0.009	0.169
019	10/31/2018 11:15:51	0.009	0.149
020	10/31/2018 11:16:51	0.009	0.128
021	10/31/2018 11:17:51	0.009	0.103
022	10/31/2018 11:18:51	0.009	0.099
023	10/31/2018 11:19:51	0.009	0.091
024	10/31/2018 11:20:51	0.010	0.082
025	10/31/2018 11:21:51	0.010	0.085
026	10/31/2018 11:22:51	0.010	0.078
027	10/31/2018 11:23:51	0.010	0.072
028	10/31/2018 11:24:51	0.010	0.072
029	10/31/2018 11:25:51	0.010	0.069
030	10/31/2018 11:26:51	0.010	0.069
031	10/31/2018 11:27:51	0.010	0.063
032	10/31/2018 11:28:51	0.010	0.060
033	10/31/2018 11:29:51	0.010	0.056
034	10/31/2018 11:30:51	0.010	0.052
035	10/31/2018 11:31:51	0.010	0.049
036	10/31/2018 11:32:51	0.011	0.055
037	10/31/2018 11:33:51	0.011	0.040
038	10/31/2018 11:34:51	0.011	0.049
039	10/31/2018 11:35:51	0.011	0.046
040	10/31/2018 11:36:51	0.011	0.040
041	10/31/2018 11:37:51	0.011	0.040
042	10/31/2018 11:38:51	0.011	0.031
043	10/31/2018 11:39:51	0.011	0.027
044	10/31/2018 11:40:51	0.011	0.027
045	10/31/2018 11:41:51	0.011	0.025
046	10/31/2018 11:42:51	0.011	0.025
047	10/31/2018 11:43:51	0.011	0.028
048	10/31/2018 11:44:51	0.011	0.028

049	10/31/2018 11:45:51	0.011	0.026
050	10/31/2018 11:46:51	0.011	0.026
051	10/31/2018 11:47:51	0.011	0.019
052	10/31/2018 11:48:51	0.011	0.025
053	10/31/2018 11:49:51	0.011	0.016
054	10/31/2018 11:50:51	0.011	0.015
055	10/31/2018 11:51:51	0.011	0.015
056	10/31/2018 11:52:51	0.011	0.015
057	10/31/2018 11:53:51	0.012	0.018
058	10/31/2018 11:54:51	0.012	0.016
059	10/31/2018 11:55:51	0.012	0.018
060	10/31/2018 11:56:51	0.012	0.018
061	10/31/2018 11:57:51	0.012	0.024
062	10/31/2018 11:58:51	0.012	0.022
063	10/31/2018 11:59:51	0.012	0.025
064	10/31/2018 12:00:51	0.012	0.028
065	10/31/2018 12:01:51	0.012	0.031
066	10/31/2018 12:02:51	0.012	0.033
067	10/31/2018 12:03:51	0.013	0.037
068	10/31/2018 12:04:51	0.013	0.037
069	10/31/2018 12:05:51	0.013	0.038
070	10/31/2018 12:06:51	0.013	0.037
071	10/31/2018 12:07:51	0.013	0.042
072	10/31/2018 12:08:51	0.013	0.046
073	10/31/2018 12:09:51	0.013	0.052
074	10/31/2018 12:10:51	0.013	0.051
075	10/31/2018 12:11:51	0.013	0.052
076	10/31/2018 12:12:51	0.013	0.045
077	10/31/2018 12:13:51	0.013	0.045
078	10/31/2018 12:14:51	0.013	0.045
079	10/31/2018 12:15:51	0.013	0.042
080	10/31/2018 12:16:51	0.014	0.041
081	10/31/2018 12:17:51	0.014	0.039
082	10/31/2018 12:18:51	0.014	0.034
083	10/31/2018 12:19:51	0.014	0.040
084	10/31/2018 12:20:51	0.014	0.042
085	10/31/2018 12:21:51	0.014	0.043
086	10/31/2018 12:22:51	0.014	0.040
087	10/31/2018 12:23:51	0.014	0.034
088	10/31/2018 12:24:51	0.014	0.026
089	10/31/2018 12:25:51	0.014	0.028
090	10/31/2018 12:26:51	0.014	0.030
091	10/31/2018 12:27:51	0.014	0.029
092	10/31/2018 12:28:51	0.014	0.029
093	10/31/2018 12:29:51	0.014	0.026
094	10/31/2018 12:30:51	0.014	0.027
095	10/31/2018 12:31:51	0.014	0.023
096	10/31/2018 12:32:51	0.014	0.028

097	10/31/2018 12:33:51	0.014	0.023	
098	10/31/2018 12:34:51	0.014	0.021	
099	10/31/2018 12:35:51	0.015	0.020	
100	10/31/2018 12:36:51	0.015	0.021	
101	10/31/2018 12:37:51	0.015	0.024	
102	10/31/2018 12:38:51	0.015	0.024	
103	10/31/2018 12:39:51	0.015	0.024	
104	10/31/2018 12:40:51	0.015	0.020	
105	10/31/2018 12:41:51	0.015	0.017	
106	10/31/2018 12:42:51	0.015	0.017	
107	10/31/2018 12:43:51	0.015	0.019	
108	10/31/2018 12:44:51	0.015	0.018	
109	10/31/2018 12:45:51	0.015	0.019	
110	10/31/2018 12:46:51	0.015	0.019	
111	10/31/2018 12:47:51	0.015	0.015	
112	10/31/2018 12:48:51	0.015	0.015	
113	10/31/2018 12:49:51	0.015	0.012	
114	10/31/2018 12:50:51	0.015	0.010	
115	10/31/2018 12:51:51	0.015	0.007	
116	10/31/2018 12:52:51	0.015	0.003	
117	10/31/2018 12:53:51	0.015	0.004	
118	10/31/2018 12:54:51	0.015	0.004	
119	10/31/2018 12:55:51	0.015	0.004	
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121	10/31/2018 12:57:51	0.015	0.005	
122	10/31/2018 12:58:51	0.015	0.004	
123	10/31/2018 12:59:51	0.015	0.004	
124	10/31/2018 13:00:51	0.015	0.003	
125	10/31/2018 13:01:51	0.015	0.004	
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129	10/31/2018 13:05:51	0.015	0.004	
130	10/31/2018 13:06:51	0.015	0.004	
131	10/31/2018 13:07:51	3355.458		107374.187
132	10/31/2018 13:08:51	6326.424		202445.077
133	10/31/2018 13:09:51	6326.424		202445.076
134	10/31/2018 13:10:51	6326.424		202445.076
135	10/31/2018 13:11:51	6326.424		202445.076
136	10/31/2018 13:12:51	6326.424		202445.075
137	10/31/2018 13:13:51	6326.424		202445.075
138	10/31/2018 13:14:51	6326.424		202445.075
139	10/31/2018 13:15:51	6326.424		202445.074
140	10/31/2018 13:16:51	6326.424		202445.073
141	10/31/2018 13:17:51	6326.424		202445.073
142	10/31/2018 13:18:51	6326.424		202445.073
143	10/31/2018 13:19:51	6326.424		202445.073
144	10/31/2018 13:20:51	6326.424		202445.073

145	10/31/2018 13:21:51	6326.424	202445.073
146	10/31/2018 13:22:51	6326.424	95070.891
147	10/31/2018 13:23:51	6326.424	0.000
148	10/31/2018 13:24:51	6326.424	0.000
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163	10/31/2018 13:39:51	6326.424	0.000
164	10/31/2018 13:40:51	6326.424	0.000
165	10/31/2018 13:41:51	6326.424	0.000
166	10/31/2018 13:42:51	6326.424	0.000
167	10/31/2018 13:43:51	6326.424	0.000
168	10/31/2018 13:44:51	6326.424	0.000
169	10/31/2018 13:45:51	6326.424	0.000
170	10/31/2018 13:46:51	6326.424	0.000
171	10/31/2018 13:47:51	6326.424	0.000
172	10/31/2018 13:48:51	6326.424	0.000
173	10/31/2018 13:49:51	6326.424	0.000
174	10/31/2018 13:50:51	6326.424	0.000
175	10/31/2018 13:51:51	6326.424	0.000
176	10/31/2018 13:52:51	6326.424	0.000
177	10/31/2018 13:53:51	6326.424	0.000
178	10/31/2018 13:54:51	6326.424	0.000
179	10/31/2018 13:55:51	6326.424	0.000
180	10/31/2018 13:56:51	6326.424	0.000
181	10/31/2018 13:57:51	6326.424	0.000
182	10/31/2018 13:58:51	6326.424	0.000
183	10/31/2018 13:59:51	6326.424	0.000
184	10/31/2018 14:00:51	6326.424	0.000
185	10/31/2018 14:01:51	6326.424	0.000
186	10/31/2018 14:02:51	6326.424	0.000
187	10/31/2018 14:03:51	6326.424	0.000
188	10/31/2018 14:04:51	6326.424	0.000
189	10/31/2018 14:05:51	6326.424	0.000
190	10/31/2018 14:06:51	6326.424	0.000
191	10/31/2018 14:07:51	6326.424	0.000
192	10/31/2018 14:08:51	6326.424	0.000

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194	10/31/2018 14:10:51	6326.424	0.000
195	10/31/2018 14:11:51	6326.424	0.000
196	10/31/2018 14:12:51	6326.424	0.000
197	10/31/2018 14:13:51	6326.424	0.000
198	10/31/2018 14:14:51	6326.424	0.000
199	10/31/2018 14:15:51	6326.424	0.000
200	10/31/2018 14:16:51	6326.424	0.000
201	10/31/2018 14:17:51	6326.424	0.000
202	10/31/2018 14:18:51	6326.424	0.000
203	10/31/2018 14:19:51	6326.424	0.000
204	10/31/2018 14:20:51	6326.424	0.000
205	10/31/2018 14:21:51	6326.424	0.000
206	10/31/2018 14:22:51	6326.424	0.000
207	10/31/2018 14:23:51	6326.424	0.000
208	10/31/2018 14:24:51	6326.424	0.000
209	10/31/2018 14:25:51	6326.424	0.000
210	10/31/2018 14:26:51	6326.424	0.000
211	10/31/2018 14:27:51	6326.424	0.000
212	10/31/2018 14:28:51	6326.424	0.000
213	10/31/2018 14:29:51	6326.424	0.000
214	10/31/2018 14:30:51	6326.424	0.000
215	10/31/2018 14:31:51	6326.424	0.000
216	10/31/2018 14:32:51	6326.424	0.000
217	10/31/2018 14:33:51	6326.424	0.000
218	10/31/2018 14:34:51	6326.424	0.000
219	10/31/2018 14:35:51	6326.424	0.000
220	10/31/2018 14:36:51	6326.424	0.000
221	10/31/2018 14:37:51	6326.424	0.000
222	10/31/2018 14:38:51	6326.424	0.000
223	10/31/2018 14:39:51	6326.424	0.000
224	10/31/2018 14:40:51	6326.424	0.000
225	10/31/2018 14:41:51	6326.424	0.000
226	10/31/2018 14:42:51	6326.424	0.000
227	10/31/2018 14:43:51	6326.424	0.000
228	10/31/2018 14:44:51	6326.424	0.000
229	10/31/2018 14:45:51	6326.424	0.000
230	10/31/2018 14:46:51	6326.424	0.000
231	10/31/2018 14:47:51	6326.424	0.000
232	10/31/2018 14:48:51	6326.424	0.000
233	10/31/2018 14:49:51	6326.424	0.000
234	10/31/2018 14:50:51	6326.424	0.000
235	10/31/2018 14:51:51	6326.424	0.000
236	10/31/2018 14:52:51	6326.424	0.000
237	10/31/2018 14:53:51	6326.424	0.000
238	10/31/2018 14:54:51	6326.424	0.000

TrakPro Version 4.70 ASCII Data File

Model:,DustTrak II
Model Number:,8530
Serial Number:,8530133405
Test ID:,001
Test Abbreviation:,MANUAL_001
Start Date:,10/31/2018
Start Time:,10:55:33
Duration (dd:hh:mm:ss):,0:03:57:00
Log Interval (mm:ss):,01:00
Number of points:,237
Notes:,

Statistics,Channel:,AEROSOL
,Units:,mg/m^3
,Average:,0.015
,Minimum:,0.013
,Time of Minimum:,11:00:33
,Date of Minimum:,10/31/2018
,Maximum:,0.018
,Time of Maximum:,11:50:33
,Date of Maximum:,10/31/2018

Calibration,Sensor:,AEROSOL
,Cal. date,01/19/2018

Date,Time,AEROSOL
MM/dd/yyyy,hh:mm:ss,mg/m^3
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TrakPro Version 4.70 ASCII Data File

Model:,DustTrak II
Model Number:,8530
Serial Number:,8530141113
Test ID:,001
Test Abbreviation:,MANUAL_001
Start Date:,10/31/2018
Start Time:,10:57:45
Duration (dd:hh:mm:ss):,0:03:59:00
Log Interval (mm:ss):,01:00
Number of points:,239
Notes:,

Statistics,Channel:,AEROSOL
,Units:,mg/m^3
,Average:,0.013
,Minimum:,0.009
,Time of Minimum:,12:56:45
,Date of Minimum:,10/31/2018
,Maximum:,0.060
,Time of Maximum:,14:18:45
,Date of Maximum:,10/31/2018

Calibration,Sensor:,AEROSOL
,Cal. date,10/15/2018

Date,Time,AEROSOL
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PID_FA01729_upwind_11_1_18

18/11/01 11:12

Summary

Unit Name	MiniRAE 3000(PGM-7320)
Unit SN	592-913005
Unit Firmware Ver	V2.16
Running Mode	Hygiene Mode
Datalog Mode	Auto
Diagnostic Mode	No
Stop Reason	Pause in Menu Mode
Site ID	12345678
User ID	12345678
Begin	11/1/2018 11:12:49
End	11/1/2018 14:19:09
Sample Period(s)	60
Number of Records	186
Sensor	PID(ppm)
Sensor SN	S023030337R6
Measure Type	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	100.0
Measurement Gas	Isobutylene
Calibration Time	10/26/2018 15:20
Peak	1.8
Min	0.5
Average	1.0

Datalog

Index	Date/Time	PID(ppm) (Avg)	PID(ppm) (Max)	PID(ppm) (Real)	PID(ppm)
001	11/1/2018 11:13:49		0.7	0.8	0.7
002	11/1/2018 11:14:49		0.6	0.7	0.6
003	11/1/2018 11:15:49		0.6	0.6	0.6
004	11/1/2018 11:16:49		0.6	0.6	0.6
005	11/1/2018 11:17:49		0.6	0.6	0.6
006	11/1/2018 11:18:49		0.6	0.6	0.5

007	11/1/2018 11:19:49	0.6	0.6	0.5
008	11/1/2018 11:20:49	0.6	0.6	0.5
009	11/1/2018 11:21:49	0.5	0.6	0.5
010	11/1/2018 11:22:49	0.5	0.6	0.5
011	11/1/2018 11:23:49	0.5	0.6	0.5
012	11/1/2018 11:24:49	0.5	0.6	0.5
013	11/1/2018 11:25:49	0.5	0.6	0.5
014	11/1/2018 11:26:49	0.5	0.5	0.5
015	11/1/2018 11:27:49	0.5	0.5	0.5
016	11/1/2018 11:28:49	0.5	0.6	0.6
017	11/1/2018 11:29:49	0.5	0.5	0.5
018	11/1/2018 11:30:49	0.5	0.5	0.5
019	11/1/2018 11:31:49	0.5	0.5	0.5
020	11/1/2018 11:32:49	0.5	0.6	0.5
021	11/1/2018 11:33:49	0.5	0.5	0.5
022	11/1/2018 11:34:49	0.5	0.5	0.5
023	11/1/2018 11:35:49	0.5	0.6	0.5
024	11/1/2018 11:36:49	0.5	0.6	0.6
025	11/1/2018 11:37:49	0.6	0.6	0.5
026	11/1/2018 11:38:49	0.5	0.6	0.5
027	11/1/2018 11:39:49	0.5	0.6	0.5
028	11/1/2018 11:40:49	0.5	0.6	0.5
029	11/1/2018 11:41:49	0.5	0.6	0.5
030	11/1/2018 11:42:49	0.5	0.6	0.5
031	11/1/2018 11:43:49	0.6	0.6	0.5
032	11/1/2018 11:44:49	0.6	0.6	0.6
033	11/1/2018 11:45:49	0.6	0.6	0.6
034	11/1/2018 11:46:49	0.6	0.6	0.6
035	11/1/2018 11:47:49	0.6	0.6	0.6
036	11/1/2018 11:48:49	0.6	0.6	0.6
037	11/1/2018 11:49:49	0.6	0.6	0.6
038	11/1/2018 11:50:49	0.6	0.6	0.6
039	11/1/2018 11:51:49	0.6	0.6	0.6
040	11/1/2018 11:52:49	0.6	0.6	0.6
041	11/1/2018 11:53:49	0.6	0.6	0.6
042	11/1/2018 11:54:49	0.6	0.7	0.7
043	11/1/2018 11:55:49	0.6	0.7	0.6
044	11/1/2018 11:56:49	0.6	0.7	0.6
045	11/1/2018 11:57:49	0.7	0.7	0.6
046	11/1/2018 11:58:49	0.7	0.7	0.7
047	11/1/2018 11:59:49	0.7	0.7	0.7
048	11/1/2018 12:00:49	0.7	0.7	0.7
049	11/1/2018 12:01:49	0.7	0.7	0.7
050	11/1/2018 12:02:49	0.7	0.7	0.7
051	11/1/2018 12:03:49	0.7	0.7	0.7
052	11/1/2018 12:04:49	0.7	0.7	0.7
053	11/1/2018 12:05:49	0.7	0.7	0.7
054	11/1/2018 12:06:49	0.7	0.7	0.7

055	11/1/2018 12:07:49	0.7	0.7	0.7
056	11/1/2018 12:08:49	0.7	0.7	0.7
057	11/1/2018 12:09:49	0.7	0.7	0.7
058	11/1/2018 12:10:49	0.7	0.8	0.7
059	11/1/2018 12:11:49	0.7	0.8	0.7
060	11/1/2018 12:12:49	0.7	0.8	0.7
061	11/1/2018 12:13:49	0.7	0.8	0.7
062	11/1/2018 12:14:49	0.7	0.8	0.7
063	11/1/2018 12:15:49	0.7	0.8	0.7
064	11/1/2018 12:16:49	0.7	0.8	0.7
065	11/1/2018 12:17:49	0.7	0.8	0.8
066	11/1/2018 12:18:49	0.7	0.8	0.7
067	11/1/2018 12:19:49	0.7	0.8	0.7
068	11/1/2018 12:20:49	0.7	0.8	0.7
069	11/1/2018 12:21:49	0.8	0.8	0.7
070	11/1/2018 12:22:49	0.8	0.8	0.8
071	11/1/2018 12:23:49	0.8	0.8	0.8
072	11/1/2018 12:24:49	0.8	0.8	0.8
073	11/1/2018 12:25:49	0.8	0.8	0.8
074	11/1/2018 12:26:49	0.8	0.8	0.8
075	11/1/2018 12:27:49	0.8	0.8	0.8
076	11/1/2018 12:28:49	0.8	0.8	0.8
077	11/1/2018 12:29:49	0.8	0.8	0.8
078	11/1/2018 12:30:49	0.8	0.9	0.8
079	11/1/2018 12:31:49	0.8	0.9	0.8
080	11/1/2018 12:32:49	0.9	0.9	0.9
081	11/1/2018 12:33:49	0.9	0.9	0.9
082	11/1/2018 12:34:49	0.9	0.9	0.9
083	11/1/2018 12:35:49	0.9	0.9	0.8
084	11/1/2018 12:36:49	0.9	0.9	0.9
085	11/1/2018 12:37:49	0.9	0.9	0.9
086	11/1/2018 12:38:49	0.9	1.0	0.9
087	11/1/2018 12:39:49	0.9	1.0	0.9
088	11/1/2018 12:40:49	0.9	1.0	0.9
089	11/1/2018 12:41:49	0.9	1.0	0.9
090	11/1/2018 12:42:49	0.9	1.0	0.9
091	11/1/2018 12:43:49	0.9	1.0	0.9
092	11/1/2018 12:44:49	0.9	1.0	1.0
093	11/1/2018 12:45:49	1.0	1.0	1.0
094	11/1/2018 12:46:49	1.0	1.0	1.0
095	11/1/2018 12:47:49	1.0	1.0	1.0
096	11/1/2018 12:48:49	1.0	1.0	1.0
097	11/1/2018 12:49:49	1.0	1.0	1.0
098	11/1/2018 12:50:49	1.0	1.0	1.0
099	11/1/2018 12:51:49	1.0	1.0	1.0
100	11/1/2018 12:52:49	1.0	1.0	1.0
101	11/1/2018 12:53:49	1.0	1.1	1.0
102	11/1/2018 12:54:49	1.0	1.1	1.0

103	11/1/2018 12:55:49	1.0	1.1	1.0
104	11/1/2018 12:56:49	1.0	1.1	1.0
105	11/1/2018 12:57:49	1.1	1.1	1.1
106	11/1/2018 12:58:49	1.1	1.1	1.1
107	11/1/2018 12:59:49	1.1	1.1	1.1
108	11/1/2018 13:00:49	1.1	1.1	1.1
109	11/1/2018 13:01:49	1.1	1.1	1.1
110	11/1/2018 13:02:49	1.1	1.1	1.1
111	11/1/2018 13:03:49	1.1	1.2	1.1
112	11/1/2018 13:04:49	1.1	1.1	1.1
113	11/1/2018 13:05:49	1.1	1.2	1.2
114	11/1/2018 13:06:49	1.1	1.2	1.1
115	11/1/2018 13:07:49	1.1	1.2	1.1
116	11/1/2018 13:08:49	1.1	1.2	1.1
117	11/1/2018 13:09:49	1.1	1.2	1.2
118	11/1/2018 13:10:49	1.2	1.2	1.2
119	11/1/2018 13:11:49	1.2	1.3	1.2
120	11/1/2018 13:12:49	1.2	1.2	1.2
121	11/1/2018 13:13:49	1.2	1.2	1.2
122	11/1/2018 13:14:49	1.2	1.3	1.2
123	11/1/2018 13:15:49	1.2	1.3	1.2
124	11/1/2018 13:16:49	1.3	1.3	1.3
125	11/1/2018 13:17:49	1.3	1.3	1.2
126	11/1/2018 13:18:49	1.3	1.4	1.3
127	11/1/2018 13:19:49	1.3	1.4	1.3
128	11/1/2018 13:20:49	1.3	1.3	1.2
129	11/1/2018 13:21:49	1.3	1.3	1.3
130	11/1/2018 13:22:49	1.1	1.3	1.1
131	11/1/2018 13:23:49	1.2	1.4	1.3
132	11/1/2018 13:24:49	1.3	1.4	1.3
133	11/1/2018 13:25:49	1.4	1.6	1.5
134	11/1/2018 13:26:49	1.4	1.6	1.3
135	11/1/2018 13:27:49	1.3	1.4	1.3
136	11/1/2018 13:28:49	1.3	1.4	1.3
137	11/1/2018 13:29:49	1.3	1.4	1.3
138	11/1/2018 13:30:49	1.3	1.4	1.3
139	11/1/2018 13:31:49	1.3	1.4	1.3
140	11/1/2018 13:32:49	1.5	1.6	1.5
141	11/1/2018 13:33:49	1.5	1.6	1.4
142	11/1/2018 13:34:49	1.4	1.5	1.4
143	11/1/2018 13:35:49	1.4	1.5	1.4
144	11/1/2018 13:36:49	1.4	1.5	1.4
145	11/1/2018 13:37:49	1.5	1.6	1.5
146	11/1/2018 13:38:49	1.6	1.7	1.6
147	11/1/2018 13:39:49	1.5	1.6	1.4
148	11/1/2018 13:40:49	1.4	1.5	1.4
149	11/1/2018 13:41:49	1.4	1.5	1.3
150	11/1/2018 13:42:49	1.4	1.6	1.4

151	11/1/2018 13:43:49	1.6	1.7	1.7
152	11/1/2018 13:44:49	1.6	1.7	1.5
153	11/1/2018 13:45:49	1.4	1.5	1.4
154	11/1/2018 13:46:49	1.4	1.4	1.4
155	11/1/2018 13:47:49	1.4	1.4	1.4
156	11/1/2018 13:48:49	1.4	1.4	1.4
157	11/1/2018 13:49:49	1.4	1.4	1.4
158	11/1/2018 13:50:49	1.4	1.4	1.3
159	11/1/2018 13:51:49	1.5	1.8	1.6
160	11/1/2018 13:52:49	1.6	1.9	1.6
161	11/1/2018 13:53:49	1.5	1.6	1.5
162	11/1/2018 13:54:49	1.4	1.5	1.4
163	11/1/2018 13:55:49	1.4	1.5	1.5
164	11/1/2018 13:56:49	1.4	1.5	1.4
165	11/1/2018 13:57:49	1.4	1.5	1.4
166	11/1/2018 13:58:49	1.4	1.5	1.4
167	11/1/2018 13:59:49	1.5	1.8	1.6
168	11/1/2018 14:00:49	1.6	1.8	1.6
169	11/1/2018 14:01:49	1.5	1.6	1.5
170	11/1/2018 14:02:49	1.5	1.5	1.5
171	11/1/2018 14:03:49	1.5	1.5	1.5
172	11/1/2018 14:04:49	1.5	1.5	1.5
173	11/1/2018 14:05:49	1.5	1.6	1.5
174	11/1/2018 14:06:49	1.5	1.6	1.5
175	11/1/2018 14:07:49	1.7	1.8	1.6
176	11/1/2018 14:08:49	1.6	1.7	1.5
177	11/1/2018 14:09:49	1.5	1.6	1.5
178	11/1/2018 14:10:49	1.5	1.6	1.6
179	11/1/2018 14:11:49	1.6	1.6	1.6
180	11/1/2018 14:12:49	1.6	1.6	1.6
181	11/1/2018 14:13:49	1.6	1.8	1.8
182	11/1/2018 14:14:49	1.7	1.8	1.5
183	11/1/2018 14:15:49	1.5	1.6	1.5
184	11/1/2018 14:16:49	1.5	1.6	1.6
185	11/1/2018 14:17:49	1.6	1.8	1.7
186	11/1/2018 14:18:49	1.6	1.8	1.5
Peak		1.7	1.9	1.8
Min		0.5	0.5	0.5
Average		1.0	1.1	1.0

****

TWA/STEL

Index	Date/Time	PID(ppm) (TWA)	PID(ppm) (STEL)
001	11/1/2018 11:13:49	0.0	---
002	11/1/2018 11:14:49	0.0	---
003	11/1/2018 11:15:49	0.0	---
004	11/1/2018 11:16:49	0.0	---

005	11/1/2018 11:17:49	0.0	---
006	11/1/2018 11:18:49	0.0	---
007	11/1/2018 11:19:49	0.0	---
008	11/1/2018 11:20:49	0.0	---
009	11/1/2018 11:21:49	0.0	---
010	11/1/2018 11:22:49	0.0	---
011	11/1/2018 11:23:49	0.0	---
012	11/1/2018 11:24:49	0.0	---
013	11/1/2018 11:25:49	0.0	---
014	11/1/2018 11:26:49	0.0	---
015	11/1/2018 11:27:49	0.0	0.5
016	11/1/2018 11:28:49	0.0	0.6
017	11/1/2018 11:29:49	0.0	0.6
018	11/1/2018 11:30:49	0.0	0.6
019	11/1/2018 11:31:49	0.0	0.6
020	11/1/2018 11:32:49	0.0	0.5
021	11/1/2018 11:33:49	0.0	0.5
022	11/1/2018 11:34:49	0.0	0.5
023	11/1/2018 11:35:49	0.0	0.5
024	11/1/2018 11:36:49	0.0	0.5
025	11/1/2018 11:37:49	0.0	0.5
026	11/1/2018 11:38:49	0.0	0.5
027	11/1/2018 11:39:49	0.0	0.5
028	11/1/2018 11:40:49	0.0	0.5
029	11/1/2018 11:41:49	0.0	0.5
030	11/1/2018 11:42:49	0.0	0.5
031	11/1/2018 11:43:49	0.0	0.5
032	11/1/2018 11:44:49	0.0	0.5
033	11/1/2018 11:45:49	0.0	0.6
034	11/1/2018 11:46:49	0.0	0.6
035	11/1/2018 11:47:49	0.0	0.6
036	11/1/2018 11:48:49	0.0	0.6
037	11/1/2018 11:49:49	0.0	0.6
038	11/1/2018 11:50:49	0.0	0.6
039	11/1/2018 11:51:49	0.0	0.6
040	11/1/2018 11:52:49	0.0	0.6
041	11/1/2018 11:53:49	0.0	0.6
042	11/1/2018 11:54:49	0.0	0.6
043	11/1/2018 11:55:49	0.0	0.6
044	11/1/2018 11:56:49	0.1	0.6
045	11/1/2018 11:57:49	0.1	0.6
046	11/1/2018 11:58:49	0.1	0.6
047	11/1/2018 11:59:49	0.1	0.7
048	11/1/2018 12:00:49	0.1	0.7
049	11/1/2018 12:01:49	0.1	0.7
050	11/1/2018 12:02:49	0.1	0.7
051	11/1/2018 12:03:49	0.1	0.7
052	11/1/2018 12:04:49	0.1	0.7

053	11/1/2018 12:05:49	0.1	0.7
054	11/1/2018 12:06:49	0.1	0.7
055	11/1/2018 12:07:49	0.1	0.7
056	11/1/2018 12:08:49	0.1	0.7
057	11/1/2018 12:09:49	0.1	0.7
058	11/1/2018 12:10:49	0.1	0.7
059	11/1/2018 12:11:49	0.1	0.7
060	11/1/2018 12:12:49	0.1	0.7
061	11/1/2018 12:13:49	0.1	0.7
062	11/1/2018 12:14:49	0.1	0.7
063	11/1/2018 12:15:49	0.1	0.7
064	11/1/2018 12:16:49	0.1	0.7
065	11/1/2018 12:17:49	0.1	0.8
066	11/1/2018 12:18:49	0.1	0.8
067	11/1/2018 12:19:49	0.1	0.8
068	11/1/2018 12:20:49	0.1	0.8
069	11/1/2018 12:21:49	0.1	0.8
070	11/1/2018 12:22:49	0.1	0.8
071	11/1/2018 12:23:49	0.1	0.8
072	11/1/2018 12:24:49	0.1	0.8
073	11/1/2018 12:25:49	0.1	0.8
074	11/1/2018 12:26:49	0.1	0.8
075	11/1/2018 12:27:49	0.1	0.8
076	11/1/2018 12:28:49	0.1	0.8
077	11/1/2018 12:29:49	0.1	0.8
078	11/1/2018 12:30:49	0.1	0.8
079	11/1/2018 12:31:49	0.1	0.8
080	11/1/2018 12:32:49	0.1	0.8
081	11/1/2018 12:33:49	0.1	0.8
082	11/1/2018 12:34:49	0.1	0.9
083	11/1/2018 12:35:49	0.1	0.9
084	11/1/2018 12:36:49	0.1	0.9
085	11/1/2018 12:37:49	0.1	0.9
086	11/1/2018 12:38:49	0.1	0.9
087	11/1/2018 12:39:49	0.1	0.9
088	11/1/2018 12:40:49	0.1	0.9
089	11/1/2018 12:41:49	0.1	0.9
090	11/1/2018 12:42:49	0.1	0.9
091	11/1/2018 12:43:49	0.1	0.9
092	11/1/2018 12:44:49	0.1	0.9
093	11/1/2018 12:45:49	0.1	1.0
094	11/1/2018 12:46:49	0.1	1.0
095	11/1/2018 12:47:49	0.1	1.0
096	11/1/2018 12:48:49	0.1	1.0
097	11/1/2018 12:49:49	0.1	1.0
098	11/1/2018 12:50:49	0.1	1.0
099	11/1/2018 12:51:49	0.1	1.0
100	11/1/2018 12:52:49	0.1	1.0

101	11/1/2018 12:53:49	0.1	1.0
102	11/1/2018 12:54:49	0.1	1.0
103	11/1/2018 12:55:49	0.2	1.0
104	11/1/2018 12:56:49	0.2	1.0
105	11/1/2018 12:57:49	0.2	1.1
106	11/1/2018 12:58:49	0.2	1.1
107	11/1/2018 12:59:49	0.2	1.1
108	11/1/2018 13:00:49	0.2	1.1
109	11/1/2018 13:01:49	0.2	1.1
110	11/1/2018 13:02:49	0.2	1.1
111	11/1/2018 13:03:49	0.2	1.1
112	11/1/2018 13:04:49	0.2	1.1
113	11/1/2018 13:05:49	0.2	1.1
114	11/1/2018 13:06:49	0.2	1.1
115	11/1/2018 13:07:49	0.2	1.1
116	11/1/2018 13:08:49	0.2	1.2
117	11/1/2018 13:09:49	0.2	1.2
118	11/1/2018 13:10:49	0.2	1.2
119	11/1/2018 13:11:49	0.2	1.2
120	11/1/2018 13:12:49	0.2	1.2
121	11/1/2018 13:13:49	0.2	1.2
122	11/1/2018 13:14:49	0.2	1.2
123	11/1/2018 13:15:49	0.2	1.2
124	11/1/2018 13:16:49	0.2	1.2
125	11/1/2018 13:17:49	0.2	1.2
126	11/1/2018 13:18:49	0.2	1.3
127	11/1/2018 13:19:49	0.2	1.3
128	11/1/2018 13:20:49	0.2	1.3
129	11/1/2018 13:21:49	0.2	1.3
130	11/1/2018 13:22:49	0.2	1.3
131	11/1/2018 13:23:49	0.2	1.3
132	11/1/2018 13:24:49	0.2	1.3
133	11/1/2018 13:25:49	0.2	1.3
134	11/1/2018 13:26:49	0.2	1.3
135	11/1/2018 13:27:49	0.2	1.3
136	11/1/2018 13:28:49	0.2	1.4
137	11/1/2018 13:29:49	0.2	1.4
138	11/1/2018 13:30:49	0.2	1.4
139	11/1/2018 13:31:49	0.2	1.4
140	11/1/2018 13:32:49	0.2	1.4
141	11/1/2018 13:33:49	0.2	1.4
142	11/1/2018 13:34:49	0.3	1.4
143	11/1/2018 13:35:49	0.3	1.4
144	11/1/2018 13:36:49	0.3	1.4
145	11/1/2018 13:37:49	0.3	1.4
146	11/1/2018 13:38:49	0.3	1.5
147	11/1/2018 13:39:49	0.3	1.5
148	11/1/2018 13:40:49	0.3	1.5

149	11/1/2018 13:41:49	0.3	1.5
150	11/1/2018 13:42:49	0.3	1.5
151	11/1/2018 13:43:49	0.3	1.5
152	11/1/2018 13:44:49	0.3	1.5
153	11/1/2018 13:45:49	0.3	1.5
154	11/1/2018 13:46:49	0.3	1.5
155	11/1/2018 13:47:49	0.3	1.5
156	11/1/2018 13:48:49	0.3	1.5
157	11/1/2018 13:49:49	0.3	1.5
158	11/1/2018 13:50:49	0.3	1.5
159	11/1/2018 13:51:49	0.3	1.5
160	11/1/2018 13:52:49	0.3	1.6
161	11/1/2018 13:53:49	0.3	1.6
162	11/1/2018 13:54:49	0.3	1.5
163	11/1/2018 13:55:49	0.3	1.5
164	11/1/2018 13:56:49	0.3	1.5
165	11/1/2018 13:57:49	0.3	1.6
166	11/1/2018 13:58:49	0.3	1.6
167	11/1/2018 13:59:49	0.3	1.5
168	11/1/2018 14:00:49	0.3	1.6
169	11/1/2018 14:01:49	0.3	1.6
170	11/1/2018 14:02:49	0.3	1.6
171	11/1/2018 14:03:49	0.3	1.6
172	11/1/2018 14:04:49	0.3	1.6
173	11/1/2018 14:05:49	0.3	1.6
174	11/1/2018 14:06:49	0.3	1.6
175	11/1/2018 14:07:49	0.4	1.6
176	11/1/2018 14:08:49	0.4	1.6
177	11/1/2018 14:09:49	0.4	1.6
178	11/1/2018 14:10:49	0.4	1.6
179	11/1/2018 14:11:49	0.4	1.6
180	11/1/2018 14:12:49	0.4	1.6
181	11/1/2018 14:13:49	0.4	1.7
182	11/1/2018 14:14:49	0.4	1.7
183	11/1/2018 14:15:49	0.4	1.7
184	11/1/2018 14:16:49	0.4	1.7
185	11/1/2018 14:17:49	0.4	1.7
186	11/1/2018 14:18:49	0.4	1.7

PID_FA01729_upwind_11_1_18(2)

18/11/01 14:24

Summary

Unit Name	MiniRAE 3000(PGM-7320)
Unit SN	592-913005
Unit Firmware Ver	V2.16
Running Mode	Hygiene Mode
Datalog Mode	Auto
Diagnostic Mode	No
Stop Reason	Power Down
Site ID	12345678
User ID	12345678
Begin	11/1/2018 14:24:04
End	11/1/2018 15:58:33
Sample Period(s)	60
Number of Records	94
Sensor	PID(ppm)
Sensor SN	S023030337R6
Measure Type	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	100.0
Measurement Gas	Isobutylene
Calibration Time	11/1/2018 14:22
Peak	5.5
Min	1.2
Average	3.8

Datalog

Index	Date/Time	PID(ppm) (Avg)	PID(ppm) (Max)	PID(ppm) (Real)
001	11/1/2018 14:25:04	2.7	4.6	3.2
002	11/1/2018 14:26:04	1.9	3.6	2.4
003	11/1/2018 14:27:04	2.6	4.1	3.5
004	11/1/2018 14:28:04	3.3	4.3	3.4
005	11/1/2018 14:29:04	3.6	5.0	2.7
006	11/1/2018 14:30:04	3.7	5.2	4.1

007	11/1/2018 14:31:04	3.7	5.2	3.8
008	11/1/2018 14:32:04	4.1	5.9	4.4
009	11/1/2018 14:33:04	4.0	5.2	4.7
010	11/1/2018 14:34:04	4.4	5.9	4.1
011	11/1/2018 14:35:04	4.8	6.2	3.7
012	11/1/2018 14:36:04	4.6	6.2	4.3
013	11/1/2018 14:37:04	4.9	6.0	4.3
014	11/1/2018 14:38:04	5.0	13.4	3.5
015	11/1/2018 14:39:04	4.1	5.6	4.5
016	11/1/2018 14:40:04	4.8	6.3	4.8
017	11/1/2018 14:41:04	4.1	5.4	3.9
018	11/1/2018 14:42:04	4.5	5.8	4.3
019	11/1/2018 14:43:04	4.5	5.8	4.3
020	11/1/2018 14:44:04	4.4	5.7	5.3
021	11/1/2018 14:45:04	4.4	5.7	5.1
022	11/1/2018 14:46:04	4.6	6.1	5.3
023	11/1/2018 14:47:04	3.9	5.1	4.3
024	11/1/2018 14:48:04	4.0	5.6	3.8
025	11/1/2018 14:49:04	4.2	5.8	4.6
026	11/1/2018 14:50:04	4.4	5.5	4.6
027	11/1/2018 14:51:04	3.9	5.2	4.9
028	11/1/2018 14:52:04	3.4	4.9	3.3
029	11/1/2018 14:53:04	4.0	8.5	2.4
030	11/1/2018 14:54:04	3.3	5.1	2.5
031	11/1/2018 14:55:04	3.8	5.0	5.0
032	11/1/2018 14:56:04	3.6	5.5	3.0
033	11/1/2018 14:57:04	3.5	4.6	3.8
034	11/1/2018 14:58:04	3.4	5.0	3.5
035	11/1/2018 14:59:04	3.4	4.3	3.7
036	11/1/2018 15:00:04	3.7	5.4	4.3
037	11/1/2018 15:01:04	3.8	5.5	3.0
038	11/1/2018 15:02:04	3.3	4.3	2.9
039	11/1/2018 15:03:04	3.0	4.9	3.2
040	11/1/2018 15:04:04	3.8	5.7	4.6
041	11/1/2018 15:05:04	3.5	5.2	3.7
042	11/1/2018 15:06:04	3.2	4.6	1.2
043	11/1/2018 15:07:04	3.2	4.7	3.8
044	11/1/2018 15:08:04	3.5	5.2	3.1
045	11/1/2018 15:09:04	4.8	7.0	4.7
046	11/1/2018 15:10:04	5.0	6.7	5.5
047	11/1/2018 15:11:04	5.1	6.5	4.1
048	11/1/2018 15:12:04	4.7	5.9	5.1
049	11/1/2018 15:13:04	4.6	5.3	4.8
050	11/1/2018 15:14:04	4.3	5.3	4.0
051	11/1/2018 15:15:04	4.2	5.6	5.3
052	11/1/2018 15:16:04	4.4	5.3	4.6
053	11/1/2018 15:17:04	4.1	5.0	4.7
054	11/1/2018 15:18:04	3.7	4.8	4.4

055	11/1/2018 15:19:04	4.0	5.2	3.0
056	11/1/2018 15:20:04	3.8	5.3	4.9
057	11/1/2018 15:21:04	4.0	5.2	3.8
058	11/1/2018 15:22:04	3.6	4.8	3.7
059	11/1/2018 15:23:04	3.5	5.3	3.1
060	11/1/2018 15:24:04	3.5	4.7	4.1
061	11/1/2018 15:25:04	3.4	5.2	5.2
062	11/1/2018 15:26:04	3.8	5.2	3.1
063	11/1/2018 15:27:04	3.3	4.7	2.8
064	11/1/2018 15:28:04	3.0	4.2	2.8
065	11/1/2018 15:29:04	3.2	4.3	2.7
066	11/1/2018 15:30:04	3.1	4.1	2.6
067	11/1/2018 15:31:04	3.0	4.0	3.7
068	11/1/2018 15:32:04	2.8	3.5	2.3
069	11/1/2018 15:33:04	3.0	3.6	2.7
070	11/1/2018 15:34:04	2.8	3.7	3.3
071	11/1/2018 15:35:04	3.0	3.3	2.9
072	11/1/2018 15:36:04	3.2	4.0	2.9
073	11/1/2018 15:37:04	3.4	4.5	3.9
074	11/1/2018 15:38:04	3.2	3.8	3.3
075	11/1/2018 15:39:04	3.4	4.3	4.3
076	11/1/2018 15:40:04	3.5	4.3	3.6
077	11/1/2018 15:41:04	3.7	4.4	3.6
078	11/1/2018 15:42:04	3.5	4.7	3.3
079	11/1/2018 15:43:04	3.7	4.9	3.6
080	11/1/2018 15:44:04	3.7	4.3	2.9
081	11/1/2018 15:45:04	3.4	4.0	3.3
082	11/1/2018 15:46:04	3.6	4.9	3.4
083	11/1/2018 15:47:04	3.7	4.5	3.8
084	11/1/2018 15:48:04	3.5	4.2	2.6
085	11/1/2018 15:49:04	3.6	4.6	3.2
086	11/1/2018 15:50:04	4.0	4.8	3.9
087	11/1/2018 15:51:04	3.9	4.7	3.3
088	11/1/2018 15:52:04	3.7	4.5	3.1
089	11/1/2018 15:53:04	3.9	5.1	4.4
090	11/1/2018 15:54:04	3.9	4.6	3.9
091	11/1/2018 15:55:04	3.8	4.4	4.0
092	11/1/2018 15:56:04	3.7	4.3	3.9
093	11/1/2018 15:57:04	3.8	4.6	4.2
094	11/1/2018 15:58:04	3.6	4.7	3.6
Peak		5.1	13.4	5.5
Min		1.9	3.3	1.2
Average		3.8	5.1	3.8

****

TWA/STEL

Index	Date/Time	PID(ppm) (TWA)	PID(ppm) (STEL)

001	11/1/2018 14:25:04	0.0	---
002	11/1/2018 14:26:04	0.0	---
003	11/1/2018 14:27:04	0.0	---
004	11/1/2018 14:28:04	0.0	---
005	11/1/2018 14:29:04	0.0	---
006	11/1/2018 14:30:04	0.0	---
007	11/1/2018 14:31:04	0.0	---
008	11/1/2018 14:32:04	0.1	---
009	11/1/2018 14:33:04	0.1	---
010	11/1/2018 14:34:04	0.1	---
011	11/1/2018 14:35:04	0.1	---
012	11/1/2018 14:36:04	0.1	---
013	11/1/2018 14:37:04	0.1	---
014	11/1/2018 14:38:04	0.1	---
015	11/1/2018 14:39:04	0.1	3.8
016	11/1/2018 14:40:04	0.1	4.1
017	11/1/2018 14:41:04	0.1	4.1
018	11/1/2018 14:42:04	0.1	4.3
019	11/1/2018 14:43:04	0.2	4.3
020	11/1/2018 14:44:04	0.2	4.4
021	11/1/2018 14:45:04	0.2	4.6
022	11/1/2018 14:46:04	0.2	4.7
023	11/1/2018 14:47:04	0.2	4.7
024	11/1/2018 14:48:04	0.2	4.7
025	11/1/2018 14:49:04	0.2	4.7
026	11/1/2018 14:50:04	0.2	4.7
027	11/1/2018 14:51:04	0.2	4.8
028	11/1/2018 14:52:04	0.2	4.7
029	11/1/2018 14:53:04	0.2	4.6
030	11/1/2018 14:54:04	0.3	4.5
031	11/1/2018 14:55:04	0.3	4.6
032	11/1/2018 14:56:04	0.3	4.4
033	11/1/2018 14:57:04	0.3	4.4
034	11/1/2018 14:58:04	0.3	4.4
035	11/1/2018 14:59:04	0.3	4.3
036	11/1/2018 15:00:04	0.3	4.3
037	11/1/2018 15:01:04	0.3	4.1
038	11/1/2018 15:02:04	0.3	4.0
039	11/1/2018 15:03:04	0.3	3.9
040	11/1/2018 15:04:04	0.3	4.0
041	11/1/2018 15:05:04	0.3	3.9
042	11/1/2018 15:06:04	0.3	3.7
043	11/1/2018 15:07:04	0.3	3.6
044	11/1/2018 15:08:04	0.4	3.6
045	11/1/2018 15:09:04	0.4	3.7
046	11/1/2018 15:10:04	0.4	3.9
047	11/1/2018 15:11:04	0.4	3.9
048	11/1/2018 15:12:04	0.4	4.0

049	11/1/2018 15:13:04	0.4	4.1
050	11/1/2018 15:14:04	0.4	4.1
051	11/1/2018 15:15:04	0.4	4.2
052	11/1/2018 15:16:04	0.4	4.2
053	11/1/2018 15:17:04	0.4	4.4
054	11/1/2018 15:18:04	0.5	4.5
055	11/1/2018 15:19:04	0.5	4.4
056	11/1/2018 15:20:04	0.5	4.5
057	11/1/2018 15:21:04	0.5	4.5
058	11/1/2018 15:22:04	0.5	4.6
059	11/1/2018 15:23:04	0.5	4.6
060	11/1/2018 15:24:04	0.5	4.7
061	11/1/2018 15:25:04	0.5	4.7
062	11/1/2018 15:26:04	0.5	4.5
063	11/1/2018 15:27:04	0.5	4.4
064	11/1/2018 15:28:04	0.5	4.3
065	11/1/2018 15:29:04	0.5	4.1
066	11/1/2018 15:30:04	0.5	4.1
067	11/1/2018 15:31:04	0.5	3.9
068	11/1/2018 15:32:04	0.5	3.8
069	11/1/2018 15:33:04	0.6	3.7
070	11/1/2018 15:34:04	0.6	3.6
071	11/1/2018 15:35:04	0.6	3.6
072	11/1/2018 15:36:04	0.6	3.4
073	11/1/2018 15:37:04	0.6	3.5
074	11/1/2018 15:38:04	0.6	3.4
075	11/1/2018 15:39:04	0.6	3.5
076	11/1/2018 15:40:04	0.6	3.5
077	11/1/2018 15:41:04	0.6	3.4
078	11/1/2018 15:42:04	0.6	3.4
079	11/1/2018 15:43:04	0.6	3.4
080	11/1/2018 15:44:04	0.6	3.4
081	11/1/2018 15:45:04	0.6	3.5
082	11/1/2018 15:46:04	0.6	3.5
083	11/1/2018 15:47:04	0.7	3.5
084	11/1/2018 15:48:04	0.7	3.6
085	11/1/2018 15:49:04	0.7	3.6
086	11/1/2018 15:50:04	0.7	3.6
087	11/1/2018 15:51:04	0.7	3.7
088	11/1/2018 15:52:04	0.7	3.7
089	11/1/2018 15:53:04	0.7	3.7
090	11/1/2018 15:54:04	0.7	3.7
091	11/1/2018 15:55:04	0.7	3.7
092	11/1/2018 15:56:04	0.7	3.7
093	11/1/2018 15:57:04	0.7	3.8
094	11/1/2018 15:58:04	0.7	3.8

PID_FA01590_Downwind_11_1_18

18/11/01 11:17

Summary

Unit Name	MiniRAE 3000(PGM-7320)
Unit SN	592-912589
Unit Firmware Ver	V1.20A
Running Mode	Hygiene Mode
Measure Type	Avg; Max; Real
Datalog Mode	Continuous
Datalog Type	Auto
Diagnostic Mode	No
Stop Reason	Power Down
Site ID	12345678
User ID	12345678
Begin	11/1/2018 11:17:30
End	11/1/2018 14:08:22
Sample Period(s)	60
Number of Records	170
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	10/26/2018 15:00
Peak	0.166
Min	0.000
Average	0.044

Datalog

Index	Date/Time	VOC(ppm) (Avg)	VOC(ppm) (Max)	VOC(ppm) (Real)	
001	11/1/2018 11:18:30	0.000	0.000	0.000	
002	11/1/2018 11:19:30	0.000	0.000	0.000	
003	11/1/2018 11:20:30	0.000	0.002	0.000	
004	11/1/2018 11:21:30	0.000	0.000	0.000	
005	11/1/2018 11:22:30	0.000	0.000	0.000	
006	11/1/2018 11:23:30	0.000	0.000	0.000	

007	11/1/2018 11:24:30	0.000	0.000	0.000
008	11/1/2018 11:25:30	0.000	0.000	0.000
009	11/1/2018 11:26:30	0.000	0.000	0.000
010	11/1/2018 11:27:30	0.000	0.000	0.000
011	11/1/2018 11:28:30	0.000	0.000	0.000
012	11/1/2018 11:29:30	0.000	0.000	0.000
013	11/1/2018 11:30:30	0.000	0.000	0.000
014	11/1/2018 11:31:30	0.000	0.000	0.000
015	11/1/2018 11:32:30	0.000	0.000	0.000
016	11/1/2018 11:33:30	0.000	0.000	0.000
017	11/1/2018 11:34:30	0.000	0.000	0.000
018	11/1/2018 11:35:30	0.000	0.000	0.000
019	11/1/2018 11:36:30	0.000	0.000	0.000
020	11/1/2018 11:37:30	0.000	0.000	0.000
021	11/1/2018 11:38:30	0.000	0.000	0.000
022	11/1/2018 11:39:30	0.000	0.000	0.000
023	11/1/2018 11:40:30	0.000	0.000	0.000
024	11/1/2018 11:41:30	0.000	0.000	0.000
025	11/1/2018 11:42:30	0.000	0.000	0.000
026	11/1/2018 11:43:30	0.000	0.000	0.000
027	11/1/2018 11:44:30	0.000	0.000	0.000
028	11/1/2018 11:45:30	0.000	0.000	0.000
029	11/1/2018 11:46:30	0.000	0.000	0.000
030	11/1/2018 11:47:30	0.000	0.000	0.000
031	11/1/2018 11:48:30	0.000	0.000	0.000
032	11/1/2018 11:49:30	0.000	0.000	0.000
033	11/1/2018 11:50:30	0.000	0.000	0.000
034	11/1/2018 11:51:30	0.000	0.000	0.000
035	11/1/2018 11:52:30	0.000	0.000	0.000
036	11/1/2018 11:53:30	0.000	0.000	0.000
037	11/1/2018 11:54:30	0.000	0.000	0.000
038	11/1/2018 11:55:30	0.000	0.000	0.000
039	11/1/2018 11:56:30	0.000	0.000	0.000
040	11/1/2018 11:57:30	0.000	0.000	0.000
041	11/1/2018 11:58:30	0.000	0.000	0.000
042	11/1/2018 11:59:30	0.000	0.000	0.000
043	11/1/2018 12:00:30	0.000	0.000	0.000
044	11/1/2018 12:01:30	0.000	0.000	0.000
045	11/1/2018 12:02:30	0.000	0.000	0.000
046	11/1/2018 12:03:30	0.000	0.000	0.000
047	11/1/2018 12:04:30	0.000	0.000	0.000
048	11/1/2018 12:05:30	0.000	0.000	0.000
049	11/1/2018 12:06:30	0.000	0.000	0.000
050	11/1/2018 12:07:30	0.000	0.000	0.000
051	11/1/2018 12:08:30	0.000	0.000	0.000
052	11/1/2018 12:09:30	0.000	0.000	0.000
053	11/1/2018 12:10:30	0.001	0.013	0.002
054	11/1/2018 12:11:30	0.000	0.002	0.000

055	11/1/2018 12:12:30	0.000	0.002	0.000
056	11/1/2018 12:13:30	0.001	0.009	0.002
057	11/1/2018 12:14:30	0.002	0.006	0.000
058	11/1/2018 12:15:30	0.000	0.004	0.000
059	11/1/2018 12:16:30	0.000	0.000	0.000
060	11/1/2018 12:17:30	0.000	0.000	0.000
061	11/1/2018 12:18:30	0.000	0.000	0.000
062	11/1/2018 12:19:30	0.000	0.000	0.000
063	11/1/2018 12:20:30	0.000	0.000	0.000
064	11/1/2018 12:21:30	0.000	0.002	0.000
065	11/1/2018 12:22:30	0.004	0.018	0.011
066	11/1/2018 12:23:30	0.004	0.019	0.005
067	11/1/2018 12:24:30	0.011	0.035	0.000
068	11/1/2018 12:25:30	0.024	0.058	0.039
069	11/1/2018 12:26:30	0.034	0.064	0.039
070	11/1/2018 12:27:30	0.031	0.046	0.037
071	11/1/2018 12:28:30	0.030	0.061	0.025
072	11/1/2018 12:29:30	0.029	0.067	0.027
073	11/1/2018 12:30:30	0.019	0.038	0.018
074	11/1/2018 12:31:30	0.015	0.023	0.003
075	11/1/2018 12:32:30	0.012	0.069	0.000
076	11/1/2018 12:33:30	0.024	0.070	0.040
077	11/1/2018 12:34:30	0.025	0.070	0.045
078	11/1/2018 12:35:30	0.029	0.062	0.002
079	11/1/2018 12:36:30	0.045	0.084	0.060
080	11/1/2018 12:37:30	0.078	0.106	0.084
081	11/1/2018 12:38:30	0.080	0.112	0.100
082	11/1/2018 12:39:30	0.085	0.107	0.068
083	11/1/2018 12:40:30	0.070	0.107	0.070
084	11/1/2018 12:41:30	0.073	0.103	0.072
085	11/1/2018 12:42:30	0.068	0.095	0.082
086	11/1/2018 12:43:30	0.043	0.078	0.076
087	11/1/2018 12:44:30	0.044	0.090	0.054
088	11/1/2018 12:45:30	0.059	0.105	0.056
089	11/1/2018 12:46:30	0.060	0.102	0.055
090	11/1/2018 12:47:30	0.048	0.089	0.073
091	11/1/2018 12:48:30	0.074	0.106	0.089
092	11/1/2018 12:49:30	0.094	0.126	0.106
093	11/1/2018 12:50:30	0.113	0.148	0.137
094	11/1/2018 12:51:30	0.106	0.137	0.116
095	11/1/2018 12:52:30	0.115	0.144	0.096
096	11/1/2018 12:53:30	0.090	0.109	0.095
097	11/1/2018 12:54:30	0.090	0.117	0.069
098	11/1/2018 12:55:30	0.080	0.120	0.050
099	11/1/2018 12:56:30	0.055	0.096	0.088
100	11/1/2018 12:57:30	0.071	0.125	0.122
101	11/1/2018 12:58:30	0.079	0.157	0.096
102	11/1/2018 12:59:30	0.073	0.122	0.099

103	11/1/2018 13:00:30	0.095	0.155	0.026
104	11/1/2018 13:01:30	0.094	0.159	0.096
105	11/1/2018 13:02:30	0.104	0.173	0.100
106	11/1/2018 13:03:30	0.091	0.130	0.130
107	11/1/2018 13:04:30	0.087	0.131	0.081
108	11/1/2018 13:05:30	0.077	0.138	0.053
109	11/1/2018 13:06:30	0.090	0.131	0.063
110	11/1/2018 13:07:30	0.098	0.143	0.105
111	11/1/2018 13:08:30	0.110	0.160	0.124
112	11/1/2018 13:09:30	0.130	0.163	0.154
113	11/1/2018 13:10:30	0.134	0.178	0.152
114	11/1/2018 13:11:30	0.151	0.178	0.166
115	11/1/2018 13:12:30	0.148	0.185	0.134
116	11/1/2018 13:13:30	0.087	0.144	0.048
117	11/1/2018 13:14:30	0.109	0.162	0.134
118	11/1/2018 13:15:30	0.105	0.167	0.107
119	11/1/2018 13:16:30	0.118	0.169	0.103
120	11/1/2018 13:17:30	0.110	0.171	0.104
121	11/1/2018 13:18:30	0.120	0.157	0.099
122	11/1/2018 13:19:30	0.117	0.174	0.091
123	11/1/2018 13:20:30	0.105	0.142	0.100
124	11/1/2018 13:21:30	0.119	0.172	0.105
125	11/1/2018 13:22:30	0.111	0.183	0.094
126	11/1/2018 13:23:30	0.116	0.145	0.101
127	11/1/2018 13:24:30	0.102	0.150	0.120
128	11/1/2018 13:25:30	0.104	0.147	0.082
129	11/1/2018 13:26:30	0.101	0.148	0.053
130	11/1/2018 13:27:30	0.106	0.147	0.128
131	11/1/2018 13:28:30	0.115	0.149	0.120
132	11/1/2018 13:29:30	0.125	0.168	0.138
133	11/1/2018 13:30:30	0.133	0.169	0.132
134	11/1/2018 13:31:30	0.148	0.178	0.149
135	11/1/2018 13:32:30	0.145	0.170	0.111
136	11/1/2018 13:33:30	0.086	0.143	0.073
137	11/1/2018 13:34:30	0.083	0.114	0.090
138	11/1/2018 13:35:30	0.077	0.153	0.055
139	11/1/2018 13:36:30	0.074	0.120	0.077
140	11/1/2018 13:37:30	0.071	0.116	0.077
141	11/1/2018 13:38:30	0.066	0.113	0.059
142	11/1/2018 13:39:30	0.072	0.118	0.118
143	11/1/2018 13:40:30	0.063	0.103	0.072
144	11/1/2018 13:41:30	0.064	0.115	0.031
145	11/1/2018 13:42:30	0.066	0.109	0.078
146	11/1/2018 13:43:30	0.084	0.107	0.089
147	11/1/2018 13:44:30	0.081	0.113	0.096
148	11/1/2018 13:45:30	0.092	0.130	0.084
149	11/1/2018 13:46:30	0.095	0.124	0.097
150	11/1/2018 13:47:30	0.099	0.119	0.084

151	11/1/2018 13:48:30	0.048	0.099	0.021
152	11/1/2018 13:49:30	0.016	0.053	0.011
153	11/1/2018 13:50:30	0.015	0.048	0.011
154	11/1/2018 13:51:30	0.021	0.053	0.004
155	11/1/2018 13:52:30	0.017	0.066	0.020
156	11/1/2018 13:53:30	0.025	0.063	0.029
157	11/1/2018 13:54:30	0.041	0.114	0.066
158	11/1/2018 13:55:30	0.043	0.074	0.062
159	11/1/2018 13:56:30	0.047	0.102	0.053
160	11/1/2018 13:57:30	0.056	0.075	0.029
161	11/1/2018 13:58:30	0.034	0.061	0.028
162	11/1/2018 13:59:30	0.016	0.050	0.004
163	11/1/2018 14:00:30	0.012	0.042	0.012
164	11/1/2018 14:01:30	0.012	0.040	0.016
165	11/1/2018 14:02:30	0.005	0.022	0.010
166	11/1/2018 14:03:30	0.005	0.022	0.015
167	11/1/2018 14:04:30	0.005	0.020	0.011
168	11/1/2018 14:05:30	0.005	0.025	0.019
169	11/1/2018 14:06:30	0.010	0.033	0.000
170	11/1/2018 14:07:30	0.004	0.023	0.011
Peak		0.151	0.185	0.166
Min		0.000	0.000	0.000
Average		0.044	0.068	0.044

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TWA/STEL

Index	Date/Time	VOC(ppm) (TWA)	VOC(ppm) (STEL)
001	11/1/2018 11:18:30	0.000	---
002	11/1/2018 11:19:30	0.000	---
003	11/1/2018 11:20:30	0.000	---
004	11/1/2018 11:21:30	0.000	---
005	11/1/2018 11:22:30	0.000	---
006	11/1/2018 11:23:30	0.000	---
007	11/1/2018 11:24:30	0.000	---
008	11/1/2018 11:25:30	0.000	---
009	11/1/2018 11:26:30	0.000	---
010	11/1/2018 11:27:30	0.000	---
011	11/1/2018 11:28:30	0.000	---
012	11/1/2018 11:29:30	0.000	---
013	11/1/2018 11:30:30	0.000	---
014	11/1/2018 11:31:30	0.000	---
015	11/1/2018 11:32:30	0.000	0.000
016	11/1/2018 11:33:30	0.000	0.000
017	11/1/2018 11:34:30	0.000	0.000
018	11/1/2018 11:35:30	0.000	0.000
019	11/1/2018 11:36:30	0.000	0.000
020	11/1/2018 11:37:30	0.000	0.000

021	11/1/2018 11:38:30	0.000	0.000
022	11/1/2018 11:39:30	0.000	0.000
023	11/1/2018 11:40:30	0.000	0.000
024	11/1/2018 11:41:30	0.000	0.000
025	11/1/2018 11:42:30	0.000	0.000
026	11/1/2018 11:43:30	0.000	0.000
027	11/1/2018 11:44:30	0.000	0.000
028	11/1/2018 11:45:30	0.000	0.000
029	11/1/2018 11:46:30	0.000	0.000
030	11/1/2018 11:47:30	0.000	0.000
031	11/1/2018 11:48:30	0.000	0.000
032	11/1/2018 11:49:30	0.000	0.000
033	11/1/2018 11:50:30	0.000	0.000
034	11/1/2018 11:51:30	0.000	0.000
035	11/1/2018 11:52:30	0.000	0.000
036	11/1/2018 11:53:30	0.000	0.000
037	11/1/2018 11:54:30	0.000	0.000
038	11/1/2018 11:55:30	0.000	0.000
039	11/1/2018 11:56:30	0.000	0.000
040	11/1/2018 11:57:30	0.000	0.000
041	11/1/2018 11:58:30	0.000	0.000
042	11/1/2018 11:59:30	0.000	0.000
043	11/1/2018 12:00:30	0.000	0.000
044	11/1/2018 12:01:30	0.000	0.000
045	11/1/2018 12:02:30	0.000	0.000
046	11/1/2018 12:03:30	0.000	0.000
047	11/1/2018 12:04:30	0.000	0.000
048	11/1/2018 12:05:30	0.000	0.000
049	11/1/2018 12:06:30	0.000	0.000
050	11/1/2018 12:07:30	0.000	0.000
051	11/1/2018 12:08:30	0.000	0.000
052	11/1/2018 12:09:30	0.000	0.000
053	11/1/2018 12:10:30	0.000	0.000
054	11/1/2018 12:11:30	0.000	0.000
055	11/1/2018 12:12:30	0.000	0.000
056	11/1/2018 12:13:30	0.000	0.000
057	11/1/2018 12:14:30	0.000	0.000
058	11/1/2018 12:15:30	0.000	0.000
059	11/1/2018 12:16:30	0.000	0.000
060	11/1/2018 12:17:30	0.000	0.000
061	11/1/2018 12:18:30	0.000	0.000
062	11/1/2018 12:19:30	0.000	0.000
063	11/1/2018 12:20:30	0.000	0.000
064	11/1/2018 12:21:30	0.000	0.000
065	11/1/2018 12:22:30	0.000	0.001
066	11/1/2018 12:23:30	0.000	0.001
067	11/1/2018 12:24:30	0.000	0.001
068	11/1/2018 12:25:30	0.000	0.004

069	11/1/2018 12:26:30	0.000	0.006
070	11/1/2018 12:27:30	0.000	0.009
071	11/1/2018 12:28:30	0.000	0.010
072	11/1/2018 12:29:30	0.000	0.012
073	11/1/2018 12:30:30	0.000	0.013
074	11/1/2018 12:31:30	0.000	0.014
075	11/1/2018 12:32:30	0.000	0.014
076	11/1/2018 12:33:30	0.001	0.016
077	11/1/2018 12:34:30	0.001	0.019
078	11/1/2018 12:35:30	0.001	0.019
079	11/1/2018 12:36:30	0.001	0.023
080	11/1/2018 12:37:30	0.001	0.028
081	11/1/2018 12:38:30	0.001	0.035
082	11/1/2018 12:39:30	0.001	0.039
083	11/1/2018 12:40:30	0.001	0.041
084	11/1/2018 12:41:30	0.002	0.043
085	11/1/2018 12:42:30	0.002	0.046
086	11/1/2018 12:43:30	0.002	0.050
087	11/1/2018 12:44:30	0.002	0.052
088	11/1/2018 12:45:30	0.002	0.054
089	11/1/2018 12:46:30	0.002	0.058
090	11/1/2018 12:47:30	0.002	0.062
091	11/1/2018 12:48:30	0.003	0.066
092	11/1/2018 12:49:30	0.003	0.070
093	11/1/2018 12:50:30	0.003	0.079
094	11/1/2018 12:51:30	0.003	0.083
095	11/1/2018 12:52:30	0.004	0.083
096	11/1/2018 12:53:30	0.004	0.083
097	11/1/2018 12:54:30	0.004	0.083
098	11/1/2018 12:55:30	0.004	0.082
099	11/1/2018 12:56:30	0.004	0.083
100	11/1/2018 12:57:30	0.004	0.085
101	11/1/2018 12:58:30	0.005	0.087
102	11/1/2018 12:59:30	0.005	0.090
103	11/1/2018 13:00:30	0.005	0.088
104	11/1/2018 13:01:30	0.005	0.091
105	11/1/2018 13:02:30	0.005	0.092
106	11/1/2018 13:03:30	0.006	0.095
107	11/1/2018 13:04:30	0.006	0.093
108	11/1/2018 13:05:30	0.006	0.088
109	11/1/2018 13:06:30	0.006	0.084
110	11/1/2018 13:07:30	0.006	0.085
111	11/1/2018 13:08:30	0.006	0.087
112	11/1/2018 13:09:30	0.007	0.092
113	11/1/2018 13:10:30	0.007	0.099
114	11/1/2018 13:11:30	0.007	0.104
115	11/1/2018 13:12:30	0.008	0.105
116	11/1/2018 13:13:30	0.008	0.102

117	11/1/2018 13:14:30	0.008	0.104
118	11/1/2018 13:15:30	0.008	0.110
119	11/1/2018 13:16:30	0.009	0.110
120	11/1/2018 13:17:30	0.009	0.111
121	11/1/2018 13:18:30	0.009	0.108
122	11/1/2018 13:19:30	0.009	0.109
123	11/1/2018 13:20:30	0.009	0.112
124	11/1/2018 13:21:30	0.010	0.115
125	11/1/2018 13:22:30	0.010	0.114
126	11/1/2018 13:23:30	0.010	0.113
127	11/1/2018 13:24:30	0.010	0.111
128	11/1/2018 13:25:30	0.010	0.106
129	11/1/2018 13:26:30	0.010	0.098
130	11/1/2018 13:27:30	0.011	0.098
131	11/1/2018 13:28:30	0.011	0.103
132	11/1/2018 13:29:30	0.011	0.103
133	11/1/2018 13:30:30	0.012	0.105
134	11/1/2018 13:31:30	0.012	0.108
135	11/1/2018 13:32:30	0.012	0.108
136	11/1/2018 13:33:30	0.012	0.106
137	11/1/2018 13:34:30	0.012	0.106
138	11/1/2018 13:35:30	0.013	0.103
139	11/1/2018 13:36:30	0.013	0.102
140	11/1/2018 13:37:30	0.013	0.100
141	11/1/2018 13:38:30	0.013	0.098
142	11/1/2018 13:39:30	0.013	0.097
143	11/1/2018 13:40:30	0.013	0.097
144	11/1/2018 13:41:30	0.013	0.095
145	11/1/2018 13:42:30	0.014	0.092
146	11/1/2018 13:43:30	0.014	0.090
147	11/1/2018 13:44:30	0.014	0.087
148	11/1/2018 13:45:30	0.014	0.084
149	11/1/2018 13:46:30	0.014	0.080
150	11/1/2018 13:47:30	0.015	0.079
151	11/1/2018 13:48:30	0.015	0.075
152	11/1/2018 13:49:30	0.015	0.070
153	11/1/2018 13:50:30	0.015	0.067
154	11/1/2018 13:51:30	0.015	0.062
155	11/1/2018 13:52:30	0.015	0.058
156	11/1/2018 13:53:30	0.015	0.056
157	11/1/2018 13:54:30	0.015	0.053
158	11/1/2018 13:55:30	0.015	0.052
159	11/1/2018 13:56:30	0.015	0.054
160	11/1/2018 13:57:30	0.015	0.050
161	11/1/2018 13:58:30	0.015	0.046
162	11/1/2018 13:59:30	0.015	0.040
163	11/1/2018 14:00:30	0.015	0.035
164	11/1/2018 14:01:30	0.015	0.030

		PID_FA01590_Downwind_11_1_18	
165	11/1/2018 14:02:30	0.015	0.025
166	11/1/2018 14:03:30	0.015	0.025
167	11/1/2018 14:04:30	0.015	0.025
168	11/1/2018 14:05:30	0.015	0.025
169	11/1/2018 14:06:30	0.015	0.025
170	11/1/2018 14:07:30	0.015	0.024

PID_FA01590_Downwind_11_1_18(2)

18/11/01 14:09

Summary

Unit Name	MiniRAE 3000(PGM-7320)
Unit SN	592-912589
Unit Firmware Ver	V1.20A
Running Mode	Hygiene Mode
Measure Type	Avg; Max; Real
Datalog Mode	Continuous
Datalog Type	Auto
Diagnostic Mode	No
Stop Reason	Power Down
Site ID	12345678
User ID	12345678
Begin	11/1/2018 14:09:51
End	11/1/2018 15:54:31
Sample Period(s)	60
Number of Records	104
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	10/26/2018 15:00
Peak	0.025
Min	0.000
Average	0.000

Datalog

Index	Date/Time	VOC(ppm) (Avg)	VOC(ppm) (Max)	VOC(ppm) (Real)	
001	11/1/2018 14:10:51		0.000	0.000	0.000
002	11/1/2018 14:11:51		0.000	0.000	0.000
003	11/1/2018 14:12:51		0.000	0.000	0.000
004	11/1/2018 14:13:51		0.000	0.000	0.000
005	11/1/2018 14:14:51		0.000	0.000	0.000
006	11/1/2018 14:15:51		0.000	0.000	0.000

007	11/1/2018 14:16:51	0.000	0.000	0.000
008	11/1/2018 14:17:51	0.000	0.000	0.000
009	11/1/2018 14:18:51	0.000	0.000	0.000
010	11/1/2018 14:19:51	0.000	0.000	0.000
011	11/1/2018 14:20:51	0.000	0.000	0.000
012	11/1/2018 14:21:51	0.000	0.000	0.000
013	11/1/2018 14:22:51	0.000	0.000	0.000
014	11/1/2018 14:23:51	0.000	0.000	0.000
015	11/1/2018 14:24:51	0.000	0.000	0.000
016	11/1/2018 14:25:51	0.000	0.000	0.000
017	11/1/2018 14:26:51	0.000	0.000	0.000
018	11/1/2018 14:27:51	0.001	0.025	0.025
019	11/1/2018 14:28:51	0.007	0.036	0.000
020	11/1/2018 14:29:51	0.000	0.004	0.002
021	11/1/2018 14:30:51	0.000	0.002	0.000
022	11/1/2018 14:31:51	0.000	0.000	0.000
023	11/1/2018 14:32:51	0.000	0.005	0.000
024	11/1/2018 14:33:51	0.000	0.000	0.000
025	11/1/2018 14:34:51	0.001	0.009	0.000
026	11/1/2018 14:35:51	0.000	0.000	0.000
027	11/1/2018 14:36:51	0.000	0.000	0.000
028	11/1/2018 14:37:51	0.000	0.009	0.000
029	11/1/2018 14:38:51	0.000	0.003	0.000
030	11/1/2018 14:39:51	0.000	0.000	0.000
031	11/1/2018 14:40:51	0.000	0.000	0.000
032	11/1/2018 14:41:51	0.000	0.000	0.000
033	11/1/2018 14:42:51	0.000	0.000	0.000
034	11/1/2018 14:43:51	0.000	0.000	0.000
035	11/1/2018 14:44:51	0.000	0.000	0.000
036	11/1/2018 14:45:51	0.000	0.000	0.000
037	11/1/2018 14:46:51	0.000	0.000	0.000
038	11/1/2018 14:47:51	0.000	0.000	0.000
039	11/1/2018 14:48:51	0.000	0.000	0.000
040	11/1/2018 14:49:51	0.000	0.000	0.000
041	11/1/2018 14:50:51	0.000	0.000	0.000
042	11/1/2018 14:51:51	0.000	0.000	0.000
043	11/1/2018 14:52:51	0.000	0.000	0.000
044	11/1/2018 14:53:51	0.000	0.000	0.000
045	11/1/2018 14:54:51	0.000	0.000	0.000
046	11/1/2018 14:55:51	0.000	0.000	0.000
047	11/1/2018 14:56:51	0.000	0.000	0.000
048	11/1/2018 14:57:51	0.000	0.000	0.000
049	11/1/2018 14:58:51	0.000	0.000	0.000
050	11/1/2018 14:59:51	0.000	0.000	0.000
051	11/1/2018 15:00:51	0.000	0.000	0.000
052	11/1/2018 15:01:51	0.000	0.000	0.000
053	11/1/2018 15:02:51	0.000	0.000	0.000
054	11/1/2018 15:03:51	0.000	0.000	0.000

055	11/1/2018 15:04:51	0.000	0.000	0.000
056	11/1/2018 15:05:51	0.000	0.000	0.000
057	11/1/2018 15:06:51	0.000	0.000	0.000
058	11/1/2018 15:07:51	0.000	0.000	0.000
059	11/1/2018 15:08:51	0.000	0.000	0.000
060	11/1/2018 15:09:51	0.000	0.000	0.000
061	11/1/2018 15:10:51	0.000	0.000	0.000
062	11/1/2018 15:11:51	0.000	0.000	0.000
063	11/1/2018 15:12:51	0.000	0.000	0.000
064	11/1/2018 15:13:51	0.000	0.000	0.000
065	11/1/2018 15:14:51	0.000	0.000	0.000
066	11/1/2018 15:15:51	0.000	0.000	0.000
067	11/1/2018 15:16:51	0.000	0.000	0.000
068	11/1/2018 15:17:51	0.000	0.000	0.000
069	11/1/2018 15:18:51	0.000	0.000	0.000
070	11/1/2018 15:19:51	0.000	0.000	0.000
071	11/1/2018 15:20:51	0.000	0.000	0.000
072	11/1/2018 15:21:51	0.000	0.000	0.000
073	11/1/2018 15:22:51	0.000	0.000	0.000
074	11/1/2018 15:23:51	0.000	0.000	0.000
075	11/1/2018 15:24:51	0.000	0.000	0.000
076	11/1/2018 15:25:51	0.000	0.000	0.000
077	11/1/2018 15:26:51	0.000	0.000	0.000
078	11/1/2018 15:27:51	0.000	0.000	0.000
079	11/1/2018 15:28:51	0.000	0.000	0.000
080	11/1/2018 15:29:51	0.000	0.000	0.000
081	11/1/2018 15:30:51	0.000	0.000	0.000
082	11/1/2018 15:31:51	0.000	0.000	0.000
083	11/1/2018 15:32:51	0.000	0.000	0.000
084	11/1/2018 15:33:51	0.000	0.000	0.000
085	11/1/2018 15:34:51	0.000	0.000	0.000
086	11/1/2018 15:35:51	0.000	0.000	0.000
087	11/1/2018 15:36:51	0.000	0.000	0.000
088	11/1/2018 15:37:51	0.000	0.000	0.000
089	11/1/2018 15:38:51	0.000	0.000	0.000
090	11/1/2018 15:39:51	0.000	0.000	0.000
091	11/1/2018 15:40:51	0.000	0.000	0.000
092	11/1/2018 15:41:51	0.000	0.000	0.000
093	11/1/2018 15:42:51	0.000	0.000	0.000
094	11/1/2018 15:43:51	0.000	0.000	0.000
095	11/1/2018 15:44:51	0.000	0.000	0.000
096	11/1/2018 15:45:51	0.000	0.000	0.000
097	11/1/2018 15:46:51	0.000	0.000	0.000
098	11/1/2018 15:47:51	0.000	0.000	0.000
099	11/1/2018 15:48:51	0.000	0.000	0.000
100	11/1/2018 15:49:51	0.000	0.000	0.000
101	11/1/2018 15:50:51	0.000	0.000	0.000
102	11/1/2018 15:51:51	0.000	0.000	0.000

103	11/1/2018 15:52:51	0.000	0.000	0.000
104	11/1/2018 15:53:51	0.000	0.000	0.000
Peak		0.007	0.036	0.025
Min		0.000	0.000	0.000
Average		0.000	0.001	0.000

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TWA/STEL

Index	Date/Time	VOC(ppm) (TWA)	VOC(ppm) (STEL)
001	11/1/2018 14:10:51	0.000	---
002	11/1/2018 14:11:51	0.000	---
003	11/1/2018 14:12:51	0.000	---
004	11/1/2018 14:13:51	0.000	---
005	11/1/2018 14:14:51	0.000	---
006	11/1/2018 14:15:51	0.000	---
007	11/1/2018 14:16:51	0.000	---
008	11/1/2018 14:17:51	0.000	---
009	11/1/2018 14:18:51	0.000	---
010	11/1/2018 14:19:51	0.000	---
011	11/1/2018 14:20:51	0.000	---
012	11/1/2018 14:21:51	0.000	---
013	11/1/2018 14:22:51	0.000	---
014	11/1/2018 14:23:51	0.000	---
015	11/1/2018 14:24:51	0.000	0.000
016	11/1/2018 14:25:51	0.000	0.000
017	11/1/2018 14:26:51	0.000	0.000
018	11/1/2018 14:27:51	0.000	0.002
019	11/1/2018 14:28:51	0.000	0.002
020	11/1/2018 14:29:51	0.000	0.002
021	11/1/2018 14:30:51	0.000	0.002
022	11/1/2018 14:31:51	0.000	0.002
023	11/1/2018 14:32:51	0.000	0.002
024	11/1/2018 14:33:51	0.000	0.002
025	11/1/2018 14:34:51	0.000	0.002
026	11/1/2018 14:35:51	0.000	0.002
027	11/1/2018 14:36:51	0.000	0.002
028	11/1/2018 14:37:51	0.000	0.002
029	11/1/2018 14:38:51	0.000	0.002
030	11/1/2018 14:39:51	0.000	0.002
031	11/1/2018 14:40:51	0.000	0.002
032	11/1/2018 14:41:51	0.000	0.002
033	11/1/2018 14:42:51	0.000	0.000
034	11/1/2018 14:43:51	0.000	0.000
035	11/1/2018 14:44:51	0.000	0.000
036	11/1/2018 14:45:51	0.000	0.000
037	11/1/2018 14:46:51	0.000	0.000
038	11/1/2018 14:47:51	0.000	0.000

039	11/1/2018 14:48:51	0.000	0.000
040	11/1/2018 14:49:51	0.000	0.000
041	11/1/2018 14:50:51	0.000	0.000
042	11/1/2018 14:51:51	0.000	0.000
043	11/1/2018 14:52:51	0.000	0.000
044	11/1/2018 14:53:51	0.000	0.000
045	11/1/2018 14:54:51	0.000	0.000
046	11/1/2018 14:55:51	0.000	0.000
047	11/1/2018 14:56:51	0.000	0.000
048	11/1/2018 14:57:51	0.000	0.000
049	11/1/2018 14:58:51	0.000	0.000
050	11/1/2018 14:59:51	0.000	0.000
051	11/1/2018 15:00:51	0.000	0.000
052	11/1/2018 15:01:51	0.000	0.000
053	11/1/2018 15:02:51	0.000	0.000
054	11/1/2018 15:03:51	0.000	0.000
055	11/1/2018 15:04:51	0.000	0.000
056	11/1/2018 15:05:51	0.000	0.000
057	11/1/2018 15:06:51	0.000	0.000
058	11/1/2018 15:07:51	0.000	0.000
059	11/1/2018 15:08:51	0.000	0.000
060	11/1/2018 15:09:51	0.000	0.000
061	11/1/2018 15:10:51	0.000	0.000
062	11/1/2018 15:11:51	0.000	0.000
063	11/1/2018 15:12:51	0.000	0.000
064	11/1/2018 15:13:51	0.000	0.000
065	11/1/2018 15:14:51	0.000	0.000
066	11/1/2018 15:15:51	0.000	0.000
067	11/1/2018 15:16:51	0.000	0.000
068	11/1/2018 15:17:51	0.000	0.000
069	11/1/2018 15:18:51	0.000	0.000
070	11/1/2018 15:19:51	0.000	0.000
071	11/1/2018 15:20:51	0.000	0.000
072	11/1/2018 15:21:51	0.000	0.000
073	11/1/2018 15:22:51	0.000	0.000
074	11/1/2018 15:23:51	0.000	0.000
075	11/1/2018 15:24:51	0.000	0.000
076	11/1/2018 15:25:51	0.000	0.000
077	11/1/2018 15:26:51	0.000	0.000
078	11/1/2018 15:27:51	0.000	0.000
079	11/1/2018 15:28:51	0.000	0.000
080	11/1/2018 15:29:51	0.000	0.000
081	11/1/2018 15:30:51	0.000	0.000
082	11/1/2018 15:31:51	0.000	0.000
083	11/1/2018 15:32:51	0.000	0.000
084	11/1/2018 15:33:51	0.000	0.000
085	11/1/2018 15:34:51	0.000	0.000
086	11/1/2018 15:35:51	0.000	0.000

087	11/1/2018 15:36:51	0.000	0.000
088	11/1/2018 15:37:51	0.000	0.000
089	11/1/2018 15:38:51	0.000	0.000
090	11/1/2018 15:39:51	0.000	0.000
091	11/1/2018 15:40:51	0.000	0.000
092	11/1/2018 15:41:51	0.000	0.000
093	11/1/2018 15:42:51	0.000	0.000
094	11/1/2018 15:43:51	0.000	0.000
095	11/1/2018 15:44:51	0.000	0.000
096	11/1/2018 15:45:51	0.000	0.000
097	11/1/2018 15:46:51	0.000	0.000
098	11/1/2018 15:47:51	0.000	0.000
099	11/1/2018 15:48:51	0.000	0.000
100	11/1/2018 15:49:51	0.000	0.000
101	11/1/2018 15:50:51	0.000	0.000
102	11/1/2018 15:51:51	0.000	0.000
103	11/1/2018 15:52:51	0.000	0.000
104	11/1/2018 15:53:51	0.000	0.000

PID_FA01729_upwind_11_2_18

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18/11/02 07:46

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Summary

Unit Name MiniRAE 3000(PGM-7320)
Unit SN 592-913005
Unit Firmware Ver V2.16

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

Site ID 12345678
User ID 12345678

Begin 11/2/2018 07:46:53
End 11/2/2018 12:11:36
Sample Period(s) 60
Number of Records 264

Sensor PID(ppm)
Sensor SN S023030337R6
Measure Type 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 100.0
Measurement Gas Isobutylene
Calibration Time 11/1/2018 14:22
Peak 11.7
Min 0.0
Average 1.5

****

Datalog

Index	Date/Time	PID(ppm) (Avg)	PID(ppm) (Max)	PID(ppm) (Real)
001	11/2/2018 07:47:53	15.3	20.0	11.7
002	11/2/2018 07:48:53	10.7	11.7	6.2
003	11/2/2018 07:49:53	0.1	3.0	0.0
004	11/2/2018 07:50:53	0.0	0.0	0.0
005	11/2/2018 07:51:53	0.0	0.0	0.0
006	11/2/2018 07:52:53	0.2	1.1	0.5

007	11/2/2018 07:53:53	0.6	2.1	0.1
008	11/2/2018 07:54:53	0.4	1.7	0.9
009	11/2/2018 07:55:53	0.4	1.5	0.0
010	11/2/2018 07:56:53	0.5	1.5	0.4
011	11/2/2018 07:57:53	0.6	1.3	1.2
012	11/2/2018 07:58:53	0.5	1.4	0.2
013	11/2/2018 07:59:53	0.1	0.5	0.0
014	11/2/2018 08:00:53	0.1	0.8	0.4
015	11/2/2018 08:01:53	0.2	0.8	0.4
016	11/2/2018 08:02:53	0.7	2.5	0.8
017	11/2/2018 08:03:53	0.7	1.8	0.0
018	11/2/2018 08:04:53	0.1	0.5	0.0
019	11/2/2018 08:05:53	0.0	0.4	0.2
020	11/2/2018 08:06:53	0.2	0.6	0.1
021	11/2/2018 08:07:53	0.3	0.9	0.4
022	11/2/2018 08:08:53	0.9	1.7	1.2
023	11/2/2018 08:09:53	1.4	2.6	0.6
024	11/2/2018 08:10:53	0.5	1.4	0.2
025	11/2/2018 08:11:53	0.5	1.4	0.2
026	11/2/2018 08:12:53	0.3	0.9	0.4
027	11/2/2018 08:13:53	0.6	2.1	0.8
028	11/2/2018 08:14:53	0.9	1.9	1.3
029	11/2/2018 08:15:53	1.3	3.2	0.9
030	11/2/2018 08:16:53	0.7	2.0	0.6
031	11/2/2018 08:17:53	0.5	1.4	0.5
032	11/2/2018 08:18:53	0.8	1.6	1.2
033	11/2/2018 08:19:53	0.8	2.6	0.6
034	11/2/2018 08:20:53	0.8	1.6	1.0
035	11/2/2018 08:21:53	0.9	1.8	1.3
036	11/2/2018 08:22:53	0.7	1.4	0.5
037	11/2/2018 08:23:53	1.0	1.6	0.7
038	11/2/2018 08:24:53	0.7	1.8	1.4
039	11/2/2018 08:25:53	0.7	2.0	0.8
040	11/2/2018 08:26:53	0.9	1.9	0.3
041	11/2/2018 08:27:53	1.1	3.1	0.9
042	11/2/2018 08:28:53	1.1	2.5	1.0
043	11/2/2018 08:29:53	1.2	2.3	1.0
044	11/2/2018 08:30:53	1.3	2.0	1.1
045	11/2/2018 08:31:53	1.2	2.3	1.7
046	11/2/2018 08:32:53	1.1	2.0	0.8
047	11/2/2018 08:33:53	0.9	1.9	0.2
048	11/2/2018 08:34:53	0.9	2.1	1.4
049	11/2/2018 08:35:53	1.1	1.9	0.6
050	11/2/2018 08:36:53	1.1	2.1	1.5
051	11/2/2018 08:37:53	1.2	1.9	1.5
052	11/2/2018 08:38:53	1.2	2.3	1.5
053	11/2/2018 08:39:53	1.2	2.2	1.1
054	11/2/2018 08:40:53	1.0	1.9	1.4

055	11/2/2018 08:41:53	0.9	1.6	0.9
056	11/2/2018 08:42:53	1.0	1.8	0.5
057	11/2/2018 08:43:53	0.9	2.0	0.6
058	11/2/2018 08:44:53	1.0	1.8	0.6
059	11/2/2018 08:45:53	0.7	1.7	0.6
060	11/2/2018 08:46:53	0.7	1.5	0.9
061	11/2/2018 08:47:53	0.7	1.2	0.6
062	11/2/2018 08:48:53	0.7	1.6	0.5
063	11/2/2018 08:49:53	0.6	1.3	0.4
064	11/2/2018 08:50:53	0.7	1.4	1.0
065	11/2/2018 08:51:53	0.8	1.5	0.8
066	11/2/2018 08:52:53	0.8	1.7	0.7
067	11/2/2018 08:53:53	1.0	2.0	0.8
068	11/2/2018 08:54:53	1.2	2.1	1.6
069	11/2/2018 08:55:53	1.3	2.2	1.4
070	11/2/2018 08:56:53	1.1	1.8	1.5
071	11/2/2018 08:57:53	1.1	1.7	1.7
072	11/2/2018 08:58:53	1.5	2.4	1.5
073	11/2/2018 08:59:53	1.8	2.7	1.4
074	11/2/2018 09:00:53	1.8	2.7	1.9
075	11/2/2018 09:01:53	1.7	2.7	1.4
076	11/2/2018 09:02:53	1.6	2.3	1.9
077	11/2/2018 09:03:53	1.6	2.2	2.2
078	11/2/2018 09:04:53	1.7	2.3	1.0
079	11/2/2018 09:05:53	2.0	3.1	1.4
080	11/2/2018 09:06:53	1.9	3.0	1.6
081	11/2/2018 09:07:53	2.4	3.2	2.4
082	11/2/2018 09:08:53	2.4	3.1	2.8
083	11/2/2018 09:09:53	2.4	3.2	2.1
084	11/2/2018 09:10:53	2.5	3.8	2.3
085	11/2/2018 09:11:53	2.7	3.6	2.8
086	11/2/2018 09:12:53	2.9	4.0	2.8
087	11/2/2018 09:13:53	2.6	3.7	2.3
088	11/2/2018 09:14:53	2.5	2.9	2.7
089	11/2/2018 09:15:53	2.6	3.3	2.6
090	11/2/2018 09:16:53	2.7	3.3	2.5
091	11/2/2018 09:17:53	2.7	3.2	2.7
092	11/2/2018 09:18:53	2.6	3.1	2.4
093	11/2/2018 09:19:53	2.8	3.3	2.5
094	11/2/2018 09:20:53	2.7	3.3	2.8
095	11/2/2018 09:21:53	2.7	3.5	3.2
096	11/2/2018 09:22:53	2.8	3.3	2.9
097	11/2/2018 09:23:53	2.8	3.4	2.7
098	11/2/2018 09:24:53	2.9	3.3	3.0
099	11/2/2018 09:25:53	3.0	3.5	2.9
100	11/2/2018 09:26:53	3.1	3.5	2.8
101	11/2/2018 09:27:53	3.0	3.4	3.4
102	11/2/2018 09:28:53	3.1	3.6	3.4

103	11/2/2018 09:29:53	3.1	3.6	3.1
104	11/2/2018 09:30:53	3.1	3.6	2.9
105	11/2/2018 09:31:53	3.1	3.7	3.0
106	11/2/2018 09:32:53	3.0	3.4	3.2
107	11/2/2018 09:33:53	2.9	3.5	2.9
108	11/2/2018 09:34:53	3.1	3.6	3.1
109	11/2/2018 09:35:53	3.2	3.9	3.2
110	11/2/2018 09:36:53	2.7	3.3	2.6
111	11/2/2018 09:37:53	2.6	3.5	2.4
112	11/2/2018 09:38:53	2.9	3.5	3.2
113	11/2/2018 09:39:53	3.1	3.5	3.2
114	11/2/2018 09:40:53	3.3	3.9	3.2
115	11/2/2018 09:41:53	3.3	3.7	3.6
116	11/2/2018 09:42:53	3.5	4.2	3.4
117	11/2/2018 09:43:53	3.6	4.0	3.6
118	11/2/2018 09:44:53	3.6	4.5	3.4
119	11/2/2018 09:45:53	3.6	4.3	4.3
120	11/2/2018 09:46:53	3.9	4.7	3.8
121	11/2/2018 09:47:53	3.8	4.5	3.6
122	11/2/2018 09:48:53	3.9	4.5	4.0
123	11/2/2018 09:49:53	3.9	4.4	3.5
124	11/2/2018 09:50:53	3.8	4.4	3.7
125	11/2/2018 09:51:53	3.8	4.6	3.7
126	11/2/2018 09:52:53	3.8	4.6	3.5
127	11/2/2018 09:53:53	3.6	4.1	3.6
128	11/2/2018 09:54:53	3.6	4.3	3.7
129	11/2/2018 09:55:53	3.6	4.0	3.7
130	11/2/2018 09:56:53	3.6	3.9	3.6
131	11/2/2018 09:57:53	3.8	4.5	4.2
132	11/2/2018 09:58:53	3.9	4.1	4.1
133	11/2/2018 09:59:53	3.8	4.2	3.9
134	11/2/2018 10:00:53	4.1	4.5	4.2
135	11/2/2018 10:01:53	4.3	4.8	4.3
136	11/2/2018 10:02:53	4.2	5.0	4.2
137	11/2/2018 10:03:53	4.2	4.6	4.3
138	11/2/2018 10:04:53	4.3	5.0	4.1
139	11/2/2018 10:05:53	4.2	4.9	4.9
140	11/2/2018 10:06:53	4.4	4.9	4.5
141	11/2/2018 10:07:53	4.7	5.2	4.8
142	11/2/2018 10:08:53	4.7	5.8	4.4
143	11/2/2018 10:09:53	5.0	5.6	5.0
144	11/2/2018 10:10:53	5.1	5.8	4.8
145	11/2/2018 10:11:53	4.9	5.8	4.9
146	11/2/2018 10:12:53	4.9	5.4	4.9
147	11/2/2018 10:13:53	4.8	5.3	5.0
148	11/2/2018 10:14:53	5.1	6.1	5.4
149	11/2/2018 10:15:53	4.8	5.4	4.5
150	11/2/2018 10:16:53	4.4	4.8	4.5

151	11/2/2018	10:17:53	4.5	4.9	4.8
152	11/2/2018	10:18:53	4.8	5.3	4.6
153	11/2/2018	10:19:53	4.5	5.3	4.5
154	11/2/2018	10:20:53	4.4	4.9	4.7
155	11/2/2018	10:21:53	4.4	5.0	4.3
156	11/2/2018	10:22:53	4.2	4.9	4.6
157	11/2/2018	10:23:53	4.0	4.6	3.6
158	11/2/2018	10:24:53	3.4	3.9	2.7
159	11/2/2018	10:25:53	3.0	4.2	2.6
160	11/2/2018	10:26:53	2.9	3.6	3.1
161	11/2/2018	10:27:53	3.1	3.6	3.2
162	11/2/2018	10:28:53	3.3	3.8	3.1
163	11/2/2018	10:29:53	2.9	3.5	2.4
164	11/2/2018	10:30:53	2.7	4.1	3.1
165	11/2/2018	10:31:53	2.5	3.5	2.4
166	11/2/2018	10:32:53	2.3	2.9	2.0
167	11/2/2018	10:33:53	2.4	3.3	1.9
168	11/2/2018	10:34:53	1.7	2.1	1.7
169	11/2/2018	10:35:53	1.5	1.9	1.5
170	11/2/2018	10:36:53	1.6	2.1	2.1
171	11/2/2018	10:37:53	1.6	2.3	1.8
172	11/2/2018	10:38:53	1.3	1.8	1.7
173	11/2/2018	10:39:53	1.0	1.9	0.8
174	11/2/2018	10:40:53	1.0	1.5	0.9
175	11/2/2018	10:41:53	1.1	1.6	1.2
176	11/2/2018	10:42:53	0.6	1.1	0.4
177	11/2/2018	10:43:53	0.3	0.8	0.4
178	11/2/2018	10:44:53	0.4	0.8	0.6
179	11/2/2018	10:45:53	0.5	1.0	0.7
180	11/2/2018	10:46:53	0.5	1.2	0.2
181	11/2/2018	10:47:53	0.3	0.8	0.1
182	11/2/2018	10:48:53	0.2	0.6	0.2
183	11/2/2018	10:49:53	0.2	0.5	0.5
184	11/2/2018	10:50:53	0.2	0.6	0.1
185	11/2/2018	10:51:53	0.1	0.6	0.1
186	11/2/2018	10:52:53	0.1	0.5	0.0
187	11/2/2018	10:53:53	0.1	0.5	0.0
188	11/2/2018	10:54:53	0.0	0.4	0.0
189	11/2/2018	10:55:53	0.0	0.3	0.0
190	11/2/2018	10:56:53	0.0	0.2	0.2
191	11/2/2018	10:57:53	0.1	0.3	0.0
192	11/2/2018	10:58:53	0.0	0.2	0.0
193	11/2/2018	10:59:53	0.0	0.1	0.0
194	11/2/2018	11:00:53	0.0	0.2	0.0
195	11/2/2018	11:01:53	0.0	0.2	0.0
196	11/2/2018	11:02:53	0.0	0.1	0.0
197	11/2/2018	11:03:53	0.0	0.1	0.0
198	11/2/2018	11:04:53	0.0	0.0	0.0

199	11/2/2018 11:05:53	0.0	0.0	0.0
200	11/2/2018 11:06:53	0.0	0.0	0.0
201	11/2/2018 11:07:53	0.0	0.0	0.0
202	11/2/2018 11:08:53	0.0	0.0	0.0
203	11/2/2018 11:09:53	0.0	0.0	0.0
204	11/2/2018 11:10:53	0.0	0.0	0.0
205	11/2/2018 11:11:53	0.0	0.0	0.0
206	11/2/2018 11:12:53	0.0	0.0	0.0
207	11/2/2018 11:13:53	0.0	0.0	0.0
208	11/2/2018 11:14:53	0.0	0.0	0.0
209	11/2/2018 11:15:53	0.0	0.0	0.0
210	11/2/2018 11:16:53	0.0	0.0	0.0
211	11/2/2018 11:17:53	0.0	0.0	0.0
212	11/2/2018 11:18:53	0.0	0.0	0.0
213	11/2/2018 11:19:53	0.0	0.0	0.0
214	11/2/2018 11:20:53	0.0	0.0	0.0
215	11/2/2018 11:21:53	0.0	0.0	0.0
216	11/2/2018 11:22:53	0.0	0.0	0.0
217	11/2/2018 11:23:53	0.0	0.0	0.0
218	11/2/2018 11:24:53	0.0	0.0	0.0
219	11/2/2018 11:25:53	0.0	0.0	0.0
220	11/2/2018 11:26:53	0.0	0.0	0.0
221	11/2/2018 11:27:53	0.0	0.0	0.0
222	11/2/2018 11:28:53	0.0	0.0	0.0
223	11/2/2018 11:29:53	0.0	0.0	0.0
224	11/2/2018 11:30:53	0.0	0.0	0.0
225	11/2/2018 11:31:53	0.0	0.0	0.0
226	11/2/2018 11:32:53	0.0	0.0	0.0
227	11/2/2018 11:33:53	0.0	0.0	0.0
228	11/2/2018 11:34:53	0.0	0.0	0.0
229	11/2/2018 11:35:53	0.0	0.0	0.0
230	11/2/2018 11:36:53	0.0	0.0	0.0
231	11/2/2018 11:37:53	0.0	0.0	0.0
232	11/2/2018 11:38:53	0.0	0.0	0.0
233	11/2/2018 11:39:53	0.0	0.0	0.0
234	11/2/2018 11:40:53	0.0	0.0	0.0
235	11/2/2018 11:41:53	0.0	0.0	0.0
236	11/2/2018 11:42:53	0.0	0.0	0.0
237	11/2/2018 11:43:53	0.0	0.0	0.0
238	11/2/2018 11:44:53	0.0	0.0	0.0
239	11/2/2018 11:45:53	0.0	0.0	0.0
240	11/2/2018 11:46:53	0.0	0.0	0.0
241	11/2/2018 11:47:53	0.0	0.0	0.0
242	11/2/2018 11:48:53	0.0	0.0	0.0
243	11/2/2018 11:49:53	0.0	0.0	0.0
244	11/2/2018 11:50:53	0.0	0.0	0.0
245	11/2/2018 11:51:53	0.0	0.0	0.0
246	11/2/2018 11:52:53	0.0	0.0	0.0

PID_FA01729_upwind_11_2_18

247	11/2/2018 11:53:53	0.0	0.0	0.0
248	11/2/2018 11:54:53	0.0	0.0	0.0
249	11/2/2018 11:55:53	0.0	0.0	0.0
250	11/2/2018 11:56:53	0.0	0.0	0.0
251	11/2/2018 11:57:53	0.0	0.0	0.0
252	11/2/2018 11:58:53	0.0	0.0	0.0
253	11/2/2018 11:59:53	0.0	0.0	0.0
254	11/2/2018 12:00:53	0.0	0.0	0.0
255	11/2/2018 12:01:53	0.0	0.0	0.0
256	11/2/2018 12:02:53	0.0	0.0	0.0
257	11/2/2018 12:03:53	0.0	0.0	0.0
258	11/2/2018 12:04:53	0.0	0.0	0.0
259	11/2/2018 12:05:53	0.0	0.0	0.0
260	11/2/2018 12:06:53	0.0	0.0	0.0
261	11/2/2018 12:07:53	0.0	0.0	0.0
262	11/2/2018 12:08:53	0.0	0.0	0.0
263	11/2/2018 12:09:53	0.0	0.0	0.0
264	11/2/2018 12:10:53	0.0	0.0	0.0
Peak		15.3	20.0	11.7
Min		0.0	0.0	0.0
Average		1.6	2.1	1.5

****

TWA/STEL

Index	Date/Time	PID(ppm) (TWA)	PID(ppm) (STEL)
001	11/2/2018 07:47:53	0.0	---
002	11/2/2018 07:48:53	0.0	---
003	11/2/2018 07:49:53	0.0	---
004	11/2/2018 07:50:53	0.0	---
005	11/2/2018 07:51:53	0.0	---
006	11/2/2018 07:52:53	0.0	---
007	11/2/2018 07:53:53	0.0	---
008	11/2/2018 07:54:53	0.0	---
009	11/2/2018 07:55:53	0.0	---
010	11/2/2018 07:56:53	0.0	---
011	11/2/2018 07:57:53	0.0	---
012	11/2/2018 07:58:53	0.0	---
013	11/2/2018 07:59:53	0.0	---
014	11/2/2018 08:00:53	0.0	---
015	11/2/2018 08:01:53	0.0	1.5
016	11/2/2018 08:02:53	0.0	1.5
017	11/2/2018 08:03:53	0.0	0.7
018	11/2/2018 08:04:53	0.0	0.3
019	11/2/2018 08:05:53	0.0	0.3
020	11/2/2018 08:06:53	0.0	0.3
021	11/2/2018 08:07:53	0.0	0.4
022	11/2/2018 08:08:53	0.1	0.4

023	11/2/2018 08:09:53	0.1	0.5
024	11/2/2018 08:10:53	0.1	0.4
025	11/2/2018 08:11:53	0.1	0.4
026	11/2/2018 08:12:53	0.1	0.4
027	11/2/2018 08:13:53	0.1	0.4
028	11/2/2018 08:14:53	0.1	0.5
029	11/2/2018 08:15:53	0.1	0.5
030	11/2/2018 08:16:53	0.1	0.5
031	11/2/2018 08:17:53	0.1	0.5
032	11/2/2018 08:18:53	0.1	0.6
033	11/2/2018 08:19:53	0.1	0.6
034	11/2/2018 08:20:53	0.1	0.7
035	11/2/2018 08:21:53	0.1	0.8
036	11/2/2018 08:22:53	0.1	0.8
037	11/2/2018 08:23:53	0.1	0.8
038	11/2/2018 08:24:53	0.1	0.8
039	11/2/2018 08:25:53	0.1	0.8
040	11/2/2018 08:26:53	0.1	0.8
041	11/2/2018 08:27:53	0.1	0.9
042	11/2/2018 08:28:53	0.1	0.9
043	11/2/2018 08:29:53	0.1	0.9
044	11/2/2018 08:30:53	0.1	0.9
045	11/2/2018 08:31:53	0.1	1.0
046	11/2/2018 08:32:53	0.1	1.0
047	11/2/2018 08:33:53	0.1	1.0
048	11/2/2018 08:34:53	0.1	1.0
049	11/2/2018 08:35:53	0.1	1.0
050	11/2/2018 08:36:53	0.1	1.0
051	11/2/2018 08:37:53	0.1	1.0
052	11/2/2018 08:38:53	0.1	1.1
053	11/2/2018 08:39:53	0.1	1.1
054	11/2/2018 08:40:53	0.1	1.1
055	11/2/2018 08:41:53	0.1	1.1
056	11/2/2018 08:42:53	0.1	1.1
057	11/2/2018 08:43:53	0.1	1.1
058	11/2/2018 08:44:53	0.1	1.1
059	11/2/2018 08:45:53	0.1	1.1
060	11/2/2018 08:46:53	0.1	1.1
061	11/2/2018 08:47:53	0.1	1.0
062	11/2/2018 08:48:53	0.1	1.0
063	11/2/2018 08:49:53	0.1	1.0
064	11/2/2018 08:50:53	0.1	0.9
065	11/2/2018 08:51:53	0.1	1.0
066	11/2/2018 08:52:53	0.1	0.9
067	11/2/2018 08:53:53	0.1	0.9
068	11/2/2018 08:54:53	0.1	0.9
069	11/2/2018 08:55:53	0.1	0.9
070	11/2/2018 08:56:53	0.1	0.9

071	11/2/2018 08:57:53	0.1	0.9
072	11/2/2018 08:58:53	0.1	1.0
073	11/2/2018 08:59:53	0.1	1.1
074	11/2/2018 09:00:53	0.2	1.2
075	11/2/2018 09:01:53	0.2	1.2
076	11/2/2018 09:02:53	0.2	1.3
077	11/2/2018 09:03:53	0.2	1.4
078	11/2/2018 09:04:53	0.2	1.4
079	11/2/2018 09:05:53	0.2	1.5
080	11/2/2018 09:06:53	0.2	1.5
081	11/2/2018 09:07:53	0.2	1.6
082	11/2/2018 09:08:53	0.2	1.8
083	11/2/2018 09:09:53	0.2	1.9
084	11/2/2018 09:10:53	0.2	1.9
085	11/2/2018 09:11:53	0.2	2.0
086	11/2/2018 09:12:53	0.2	2.1
087	11/2/2018 09:13:53	0.2	2.1
088	11/2/2018 09:14:53	0.2	2.2
089	11/2/2018 09:15:53	0.2	2.3
090	11/2/2018 09:16:53	0.2	2.3
091	11/2/2018 09:17:53	0.2	2.4
092	11/2/2018 09:18:53	0.2	2.4
093	11/2/2018 09:19:53	0.2	2.5
094	11/2/2018 09:20:53	0.2	2.6
095	11/2/2018 09:21:53	0.3	2.7
096	11/2/2018 09:22:53	0.3	2.8
097	11/2/2018 09:23:53	0.3	2.8
098	11/2/2018 09:24:53	0.3	2.8
099	11/2/2018 09:25:53	0.3	2.9
100	11/2/2018 09:26:53	0.3	2.9
101	11/2/2018 09:27:53	0.3	2.9
102	11/2/2018 09:28:53	0.3	3.0
103	11/2/2018 09:29:53	0.3	3.0
104	11/2/2018 09:30:53	0.3	3.1
105	11/2/2018 09:31:53	0.3	3.1
106	11/2/2018 09:32:53	0.3	3.1
107	11/2/2018 09:33:53	0.3	3.1
108	11/2/2018 09:34:53	0.3	3.2
109	11/2/2018 09:35:53	0.3	3.2
110	11/2/2018 09:36:53	0.3	3.2
111	11/2/2018 09:37:53	0.4	3.2
112	11/2/2018 09:38:53	0.4	3.2
113	11/2/2018 09:39:53	0.4	3.2
114	11/2/2018 09:40:53	0.4	3.2
115	11/2/2018 09:41:53	0.4	3.3
116	11/2/2018 09:42:53	0.4	3.3
117	11/2/2018 09:43:53	0.4	3.3
118	11/2/2018 09:44:53	0.4	3.3

119	11/2/2018 09:45:53	0.4	3.4
120	11/2/2018 09:46:53	0.4	3.5
121	11/2/2018 09:47:53	0.4	3.5
122	11/2/2018 09:48:53	0.4	3.6
123	11/2/2018 09:49:53	0.4	3.6
124	11/2/2018 09:50:53	0.5	3.6
125	11/2/2018 09:51:53	0.5	3.7
126	11/2/2018 09:52:53	0.5	3.7
127	11/2/2018 09:53:53	0.5	3.8
128	11/2/2018 09:54:53	0.5	3.9
129	11/2/2018 09:55:53	0.5	3.9
130	11/2/2018 09:56:53	0.5	3.9
131	11/2/2018 09:57:53	0.5	4.0
132	11/2/2018 09:58:53	0.5	4.0
133	11/2/2018 09:59:53	0.5	4.0
134	11/2/2018 10:00:53	0.5	4.1
135	11/2/2018 10:01:53	0.5	4.1
136	11/2/2018 10:02:53	0.5	4.1
137	11/2/2018 10:03:53	0.6	4.1
138	11/2/2018 10:04:53	0.6	4.2
139	11/2/2018 10:05:53	0.6	4.2
140	11/2/2018 10:06:53	0.6	4.3
141	11/2/2018 10:07:53	0.6	4.4
142	11/2/2018 10:08:53	0.6	4.4
143	11/2/2018 10:09:53	0.6	4.5
144	11/2/2018 10:10:53	0.6	4.6
145	11/2/2018 10:11:53	0.6	4.7
146	11/2/2018 10:12:53	0.6	4.8
147	11/2/2018 10:13:53	0.7	4.8
148	11/2/2018 10:14:53	0.7	4.9
149	11/2/2018 10:15:53	0.7	4.9
150	11/2/2018 10:16:53	0.7	5.0
151	11/2/2018 10:17:53	0.7	5.0
152	11/2/2018 10:18:53	0.7	5.0
153	11/2/2018 10:19:53	0.7	5.0
154	11/2/2018 10:20:53	0.7	5.1
155	11/2/2018 10:21:53	0.7	5.0
156	11/2/2018 10:22:53	0.7	5.0
157	11/2/2018 10:23:53	0.7	5.0
158	11/2/2018 10:24:53	0.8	4.9
159	11/2/2018 10:25:53	0.8	4.7
160	11/2/2018 10:26:53	0.8	4.6
161	11/2/2018 10:27:53	0.8	4.5
162	11/2/2018 10:28:53	0.8	4.3
163	11/2/2018 10:29:53	0.8	4.2
164	11/2/2018 10:30:53	0.8	4.0
165	11/2/2018 10:31:53	0.8	3.9
166	11/2/2018 10:32:53	0.8	3.7

167	11/2/2018 10:33:53	0.8	3.5
168	11/2/2018 10:34:53	0.8	3.3
169	11/2/2018 10:35:53	0.8	3.1
170	11/2/2018 10:36:53	0.8	3.0
171	11/2/2018 10:37:53	0.8	2.8
172	11/2/2018 10:38:53	0.8	2.6
173	11/2/2018 10:39:53	0.8	2.4
174	11/2/2018 10:40:53	0.8	2.3
175	11/2/2018 10:41:53	0.8	2.2
176	11/2/2018 10:42:53	0.8	2.0
177	11/2/2018 10:43:53	0.8	1.8
178	11/2/2018 10:44:53	0.8	1.7
179	11/2/2018 10:45:53	0.8	1.5
180	11/2/2018 10:46:53	0.8	1.4
181	11/2/2018 10:47:53	0.8	1.2
182	11/2/2018 10:48:53	0.8	1.1
183	11/2/2018 10:49:53	0.8	1.0
184	11/2/2018 10:50:53	0.8	0.9
185	11/2/2018 10:51:53	0.8	0.8
186	11/2/2018 10:52:53	0.8	0.6
187	11/2/2018 10:53:53	0.8	0.5
188	11/2/2018 10:54:53	0.8	0.4
189	11/2/2018 10:55:53	0.8	0.4
190	11/2/2018 10:56:53	0.8	0.3
191	11/2/2018 10:57:53	0.8	0.2
192	11/2/2018 10:58:53	0.8	0.2
193	11/2/2018 10:59:53	0.8	0.2
194	11/2/2018 11:00:53	0.8	0.1
195	11/2/2018 11:01:53	0.8	0.1
196	11/2/2018 11:02:53	0.8	0.1
197	11/2/2018 11:03:53	0.8	0.1
198	11/2/2018 11:04:53	0.8	0.1
199	11/2/2018 11:05:53	0.8	0.0
200	11/2/2018 11:06:53	0.8	0.0
201	11/2/2018 11:07:53	0.8	0.0
202	11/2/2018 11:08:53	0.8	0.0
203	11/2/2018 11:09:53	0.8	0.0
204	11/2/2018 11:10:53	0.8	0.0
205	11/2/2018 11:11:53	0.8	0.0
206	11/2/2018 11:12:53	0.8	0.0
207	11/2/2018 11:13:53	0.8	0.0
208	11/2/2018 11:14:53	0.8	0.0
209	11/2/2018 11:15:53	0.8	0.0
210	11/2/2018 11:16:53	0.8	0.0
211	11/2/2018 11:17:53	0.8	0.0
212	11/2/2018 11:18:53	0.8	0.0
213	11/2/2018 11:19:53	0.8	0.0
214	11/2/2018 11:20:53	0.8	0.0

215	11/2/2018 11:21:53	0.8	0.0
216	11/2/2018 11:22:53	0.8	0.0
217	11/2/2018 11:23:53	0.8	0.0
218	11/2/2018 11:24:53	0.8	0.0
219	11/2/2018 11:25:53	0.8	0.0
220	11/2/2018 11:26:53	0.8	0.0
221	11/2/2018 11:27:53	0.8	0.0
222	11/2/2018 11:28:53	0.8	0.0
223	11/2/2018 11:29:53	0.8	0.0
224	11/2/2018 11:30:53	0.8	0.0
225	11/2/2018 11:31:53	0.8	0.0
226	11/2/2018 11:32:53	0.8	0.0
227	11/2/2018 11:33:53	0.8	0.0
228	11/2/2018 11:34:53	0.8	0.0
229	11/2/2018 11:35:53	0.8	0.0
230	11/2/2018 11:36:53	0.8	0.0
231	11/2/2018 11:37:53	0.8	0.0
232	11/2/2018 11:38:53	0.8	0.0
233	11/2/2018 11:39:53	0.8	0.0
234	11/2/2018 11:40:53	0.8	0.0
235	11/2/2018 11:41:53	0.8	0.0
236	11/2/2018 11:42:53	0.8	0.0
237	11/2/2018 11:43:53	0.8	0.0
238	11/2/2018 11:44:53	0.8	0.0
239	11/2/2018 11:45:53	0.8	0.0
240	11/2/2018 11:46:53	0.8	0.0
241	11/2/2018 11:47:53	0.8	0.0
242	11/2/2018 11:48:53	0.8	0.0
243	11/2/2018 11:49:53	0.8	0.0
244	11/2/2018 11:50:53	0.8	0.0
245	11/2/2018 11:51:53	0.8	0.0
246	11/2/2018 11:52:53	0.8	0.0
247	11/2/2018 11:53:53	0.8	0.0
248	11/2/2018 11:54:53	0.8	0.0
249	11/2/2018 11:55:53	0.8	0.0
250	11/2/2018 11:56:53	0.8	0.0
251	11/2/2018 11:57:53	0.8	0.0
252	11/2/2018 11:58:53	0.8	0.0
253	11/2/2018 11:59:53	0.8	0.0
254	11/2/2018 12:00:53	0.8	0.0
255	11/2/2018 12:01:53	0.8	0.0
256	11/2/2018 12:02:53	0.8	0.0
257	11/2/2018 12:03:53	0.8	0.0
258	11/2/2018 12:04:53	0.8	0.0
259	11/2/2018 12:05:53	0.8	0.0
260	11/2/2018 12:06:53	0.8	0.0
261	11/2/2018 12:07:53	0.8	0.0
262	11/2/2018 12:08:53	0.8	0.0

		PID_FA01729_upwind_11_2_18	
263	11/2/2018 12:09:53	0.8	0.0
264	11/2/2018 12:10:53	0.8	0.0

PID_FA01590_downwind_11_2_18

18/11/02 07:42

Summary

Unit Name	MiniRAE 3000(PGM-7320)
Unit SN	592-912589
Unit Firmware Ver	V1.20A
Running Mode	Hygiene Mode
Measure Type	Avg; Max; Real
Datalog Mode	Continuous
Datalog Type	Auto
Diagnostic Mode	No
Stop Reason	Power Down
Site ID	12345678
User ID	12345678
Begin	11/2/2018 07:42:40
End	11/2/2018 11:52:18
Sample Period(s)	60
Number of Records	249
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	10/26/2018 15:00
Peak	0.000
Min	0.000
Average	0.000

Datalog

Index	Date/Time	VOC(ppm) (Avg)	VOC(ppm) (Max)	VOC(ppm) (Real)
001	11/2/2018 07:43:40	0.000	0.000	0.000
002	11/2/2018 07:44:40	0.000	0.000	0.000
003	11/2/2018 07:45:40	0.000	0.000	0.000
004	11/2/2018 07:46:40	0.000	0.000	0.000
005	11/2/2018 07:47:40	0.000	0.000	0.000
006	11/2/2018 07:48:40	0.000	0.000	0.000

007	11/2/2018 07:49:40	0.000	0.000	0.000
008	11/2/2018 07:50:40	0.000	0.000	0.000
009	11/2/2018 07:51:40	0.000	0.000	0.000
010	11/2/2018 07:52:40	0.000	0.000	0.000
011	11/2/2018 07:53:40	0.000	0.000	0.000
012	11/2/2018 07:54:40	0.000	0.000	0.000
013	11/2/2018 07:55:40	0.000	0.000	0.000
014	11/2/2018 07:56:40	0.000	0.000	0.000
015	11/2/2018 07:57:40	0.000	0.000	0.000
016	11/2/2018 07:58:40	0.000	0.000	0.000
017	11/2/2018 07:59:40	0.000	0.000	0.000
018	11/2/2018 08:00:40	0.000	0.000	0.000
019	11/2/2018 08:01:40	0.000	0.000	0.000
020	11/2/2018 08:02:40	0.000	0.000	0.000
021	11/2/2018 08:03:40	0.000	0.000	0.000
022	11/2/2018 08:04:40	0.000	0.000	0.000
023	11/2/2018 08:05:40	0.000	0.000	0.000
024	11/2/2018 08:06:40	0.000	0.000	0.000
025	11/2/2018 08:07:40	0.000	0.000	0.000
026	11/2/2018 08:08:40	0.000	0.000	0.000
027	11/2/2018 08:09:40	0.000	0.000	0.000
028	11/2/2018 08:10:40	0.000	0.000	0.000
029	11/2/2018 08:11:40	0.000	0.000	0.000
030	11/2/2018 08:12:40	0.000	0.000	0.000
031	11/2/2018 08:13:40	0.000	0.000	0.000
032	11/2/2018 08:14:40	0.000	0.000	0.000
033	11/2/2018 08:15:40	0.000	0.000	0.000
034	11/2/2018 08:16:40	0.000	0.000	0.000
035	11/2/2018 08:17:40	0.000	0.000	0.000
036	11/2/2018 08:18:40	0.000	0.000	0.000
037	11/2/2018 08:19:40	0.000	0.000	0.000
038	11/2/2018 08:20:40	0.000	0.000	0.000
039	11/2/2018 08:21:40	0.000	0.000	0.000
040	11/2/2018 08:22:40	0.000	0.000	0.000
041	11/2/2018 08:23:40	0.000	0.000	0.000
042	11/2/2018 08:24:40	0.000	0.000	0.000
043	11/2/2018 08:25:40	0.000	0.000	0.000
044	11/2/2018 08:26:40	0.000	0.000	0.000
045	11/2/2018 08:27:40	0.000	0.000	0.000
046	11/2/2018 08:28:40	0.000	0.000	0.000
047	11/2/2018 08:29:40	0.000	0.000	0.000
048	11/2/2018 08:30:40	0.000	0.000	0.000
049	11/2/2018 08:31:40	0.000	0.000	0.000
050	11/2/2018 08:32:40	0.000	0.000	0.000
051	11/2/2018 08:33:40	0.000	0.000	0.000
052	11/2/2018 08:34:40	0.000	0.000	0.000
053	11/2/2018 08:35:40	0.000	0.000	0.000
054	11/2/2018 08:36:40	0.000	0.000	0.000

055	11/2/2018 08:37:40	0.000	0.000	0.000
056	11/2/2018 08:38:40	0.000	0.000	0.000
057	11/2/2018 08:39:40	0.000	0.000	0.000
058	11/2/2018 08:40:40	0.000	0.000	0.000
059	11/2/2018 08:41:40	0.000	0.000	0.000
060	11/2/2018 08:42:40	0.000	0.000	0.000
061	11/2/2018 08:43:40	0.000	0.000	0.000
062	11/2/2018 08:44:40	0.000	0.000	0.000
063	11/2/2018 08:45:40	0.000	0.000	0.000
064	11/2/2018 08:46:40	0.000	0.000	0.000
065	11/2/2018 08:47:40	0.000	0.000	0.000
066	11/2/2018 08:48:40	0.000	0.000	0.000
067	11/2/2018 08:49:40	0.000	0.000	0.000
068	11/2/2018 08:50:40	0.000	0.000	0.000
069	11/2/2018 08:51:40	0.000	0.000	0.000
070	11/2/2018 08:52:40	0.000	0.000	0.000
071	11/2/2018 08:53:40	0.000	0.000	0.000
072	11/2/2018 08:54:40	0.000	0.000	0.000
073	11/2/2018 08:55:40	0.000	0.000	0.000
074	11/2/2018 08:56:40	0.000	0.000	0.000
075	11/2/2018 08:57:40	0.000	0.000	0.000
076	11/2/2018 08:58:40	0.000	0.000	0.000
077	11/2/2018 08:59:40	0.000	0.000	0.000
078	11/2/2018 09:00:40	0.000	0.000	0.000
079	11/2/2018 09:01:40	0.000	0.000	0.000
080	11/2/2018 09:02:40	0.000	0.000	0.000
081	11/2/2018 09:03:40	0.000	0.000	0.000
082	11/2/2018 09:04:40	0.000	0.000	0.000
083	11/2/2018 09:05:40	0.000	0.000	0.000
084	11/2/2018 09:06:40	0.000	0.000	0.000
085	11/2/2018 09:07:40	0.000	0.000	0.000
086	11/2/2018 09:08:40	0.000	0.000	0.000
087	11/2/2018 09:09:40	0.000	0.000	0.000
088	11/2/2018 09:10:40	0.000	0.000	0.000
089	11/2/2018 09:11:40	0.000	0.000	0.000
090	11/2/2018 09:12:40	0.000	0.000	0.000
091	11/2/2018 09:13:40	0.000	0.000	0.000
092	11/2/2018 09:14:40	0.000	0.000	0.000
093	11/2/2018 09:15:40	0.000	0.000	0.000
094	11/2/2018 09:16:40	0.000	0.000	0.000
095	11/2/2018 09:17:40	0.000	0.000	0.000
096	11/2/2018 09:18:40	0.000	0.000	0.000
097	11/2/2018 09:19:40	0.000	0.000	0.000
098	11/2/2018 09:20:40	0.000	0.000	0.000
099	11/2/2018 09:21:40	0.000	0.000	0.000
100	11/2/2018 09:22:40	0.000	0.000	0.000
101	11/2/2018 09:23:40	0.000	0.000	0.000
102	11/2/2018 09:24:40	0.000	0.000	0.000

103	11/2/2018 09:25:40	0.000	0.000	0.000
104	11/2/2018 09:26:40	0.000	0.000	0.000
105	11/2/2018 09:27:40	0.000	0.000	0.000
106	11/2/2018 09:28:40	0.000	0.000	0.000
107	11/2/2018 09:29:40	0.000	0.000	0.000
108	11/2/2018 09:30:40	0.000	0.000	0.000
109	11/2/2018 09:31:40	0.000	0.000	0.000
110	11/2/2018 09:32:40	0.000	0.000	0.000
111	11/2/2018 09:33:40	0.000	0.000	0.000
112	11/2/2018 09:34:40	0.000	0.000	0.000
113	11/2/2018 09:35:40	0.000	0.000	0.000
114	11/2/2018 09:36:40	0.000	0.000	0.000
115	11/2/2018 09:37:40	0.000	0.000	0.000
116	11/2/2018 09:38:40	0.000	0.000	0.000
117	11/2/2018 09:39:40	0.000	0.000	0.000
118	11/2/2018 09:40:40	0.000	0.000	0.000
119	11/2/2018 09:41:40	0.000	0.000	0.000
120	11/2/2018 09:42:40	0.000	0.000	0.000
121	11/2/2018 09:43:40	0.000	0.000	0.000
122	11/2/2018 09:44:40	0.000	0.000	0.000
123	11/2/2018 09:45:40	0.000	0.000	0.000
124	11/2/2018 09:46:40	0.000	0.000	0.000
125	11/2/2018 09:47:40	0.000	0.000	0.000
126	11/2/2018 09:48:40	0.000	0.000	0.000
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128	11/2/2018 09:50:40	0.000	0.000	0.000
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134	11/2/2018 09:56:40	0.000	0.000	0.000
135	11/2/2018 09:57:40	0.000	0.000	0.000
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137	11/2/2018 09:59:40	0.000	0.000	0.000
138	11/2/2018 10:00:40	0.000	0.000	0.000
139	11/2/2018 10:01:40	0.000	0.000	0.000
140	11/2/2018 10:02:40	0.000	0.000	0.000
141	11/2/2018 10:03:40	0.000	0.000	0.000
142	11/2/2018 10:04:40	0.000	0.000	0.000
143	11/2/2018 10:05:40	0.000	0.000	0.000
144	11/2/2018 10:06:40	0.000	0.000	0.000
145	11/2/2018 10:07:40	0.000	0.000	0.000
146	11/2/2018 10:08:40	0.000	0.000	0.000
147	11/2/2018 10:09:40	0.000	0.000	0.000
148	11/2/2018 10:10:40	0.000	0.000	0.000
149	11/2/2018 10:11:40	0.000	0.000	0.000
150	11/2/2018 10:12:40	0.000	0.000	0.000

151	11/2/2018 10:13:40	0.000	0.000	0.000
152	11/2/2018 10:14:40	0.000	0.000	0.000
153	11/2/2018 10:15:40	0.000	0.000	0.000
154	11/2/2018 10:16:40	0.000	0.000	0.000
155	11/2/2018 10:17:40	0.000	0.000	0.000
156	11/2/2018 10:18:40	0.000	0.000	0.000
157	11/2/2018 10:19:40	0.000	0.000	0.000
158	11/2/2018 10:20:40	0.000	0.000	0.000
159	11/2/2018 10:21:40	0.000	0.000	0.000
160	11/2/2018 10:22:40	0.000	0.000	0.000
161	11/2/2018 10:23:40	0.000	0.000	0.000
162	11/2/2018 10:24:40	0.000	0.000	0.000
163	11/2/2018 10:25:40	0.000	0.000	0.000
164	11/2/2018 10:26:40	0.000	0.000	0.000
165	11/2/2018 10:27:40	0.000	0.000	0.000
166	11/2/2018 10:28:40	0.000	0.000	0.000
167	11/2/2018 10:29:40	0.000	0.000	0.000
168	11/2/2018 10:30:40	0.000	0.000	0.000
169	11/2/2018 10:31:40	0.000	0.000	0.000
170	11/2/2018 10:32:40	0.000	0.000	0.000
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172	11/2/2018 10:34:40	0.000	0.000	0.000
173	11/2/2018 10:35:40	0.000	0.000	0.000
174	11/2/2018 10:36:40	0.000	0.000	0.000
175	11/2/2018 10:37:40	0.000	0.000	0.000
176	11/2/2018 10:38:40	0.000	0.000	0.000
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178	11/2/2018 10:40:40	0.000	0.000	0.000
179	11/2/2018 10:41:40	0.000	0.000	0.000
180	11/2/2018 10:42:40	0.000	0.000	0.000
181	11/2/2018 10:43:40	0.000	0.000	0.000
182	11/2/2018 10:44:40	0.000	0.000	0.000
183	11/2/2018 10:45:40	0.000	0.000	0.000
184	11/2/2018 10:46:40	0.000	0.000	0.000
185	11/2/2018 10:47:40	0.000	0.000	0.000
186	11/2/2018 10:48:40	0.000	0.000	0.000
187	11/2/2018 10:49:40	0.000	0.000	0.000
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189	11/2/2018 10:51:40	0.000	0.000	0.000
190	11/2/2018 10:52:40	0.000	0.000	0.000
191	11/2/2018 10:53:40	0.000	0.000	0.000
192	11/2/2018 10:54:40	0.000	0.000	0.000
193	11/2/2018 10:55:40	0.000	0.000	0.000
194	11/2/2018 10:56:40	0.000	0.000	0.000
195	11/2/2018 10:57:40	0.000	0.000	0.000
196	11/2/2018 10:58:40	0.000	0.000	0.000
197	11/2/2018 10:59:40	0.000	0.000	0.000
198	11/2/2018 11:00:40	0.000	0.000	0.000

199	11/2/2018 11:01:40	0.000	0.000	0.000
200	11/2/2018 11:02:40	0.000	0.000	0.000
201	11/2/2018 11:03:40	0.000	0.000	0.000
202	11/2/2018 11:04:40	0.000	0.000	0.000
203	11/2/2018 11:05:40	0.000	0.000	0.000
204	11/2/2018 11:06:40	0.000	0.000	0.000
205	11/2/2018 11:07:40	0.000	0.000	0.000
206	11/2/2018 11:08:40	0.000	0.000	0.000
207	11/2/2018 11:09:40	0.000	0.000	0.000
208	11/2/2018 11:10:40	0.000	0.000	0.000
209	11/2/2018 11:11:40	0.000	0.000	0.000
210	11/2/2018 11:12:40	0.000	0.000	0.000
211	11/2/2018 11:13:40	0.000	0.000	0.000
212	11/2/2018 11:14:40	0.000	0.000	0.000
213	11/2/2018 11:15:40	0.000	0.000	0.000
214	11/2/2018 11:16:40	0.000	0.000	0.000
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216	11/2/2018 11:18:40	0.000	0.000	0.000
217	11/2/2018 11:19:40	0.000	0.000	0.000
218	11/2/2018 11:20:40	0.000	0.000	0.000
219	11/2/2018 11:21:40	0.000	0.000	0.000
220	11/2/2018 11:22:40	0.000	0.000	0.000
221	11/2/2018 11:23:40	0.000	0.000	0.000
222	11/2/2018 11:24:40	0.000	0.000	0.000
223	11/2/2018 11:25:40	0.000	0.000	0.000
224	11/2/2018 11:26:40	0.000	0.000	0.000
225	11/2/2018 11:27:40	0.000	0.000	0.000
226	11/2/2018 11:28:40	0.000	0.000	0.000
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228	11/2/2018 11:30:40	0.000	0.000	0.000
229	11/2/2018 11:31:40	0.000	0.000	0.000
230	11/2/2018 11:32:40	0.000	0.000	0.000
231	11/2/2018 11:33:40	0.000	0.000	0.000
232	11/2/2018 11:34:40	0.000	0.000	0.000
233	11/2/2018 11:35:40	0.000	0.000	0.000
234	11/2/2018 11:36:40	0.000	0.000	0.000
235	11/2/2018 11:37:40	0.000	0.000	0.000
236	11/2/2018 11:38:40	0.000	0.000	0.000
237	11/2/2018 11:39:40	0.000	0.000	0.000
238	11/2/2018 11:40:40	0.000	0.000	0.000
239	11/2/2018 11:41:40	0.000	0.000	0.000
240	11/2/2018 11:42:40	0.000	0.000	0.000
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242	11/2/2018 11:44:40	0.000	0.000	0.000
243	11/2/2018 11:45:40	0.000	0.000	0.000
244	11/2/2018 11:46:40	0.000	0.000	0.000
245	11/2/2018 11:47:40	0.000	0.000	0.000
246	11/2/2018 11:48:40	0.000	0.000	0.000

247	11/2/2018 11:49:40	0.000	0.000	0.000
248	11/2/2018 11:50:40	0.000	0.000	0.000
249	11/2/2018 11:51:40	0.000	0.000	0.000
Peak		0.000	0.000	0.000
Min		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	11/2/2018 07:43:40	0.000	---
002	11/2/2018 07:44:40	0.000	---
003	11/2/2018 07:45:40	0.000	---
004	11/2/2018 07:46:40	0.000	---
005	11/2/2018 07:47:40	0.000	---
006	11/2/2018 07:48:40	0.000	---
007	11/2/2018 07:49:40	0.000	---
008	11/2/2018 07:50:40	0.000	---
009	11/2/2018 07:51:40	0.000	---
010	11/2/2018 07:52:40	0.000	---
011	11/2/2018 07:53:40	0.000	---
012	11/2/2018 07:54:40	0.000	---
013	11/2/2018 07:55:40	0.000	---
014	11/2/2018 07:56:40	0.000	---
015	11/2/2018 07:57:40	0.000	0.000
016	11/2/2018 07:58:40	0.000	0.000
017	11/2/2018 07:59:40	0.000	0.000
018	11/2/2018 08:00:40	0.000	0.000
019	11/2/2018 08:01:40	0.000	0.000
020	11/2/2018 08:02:40	0.000	0.000
021	11/2/2018 08:03:40	0.000	0.000
022	11/2/2018 08:04:40	0.000	0.000
023	11/2/2018 08:05:40	0.000	0.000
024	11/2/2018 08:06:40	0.000	0.000
025	11/2/2018 08:07:40	0.000	0.000
026	11/2/2018 08:08:40	0.000	0.000
027	11/2/2018 08:09:40	0.000	0.000
028	11/2/2018 08:10:40	0.000	0.000
029	11/2/2018 08:11:40	0.000	0.000
030	11/2/2018 08:12:40	0.000	0.000
031	11/2/2018 08:13:40	0.000	0.000
032	11/2/2018 08:14:40	0.000	0.000
033	11/2/2018 08:15:40	0.000	0.000
034	11/2/2018 08:16:40	0.000	0.000
035	11/2/2018 08:17:40	0.000	0.000
036	11/2/2018 08:18:40	0.000	0.000
037	11/2/2018 08:19:40	0.000	0.000

038	11/2/2018 08:20:40	0.000	0.000
039	11/2/2018 08:21:40	0.000	0.000
040	11/2/2018 08:22:40	0.000	0.000
041	11/2/2018 08:23:40	0.000	0.000
042	11/2/2018 08:24:40	0.000	0.000
043	11/2/2018 08:25:40	0.000	0.000
044	11/2/2018 08:26:40	0.000	0.000
045	11/2/2018 08:27:40	0.000	0.000
046	11/2/2018 08:28:40	0.000	0.000
047	11/2/2018 08:29:40	0.000	0.000
048	11/2/2018 08:30:40	0.000	0.000
049	11/2/2018 08:31:40	0.000	0.000
050	11/2/2018 08:32:40	0.000	0.000
051	11/2/2018 08:33:40	0.000	0.000
052	11/2/2018 08:34:40	0.000	0.000
053	11/2/2018 08:35:40	0.000	0.000
054	11/2/2018 08:36:40	0.000	0.000
055	11/2/2018 08:37:40	0.000	0.000
056	11/2/2018 08:38:40	0.000	0.000
057	11/2/2018 08:39:40	0.000	0.000
058	11/2/2018 08:40:40	0.000	0.000
059	11/2/2018 08:41:40	0.000	0.000
060	11/2/2018 08:42:40	0.000	0.000
061	11/2/2018 08:43:40	0.000	0.000
062	11/2/2018 08:44:40	0.000	0.000
063	11/2/2018 08:45:40	0.000	0.000
064	11/2/2018 08:46:40	0.000	0.000
065	11/2/2018 08:47:40	0.000	0.000
066	11/2/2018 08:48:40	0.000	0.000
067	11/2/2018 08:49:40	0.000	0.000
068	11/2/2018 08:50:40	0.000	0.000
069	11/2/2018 08:51:40	0.000	0.000
070	11/2/2018 08:52:40	0.000	0.000
071	11/2/2018 08:53:40	0.000	0.000
072	11/2/2018 08:54:40	0.000	0.000
073	11/2/2018 08:55:40	0.000	0.000
074	11/2/2018 08:56:40	0.000	0.000
075	11/2/2018 08:57:40	0.000	0.000
076	11/2/2018 08:58:40	0.000	0.000
077	11/2/2018 08:59:40	0.000	0.000
078	11/2/2018 09:00:40	0.000	0.000
079	11/2/2018 09:01:40	0.000	0.000
080	11/2/2018 09:02:40	0.000	0.000
081	11/2/2018 09:03:40	0.000	0.000
082	11/2/2018 09:04:40	0.000	0.000
083	11/2/2018 09:05:40	0.000	0.000
084	11/2/2018 09:06:40	0.000	0.000
085	11/2/2018 09:07:40	0.000	0.000

086	11/2/2018 09:08:40	0.000	0.000
087	11/2/2018 09:09:40	0.000	0.000
088	11/2/2018 09:10:40	0.000	0.000
089	11/2/2018 09:11:40	0.000	0.000
090	11/2/2018 09:12:40	0.000	0.000
091	11/2/2018 09:13:40	0.000	0.000
092	11/2/2018 09:14:40	0.000	0.000
093	11/2/2018 09:15:40	0.000	0.000
094	11/2/2018 09:16:40	0.000	0.000
095	11/2/2018 09:17:40	0.000	0.000
096	11/2/2018 09:18:40	0.000	0.000
097	11/2/2018 09:19:40	0.000	0.000
098	11/2/2018 09:20:40	0.000	0.000
099	11/2/2018 09:21:40	0.000	0.000
100	11/2/2018 09:22:40	0.000	0.000
101	11/2/2018 09:23:40	0.000	0.000
102	11/2/2018 09:24:40	0.000	0.000
103	11/2/2018 09:25:40	0.000	0.000
104	11/2/2018 09:26:40	0.000	0.000
105	11/2/2018 09:27:40	0.000	0.000
106	11/2/2018 09:28:40	0.000	0.000
107	11/2/2018 09:29:40	0.000	0.000
108	11/2/2018 09:30:40	0.000	0.000
109	11/2/2018 09:31:40	0.000	0.000
110	11/2/2018 09:32:40	0.000	0.000
111	11/2/2018 09:33:40	0.000	0.000
112	11/2/2018 09:34:40	0.000	0.000
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114	11/2/2018 09:36:40	0.000	0.000
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116	11/2/2018 09:38:40	0.000	0.000
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118	11/2/2018 09:40:40	0.000	0.000
119	11/2/2018 09:41:40	0.000	0.000
120	11/2/2018 09:42:40	0.000	0.000
121	11/2/2018 09:43:40	0.000	0.000
122	11/2/2018 09:44:40	0.000	0.000
123	11/2/2018 09:45:40	0.000	0.000
124	11/2/2018 09:46:40	0.000	0.000
125	11/2/2018 09:47:40	0.000	0.000
126	11/2/2018 09:48:40	0.000	0.000
127	11/2/2018 09:49:40	0.000	0.000
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129	11/2/2018 09:51:40	0.000	0.000
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137	11/2/2018 09:59:40	0.000	0.000
138	11/2/2018 10:00:40	0.000	0.000
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142	11/2/2018 10:04:40	0.000	0.000
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146	11/2/2018 10:08:40	0.000	0.000
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149	11/2/2018 10:11:40	0.000	0.000
150	11/2/2018 10:12:40	0.000	0.000
151	11/2/2018 10:13:40	0.000	0.000
152	11/2/2018 10:14:40	0.000	0.000
153	11/2/2018 10:15:40	0.000	0.000
154	11/2/2018 10:16:40	0.000	0.000
155	11/2/2018 10:17:40	0.000	0.000
156	11/2/2018 10:18:40	0.000	0.000
157	11/2/2018 10:19:40	0.000	0.000
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159	11/2/2018 10:21:40	0.000	0.000
160	11/2/2018 10:22:40	0.000	0.000
161	11/2/2018 10:23:40	0.000	0.000
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168	11/2/2018 10:30:40	0.000	0.000
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172	11/2/2018 10:34:40	0.000	0.000
173	11/2/2018 10:35:40	0.000	0.000
174	11/2/2018 10:36:40	0.000	0.000
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176	11/2/2018 10:38:40	0.000	0.000
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179	11/2/2018 10:41:40	0.000	0.000
180	11/2/2018 10:42:40	0.000	0.000
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188	11/2/2018 10:50:40	0.000	0.000
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190	11/2/2018 10:52:40	0.000	0.000
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192	11/2/2018 10:54:40	0.000	0.000
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196	11/2/2018 10:58:40	0.000	0.000
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204	11/2/2018 11:06:40	0.000	0.000
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207	11/2/2018 11:09:40	0.000	0.000
208	11/2/2018 11:10:40	0.000	0.000
209	11/2/2018 11:11:40	0.000	0.000
210	11/2/2018 11:12:40	0.000	0.000
211	11/2/2018 11:13:40	0.000	0.000
212	11/2/2018 11:14:40	0.000	0.000
213	11/2/2018 11:15:40	0.000	0.000
214	11/2/2018 11:16:40	0.000	0.000
215	11/2/2018 11:17:40	0.000	0.000
216	11/2/2018 11:18:40	0.000	0.000
217	11/2/2018 11:19:40	0.000	0.000
218	11/2/2018 11:20:40	0.000	0.000
219	11/2/2018 11:21:40	0.000	0.000
220	11/2/2018 11:22:40	0.000	0.000
221	11/2/2018 11:23:40	0.000	0.000
222	11/2/2018 11:24:40	0.000	0.000
223	11/2/2018 11:25:40	0.000	0.000
224	11/2/2018 11:26:40	0.000	0.000
225	11/2/2018 11:27:40	0.000	0.000
226	11/2/2018 11:28:40	0.000	0.000
227	11/2/2018 11:29:40	0.000	0.000
228	11/2/2018 11:30:40	0.000	0.000
229	11/2/2018 11:31:40	0.000	0.000

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230	11/2/2018 11:32:40	0.000	0.000
231	11/2/2018 11:33:40	0.000	0.000
232	11/2/2018 11:34:40	0.000	0.000
233	11/2/2018 11:35:40	0.000	0.000
234	11/2/2018 11:36:40	0.000	0.000
235	11/2/2018 11:37:40	0.000	0.000
236	11/2/2018 11:38:40	0.000	0.000
237	11/2/2018 11:39:40	0.000	0.000
238	11/2/2018 11:40:40	0.000	0.000
239	11/2/2018 11:41:40	0.000	0.000
240	11/2/2018 11:42:40	0.000	0.000
241	11/2/2018 11:43:40	0.000	0.000
242	11/2/2018 11:44:40	0.000	0.000
243	11/2/2018 11:45:40	0.000	0.000
244	11/2/2018 11:46:40	0.000	0.000
245	11/2/2018 11:47:40	0.000	0.000
246	11/2/2018 11:48:40	0.000	0.000
247	11/2/2018 11:49:40	0.000	0.000
248	11/2/2018 11:50:40	0.000	0.000
249	11/2/2018 11:51:40	0.000	0.000

TrakPro Version 4.70 ASCII Data File

Model:,DustTrak II
Model Number:,8530
Serial Number:,8530141113
Test ID:,003
Test Abbreviation:,MANUAL_003
Start Date:,11/02/2018
Start Time:,07:44:52
Duration (dd:hh:mm:ss):,0:04:24:00
Log Interval (mm:ss):,01:00
Number of points:,264
Notes:,

Statistics,Channel:,AEROSOL
,Units:,mg/m^3
,Average:,0.025
,Minimum:,0.018
,Time of Minimum:,09:39:52
,Date of Minimum:,11/02/2018
,Maximum:,0.033
,Time of Maximum:,11:55:52
,Date of Maximum:,11/02/2018

Calibration,Sensor:,AEROSOL
,Cal. date,10/15/2018

Date,Time,AEROSOL
MM/dd/yyyy,hh:mm:ss,mg/m^3
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Dust FA01279_upwind_11_2_18

11/02/2018,12:04:52,0.026
11/02/2018,12:05:52,0.025
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Dust FA00938_downwind_11_2_18
TrakPro Version 4.70 ASCII Data File

Model:,DustTrak II
Model Number:,8530
Serial Number:,8530133405
Test ID:,003
Test Abbreviation:,MANUAL_003
Start Date:,11/02/2018
Start Time:,07:41:19
Duration (dd:hh:mm:ss):,0:04:08:00
Log Interval (mm:ss):,01:00
Number of points:,248
Notes:,

Statistics,Channel:,AEROSOL
,Units:,mg/m^3
,Average:,0.030
,Minimum:,0.023
,Time of Minimum:,09:40:19
,Date of Minimum:,11/02/2018
,Maximum:,0.114
,Time of Maximum:,11:41:19
,Date of Maximum:,11/02/2018

Calibration,Sensor:,AEROSOL
,Cal. date,01/19/2018

Date,Time,AEROSOL
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ATTACHMENT 4

Labratory Analytical Reports

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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: September 19, 2018 15:58

Project: Bristol-Myers Squibb

Account #: 03074
Group Number: 1985552
SDG: BMS58
PO Number: EUR_BMS_09.14.18
State of Sample Origin: NY

Electronic Copy To	Arcadis	Attn: David Wright
Electronic Copy To	Arcadis	Attn: Clint Catania

Respectfully Submitted,

Megan A. Moeller
Senior Specialist

(717) 556-7261

To view our laboratory's current scopes of accreditation please go to http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/ . Historical copies may be requested through your project manager.

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SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
Bldg 25N Under Slab 1 Grab Soil	09/10/2018 09:40	9795317

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 #: 1985552

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: 9795317

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 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:
2-butanone.

Batch #: B182561AA (Sample number(s): 9795317)

The recovery(ies) for the following analyte(s) in the LCS and/or LCSD exceeded the acceptance window indicating a positive bias: Chlorodifluoromethane

SW-846 8270D, GC/MS Semivolatiles

Sample #s: 9795317

The recovery for Triethylamine in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. The following action was taken:
The sample was originally extracted within method required holding

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time and the QC is again outside of the acceptance limits. All results are reported from the second trial.

Batch #: 18260SLE026 (Sample number(s): 9795317)

The recovery(ies) for the following analyte(s) in the LCS and/or LCSD were below the acceptance window: Triethylamine

The relative percent difference(s) for the following analyte(s) in the LCS/LCSD were outside acceptance windows: Triethylamine

SW-846 8015C Feb 2007 Rev 3, GC Petroleum Hydrocarbons

Batch #: 182560030A (Sample number(s): 9795317 UNSPK: 9795317 BKG: 9795317)

The duplicate RPD for the following analyte(s) exceeded the acceptance window: DRO C10-C28

Sample Description: **Bldg 25N Under Slab 1 Grab Soil**
B0087363.0028/BMS

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 09/11/2018 10:00
Collection Date/Time: 09/10/2018 09:40
SDG#: BMS58-01

ARCADIS U.S., Inc.
ELLE Sample #: SW 9795317
ELLE Group #: 1985552
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	0.006 J	0.017	0.005	0.7
11995	Acetonitrile	75-05-8	N.D.	0.083	0.021	0.7
11995	Benzene	71-43-2	N.D.	0.004	0.0004	0.7
11995	Bromochloromethane	74-97-5	N.D.	0.004	0.0005	0.7
11995	Bromodichloromethane	75-27-4	N.D.	0.004	0.0003	0.7
11995	Bromoform	75-25-2	N.D.	0.008	0.004	0.7
11995	Bromomethane	74-83-9	N.D.	0.004	0.0006	0.7
11995	n-Butanol	71-36-3	N.D.	0.21	0.046	0.7
11995	2-Butanone	78-93-3	0.005 J	0.008	0.0008	0.7
11995	t-Butyl alcohol	75-65-0	N.D.	0.083	0.012	0.7
11995	n-Butylbenzene	104-51-8	N.D.	0.007	0.002	0.7
11995	sec-Butylbenzene	135-98-8	N.D.	0.004	0.002	0.7
11995	tert-Butylbenzene	98-06-6	N.D.	0.004	0.0007	0.7
11995	Carbon Disulfide	75-15-0	N.D.	0.004	0.0005	0.7
11995	Carbon Tetrachloride	56-23-5	N.D.	0.004	0.0004	0.7
11995	Chlorobenzene	108-90-7	N.D.	0.004	0.0004	0.7
11995	Chlorodifluoromethane	75-45-6	N.D.	0.008	0.002	0.7
11995	Chloroethane	75-00-3	N.D.	0.004	0.0008	0.7
11995	Chloroform	67-66-3	N.D.	0.004	0.0005	0.7
11995	Chloromethane	74-87-3	N.D.	0.004	0.0005	0.7
11995	Cyclohexane	110-82-7	N.D.	0.004	0.0004	0.7
11995	Cyclohexanone	108-94-1	N.D.	0.21	0.021	0.7
11995	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	0.004	0.0003	0.7
11995	Dibromochloromethane	124-48-1	N.D.	0.004	0.0003	0.7
11995	1,2-Dibromoethane	106-93-4	N.D.	0.004	0.0003	0.7
11995	1,2-Dichlorobenzene	95-50-1	N.D.	0.004	0.0004	0.7
11995	1,3-Dichlorobenzene	541-73-1	N.D.	0.004	0.0004	0.7
11995	1,4-Dichlorobenzene	106-46-7	N.D.	0.004	0.0003	0.7
11995	Dichlorodifluoromethane	75-71-8	N.D.	0.004	0.0005	0.7
11995	1,1-Dichloroethane	75-34-3	N.D.	0.004	0.0004	0.7
11995	1,2-Dichloroethane	107-06-2	N.D.	0.004	0.0005	0.7
11995	1,1-Dichloroethene	75-35-4	N.D.	0.004	0.0004	0.7
11995	cis-1,2-Dichloroethene	156-59-2	N.D.	0.004	0.0004	0.7
11995	trans-1,2-Dichloroethene	156-60-5	N.D.	0.004	0.0004	0.7
11995	1,2-Dichloropropane	78-87-5	N.D.	0.004	0.0004	0.7
11995	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.004	0.0003	0.7
11995	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.004	0.0002	0.7
11995	1,4-Dioxane	123-91-1	N.D.	0.21	0.031	0.7
11995	Ethyl Acetate	141-78-6	N.D.	0.004	0.0008	0.7
11995	Ethyl Ether	60-29-7	N.D.	0.004	0.0008	0.7
11995	Ethylbenzene	100-41-4	N.D.	0.004	0.0003	0.7

*=This limit was used in the evaluation of the final result

Sample Description: **Bldg 25N Under Slab 1 Grab Soil**
B0087363.0028/BMS

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 09/11/2018 10:00
Collection Date/Time: 09/10/2018 09:40
SDG#: BMS58-01

ARCADIS U.S., Inc.
ELLE Sample #: SW 9795317
ELLE Group #: 1985552
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.	0.008	0.0005	0.7
11995	n-Heptane	142-82-5	N.D.	0.007	0.002	0.7
11995	n-Hexane	110-54-3	0.0008 J	0.004	0.0004	0.7
11995	2-Hexanone	591-78-6	N.D.	0.008	0.0008	0.7
11995	Isobutyl Alcohol	78-83-1	N.D.	0.21	0.031	0.7
11995	Isopropylbenzene	98-82-8	N.D.	0.004	0.0003	0.7
11995	p-Isopropyltoluene	99-87-6	N.D.	0.004	0.002	0.7
11995	Methyl Acetate	79-20-9	N.D.	0.004	0.0008	0.7
11995	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.004	0.0004	0.7
11995	4-Methyl-2-pentanone	108-10-1	N.D.	0.008	0.0008	0.7
11995	Methylcyclohexane	108-87-2	N.D.	0.004	0.0005	0.7
11995	Methylene Chloride	75-09-2	N.D.	0.004	0.002	0.7
11995	Naphthalene	91-20-3	N.D.	0.004	0.002	0.7
11995	2-Nitropropane	79-46-9	N.D.	0.008	0.0008	0.7
11995	Styrene	100-42-5	N.D.	0.004	0.0002	0.7
11995	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.004	0.0003	0.7
11995	Tetrachloroethene	127-18-4	N.D.	0.004	0.0004	0.7
11995	Tetrahydrofuran	109-99-9	N.D.	0.007	0.0008	0.7
11995	Toluene	108-88-3	0.0006 J	0.004	0.0005	0.7
11995	1,2,3-Trichlorobenzene	87-61-6	N.D.	0.008	0.004	0.7
11995	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.008	0.004	0.7
11995	1,1,1-Trichloroethane	71-55-6	N.D.	0.004	0.0005	0.7
11995	1,1,2-Trichloroethane	79-00-5	N.D.	0.004	0.0004	0.7
11995	Trichloroethene	79-01-6	0.002 J	0.004	0.0004	0.7
11995	Trichlorofluoromethane	75-69-4	N.D.	0.004	0.0006	0.7
11995	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.004	0.0004	0.7
11995	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.004	0.0004	0.7
11995	Vinyl Chloride	75-01-4	N.D.	0.004	0.0005	0.7
11995	m+p-Xylene	179601-23-1	N.D.	0.004	0.0008	0.7
11995	o-Xylene	95-47-6	N.D.	0.004	0.0003	0.7
11995	Xylene (Total)	1330-20-7	N.D.	0.004	0.0008	0.7

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 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:
2-butanone.

*=This limit was used in the evaluation of the final result

Sample Description: **Bldg 25N Under Slab 1 Grab Soil**
B0087363.0028/BMS

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 09/11/2018 10:00
Collection Date/Time: 09/10/2018 09:40
SDG#: BMS58-01

ARCADIS U.S., Inc.
ELLE Sample #: SW 9795317
ELLE Group #: 1985552
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.	19	4	1
10726	Acenaphthylene	208-96-8	N.D.	19	4	1
10726	Acetophenone	98-86-2	N.D.	58	27	1
10726	Aniline	62-53-3	N.D.	580	190	1
10726	Anthracene	120-12-7	N.D.	19	4	1
10726	Atrazine	1912-24-9	N.D.	190	39	1
10726	Benzaldehyde	100-52-7	N.D.	190	78	1
10726	Benzo(a)anthracene	56-55-3	N.D.	19	4	1
10726	Benzo(a)pyrene	50-32-8	N.D.	19	8	1
10726	Benzo(b)fluoranthene	205-99-2	11 J	19	4	1
10726	Benzo(g,h,i)perylene	191-24-2	N.D.	19	8	1
10726	Benzo(k)fluoranthene	207-08-9	N.D.	19	4	1
10726	Benzyl alcohol	100-51-6	N.D.	580	190	1
10726	1,1'-Biphenyl	92-52-4	N.D.	43	19	1
10726	4-Bromophenyl-phenylether	101-55-3	N.D.	58	23	1
10726	Butylbenzylphthalate	85-68-7	N.D.	190	78	1
10726	Di-n-butylphthalate	84-74-2	N.D.	190	78	1
10726	Caprolactam	105-60-2	N.D.	190	39	1
10726	Carbazole	86-74-8	N.D.	43	19	1
10726	4-Chloro-3-methylphenol	59-50-7	N.D.	43	19	1
10726	4-Chloroaniline	106-47-8	N.D.	190	39	1
10726	bis(2-Chloroethoxy)methane	111-91-1	N.D.	43	19	1
10726	bis(2-Chloroethyl)ether	111-44-4	N.D.	58	27	1
10726	bis(2-Chloroisopropyl)ether	39638-32-9	N.D.	43	19	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.	39	8	1
10726	2-Chlorophenol	95-57-8	N.D.	43	19	1
10726	4-Chlorophenyl-phenylether	7005-72-3	N.D.	43	19	1
10726	Chrysene	218-01-9	8 J	19	4	1
10726	Dibenz(a,h)anthracene	53-70-3	N.D.	19	4	1
10726	Dibenzofuran	132-64-9	N.D.	43	19	1
10726	3,3'-Dichlorobenzidine	91-94-1	N.D.	390	120	1
10726	2,4-Dichlorophenol	120-83-2	N.D.	43	19	1
10726	Dicyclohexylamine	101-83-7	N.D.	2,300	780	1
10726	Diethylphthalate	84-66-2	N.D.	190	78	1

*=This limit was used in the evaluation of the final result

Sample Description: **Bldg 25N Under Slab 1 Grab Soil**
B0087363.0028/BMS

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 09/11/2018 10:00
Collection Date/Time: 09/10/2018 09:40
SDG#: BMS58-01

ARCADIS U.S., Inc.
ELLE Sample #: SW 9795317
ELLE Group #: 1985552
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	121-69-7	N.D.	190	39	1
10726	2,4-Dimethylphenol	105-67-9	N.D.	43	19	1
10726	Dimethylphthalate	131-11-3	N.D.	190	78	1
10726	4,6-Dinitro-2-methylphenol	534-52-1	N.D.	580	190	1
10726	2,4-Dinitrophenol	51-28-5	N.D.	1,200	430	1
10726	2,4-Dinitrotoluene	121-14-2	N.D.	190	78	1
10726	2,6-Dinitrotoluene	606-20-2	N.D.	58	23	1
10726	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	190	78	1
10726	Fluoranthene	206-44-0	8 J	19	4	1
10726	Fluorene	86-73-7	N.D.	19	4	1
10726	Hexachlorobenzene	118-74-1	N.D.	19	4	1
10726	Hexachlorobutadiene	87-68-3	N.D.	58	23	1
10726	Hexachlorocyclopentadiene	77-47-4	N.D.	580	190	1
10726	Hexachloroethane	67-72-1	N.D.	190	39	1
10726	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	19	8	1
10726	Isophorone	78-59-1	N.D.	43	19	1
10726	2-Methylnaphthalene	91-57-6	N.D.	39	12	1
10726	2-Methylphenol	95-48-7	N.D.	78	31	1
10726	4-Methylphenol	65794-96-9	N.D.	58	23	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.	19	8	1
10726	2-Nitroaniline	88-74-4	N.D.	58	23	1
10726	3-Nitroaniline	99-09-2	N.D.	190	78	1
10726	4-Nitroaniline	100-01-6	N.D.	190	78	1
10726	Nitrobenzene	98-95-3	N.D.	78	31	1
10726	2-Nitrophenol	88-75-5	N.D.	43	19	1
10726	4-Nitrophenol	100-02-7	N.D.	580	190	1
10726	N-Nitroso-di-n-propylamine	621-64-7	N.D.	58	23	1
10726	N-Nitrosodiphenylamine	86-30-6	N.D.	43	19	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.	190	78	1
10726	Pentachlorophenol	87-86-5	N.D.	190	43	1
10726	Phenanthrene	85-01-8	8 J	19	4	1
10726	Phenol	108-95-2	N.D.	58	27	1
10726	Pyrene	129-00-0	11 J	19	4	1
10726	Pyridine	110-86-1	N.D.	190	78	1
10726	1,2,4,5-Tetrachlorobenzene	95-94-3	N.D.	43	19	1
10726	2,3,4,6-Tetrachlorophenol	58-90-2	N.D.	190	78	1

*=This limit was used in the evaluation of the final result

Sample Description: **Bldg 25N Under Slab 1 Grab Soil**
B0087363.0028/BMS

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 09/11/2018 10:00
Collection Date/Time: 09/10/2018 09:40
SDG#: BMS58-01

ARCADIS U.S., Inc.
ELLE Sample #: SW 9795317
ELLE Group #: 1985552
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.	58	23	1
10726	2,4,6-Trichlorophenol	88-06-2	N.D.	58	23	1
10726	Triethylamine	121-44-8	N.D.	5,800	1,900	1

The recovery for Triethylamine in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. The following action was taken:
The sample was originally extracted within method required holding time and the QC is again outside of the acceptance limits. All results are reported from the second 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.

GC Volatiles	**SW-846 8015D Rev.4, June 2003**		**mg/kg**	**mg/kg**	**mg/kg**	
10599	TPH-GRO soil C6-C10	n.a.	0.8 J	1.4	0.2	28.67
Aldehydes & Ketones	**SW-846 8315A**		**mg/kg**	**mg/kg**	**mg/kg**	
13031	Acetaldehyde	75-07-0	0.59 J	1.2	0.59	1
13031	Formaldehyde	50-00-0	1.2 J	1.8	0.59	1
GC Miscellaneous	**SW-846 8015C Feb 2007 Rev 3**		**mg/kg**	**mg/kg**	**mg/kg**	
12925	Ethylene glycol	107-21-1	N.D.	12	5.9	1
12925	Propylene glycol	57-55-6	N.D.	12	5.9	1
GC Miscellaneous	**SW-846 8015D Rev.4, June 2003**		**mg/kg**	**mg/kg**	**mg/kg**	
10604	Ethanol (by Direct Injection)	64-17-5	N.D. D2	1.2	0.14	1
10604	Isopropanol	67-63-0	N.D. D2	1.2	0.055	1
10604	Methanol (by Direct Injection)	67-56-1	N.D. D2	1.2	0.24	1
GC Petroleum Hydrocarbons	**SW-846 8015C Feb 2007 Rev 3**		**mg/kg**	**mg/kg**	**mg/kg**	
13567	DRO C10-C28	n.a.	5.6 J	14	4.7	1
13567	ORO >C28 - C40	n.a.	N.D.	14	4.7	1
Wet Chemistry	**SM 2540 G-2011 %Moisture Calc**		**%**	**%**	**%**	
00111	Moisture	n.a.	15.7	0.50	0.50	1

*=This limit was used in the evaluation of the final result

Sample Description: **Bldg 25N Under Slab 1 Grab Soil**
B0087363.0028/BMS

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 09/11/2018 10:00
Collection Date/Time: 09/10/2018 09:40
SDG#: BMS58-01

ARCADIS U.S., Inc.
ELLE Sample #: SW 9795317
ELLE Group #: 1985552
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Limit of Quantitation*	Dry Method Detection Limit	Dilution Factor
Wet Chemistry	**SM 2540 G-2011 %Moisture Calc**		**%**	**%**	**%**	

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

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	SW-846 8260C	1	B182561AA	09/14/2018 00:01	Patrick T Herres	0.7
06176	GC/MS - LL DIH2O Prep	SW-846 5035A	1	201825451179	09/11/2018 16:03	Anastasia K Jaynes	1
06176	GC/MS - LL DIH2O Prep	SW-846 5035A	2	201825451179	09/11/2018 16:03	Anastasia K Jaynes	1
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	201825451179	09/10/2018 09:40	Client Supplied	1
10726	SVOA 8270D (microwave)	SW-846 8270D	1	18260SLE026	09/18/2018 16:20	Linda M Hartenstine	1
10813	BNA Soil Microwave APP IX	SW-846 3546	3	18260SLE026	09/18/2018 02:30	Sherry L Morrow	1
10599	TPH-GRO soils C6-C10	SW-846 8015D Rev.4, June 2003	1	18256A16A	09/13/2018 22:06	Jeremy C Giffin	28.67
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201825451179	09/10/2018 09:40	Client Supplied	n.a.
13031	Short List Aldehydes- S 8315A	SW-846 8315A	1	182550008A	09/17/2018 14:55	James H Place	1
05876	Formaldehyde Solid Extraction	SW-846 8315A	1	182550008A	09/13/2018 23:30	Sally L Appleyard	1
12925	Glycols in Soil by 8015C	SW-846 8015C Feb 2007 Rev 3	1	182540016A	09/11/2018 21:55	Donald Brown	1
10604	Alcohols in Soil	SW-846 8015D Rev.4, June 2003	1	182540017A	09/12/2018 02:00	Donald Brown	1
13567	TPH DRO/ORO soil 8015C/D(3546)	SW-846 8015C Feb 2007 Rev 3	1	182560030A	09/15/2018 16:24	Thomas C Wildermuth	1
11221	TPH DRO/ORO Solid 3546 EXT	SW-846 3546	1	182560030A	09/13/2018 16:45	Elizabeth E Donovan	1
13121	Glycol Solids Ext. 8015C	SW-846 8015C Feb 2007 Rev 3	1	182540016A	09/11/2018 18:05	Donald Brown	1
00380	Solids Extraction for Alcohols	SW-846 8015D Rev 4 06/2003 Mod	1	182540017A	09/11/2018 18:05	Donald Brown	1
00111	Moisture	SM 2540 G-2011 %Moisture Calc	1	18255820003B	09/12/2018 09:41	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.
MS581

Lab Name: Lancaster Laboratories Contract:_____
Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____
Matrix: (soil/water) SOIL Lab Sample ID: 9795317
Sample wt/vol: 7.16 (g/mL) g Lab File ID: HP09953.i/18sep13a.b/bs13s06.d
Level: (low/med) LOW Date Received: 09/11/18
% Moisture: not dec. 15.7 Date Analyzed: 09/14/18
Column: (pack/cap) CAP Dilution Factor: 1.0
CONCENTRATION UNITS:
Number TICs found: 2 (mg/L or mg/Kg) mg/Kg

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	107-51-7	Trisiloxane, octamethyl-	7.22	0.005	J
2.	141-62-8	Tetrasiloxane, decamethyl-	9.27	0.007	J
3.					
4.	VOCTIC	Total VOC TICs		0.012	J
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					
16.					
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28.					
29.					
30.					

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FORM I VOA-TIC

1F

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

MS581

Lab Name: Lancaster Laboratories Contract:
Lab Code: LANCAS Case No.: SAS No.: SDG No.:
Matrix: (soil/water) SOIL Lab Sample ID: 9795317
Sample wt/vol: 30.5 (g/mL) g Lab File ID: pi0738.d
Level: (low/med) LOW Date Received: 09/11/18
% Moisture: 15.7 Decanted: (Y/N) Date Extracted: 09/18/18
Concentrated Extract Volume: 1000 (uL) Date Analyzed: 09/18/18
Injection Volume: 1 (uL) Dilution Factor: 1
GPC Cleanup: N pH: Extraction: Mic

CONCENTRATION UNITS:
Number TICs found: 18 (ug/L or ug/Kg) ug/Kg

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		Unknown	1.716	890	J
2.	625-33-2	3-Penten-2-one	1.887	170	J
3.		Unknown	2.669	5000	J
4.		Unknown Aldol Condensate	2.975	230	J
5.		Unknown	3.045	870	J
6.		Unknown	3.110	4400	J
7.		Unknown	3.457	460000	J
8.		Unknown	4.075	1200	J
9.		Unknown	5.428	290	J
10.		Unknown	5.522	840	J
11.	107-52-8	Hexasiloxane, tetradecamethy	7.281	340	J
12.		Unknown	8.086	720	J
13.		Unknown	8.416	1700	J
14.		Unknown	8.804	640	J
15.		Unknown	9.463	1200	J
16.		Unknown	10.051	300	J
17.		Unknown	10.592	200	J
18.		Unknown	11.404	190	J
19.					
20.	SVOCTIC	Total SVOC TICs		480000	J
21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

page 1 of 1

FORM I SV-1

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Quality Control Summary

Client Name: ARCADIS U.S., Inc. Group Number: 1985552
Reported: 09/19/2018 15:58

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: B182561AA	Sample number(s): 9795317		
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	0.0004
Dibromochloromethane	N.D.	0.005	0.0004
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	0.0003
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: 09/19/2018 15:58

Group Number: 1985552

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	0.001
Styrene	N.D.	0.005	0.0003
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.	0.005	0.001
	ug/kg	ug/kg	ug/kg
Batch number: 18260SLE026	Sample number(s): 9795317		
Acenaphthene	N.D.	17	3
Acenaphthylene	N.D.	17	3
Acetophenone	N.D.	50	23
Aniline	N.D.	500	170
Anthracene	N.D.	17	3
Atrazine	N.D.	170	33
Benzaldehyde	N.D.	170	67
Benzo(a)anthracene	N.D.	17	3
Benzo(a)pyrene	N.D.	17	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: 09/19/2018 15:58

Group Number: 1985552

Method Blank (continued)

Analysis Name	Result	LOQ**	MDL
	ug/kg	ug/kg	ug/kg
Benzo(b)fluoranthene	N.D.	17	3
Benzo(g,h,i)perylene	N.D.	17	7
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	20
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.	37	17
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.	37	17
2-Chloronaphthalene	N.D.	33	7
2-Chlorophenol	N.D.	37	17
4-Chlorophenyl-phenylether	N.D.	37	17
Chrysene	N.D.	17	3
Dibenz(a,h)anthracene	N.D.	17	3
Dibenzofuran	N.D.	37	17
3,3'-Dichlorobenzidine	N.D.	330	100
2,4-Dichlorophenol	N.D.	37	17
Dicyclohexylamine	N.D.	2,000	670
Diethylphthalate	N.D.	170	67
N,N-Dimethylaniline	N.D.	170	33
2,4-Dimethylphenol	N.D.	37	17
Dimethylphthalate	N.D.	170	67
4,6-Dinitro-2-methylphenol	N.D.	500	170
2,4-Dinitrophenol	N.D.	1,000	370
2,4-Dinitrotoluene	N.D.	170	67
2,6-Dinitrotoluene	N.D.	50	20
bis(2-Ethylhexyl)phthalate	N.D.	170	67
Fluoranthene	N.D.	17	3
Fluorene	N.D.	17	3
Hexachlorobenzene	N.D.	17	3
Hexachlorobutadiene	N.D.	50	20
Hexachlorocyclopentadiene	N.D.	500	170
Hexachloroethane	N.D.	170	33
Indeno(1,2,3-cd)pyrene	N.D.	17	7
Isophorone	N.D.	37	17
2-Methylnaphthalene	N.D.	33	10
2-Methylphenol	N.D.	67	27
4-Methylphenol	N.D.	50	20
Naphthalene	N.D.	17	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: 09/19/2018 15:58

Group Number: 1985552

Method Blank (continued)

Analysis Name	Result	LOQ**	MDL
	ug/kg	ug/kg	ug/kg
2-Nitroaniline	N.D.	50	20
3-Nitroaniline	N.D.	170	67
4-Nitroaniline	N.D.	170	67
Nitrobenzene	N.D.	67	27
2-Nitrophenol	N.D.	37	17
4-Nitrophenol	N.D.	500	170
N-Nitroso-di-n-propylamine	N.D.	50	20
N-Nitrosodiphenylamine	N.D.	37	17
Di-n-octylphthalate	N.D.	170	67
Pentachlorophenol	N.D.	170	37
Phenanthrene	N.D.	17	3
Phenol	N.D.	50	23
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.	50	20
2,4,6-Trichlorophenol	N.D.	50	20
Triethylamine	N.D.	5,000	1,700
	mg/kg	mg/kg	mg/kg
Batch number: 18256A16A	Sample number(s): 9795317		
TPH-GRO soil C6-C10	N.D.	1.0	0.2
Batch number: 182550008A	Sample number(s): 9795317		
Acetaldehyde	N.D.	1.0	0.50
Formaldehyde	N.D.	1.5	0.50
Batch number: 182540016A	Sample number(s): 9795317		
Ethylene glycol	N.D.	10	5.0
Propylene glycol	N.D.	10	5.0
Batch number: 182540017A	Sample number(s): 9795317		
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: 182560030A	Sample number(s): 9795317		
DRO C10-C28	N.D.	12	4.0
ORO >C28 - C40	N.D.	12	4.0

LCS/LCSD

*- 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: 09/19/2018 15:58

Group Number: 1985552

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: B182561AA	Sample number(s): 9795317								
Acetone	0.150	0.112	0.150	0.109	75	73	41-150	2	30
Acetonitrile	0.150	0.165	0.150	0.167	110	111	61-120	1	30
Benzene	0.0200	0.0178	0.0200	0.0173	89	87	80-120	3	30
Bromochloromethane	0.0200	0.0181	0.0200	0.0177	90	88	72-124	2	30
Bromodichloromethane	0.0200	0.0178	0.0200	0.0172	89	86	70-120	4	30
Bromoform	0.0200	0.0159	0.0200	0.0156	80	78	51-127	2	30
Bromomethane	0.0200	0.0147	0.0200	0.0139	73	70	45-140	5	30
n-Butanol	1.00	0.870	1.00	0.864	87	86	63-123	1	30
2-Butanone	0.150	0.105	0.150	0.103	70	69	57-128	2	30
t-Butyl alcohol	0.200	0.192	0.200	0.192	96	96	74-121	0	30
n-Butylbenzene	0.0200	0.0200	0.0200	0.0192	100	96	71-121	4	30
sec-Butylbenzene	0.0200	0.0193	0.0200	0.0186	96	93	72-120	4	30
tert-Butylbenzene	0.0200	0.0188	0.0200	0.0183	94	91	68-120	3	30
Carbon Disulfide	0.0200	0.0185	0.0200	0.0179	93	89	64-133	3	30
Carbon Tetrachloride	0.0200	0.0190	0.0200	0.0185	95	92	64-134	3	30
Chlorobenzene	0.0200	0.0177	0.0200	0.0174	89	87	80-120	2	30
Chlorodifluoromethane	0.0200	0.0278	0.0200	0.0294	139*	147*	60-133	5	30
Chloroethane	0.0200	0.0161	0.0200	0.0156	80	78	43-135	3	30
Chloroform	0.0200	0.0182	0.0200	0.0176	91	88	80-120	3	30
Chloromethane	0.0200	0.0169	0.0200	0.0163	85	82	56-120	4	30
Cyclohexane	0.0200	0.0206	0.0200	0.0199	103	99	58-126	4	30
Cyclohexanone	0.500	0.515	0.500	0.506	103	101	47-136	2	30
1,2-Dibromo-3-chloropropane	0.0200	0.0185	0.0200	0.0174	92	87	48-134	6	30
Dibromochloromethane	0.0200	0.0171	0.0200	0.0168	85	84	69-125	2	30
1,2-Dibromoethane	0.0200	0.0177	0.0200	0.0175	88	88	76-120	1	30
1,2-Dichlorobenzene	0.0200	0.0184	0.0200	0.0177	92	89	76-120	4	30
1,3-Dichlorobenzene	0.0200	0.0178	0.0200	0.0173	89	87	75-120	3	30
1,4-Dichlorobenzene	0.0200	0.0181	0.0200	0.0176	90	88	80-120	2	30
Dichlorodifluoromethane	0.0200	0.0156	0.0200	0.0148	78	74	21-127	5	30
1,1-Dichloroethane	0.0200	0.0182	0.0200	0.0177	91	89	79-120	2	30
1,2-Dichloroethane	0.0200	0.0182	0.0200	0.0177	91	89	71-128	3	30
1,1-Dichloroethene	0.0200	0.0201	0.0200	0.0194	100	97	73-129	3	30
cis-1,2-Dichloroethene	0.0200	0.0187	0.0200	0.0182	94	91	80-123	3	30
trans-1,2-Dichloroethene	0.0200	0.0194	0.0200	0.0186	97	93	80-125	4	30
1,2-Dichloropropane	0.0200	0.0184	0.0200	0.0180	92	90	80-120	3	30
cis-1,3-Dichloropropene	0.0200	0.0184	0.0200	0.0179	92	89	66-120	3	30
trans-1,3-Dichloropropene	0.0200	0.0175	0.0200	0.0170	88	85	68-122	3	30
1,4-Dioxane	0.500	0.418	0.500	0.427	84	85	62-131	2	30
Ethyl Acetate	0.0200	0.0201	0.0200	0.0215	100	107	65-133	7	30
Ethyl Ether	0.0200	0.0140	0.0200	0.0147	70	74	59-135	5	30
Ethylbenzene	0.0200	0.0181	0.0200	0.0176	91	88	78-120	3	30
Freon 113	0.0200	0.0226	0.0200	0.0215	113	107	64-135	5	30
n-Heptane	0.0200	0.0275	0.0200	0.0260	138	130	50-141	5	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: 1985552
Reported: 09/19/2018 15:58

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	0.0242	0.0200	0.0231	121	115	50-132	5	30
2-Hexanone	0.100	0.0782	0.100	0.0753	78	75	54-140	4	30
Isobutyl Alcohol	0.500	0.428	0.500	0.432	86	86	69-129	1	30
Isopropylbenzene	0.0200	0.0187	0.0200	0.0181	94	91	77-120	3	30
p-Isopropyltoluene	0.0200	0.0197	0.0200	0.0190	98	95	72-120	3	30
Methyl Acetate	0.0200	0.0207	0.0200	0.0195	103	97	67-128	6	30
Methyl Tertiary Butyl Ether	0.0200	0.0181	0.0200	0.0175	91	88	72-120	3	30
4-Methyl-2-pentanone	0.100	0.0837	0.100	0.0809	84	81	67-128	3	30
Methylcyclohexane	0.0200	0.0228	0.0200	0.0219	114	109	61-124	4	30
Methylene Chloride	0.0200	0.0181	0.0200	0.0174	90	87	76-122	4	30
Naphthalene	0.0200	0.0186	0.0200	0.0180	93	90	48-130	3	30
2-Nitropropane	0.0200	0.0138	0.0200	0.0135	69	67	27-183	2	30
Styrene	0.0200	0.0177	0.0200	0.0173	89	87	76-120	2	30
1,1,2,2-Tetrachloroethane	0.0200	0.0179	0.0200	0.0172	90	86	69-125	4	30
Tetrachloroethene	0.0200	0.0158	0.0200	0.0152	79	76	73-120	4	30
Tetrahydrofuran	0.100	0.0811	0.100	0.0792	81	79	71-127	2	30
Toluene	0.0200	0.0181	0.0200	0.0174	91	87	80-120	4	30
1,2,3-Trichlorobenzene	0.0200	0.0190	0.0200	0.0184	95	92	57-131	3	30
1,2,4-Trichlorobenzene	0.0200	0.0191	0.0200	0.0186	96	93	56-130	3	30
1,1,1-Trichloroethane	0.0200	0.0179	0.0200	0.0174	90	87	69-123	3	30
1,1,2-Trichloroethane	0.0200	0.0180	0.0200	0.0177	90	88	80-120	2	30
Trichloroethene	0.0200	0.0183	0.0200	0.0177	92	88	80-120	4	30
Trichlorofluoromethane	0.0200	0.0174	0.0200	0.0167	87	83	55-134	4	30
1,2,4-Trimethylbenzene	0.0200	0.0183	0.0200	0.0177	92	88	73-120	4	30
1,3,5-Trimethylbenzene	0.0200	0.0187	0.0200	0.0181	94	90	73-120	4	30
Vinyl Chloride	0.0200	0.0171	0.0200	0.0164	86	82	52-120	4	30
m+p-Xylene	0.0400	0.0371	0.0400	0.0360	93	90	80-120	3	30
o-Xylene	0.0200	0.0179	0.0200	0.0175	90	88	75-120	2	30
Xylene (Total)	0.0600	0.0550	0.0600	0.0535	92	89	75-120	3	30
	ug/kg	**ug/kg**	**ug/kg**	**ug/kg**					
Batch number: 18260SLE026	Sample number(s): 9795317								
Acenaphthene	1666.67	1780.76			107		85-114		
Acenaphthylene	1666.67	1840.9			110		80-120		
Acetophenone	1666.67	1747.07			105		77-110		
Aniline	1666.67	1357.37			81		44-113		
Anthracene	1666.67	1531.74			92		82-113		
Atrazine	1666.67	1336.6			80		68-123		
Benzaldehyde	1666.67	1448.07			87		31-119		
Benzo(a)anthracene	1666.67	1492.85			90		76-111		
Benzo(a)pyrene	1666.67	1685.12			101		82-114		
Benzo(b)fluoranthene	1666.67	1720.52			103		78-115		
Benzo(g,h,i)perylene	1666.67	1540.22			92		76-111		
Benzo(k)fluoranthene	1666.67	1739.76			104		78-119		

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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: 09/19/2018 15:58

Group Number: 1985552

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
Benzyl alcohol	1666.67	1772.87			106		69-125		
1,1'-Biphenyl	1666.67	1681.56			101		84-112		
4-Bromophenyl-phenylether	1666.67	1453.98			87		81-116		
Butylbenzylphthalate	1666.67	1807.39			108		81-113		
Di-n-butylphthalate	1666.67	1757.48			105		85-115		
Caprolactam	1666.67	1857.07			111		75-118		
Carbazole	1666.67	1672.13			100		84-117		
4-Chloro-3-methylphenol	1666.67	1861.09			112		78-127		
4-Chloroaniline	1666.67	1223.68			73		10-125		
bis(2-Chloroethoxy)methane	1666.67	1599.94			96		72-117		
bis(2-Chloroethyl)ether	1666.67	1672.93			100		74-109		
bis(2-Chloroisopropyl)ether	1666.67	1686.56			101		68-115		
2-Chloronaphthalene	1666.67	1837.06			110		62-138		
2-Chlorophenol	1666.67	1835.32			110		85-116		
4-Chlorophenyl-phenylether	1666.67	1655.63			99		79-112		
Chrysene	1666.67	1465.72			88		75-109		
Dibenz(a,h)anthracene	1666.67	1528.57			92		79-117		
Dibenzofuran	1666.67	1676.94			101		84-110		
3,3'-Dichlorobenzidine	1666.67	1493.17			90		26-124		
2,4-Dichlorophenol	1666.67	1543.64			93		80-120		
Dicyclohexylamine	1666.67	1624.62	1666.67	1640.91	97	98	49-141	1	30
Diethylphthalate	1666.67	1684.06			101		81-113		
N,N-Dimethylaniline	1666.67	818	1666.67	770.31	49	46	32-133	6	30
2,4-Dimethylphenol	1666.67	1426.5			86		66-106		
Dimethylphthalate	1666.67	1507.84			90		82-110		
4,6-Dinitro-2-methylphenol	1666.67	1558.58			94		73-127		
2,4-Dinitrophenol	3333.33	3222.18			97		41-136		
2,4-Dinitrotoluene	1666.67	1519.04			91		82-116		
2,6-Dinitrotoluene	1666.67	1613.91			97		86-116		
bis(2-Ethylhexyl)phthalate	1666.67	1815.28			109		78-118		
Fluoranthene	1666.67	1559.43			94		76-115		
Fluorene	1666.67	1705.92			102		80-112		
Hexachlorobenzene	1666.67	1500.94			90		77-114		
Hexachlorobutadiene	1666.67	1270.22			76		75-115		
Hexachlorocyclopentadiene	3333.33	2405.6			72		37-161		
Hexachloroethane	1666.67	1500.75			90		76-106		
Indeno(1,2,3-cd)pyrene	1666.67	1461.46			88		78-113		
Isophorone	1666.67	1653.87			99		76-115		
2-Methylnaphthalene	1666.67	1619.93			97		80-111		
2-Methylphenol	1666.67	1677.93			101		80-122		
4-Methylphenol	1666.67	1781.69			107		75-121		
Naphthalene	1666.67	1496.49			90		81-111		
2-Nitroaniline	1666.67	1809.23			109		81-126		
3-Nitroaniline	1666.67	1714.23			103		60-128		

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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: 1985552
Reported: 09/19/2018 15:58

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
4-Nitroaniline	1666.67	1380.81			83		54-103		
Nitrobenzene	1666.67	1540.35			92		75-114		
2-Nitrophenol	1666.67	1713.29			103		85-118		
4-Nitrophenol	1666.67	1541.93			93		54-124		
N-Nitroso-di-n-propylamine	1666.67	1721.53			103		70-114		
N-Nitrosodiphenylamine	1666.67	1782.81			107		80-120		
Di-n-octylphthalate	1666.67	2026.73			122		84-128		
Pentachlorophenol	1666.67	1134.51			68		47-134		
Phenanthrene	1666.67	1494.03			90		81-109		
Phenol	1666.67	1674			100		74-119		
Pyrene	1666.67	1725.94			104		80-107		
Pyridine	1666.67	1572.74			94		57-96		
1,2,4,5-Tetrachlorobenzene	1666.67	1456.64			87		76-116		
2,3,4,6-Tetrachlorophenol	1666.67	1450.96			87		73-127		
2,4,5-Trichlorophenol	1666.67	1644.61			99		80-120		
2,4,6-Trichlorophenol	1666.67	1673.54			100		80-120		
Triethylamine	3333.33	1008.05	3333.33	176.38	30*	5*	70-130	140*	30
	mg/kg	**mg/kg**	**mg/kg**	**mg/kg**					
Batch number: 18256A16A	Sample number(s): 9795317								
TPH-GRO soil C6-C10	11	9.14	11	8.99	83	82	60-132	2	30
	mg/kg	**mg/kg**	**mg/kg**	**mg/kg**					
Batch number: 182550008A	Sample number(s): 9795317								
Acetaldehyde	10.03	11.05	10.03	10.79	110	108	72-144	2	50
Formaldehyde	10	10.29	10	10.9	103	109	45-149	6	50
	mg/kg	**mg/kg**	**mg/kg**	**mg/kg**					
Batch number: 182540016A	Sample number(s): 9795317								
Ethylene glycol	102.39	102.09			100		76-122		
Propylene glycol	99.4	99.33			100		67-131		
Batch number: 182540017A	Sample number(s): 9795317								
Ethanol (by Direct Injection)	2.52	2.47			98		77-120		
Isopropanol	2.52	2.45			97		75-125		
Methanol (by Direct Injection)	2.51	2.59			103		76-119		
	mg/kg	**mg/kg**	**mg/kg**	**mg/kg**					
Batch number: 182560030A	Sample number(s): 9795317								
DRO C10-C28	133.83	120.64			90		76-117		
	%	**%**	**%**	**%**					
Batch number: 18255820003B	Sample number(s): 9795317								
Moisture	89.5	89.35			100		99-101		

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Quality Control Summary

Client Name: ARCADIS U.S., Inc. Group Number: 1985552
Reported: 09/19/2018 15:58

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

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc mg/kg	MS Spike Added mg/kg	MS Conc mg/kg	MSD Spike Added mg/kg	MSD Conc mg/kg	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: 182550008A	Sample number(s): 9795317 UNSPK: 9795317									
Acetaldehyde	0.501	9.79	11.12	9.80	11.32	108	110	72-144	2	50
Formaldehyde	0.983	9.76	11.05	9.78	10.65	103	99	45-149	4	50
	mg/kg	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**					
Batch number: 182540016A	Sample number(s): 9795317 UNSPK: 9795317									
Ethylene glycol	N.D.	102.39	93	102.39	95.31	91	93	76-122	2	20
Propylene glycol	N.D.	99.4	91.25	99.4	92.94	92	93	67-131	2	20
Batch number: 182540017A	Sample number(s): 9795317 UNSPK: 9795317									
Ethanol (by Direct Injection)	N.D.	2.52	2.33	2.52	2.32	92	92	77-120	0	20
Isopropanol	N.D.	2.52	2.31	2.52	2.29	92	91	75-125	1	20
Methanol (by Direct Injection)	N.D.	2.51	2.49	2.51	2.52	99	100	76-119	1	20
	mg/kg	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**					
Batch number: 182560030A	Sample number(s): 9795317 UNSPK: 9795317									
DRO C10-C28	4.72	132.07	114.94			83		76-117		

Laboratory Duplicate

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc mg/kg	DUP Conc mg/kg	DUP RPD	DUP RPD Max
Batch number: 182560030A	Sample number(s): 9795317 BKG: 9795317			
DRO C10-C28	4.72	N.D.	200* (1)	20
ORO >C28 - C40	N.D.	N.D.	0 (1)	100

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Quality Control Summary

Client Name: ARCADIS U.S., Inc. Group Number: 1985552
Reported: 09/19/2018 15:58

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- Solid by 8260C
Batch number: B182561AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
9795317	90	97	107	86
Blank	98	101	99	98
LCS	100	106	99	99
LCSD	99	105	99	100
Limits:	50-141	54-135	52-141	50-131

Analysis Name: SVOA 8270D (microwave)
Batch number: 18260SLE026

	Phenol-d6	2-Fluorophenol	2,4,6-Tribromophenol	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14
9795317	99	80	60	89	102	102
Blank	94	98	89	92	100	105
LCS	108	107	80	93	99	106
LCSD	98	102	89	90	97	111
Limits:	47-120	51-123	19-137	49-118	57-116	55-118

Analysis Name: TPH-GRO soils C6-C10
Batch number: 18256A16A

	Trifluorotoluene-F
9795317	93
Blank	94
LCS	97
LCSD	95
Limits:	50-142

Analysis Name: Short List Aldehydes- S 8315A
Batch number: 182550008A

	Butyraldehyde
9795317	79
Blank	88
LCS	109
LCSD	108
MS	108
MSD	109
Limits:	77-133

Analysis Name: Glycols in Soil by 8015C
Batch number: 182540016A

*- 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: 1985552
Reported: 09/19/2018 15:58

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 Soil by 8015C
Batch number: 182540016A

	Tetramethylene glycol
9795317	64
Blank	65
LCS	96
MS	94
MSD	92
Limits:	36-143

Analysis Name: Alcohols in Soil
Batch number: 182540017A

	Acetone-D1	Acetone-D2
9795317	93	87
Blank	101	94
LCS	94	99
MS	84	89
MSD	85	89
Limits:	10-179	10-179

Analysis Name: TPH DRO/ORO soil 8015C/D(3546)
Batch number: 182560030A

	Orthoterphenyl
9795317	87
Blank	100
DUP	92
LCS	101
MS	98
Limits:	42-143

*- Outside of specification
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Environmental Analysis Request/Chain of Custody

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For Eurofins Lancaster Laboratories Environmental use only

Acct. # 3074 Group # 1985552 Sample # 9795317

COC # 577416

Client Information

Client: Arcadis	Acct. #:
Project Name/#: BMS Syracuse - B0087363.0028	PWSID #:
Project Manager: David Wright	P.O. #:
Sampler: David Wright	Quote #:
State where samples were collected: NY	For Compliance: Yes ☐ No ☐

Matrix: Soil ☒ Sediment ☐ Tissue ☐ | Water: Potable ☐ Ground ☐ Surface ☐ NPDES ☐ | Other: ____

Analysis Requested — Preservation and Filtration Codes

Sample Identification	Collected Date	Collected Time	Grab	Composite	Total # of Containers	VOC w/TIC 8260	SVOC w/TIC 8270	Glycols + Alcohols 8015	Aldehydes 8315	TPH - G, D, O	Remarks
Bldg 25N Under Slab 1	09/10	0940	X		9	X	X	X	X	X	O = methanol + DI water vials.

Use BMS Syracuse project-specific analyte list

For Lab Use Only

FSC: ____

SCR#: 231133

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 (TAT) Requested (please circle)

Standard (Rush)

(Rush TAT is subject to laboratory approval and surcharge.)

Requested TAT in business days: 5

E-mail address: david.wright@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]	9/7/18	16:20	[signature]	9/10/18	0845
[signature]	9/10/18	1040			
			[signature]	9/11/18	10:00

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 ____ Other ____

Temperature upon receipt 1.6 °C

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Sample Administration Receipt Documentation Log

Doc Log ID: 226628

Group Number(s): 1985552

Client: ARCADIS

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Timestamp:	09/11/2018 10:00
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	VOA Vial Headspace ≥ 6mm:	No
Samples Chilled:	Yes	Total Trip Blank Qty:	0
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 Suegeily Mendez (14058) at 12:12 on 09/11/2018

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	DT42-02	1.6	DT	Wet	Y	Bagged	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

Partial Report

Sample Description: **Bldg. 25 Surface Water Grab Surface Water**
B0087363.0033/BMS

Project Name: **Bristol-Myers Squibb**

ARCADIS U.S., Inc.
ELLE Sample #: WW 9827921
ELLE Group #: 1992835
Matrix: Surface Water

Submittal Date/Time: 09/29/2018 09:45
Collection Date/Time: 09/28/2018 15:15
SDG#: BMS60-01

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	400		20	0.7	1
11997	Acetonitrile	75-05-8	N.D.		100	16	1
11997	Benzene	71-43-2	1		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	0.2	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	9	J	10	0.3	1
11997	t-Butyl alcohol	75-65-0	31	J	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	0.6	J	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	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	0.6	J	5	0.2	1
11997	Cyclohexanone	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	0.5	J	1	0.4	1

*=This limit was used in the evaluation of the final result

Reference ID:
1992835251018103734

Partial Report

Sample Description: **Bldg. 25 Surface Water Grab Surface Water**
B0087363.0033/BMS

Project Name: **Bristol-Myers Squibb**

ARCADIS U.S., Inc.
ELLE Sample #: WW 9827921
ELLE Group #: 1992835
Matrix: Surface Water

Submittal Date/Time: 09/29/2018 09:45
Collection Date/Time: 09/28/2018 15:15
SDG#: BMS60-01

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	142-82-5	N.D.	5	0.2	1
11997	n-Hexane	110-54-3	N.D.	5	0.2	1
11997	2-Hexanone	591-78-6	1 J	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	22	10	0.5	1
11997	Methylcyclohexane	108-87-2	0.4 J	5	0.2	1
11997	Methylene Chloride	75-09-2	6	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	7 J	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	N.D.	1	0.2	1
11997	Trichlorofluoromethane	75-69-4	9	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	1 J	5	1	1
11997	o-Xylene	95-47-6	0.7 J	1	0.4	1
11997	Xylene (Total)	1330-20-7	2 J	5	1	1

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: trichlorofluoromethane.

Project defined calibration criteria are not met. The calibration is compliant with the method defined criteria.

12027 VOA Interp. Library Search-20

*=This limit was used in the evaluation of the final result

Reference ID:
1992835251018103734

Partial Report

Sample Description: **Bldg. 25 Surface Water Grab Surface Water**
B0087363.0033/BMS

Project Name: **Bristol-Myers Squibb**

ARCADIS U.S., Inc.
ELLE Sample #: WW 9827921
ELLE Group #: 1992835
Matrix: Surface Water

Submittal Date/Time: 09/29/2018 09:45
Collection Date/Time: 09/28/2018 15:15
SDG#: BMS60-01

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.		0.50	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	12	J	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	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	101-83-7	N.D.		10	10	1
14241	Diethylphthalate	84-66-2	N.D.		5.0	2.0	1
14241	N,N-Dimethylaniline	121-69-7	0.95	J	1.0	0.50	1

*=This limit was used in the evaluation of the final result

Reference ID:
1992835251018103734

Partial Report

Sample Description: **Bldg. 25 Surface Water Grab Surface Water**
B0087363.0033/BMS

Project Name: **Bristol-Myers Squibb**

ARCADIS U.S., Inc.
ELLE Sample #: WW 9827921
ELLE Group #: 1992835
Matrix: Surface Water

Submittal Date/Time: 09/29/2018 09:45
Collection Date/Time: 09/28/2018 15:15
SDG#: BMS60-01

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-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
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	0.24 J	0.50	0.10	1
14241	2-Methylphenol	95-48-7	N.D.	2.0	0.50	1
14241	4-Methylphenol	65794-96-9	1.9 J	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	0.20 J	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	51	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

*=This limit was used in the evaluation of the final result

Reference ID:
1992835251018103734

Partial Report

Sample Description: **Bldg. 25 Surface Water Grab Surface Water**
B0087363.0033/BMS

Project Name: **Bristol-Myers Squibb**

ARCADIS U.S., Inc.
ELLE Sample #: WW 9827921
ELLE Group #: 1992835
Matrix: Surface Water

Submittal Date/Time: 09/29/2018 09:45
Collection Date/Time: 09/28/2018 15:15
SDG#: BMS60-01

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	2,4,6-Trichlorophenol	88-06-2	N.D.	2.0	0.50	1
14241	Triethylamine	121-44-8	89	10	10	1
	The stated QC limits for Dicyclohexylamine and Triethylamine are advisory only until sufficient data points can be obtained to calculate statistical limits.					
GC/MS Semivolatiles	**SW-846 8270D SIM**		**ug/l**	**ug/l**	**ug/l**	
14244	1,4-Dioxane	123-91-1	5	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.					
GC Volatiles	**SW-846 8015D Rev.4, June 2003**		**ug/l**	**ug/l**	**ug/l**	
10598	TPH-GRO water C6-C10	n.a.	340	50	11	1
Aldehydes & Ketones	**SW-846 8315A**		**ug/l**	**ug/l**	**ug/l**	
13022	Acetaldehyde	75-07-0	N.D.	60	30	1
13022	Formaldehyde	50-00-0	N.D.	50	20	1
13022	Glutaraldehyde	111-30-8	N.D.	50	30	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	67-63-0	N.D. D2	1,000	110	1
10603	Methanol	67-56-1	570 JD2	1,000	220	1
GC Petroleum Hydrocarbons	**SW-846 8015D Rev.4, June 2003**		**ug/l**	**ug/l**	**ug/l**	
13566	DRO C10-C28	n.a.	500,000	5,000	1,800	50
13566	ORO >C28 - C40	n.a.	220,000	5,000	1,800	50
Metals	**SW-846 6010C**		**mg/l**	**mg/l**	**mg/l**	
07044	Antimony	7440-36-0	0.0331 J	0.0500	0.0100	1
07035	Arsenic	7440-38-2	N.D.	0.0500	0.0160	1
07046	Barium	7440-39-3	0.0703	0.0050	0.0010	1
07047	Beryllium	7440-41-7	N.D.	0.0050	0.0010	1
07049	Cadmium	7440-43-9	0.0017 J	0.0050	0.0010	1
01750	Calcium	7440-70-2	109	0.500	0.0330	1
07051	Chromium	7440-47-3	0.0070 J	0.0150	0.0053	1
07052	Cobalt	7440-48-4	0.0034 JK2	0.0050	0.0015	1

*=This limit was used in the evaluation of the final result

Reference ID:
1992835251018103734

Partial Report

Sample Description: **Bldg. 25 Surface Water Grab Surface Water**
B0087363.0033/BMS

Project Name: **Bristol-Myers Squibb**

ARCADIS U.S., Inc.
ELLE Sample #: WW 9827921
ELLE Group #: 1992835
Matrix: Surface Water

Submittal Date/Time: 09/29/2018 09:45
Collection Date/Time: 09/28/2018 15:15
SDG#: BMS60-01

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
Metals		**SW-846 6010C**	**mg/l**	**mg/l**	**mg/l**	
07053	Copper	7440-50-8	0.0234	0.0200	0.0062	1
01754	Iron	7439-89-6	1.37	0.200	0.0400	1
07055	Lead	7439-92-1	0.0079 J	0.0150	0.0071	1
01757	Magnesium	7439-95-4	13.3	0.100	0.0190	1
07058	Manganese	7439-96-5	0.0364	0.0200	0.0011	1
07061	Nickel	7440-02-0	0.0134	0.0100	0.0031	1
01762	Potassium	7440-09-7	80.7	0.500	0.203	1
07036	Selenium	7782-49-2	N.D.	0.0500	0.0210	1
07066	Silver	7440-22-4	N.D.	0.0100	0.0050	1
01767	Sodium	7440-23-5	719	5.00	1.63	5
07022	Thallium	7440-28-0	N.D.	0.0300	0.0140	1
		SW-846 6010C	**ug/l**	**ug/l**	**ug/l**	
01743	Aluminum	7429-90-5	1,030	300	153	1
07071	Vanadium	7440-62-2	6.9 J	10.0	3.0	1
07072	Zinc	7440-66-6	69.9	20.0	3.0	1
		SW-846 7470A	**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	0.000075 J	0.00020	0.000050	1

Sample Comments

State of New York Certification No. 10670
Trip blank vials were not received by the laboratory for this sample group.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	L182821AA	10/09/2018 13:44	Linda C Pape	1
14241	Semi-annual Groundwater BMS	SW-846 8270D	1	18276WAP026	10/05/2018 08:21	Ashley R Transue	1
14244	SIM SVOAs 8270D MINI	SW-846 8270D SIM	1	18276WAO026	10/05/2018 05:19	Brandon K Cordova	1
10598	TPH-GRO water C6-C10	SW-846 8015D Rev.4, June 2003	1	18276A53A	10/04/2018 03:09	Jeremy C Giffin	1
13022	Short List Aldehydes- W 8315A	SW-846 8315A	1	182740031A	10/03/2018 17:31	James H Place	1
10603	Alcohols in Water	SW-846 8015D Rev.4, June 2003	1	182810026A	10/10/2018 17:26	Johanna C Kennedy	1
13566	TPH DRO/ORO water 8015C/D	SW-846 8015D Rev.4, June 2003	1	182760011A	10/08/2018 21:41	Marisa Englebright	50
01743	Aluminum	SW-846 6010C	1	182761063504	10/08/2018 22:06	Elaine F Stoltzfus	1
07044	Antimony	SW-846 6010C	1	182761063504	10/08/2018 22:06	Elaine F Stoltzfus	1
07035	Arsenic	SW-846 6010C	1	182761063504	10/08/2018 22:06	Elaine F Stoltzfus	1
07046	Barium	SW-846 6010C	1	182761063504	10/08/2018 22:06	Elaine F Stoltzfus	1
07047	Beryllium	SW-846 6010C	1	182761063504	10/08/2018 22:06	Elaine F Stoltzfus	1
07049	Cadmium	SW-846 6010C	1	182761063504	10/08/2018 22:06	Elaine F Stoltzfus	1
01750	Calcium	SW-846 6010C	1	182761063504	10/08/2018 22:06	Elaine F Stoltzfus	1

*=This limit was used in the evaluation of the final result

Reference ID:
1992835251018103734

Partial Report

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07051	Chromium	SW-846 6010C	1	182761063504	10/08/2018 22:06	Elaine F Stoltzfus	1
07052	Cobalt	SW-846 6010C	1	182761063504	10/08/2018 22:06	Elaine F Stoltzfus	1
07053	Copper	SW-846 6010C	1	182761063504	10/08/2018 22:06	Elaine F Stoltzfus	1
01754	Iron	SW-846 6010C	1	182761063504	10/08/2018 22:06	Elaine F Stoltzfus	1
07055	Lead	SW-846 6010C	1	182761063504	10/08/2018 22:06	Elaine F Stoltzfus	1
01757	Magnesium	SW-846 6010C	1	182761063504	10/08/2018 22:06	Elaine F Stoltzfus	1
07058	Manganese	SW-846 6010C	1	182761063504	10/08/2018 22:06	Elaine F Stoltzfus	1
07061	Nickel	SW-846 6010C	1	182761063504	10/08/2018 22:06	Elaine F Stoltzfus	1
01762	Potassium	SW-846 6010C	1	182761063504	10/08/2018 22:06	Elaine F Stoltzfus	1
07036	Selenium	SW-846 6010C	1	182761063504	10/11/2018 10:46	Eric L Eby	1
07066	Silver	SW-846 6010C	1	182761063504	10/08/2018 22:06	Elaine F Stoltzfus	1
01767	Sodium	SW-846 6010C	1	182761063504	10/11/2018 10:49	Eric L Eby	5
07022	Thallium	SW-846 6010C	1	182761063504	10/08/2018 22:06	Elaine F Stoltzfus	1
07071	Vanadium	SW-846 6010C	1	182761063504	10/08/2018 22:06	Elaine F Stoltzfus	1
07072	Zinc	SW-846 6010C	1	182761063504	10/08/2018 22:06	Elaine F Stoltzfus	1
00259	Mercury	SW-846 7470A	1	182770571314	10/08/2018 17:18	Parker D Lindstrom	1

*=This limit was used in the evaluation of the final result

Reference ID:
1992835251018103734

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
B25SW

Lab Name: Lancaster Laboratories Contract:_____
Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____
Matrix: (soil/water) WATER Lab Sample ID: 9827921
Sample wt/vol: 5.0 (g/mL)mL Lab File ID:HP09915.i/18oct09a.b/lc09s09.d
Level: (low/med) LOW Date Received: 09/29/18
% Moisture: not dec. Date Analyzed: 10/09/18
Column: (pack/cap) CAP Dilution Factor: 1.0

Number TICs found: 4

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		Unknown	1.84	7	J
2.	420-56-4	Trimethylsilyl fluoride	2.06	190	J
3.		Unknown	2.79	31	J
4.	1066-40-6	Silanol, trimethyl-	5.28	190	J
5.					
6.	VOCTIC	Total VOC TICs		420	J
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					
16.					
17.					
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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

B25SW

Lab Name: Lancaster Laboratories Contract:

Lab Code: LANCAS Case No.: SAS No.: SDG No.:

Matrix: (soil/water) WATER Lab Sample ID: 9827921

Sample wt/vol: 248 (g/mL) mL Lab File ID: dj0424.d

Level: (low/med) LOW Date Received: 09/29/18

% Moisture: Decanted: (Y/N) Date Extracted: 10/04/18

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/05/18

Injection Volume: 0.5 (uL) Dilution Factor: 1

GPC Cleanup: N pH: Extraction: Sepf

CONCENTRATION UNITS:

Number TICs found: 25 (ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Unknown	11.123	330	J
2.	Unknown	12.295	4700	J
3.	Unknown	15.594	27	J
4.	Unknown	16.042	41	J
5.7225-64-1	Heptadecane, 9-octyl-	16.176	55	J
6.	Unknown	16.305	24	J
7.	Unknown	16.345	23	J
8.629-97-0	Docosane	16.398	23	J
9.19781-73-8	n-Heptadecylcyclohexane	16.532	30	J
10.4860-03-1	Hexadecane, 1-chloro-	16.608	23	J
11.	Unknown	16.666	32	J
12.646-31-1	Tetracosane	16.771	82	J
13.	Unknown	16.905	24	J
14.	Unknown	16.940	23	J
15.630-01-3	Hexacosane	16.998	23	J
16.	Unknown	17.144	65	J
17.	Unknown	17.196	31	J
18.629-94-7	Heneicosane	17.360	68	J
19.	Unknown	17.517	33	J
20.	Unknown	17.727	31	J
21.	Unknown Alkane	17.943	82	J
22.	Unknown	18.059	32	J
23.14739-72-1	Heneicosane, 11-pentyl-	18.514	56	J
24.74685-33-9	3-Eicosene, (E)-	19.085	38	J
25.	Unknown	20.507	43	J
26.				
27.SVOCTIC	Total SVOC TICs		5900	J
28.				
29.				
30.				

Reference ID:
1992835251018103734

Partial Report

Sample Description: **Bldg. 25 Surface LNAPL Composite Oil**
B0087363.0030/BMS

Project Name: **Bristol-Myers Squibb**

ARCADIS U.S., Inc.
ELLE Sample #: G5 9827922
ELLE Group #: 1992835
Matrix: Oil

Submittal Date/Time: 09/29/2018 09:45
Collection Date/Time: 09/28/2018 15:00
SDG#: BMS60-02

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Limit of Quantitation*	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**mg/kg**	**mg/kg**	**mg/kg**	
11995	Acetone	67-64-1	N.D.	10	3.0	500
11995	Acetonitrile	75-05-8	N.D.	50	13	500
11995	Benzene	71-43-2	N.D.	2.5	0.25	500
11995	Bromochloromethane	74-97-5	N.D.	2.5	0.30	500
11995	Bromodichloromethane	75-27-4	N.D.	2.5	0.20	500
11995	Bromoform	75-25-2	N.D.	5.0	2.5	500
11995	Bromomethane	74-83-9	N.D.	2.5	0.35	500
11995	n-Butanol	71-36-3	N.D.	130	28	500
11995	2-Butanone	78-93-3	N.D.	5.0	0.50	500
11995	t-Butyl alcohol	75-65-0	N.D.	50	7.5	500
11995	n-Butylbenzene	104-51-8	N.D.	4.0	1.5	500
11995	sec-Butylbenzene	135-98-8	N.D.	2.5	1.0	500
11995	tert-Butylbenzene	98-06-6	N.D.	2.5	0.40	500
11995	Carbon Disulfide	75-15-0	N.D.	2.5	0.30	500
11995	Carbon Tetrachloride	56-23-5	N.D.	2.5	0.25	500
11995	Chlorobenzene	108-90-7	N.D.	2.5	0.25	500
11995	Chloroethane	75-00-3	N.D.	2.5	0.50	500
11995	Chloroform	67-66-3	N.D.	2.5	0.30	500
11995	Chloromethane	74-87-3	N.D.	2.5	0.30	500
11995	Cyclohexane	110-82-7	0.34 J	2.5	0.25	500
11995	Cyclohexanone	108-94-1	N.D.	130	13	500
11995	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	2.5	0.20	500
11995	Dibromochloromethane	124-48-1	N.D.	2.5	0.20	500
11995	1,2-Dibromoethane	106-93-4	N.D.	2.5	0.20	500
11995	1,2-Dichlorobenzene	95-50-1	N.D.	2.5	0.25	500
11995	1,3-Dichlorobenzene	541-73-1	N.D.	2.5	0.25	500
11995	1,4-Dichlorobenzene	106-46-7	N.D.	2.5	0.20	500
11995	Dichlorodifluoromethane	75-71-8	N.D.	2.5	0.30	500
11995	1,1-Dichloroethane	75-34-3	N.D.	2.5	0.25	500
11995	1,2-Dichloroethane	107-06-2	N.D.	2.5	0.30	500
11995	1,1-Dichloroethene	75-35-4	N.D.	2.5	0.25	500
11995	cis-1,2-Dichloroethene	156-59-2	N.D.	2.5	0.25	500
11995	trans-1,2-Dichloroethene	156-60-5	N.D.	2.5	0.25	500
11995	1,2-Dichloropropane	78-87-5	N.D.	2.5	0.25	500
11995	cis-1,3-Dichloropropene	10061-01-5	N.D.	2.5	0.20	500
11995	trans-1,3-Dichloropropene	10061-02-6	N.D.	2.5	0.15	500
11995	1,4-Dioxane	123-91-1	N.D.	130	19	500
11995	Ethyl Acetate	141-78-6	N.D.	2.5	0.50	500
11995	Ethyl ether	60-29-7	N.D.	2.5	0.50	500
11995	Ethylbenzene	100-41-4	0.78 J	2.5	0.20	500
11995	Freon 113	76-13-1	N.D.	5.0	0.30	500

*=This limit was used in the evaluation of the final result

Reference ID:
1992835251018103734

Partial Report

Sample Description: **Bldg. 25 Surface LNAPL Composite Oil**
B0087363.0030/BMS

Project Name: **Bristol-Myers Squibb**

ARCADIS U.S., Inc.
ELLE Sample #: G5 9827922
ELLE Group #: 1992835
Matrix: Oil

Submittal Date/Time: 09/29/2018 09:45
Collection Date/Time: 09/28/2018 15:00
SDG#: BMS60-02

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Limit of Quantitation*	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**mg/kg**	**mg/kg**	**mg/kg**	
11995	n-Heptane	142-82-5	28	4.0	1.5	500
11995	n-Hexane	110-54-3	7.7	2.5	0.25	500
11995	2-Hexanone	591-78-6	N.D.	5.0	0.50	500
11995	Isobutyl Alcohol	78-83-1	N.D.	130	19	500
11995	Isopropylbenzene	98-82-8	0.30 J	2.5	0.20	500
11995	p-Isopropyltoluene	99-87-6	N.D.	2.5	1.0	500
11995	Methyl Acetate	79-20-9	N.D.	2.5	0.50	500
11995	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	2.5	0.25	500
11995	4-Methyl-2-pentanone	108-10-1	N.D.	5.0	0.50	500
11995	Methylcyclohexane	108-87-2	4.6	2.5	0.30	500
11995	Methylene Chloride	75-09-2	N.D.	2.5	1.0	500
11995	Naphthalene	91-20-3	N.D.	2.5	1.0	500
11995	2-Nitropropane	79-46-9	N.D.	5.0	0.50	500
11995	Styrene	100-42-5	N.D.	2.5	0.15	500
11995	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	2.5	0.20	500
11995	Tetrachloroethene	127-18-4	N.D.	2.5	0.25	500
11995	Tetrahydrofuran	109-99-9	N.D.	4.0	0.50	500
11995	Toluene	108-88-3	0.97 J	2.5	0.30	500
11995	1,2,3-Trichlorobenzene	87-61-6	N.D.	5.0	2.5	500
11995	1,2,4-Trichlorobenzene	120-82-1	N.D.	5.0	2.5	500
11995	1,1,1-Trichloroethane	71-55-6	N.D.	2.5	0.30	500
11995	1,1,2-Trichloroethane	79-00-5	N.D.	2.5	0.25	500
11995	Trichloroethene	79-01-6	N.D.	2.5	0.25	500
11995	Trichlorofluoromethane	75-69-4	2.1 J	2.5	0.35	500
11995	1,2,4-Trimethylbenzene	95-63-6	4.4	2.5	0.25	500
11995	1,3,5-Trimethylbenzene	108-67-8	1.3 J	2.5	0.25	500
11995	Vinyl Chloride	75-01-4	N.D.	2.5	0.30	500
11995	m+p-Xylene	179601-23-1	2.6	2.5	0.50	500
11995	o-Xylene	95-47-6	1.1 J	2.5	0.20	500
11995	Xylene (Total)	1330-20-7	3.7	2.5	0.50	500

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 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

*=This limit was used in the evaluation of the final result

Reference ID:
1992835251018103734

Sample Description: **Bldg. 25 Surface LNAPL Composite Oil**
B0087363.0030/BMS

Project Name: **Bristol-Myers Squibb**

ARCADIS U.S., Inc.
ELLE Sample #: G5 9827922
ELLE Group #: 1992835
Matrix: Oil

Submittal Date/Time: 09/29/2018 09:45
Collection Date/Time: 09/28/2018 15:00
SDG#: BMS60-02

CAT No.	Analysis Name	CAS Number	As Received Result		As Received Limit of Quantitation*	As Received Method Detection Limit	Dilution Factor
	the result for the following analyte(s) is estimated: o-xylene and isopropylbenzene.						
	A targeted library search was performed yielding the following results: dichlorofluoromethane is non-detect.						
	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. The client was contacted and the data reported.						
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	1,800	J	5,000	1,000	1
10726	Acenaphthylene	208-96-8	N.D.		5,000	1,000	1
10726	Acetophenone	98-86-2	N.D.		15,000	7,000	1
10726	Aniline	62-53-3	N.D.		150,000	50,000	1
10726	Anthracene	120-12-7	N.D.		5,000	1,000	1
10726	Atrazine	1912-24-9	N.D.		50,000	10,000	1
10726	Benzaldehyde	100-52-7	N.D.		50,000	20,000	1
10726	Benzo(a)anthracene	56-55-3	N.D.		5,000	1,000	1
10726	Benzo(a)pyrene	50-32-8	N.D.		5,000	2,000	1
10726	Benzo(b)fluoranthene	205-99-2	N.D.		5,000	1,000	1
10726	Benzo(g,h,i)perylene	191-24-2	N.D.		5,000	2,000	1
10726	Benzo(k)fluoranthene	207-08-9	N.D.		5,000	1,000	1
10726	Benzyl alcohol	100-51-6	N.D.		150,000	50,000	1
10726	1,1'-Biphenyl	92-52-4	N.D.		11,000	5,000	1
10726	4-Bromophenyl-phenylether	101-55-3	N.D.		15,000	6,000	1
10726	Butylbenzylphthalate	85-68-7	N.D.		50,000	20,000	1
10726	Di-n-butylphthalate	84-74-2	N.D.		50,000	20,000	1
10726	Caprolactam	105-60-2	N.D.		50,000	10,000	1
10726	Carbazole	86-74-8	N.D.		11,000	5,000	1
10726	4-Chloro-3-methylphenol	59-50-7	N.D.		11,000	5,000	1
10726	4-Chloroaniline	106-47-8	N.D.		50,000	10,000	1
10726	bis(2-Chloroethoxy)methane	111-91-1	N.D.		11,000	5,000	1
10726	bis(2-Chloroethyl)ether	111-44-4	N.D.		15,000	7,000	1
10726	bis(2-Chloroisopropyl)ether	39638-32-9	N.D.		11,000	5,000	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.		10,000	2,000	1
10726	2-Chlorophenol	95-57-8	N.D.		11,000	5,000	1

*=This limit was used in the evaluation of the final result

Reference ID:
1992835251018103734

Partial Report

Sample Description: **Bldg. 25 Surface LNAPL Composite Oil**
B0087363.0030/BMS

Project Name: **Bristol-Myers Squibb**

ARCADIS U.S., Inc.
ELLE Sample #: G5 9827922
ELLE Group #: 1992835
Matrix: Oil

Submittal Date/Time: 09/29/2018 09:45
Collection Date/Time: 09/28/2018 15:00
SDG#: BMS60-02

CAT No.	Analysis Name	CAS Number	As Received Result		As Received Limit of Quantitation*	As Received Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/kg**		**ug/kg**	**ug/kg**	
10726	4-Chlorophenyl-phenylether	7005-72-3	N.D.		11,000	5,000	1
10726	Chrysene	218-01-9	N.D.		5,000	1,000	1
10726	Dibenz(a,h)anthracene	53-70-3	N.D.		5,000	1,000	1
10726	Dibenzofuran	132-64-9	N.D.		11,000	5,000	1
10726	3,3'-Dichlorobenzidine	91-94-1	N.D.		100,000	30,000	1
10726	2,4-Dichlorophenol	120-83-2	N.D.		11,000	5,000	1
10726	Dicyclohexylamine	101-83-7	N.D.		600,000	200,000	1
10726	Diethylphthalate	84-66-2	N.D.		50,000	20,000	1
10726	N,N-Dimethylaniline	121-69-7	N.D.		50,000	10,000	1
10726	2,4-Dimethylphenol	105-67-9	N.D.		11,000	5,000	1
10726	Dimethylphthalate	131-11-3	N.D.		50,000	20,000	1
10726	4,6-Dinitro-2-methylphenol	534-52-1	N.D.		150,000	50,000	1
10726	2,4-Dinitrophenol	51-28-5	N.D.		300,000	110,000	1
10726	2,4-Dinitrotoluene	121-14-2	N.D.		50,000	20,000	1
10726	2,6-Dinitrotoluene	606-20-2	N.D.		15,000	6,000	1
10726	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.		50,000	20,000	1
10726	Fluoranthene	206-44-0	N.D.		5,000	1,000	1
10726	Fluorene	86-73-7	N.D.		5,000	1,000	1
10726	Hexachlorobenzene	118-74-1	N.D.		5,000	1,000	1
10726	Hexachlorobutadiene	87-68-3	N.D.		15,000	6,000	1
10726	Hexachlorocyclopentadiene	77-47-4	N.D.		150,000	50,000	1
10726	Hexachloroethane	67-72-1	N.D.		50,000	10,000	1
10726	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.		5,000	2,000	1
10726	Isophorone	78-59-1	N.D.		11,000	5,000	1
10726	2-Methylnaphthalene	91-57-6	4,200	J	10,000	3,000	1
10726	2-Methylphenol	95-48-7	N.D.		20,000	8,000	1
10726	4-Methylphenol	65794-96-9	N.D.		15,000	6,000	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.		5,000	2,000	1
10726	2-Nitroaniline	88-74-4	N.D.		15,000	6,000	1
10726	3-Nitroaniline	99-09-2	N.D.		50,000	20,000	1
10726	4-Nitroaniline	100-01-6	N.D.		50,000	20,000	1
10726	Nitrobenzene	98-95-3	N.D.		20,000	8,000	1
10726	2-Nitrophenol	88-75-5	N.D.		11,000	5,000	1
10726	4-Nitrophenol	100-02-7	N.D.		150,000	50,000	1
10726	N-Nitroso-di-n-propylamine	621-64-7	N.D.		15,000	6,000	1
10726	N-Nitrosodiphenylamine	86-30-6	N.D.		11,000	5,000	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.						

*=This limit was used in the evaluation of the final result

Reference ID:
1992835251018103734

Partial Report

Sample Description: **Bldg. 25 Surface LNAPL Composite Oil**
B0087363.0030/BMS

Project Name: **Bristol-Myers Squibb**

ARCADIS U.S., Inc.
ELLE Sample #: G5 9827922
ELLE Group #: 1992835
Matrix: Oil

Submittal Date/Time: 09/29/2018 09:45
Collection Date/Time: 09/28/2018 15:00
SDG#: BMS60-02

CAT No.	Analysis Name	CAS Number	As Received Result		As Received Limit of Quantitation*	As Received Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/kg**		**ug/kg**	**ug/kg**	
10726	Di-n-octylphthalate	117-84-0	N.D.		50,000	20,000	1
10726	Pentachlorophenol	87-86-5	N.D.		50,000	11,000	1
10726	Phenanthrene	85-01-8	1,900	J	5,000	1,000	1
10726	Phenol	108-95-2	N.D.		15,000	7,000	1
10726	Pyrene	129-00-0	N.D.		5,000	1,000	1
10726	Pyridine	110-86-1	N.D.		50,000	20,000	1
10726	1,2,4,5-Tetrachlorobenzene	95-94-3	N.D.		11,000	5,000	1
10726	2,3,4,6-Tetrachlorophenol	58-90-2	N.D.		50,000	20,000	1
10726	2,4,5-Trichlorophenol	95-95-4	N.D.		15,000	6,000	1
10726	2,4,6-Trichlorophenol	88-06-2	N.D.		15,000	6,000	1
10726	Triethylamine	121-44-8	N.D.		1,500,000	500,000	1

The stated QC limits for Triethylamine 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 Petroleum Hydrocarbons	**SW-846 8015D Rev 4 06/2003 Mod**		**see below**		**see below**	**see below**	
02535	Quantitative GC Fingerprint	n.a.	N.D.		100	100	100

The GC fingerprint for this sample is most similar to our Motor Oil Composite reference chromatogram. When we calculate total sample area in the C8-C40 normal hydrocarbon range as petroleum distillate, it is present at 82% by weight.

Sample Comments

State of New York Certification No. 10670
Trip blank vials were not received by the laboratory for this sample group.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11995	VOCs- Solid by 8260C	SW-846 8260C	1	Q182851AA	10/12/2018 16:41	Jennifer K Howe	500
10726	SVOA 8270D (microwave)	SW-846 8270D	1	18285SLE026	10/17/2018 16:04	Edward C Monborne	1
02535	Quantitative GC Fingerprint	SW-846 8015D Rev 4 06/2003 Mod	1	182830029A	10/10/2018 17:52	Heather E Williams	100

*=This limit was used in the evaluation of the final result

Reference ID:
1992835251018103734

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
B25LN

Lab Name: Lancaster Laboratories Contract:_____
Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____
Matrix: (soil/water) SOIL Lab Sample ID: 9827922
Sample wt/vol: 1.0 (g/mL) g Lab File ID: HP07536.i/18oct12a.b/qc12s12.d
Level: (low/med) MED Date Received: 09/29/18
% Moisture: not dec. N/A Date Analyzed: 10/12/18
Column: (pack/cap) CAP Dilution Factor: 500.0

Number TICs found: 20 CONCENTRATION UNITS: (mg/L or mg/Kg) mg/Kg

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	592-27-8	Heptane, 2-methyl-	9.25	13	J
2.	589-81-1	Heptane, 3-methyl-	9.43	10	J
3.	111-65-9	Octane	9.93	31	J
4.		Unknown	10.94	20	J
5.	2216-33-3	Octane, 3-methyl-	11.05	15	J
6.	111-84-2	Nonane	11.40	47	J
7.	5911-04-6	Nonane, 3-methyl-	11.81	8.1	J
8.		Unknown	11.91	12	J
9.	124-18-5	Decane	12.46	36	J
10.	1120-21-4	Undecane	13.31	11	J
11.		Unknown	14.05	14	J
12.	527-84-4	o-Cymene	14.10	14	J
13.		Unknown aromatic	14.33	11	J
14.		Unknown aromatic	14.42	12	J
15.		Unknown	14.53	11	J
16.	629-50-5	Tridecane	14.70	15	J
17.	4489-84-3	Benzene, (3-methyl-2-butenyl	14.78	9.3	J
18.		Unknown	15.04	7.4	J
19.	91-57-6	Naphthalene, 2-methyl-	15.34	17	J X
20.		Unknown aromatic	15.47	9.5	J
21.					
22.	VOCTIC	Total VOC TICs		330	J
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

X = Alternate choice based on known RT.

page 1 of 1

FORM I VOA-TIC

Reference ID:
1992835251018103734

1F

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

B25LN

Lab Name: Lancaster Laboratories Contract:
Lab Code: LANCAS Case No.: SAS No.: SDG No.:
Matrix: (soil/water) SOIL Lab Sample ID: 9827922
Sample wt/vol: 0.5 (g/mL) g Lab File ID: gj1015.d
Level: (low/med) LOW Date Received: 09/29/18
% Moisture: 0 Decanted: (Y/N) Date Extracted: 10/12/18
Concentrated Extract Volume: 5000 (uL) Date Analyzed: 10/17/18
Injection Volume: 1 (uL) Dilution Factor: 1
GPC Cleanup: N pH: Extraction: Mic

CONCENTRATION UNITS:
Number TICs found: 15 (ug/L or ug/Kg) ug/Kg

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		Unknown	11.333	910000	J
2.	638-67-5	Tricosane	11.851	260000	J
3.	7225-64-1	Heptadecane, 9-octyl-	11.963	260000	J
4.	630-02-4	Octacosane	12.016	250000	J
5.		Unknown	12.080	220000	J
6.	593-45-3	Octadecane	12.169	280000	J
7.	13475-77-9	Eicosane, 9-octyl-	12.263	300000	J
8.		Unknown	12.369	210000	J
9.		Unknown	12.451	310000	J
10.	629-94-7	Heneicosane	12.569	270000	J
11.		Unknown	12.651	210000	J
12.		Unknown	12.804	230000	J
13.		Unknown	12.957	290000	J
14.	55320-06-4	Heneicosane, 11-decyl-	13.163	220000	J
15.		Unknown	13.345	350000	J
16.					
17.	SVOCTIC	Total SVOC TICs		4600000	J
18.					
19.					
20.					
21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

page 1 of 1

FORM I SV-1

3074 1972835 9827921-22

ARCADIS

CHAIN OF CUSTODY LABORATORY ANALYSIS REQUEST FORM

Lab Work Order #

ARCADIS Design & Consultancy for natural and built assets

ID#:

CHAIN OF CUSTODY & LABORATORY

Page ___ of ___

Lab Work Order #

Send Results to:

Contact & Company Name: Arcadis Clint Catania	Telephone: (315) 671-9261
Address: 110 W. Fayette Street, Suite 300	Fax:
City State Zip: Syracuse, NY 13202	E-mail Address: Clint.Catania@arcadis.com
Project Name/Location (City, State): BMS Syracuse / Syracuse, NY	Project #: B0087363.0033.00004
Sampler's Printed Name:	Sampler's Signature:

Sample ID	Collection Date	Collection Time	Type Comp	Type Grab	Matrix	VOCs 8260C	SIM SVOA8270D / TCL SVOA 8270D	Glycols in Water 8015C	Alcohols in Water	Aldehydes 8315A			REMARKS
Preservative	B	E	E	B	E								
Filtered (✓)													
# of Containers	3	2	2	2	1								
Container Information	1	250mL Amber	1	1	250 mL Glass								
Bldg. 25 Surface Water	9/28/18	15:15		X	W	X	X	X	X	X			

PARAMETER ANALYSIS & METHOD

Keys

Preservation Key:
A. H2SO4
B. HCL
C. HNO3
D.NaOH
E. None
F. MeOH
G. DI
H.

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. 125 mL Plastic
10. 4 oz. Amber

Matrix Key:
SO- Soil
W- Water
T- Tissue
SE- Sediment
SL- Sludge
A- Air
NL- NAPL/Oil
SW- Sample Wipe

Special Instructions/Comments:

☐ Special QA/QC Instructions (✓)

Laboratory Information and Receipt		Relinquished By	Received By	Relinquished By	Laboratory Received By
Lab Name:	Cooler Custody Seal (✓)	Printed Name:	Printed Name:	Printed Name:	Printed Name: Nicole Reitl
☑ Cooler packed with ice (✓)	☑ Intact ☐ Not Intact	Signature:	Signature:	Signature:	Signature:
Specify Turnaround Requirements	Sample Receipt: Intact 2.0°	Firm:	Firm:	Firm:	Firm: ELE
Shipping Tracking #:	Condition/Cooler Temp:	Date/Time:	Date/Time:	Date/Time:	Date/Time: 9/29/18 0945

3074 1992835 482721-22

ARCADIS

CHAIN OF CUSTODY LABORATORY ANALYSIS REQUEST FORM

Lab Work Order #

Send Results to:

Contact & Company Name:	Telephone:
Arcadis Clint Catania	(315) 671-9261
Address:	**Fax:**
110 W. Fayette Street	
City State Zip	**E-mail Address:**
Syracuse, NY 13202	Clint.Catania@arcadis.com
Project Name/Location (City, State):	**Project #:**
BMS Syracuse / Syracuse, NY	B0087363.0033.00004
Sampler's Printed Name:	**Sampler's Signature:**

Preservative	A	E	C	E	H_3PO_4	A	E
Filtered (✓)			x				
# of Containers	1	2	2/1	1	2	1	1
Container Information	500mL Glass	50 mL Plastic	3	3	1	3	4

PARAMETER ANALYSIS & METHOD

Sample ID	Collection Date	Collection Time	Type Comp	Type Grab	Matrix	Nitrogen as Ammonia	Chloride, Fluoride, Nitrate Nitrogen, Nitrite Nitrogen, Sulfate	TAL Metals Total / TAL Metals Dissolved	Total Alkalinity	TOC	Total Phosphorus / Chemical Oxygen Demand	Biological Oxygen Demand	REMARKS
Bldg. 25 Surface Water	9/28/18	15:15		x	W	X	X	X	X	X		X	

Keys

Preservation Key:	Container Information Key:
A. H2SO4	1. 40 mL Vial
B. HCL	2. 1 L Amber
C. HNO3	3. 250 mL Plastic
D.NaOH	4. 500 mL Plastic
E. None	5. Encore
F.	6. 2 oz. Glass
G.	7. 4 oz. Glass
H.	8. 8 oz. Glass
	9. 125 mL Plastic
	10. 4 oz. Amber

Matrix Key:

SO- Soil	SE- Sediment	NL- NAPL/Oil
W- Water	SL- Sludge	SW- Sample Wipe
T- Tissue	A- Air	

Special Instructions/Comments:

☐ Special QA/QC Instructions (✓)

Laboratory Information and Receipt		Relinquished By	Received By	Relinquished By	Laboratory Received By
Lab Name:	Cooler Custody Seal (✓)	Printed Name:	Printed Name:	Printed Name:	Printed Name: Nicole Reitz
☑ Cooler packed with ice (✓)	☑ Intact ☐ Not Intact	Signature:	Signature:	Signature:	Signature:
Specify Turnaround Requirements	Sample Receipt: Intact 2.0°	Firm:	Firm:	Firm:	Firm: ELE
Shipping Tracking #:	Condition/Cooler Temp:	Date/Time:	Date/Time:	Date/Time:	Date/Time: 9/29/18 0945

3074 3074 Blvr 9/29/18 1992535 9827921-22

ARCADIS

CHAIN OF CUSTODY LABORATORY ANALYSIS REQUEST FORM

Lab Work Order #

Send Results to:

Contact & Company Name: Arcadis Clint Catania	Telephone: (315) 671-9261
Address: 110 W. Fayette Street	Fax:
City State Zip: Syracuse, NY 13202	E-mail Address: Clint.Catania@arcadis.com
Project Name/Location (City, State): BMS Syracuse / Syracuse, NY	Project #: B0087363.0033.00004
Sampler's Printed Name:	Sampler's Signature:

Keys

Preservation Key:	Container Information Key:
A. H2SO4	1. 40 mL Vial
B. HCL	2. 1 L Amber
C. HNO3	3. 250 mL Plastic
D.NaOH	4. 500 mL Plastic
E. None	5. Encore
F.	6. 2 oz. Glass
G.	7. 4 oz. Glass
H.	8. 8 oz. Glass
	9. 125 mL Plastic
	10. 4 oz. Amber

Matrix Key:

SO- Soil	SE- Sediment	NL- NAPL/Oil
W- Water	SL- Sludge	SW- Sample Wipe
T- Tissue	A- Air	

PARAMETER ANALYSIS & METHOD

Sample ID	Collection Date	Collection Time	Type Comp	Type Grab	Matrix	Preservative	Filtered (✓)	# of Containers	Container Information	TPH GRO water C6 to C10	TPH DRO/ORO water 8015C/D	PFAS in water LC/MS/MS	REMARKS
						B		3	1				
						E		2	1L Amber				
						E		2	3				
B/dg. 25 Surface Water	9/28/18	15:15		X	W					X	X		
B/dg. 25 Surface LNAPL	9/28/18	15:20	X		NL								Contact Clint Catania for analysis

Special Instructions/Comments:

☐ Special QA/QC Instructions (✓)

Laboratory Information and Receipt		Relinquished By	Received By	Relinquished By	Laboratory Received By
Lab Name:	Cooler Custody Seal (✓)	Printed Name:	Printed Name:	Printed Name:	Printed Name: Nicole Reiff
☑ Cooler packed with Ice (✓)	☑ Intact ☐ Not Intact	Signature:	Signature:	Signature:	Signature:
Specify Turnaround Requirements	Sample Receipt: Intact 2.0°	Firm:	Firm:	Firm:	Firm: ELE
Shipping Tracking #:	Condition/Cooler Temp:	Date/Time:	Date/Time:	Date/Time:	Date/Time: 9/29/18 0945

eurofins | Lancaster Laboratories Environmental

Sample Administration Receipt Documentation Log

Doc Log ID: 228550

Group Number(s): 1992835

Client: Arcadis

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Timestamp:	09/29/2018 9:45
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	VOA Vial Headspace ≥ 6mm:	No
Samples Chilled:	Yes	Total Trip Blank Qty:	0
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 Nicole Reiff (25684) at 10:58 on 09/29/2018

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	DT146	2.0	DT	Wet	Y	Bagged	N

General Comments: 1 vial w/no label on at all.

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: October 30, 2018 15:37

Project: Bristol-Myers Squibb

Account #: 03074
Group Number: 1992839
SDG: BMS63
PO Number: B0087363.0026
State of Sample Origin: NY

Electronic Copy To	Arcadis	Attn: David Wright
Electronic Copy To	Arcadis	Attn: Clint Catania

Respectfully Submitted,

Megan A. Moeller
Senior Specialist

(717) 556-7261

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SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
Test Pit #1 (10-12') Composite Soil	09/28/2018 14:45	9827949
Test Pit #2 (10-12') Composite Soil	09/28/2018 15:45	9827950
DUP-TP-092818 Composite Soil	09/28/2018	9827951
TB-092818 Water	09/28/2018	9827952

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Project Name: Bristol-Myers Squibb
ELLE Group #: 1992839

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: 9827949, 9827950, 9827951

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.

Batch #: B182781AA (Sample number(s): 9827949-9827951)

The recovery(ies) for the following analyte(s) in the LCS and/or LCSD exceeded the acceptance window indicating a positive bias: n-Heptane, Chlorodifluoromethane, Acetonitrile

SW-846 8270D, GC/MS Semivolatiles

Sample #s: 9827949, 9827950, 9827951

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. The following action was taken:
The sample was re-extracted within the method required holding time and the QC is again outside of the acceptance limits. The data is reported from the initial trial.

Batch #: 18281SLG026 (Sample number(s): 9827949-9827951)

The recovery(ies) for the following analyte(s) in the LCS were below the acceptance window: 4-Nitrophenol, Butylbenzylphthalate, bis(2-Ethylhexyl)phthalate, Pyridine, Dicyclohexylamine, N,N-Dimethylaniline, Triethylamine

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SW-846 8315A, Aldehydes & Ketones

Sample #s: 9827949

Reporting limits were raised for formaldehyde due to the detection in the blank.

Batch #: 182820033A (Sample number(s): 9827949-9827951 UNSPK: 9827950)

The recovery(ies) for the following analyte(s) in the MS and/or MSD were below the acceptance window: Formaldehyde

SW-846 8015C Feb 2007 Rev 3, GC Miscellaneous

Sample #s: 9827951

The surrogate data is outside the QC limits. Results from the reextraction are within the limits. The hold time had expired prior to the reextraction therefore, all results are reported from the original extract.

Batch #: 182780046A (Sample number(s): 9827949-9827951 UNSPK: 9827949)

The recovery(ies) for one or more surrogates were below the acceptance window for sample(s) 9827951

SW-846 8015C Feb 2007 Rev 3, GC Petroleum Hydrocarbons

Batch #: 182830040A (Sample number(s): 9827949-9827951 UNSPK: 9827950 BKG: 9827950)

The duplicate RPD for the following analyte(s) exceeded the acceptance window: DRO C10-C28

Sample Description: **Test Pit #1 (10-12') Composite Soil**
B0087363.0026/BMS

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 09/29/2018 09:45
Collection Date/Time: 09/28/2018 14:45
SDG#: BMS63-01

ARCADIS U.S., Inc.
ELLE Sample #: SW 9827949
ELLE Group #: 1992839
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	0.031	0.016	0.005	0.68
11995	Acetonitrile	75-05-8	N.D.	0.079	0.020	0.68
11995	Benzene	71-43-2	N.D.	0.004	0.0004	0.68
11995	Bromochloromethane	74-97-5	N.D.	0.004	0.0005	0.68
11995	Bromodichloromethane	75-27-4	N.D.	0.004	0.0003	0.68
11995	Bromoform	75-25-2	N.D.	0.008	0.004	0.68
11995	Bromomethane	74-83-9	N.D.	0.004	0.0006	0.68
11995	n-Butanol	71-36-3	N.D.	0.20	0.044	0.68
11995	2-Butanone	78-93-3	0.002 J	0.008	0.0008	0.68
11995	t-Butyl alcohol	75-65-0	N.D.	0.079	0.012	0.68
11995	n-Butylbenzene	104-51-8	N.D.	0.006	0.002	0.68
11995	sec-Butylbenzene	135-98-8	N.D.	0.004	0.002	0.68
11995	tert-Butylbenzene	98-06-6	N.D.	0.004	0.0006	0.68
11995	Carbon Disulfide	75-15-0	0.0005 J	0.004	0.0005	0.68
11995	Carbon Tetrachloride	56-23-5	N.D.	0.004	0.0004	0.68
11995	Chlorobenzene	108-90-7	N.D.	0.004	0.0004	0.68
11995	Chlorodifluoromethane	75-45-6	N.D.	0.008	0.002	0.68
11995	Chloroethane	75-00-3	N.D.	0.004	0.0008	0.68
11995	Chloroform	67-66-3	N.D.	0.004	0.0005	0.68
11995	Chloromethane	74-87-3	N.D.	0.004	0.0005	0.68
11995	Cyclohexane	110-82-7	N.D.	0.004	0.0004	0.68
11995	Cyclohexanone	108-94-1	N.D.	0.20	0.020	0.68
11995	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	0.004	0.0003	0.68
11995	Dibromochloromethane	124-48-1	N.D.	0.004	0.0003	0.68
11995	1,2-Dibromoethane	106-93-4	N.D.	0.004	0.0003	0.68
11995	1,2-Dichlorobenzene	95-50-1	N.D.	0.004	0.0004	0.68
11995	1,3-Dichlorobenzene	541-73-1	N.D.	0.004	0.0004	0.68
11995	1,4-Dichlorobenzene	106-46-7	N.D.	0.004	0.0003	0.68
11995	Dichlorodifluoromethane	75-71-8	N.D.	0.004	0.0005	0.68
11995	1,1-Dichloroethane	75-34-3	N.D.	0.004	0.0004	0.68
11995	1,2-Dichloroethane	107-06-2	N.D.	0.004	0.0005	0.68
11995	1,1-Dichloroethene	75-35-4	N.D.	0.004	0.0004	0.68
11995	cis-1,2-Dichloroethene	156-59-2	N.D.	0.004	0.0004	0.68
11995	trans-1,2-Dichloroethene	156-60-5	N.D.	0.004	0.0004	0.68
11995	1,2-Dichloropropane	78-87-5	N.D.	0.004	0.0004	0.68
11995	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.004	0.0003	0.68
11995	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.004	0.0002	0.68
11995	1,4-Dioxane	123-91-1	N.D.	0.20	0.029	0.68
11995	Ethyl Acetate	141-78-6	N.D.	0.004	0.0008	0.68
11995	Ethyl Ether	60-29-7	N.D.	0.004	0.0008	0.68
11995	Ethylbenzene	100-41-4	N.D.	0.004	0.0003	0.68

*=This limit was used in the evaluation of the final result

Sample Description: **Test Pit #1 (10-12') Composite Soil**
B0087363.0026/BMS

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 09/29/2018 09:45
Collection Date/Time: 09/28/2018 14:45
SDG#: BMS63-01

ARCADIS U.S., Inc.
ELLE Sample #: SW 9827949
ELLE Group #: 1992839
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.	0.008	0.0005	0.68
11995	n-Heptane	142-82-5	N.D.	0.006	0.002	0.68
11995	n-Hexane	110-54-3	N.D.	0.004	0.0004	0.68
11995	2-Hexanone	591-78-6	N.D.	0.008	0.0008	0.68
11995	Isobutyl Alcohol	78-83-1	N.D.	0.20	0.030	0.68
11995	Isopropylbenzene	98-82-8	N.D.	0.004	0.0003	0.68
11995	p-Isopropyltoluene	99-87-6	N.D.	0.004	0.002	0.68
11995	Methyl Acetate	79-20-9	N.D.	0.004	0.0008	0.68
11995	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.004	0.0004	0.68
11995	4-Methyl-2-pentanone	108-10-1	N.D.	0.008	0.0008	0.68
11995	Methylcyclohexane	108-87-2	N.D.	0.004	0.0005	0.68
11995	Methylene Chloride	75-09-2	N.D.	0.004	0.002	0.68
11995	Naphthalene	91-20-3	N.D.	0.004	0.002	0.68
11995	2-Nitropropane	79-46-9	N.D.	0.008	0.0008	0.68
11995	Styrene	100-42-5	N.D.	0.004	0.0002	0.68
11995	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.004	0.0003	0.68
11995	Tetrachloroethene	127-18-4	N.D.	0.004	0.0004	0.68
11995	Tetrahydrofuran	109-99-9	N.D.	0.006	0.0008	0.68
11995	Toluene	108-88-3	N.D.	0.004	0.0005	0.68
11995	1,2,3-Trichlorobenzene	87-61-6	N.D.	0.008	0.004	0.68
11995	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.008	0.004	0.68
11995	1,1,1-Trichloroethane	71-55-6	N.D.	0.004	0.0005	0.68
11995	1,1,2-Trichloroethane	79-00-5	N.D.	0.004	0.0004	0.68
11995	Trichloroethene	79-01-6	N.D.	0.004	0.0004	0.68
11995	Trichlorofluoromethane	75-69-4	N.D.	0.004	0.0006	0.68
11995	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.004	0.0004	0.68
11995	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.004	0.0004	0.68
11995	Vinyl Chloride	75-01-4	N.D.	0.004	0.0005	0.68
11995	m+p-Xylene	179601-23-1	N.D.	0.004	0.0008	0.68
11995	o-Xylene	95-47-6	N.D.	0.004	0.0003	0.68
11995	Xylene (Total)	1330-20-7	N.D.	0.004	0.0008	0.68

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.

GC/MS Semivolatiles	**SW-846 8270D**	**ug/kg**	**ug/kg**	**ug/kg**	

*=This limit was used in the evaluation of the final result

Sample Description: **Test Pit #1 (10-12') Composite Soil**
B0087363.0026/BMS

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 09/29/2018 09:45
Collection Date/Time: 09/28/2018 14:45
SDG#: BMS63-01

ARCADIS U.S., Inc.
ELLE Sample #: SW 9827949
ELLE Group #: 1992839
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	Acenaphthene	83-32-9	N.D.	19	4	1
10726	Acenaphthylene	208-96-8	N.D.	19	4	1
10726	Acetophenone	98-86-2	N.D.	58	27	1
10726	Aniline	62-53-3	N.D.	580	190	1
10726	Anthracene	120-12-7	12 J	19	4	1
10726	Atrazine	1912-24-9	N.D.	190	38	1
10726	Benzaldehyde	100-52-7	N.D.	190	77	1
10726	Benzo(a)anthracene	56-55-3	50	19	4	1
10726	Benzo(a)pyrene	50-32-8	52	19	8	1
10726	Benzo(b)fluoranthene	205-99-2	74	19	4	1
10726	Benzo(g,h,i)perylene	191-24-2	37	19	8	1
10726	Benzo(k)fluoranthene	207-08-9	30	19	4	1
10726	Benzyl alcohol	100-51-6	N.D.	580	190	1
10726	1,1'-Biphenyl	92-52-4	N.D.	42	19	1
10726	4-Bromophenyl-phenylether	101-55-3	N.D.	58	23	1
10726	Butylbenzylphthalate	85-68-7	N.D.	190	77	1
10726	Di-n-butylphthalate	84-74-2	N.D.	190	77	1
10726	Caprolactam	105-60-2	N.D.	190	38	1
10726	Carbazole	86-74-8	N.D.	42	19	1
10726	4-Chloro-3-methylphenol	59-50-7	N.D.	42	19	1
10726	4-Chloroaniline	106-47-8	N.D.	190	38	1
10726	bis(2-Chloroethoxy)methane	111-91-1	N.D.	42	19	1
10726	bis(2-Chloroethyl)ether	111-44-4	N.D.	58	27	1
10726	bis(2-Chloroisopropyl)ether	39638-32-9	N.D.	42	19	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.	38	8	1
10726	2-Chlorophenol	95-57-8	N.D.	42	19	1
10726	4-Chlorophenyl-phenylether	7005-72-3	N.D.	42	19	1
10726	Chrysene	218-01-9	57	19	4	1
10726	Dibenz(a,h)anthracene	53-70-3	7 J	19	4	1
10726	Dibenzofuran	132-64-9	N.D.	42	19	1
10726	3,3'-Dichlorobenzidine	91-94-1	N.D.	380	120	1
10726	2,4-Dichlorophenol	120-83-2	N.D.	42	19	1
10726	Dicyclohexylamine	101-83-7	N.D.	2,300	770	1
10726	Diethylphthalate	84-66-2	N.D.	190	77	1
10726	N,N-Dimethylaniline	121-69-7	N.D.	190	38	1
10726	2,4-Dimethylphenol	105-67-9	N.D.	42	19	1
10726	Dimethylphthalate	131-11-3	N.D.	190	77	1
10726	4,6-Dinitro-2-methylphenol	534-52-1	N.D.	580	190	1

*=This limit was used in the evaluation of the final result

Sample Description: **Test Pit #1 (10-12') Composite Soil**
B0087363.0026/BMS

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 09/29/2018 09:45
Collection Date/Time: 09/28/2018 14:45
SDG#: BMS63-01

ARCADIS U.S., Inc.
ELLE Sample #: SW 9827949
ELLE Group #: 1992839
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-Dinitrophenol	51-28-5	N.D.	1,200	420	1
10726	2,4-Dinitrotoluene	121-14-2	N.D.	190	77	1
10726	2,6-Dinitrotoluene	606-20-2	N.D.	58	23	1
10726	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	190	77	1
10726	Fluoranthene	206-44-0	110	19	4	1
10726	Fluorene	86-73-7	N.D.	19	4	1
10726	Hexachlorobenzene	118-74-1	N.D.	19	4	1
10726	Hexachlorobutadiene	87-68-3	N.D.	58	23	1
10726	Hexachlorocyclopentadiene	77-47-4	N.D.	580	190	1
10726	Hexachloroethane	67-72-1	N.D.	190	38	1
10726	Indeno(1,2,3-cd)pyrene	193-39-5	32	19	8	1
10726	Isophorone	78-59-1	N.D.	42	19	1
10726	2-Methylnaphthalene	91-57-6	N.D.	38	12	1
10726	2-Methylphenol	95-48-7	N.D.	77	31	1
10726	4-Methylphenol	65794-96-9	N.D.	58	23	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.	19	8	1
10726	2-Nitroaniline	88-74-4	N.D.	58	23	1
10726	3-Nitroaniline	99-09-2	N.D.	190	77	1
10726	4-Nitroaniline	100-01-6	N.D.	190	77	1
10726	Nitrobenzene	98-95-3	N.D.	77	31	1
10726	2-Nitrophenol	88-75-5	N.D.	42	19	1
10726	4-Nitrophenol	100-02-7	N.D.	580	190	1
10726	N-Nitroso-di-n-propylamine	621-64-7	N.D.	58	23	1
10726	N-Nitrosodiphenylamine	86-30-6	N.D.	42	19	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.	190	77	1
10726	Pentachlorophenol	87-86-5	N.D.	190	42	1
10726	Phenanthrene	85-01-8	37	19	4	1
10726	Phenol	108-95-2	N.D.	58	27	1
10726	Pyrene	129-00-0	87	19	4	1
10726	Pyridine	110-86-1	N.D.	190	77	1
10726	1,2,4,5-Tetrachlorobenzene	95-94-3	N.D.	42	19	1
10726	2,3,4,6-Tetrachlorophenol	58-90-2	N.D.	190	77	1
10726	2,4,5-Trichlorophenol	95-95-4	N.D.	58	23	1
10726	2,4,6-Trichlorophenol	88-06-2	N.D.	58	23	1
10726	Triethylamine	121-44-8	N.D.	5,800	1,900	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. The following

*=This limit was used in the evaluation of the final result

Sample Description: **Test Pit #1 (10-12') Composite Soil**
B0087363.0026/BMS

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 09/29/2018 09:45
Collection Date/Time: 09/28/2018 14:45
SDG#: BMS63-01

ARCADIS U.S., Inc.
ELLE Sample #: SW 9827949
ELLE Group #: 1992839
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Limit of Quantitation*	Dry Method Detection Limit	Dilution Factor
	action was taken: The sample was re-extracted within the method required holding time and the QC is again outside of the acceptance limits. The data is reported from the initial 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.					
GC Volatiles	**SW-846 8015D Rev.4, June 2003**		**mg/kg**	**mg/kg**	**mg/kg**	
10599	TPH-GRO soil C6-C10	n.a.	N.D.	0.9	0.2	19.35
Aldehydes & Ketones	**SW-846 8315A**		**mg/kg**	**mg/kg**	**mg/kg**	
13031	Acetaldehyde	75-07-0	2.3	1.1	0.57	1
13031	Formaldehyde	50-00-0	5.4	1.7	1.2	1
	Reporting limits were raised for formaldehyde due to the detection in the blank.					
GC Miscellaneous	**SW-846 8015C Feb 2007 Rev 3**		**mg/kg**	**mg/kg**	**mg/kg**	
12925	Ethylene glycol	107-21-1	N.D.	12	5.8	1
12925	Propylene glycol	57-55-6	N.D.	12	5.8	1
GC Miscellaneous	**SW-846 8015D Rev.4, June 2003**		**mg/kg**	**mg/kg**	**mg/kg**	
10604	Ethanol (by Direct Injection)	64-17-5	N.D. D2	1.2	0.14	1
10604	Isopropanol	67-63-0	N.D. D2	1.2	0.053	1
10604	Methanol (by Direct Injection)	67-56-1	N.D. D2	1.2	0.23	1
GC Petroleum Hydrocarbons	**SW-846 8015C Feb 2007 Rev 3**		**mg/kg**	**mg/kg**	**mg/kg**	
13567	DRO C10-C28	n.a.	9.5 J	14	4.6	1
13567	ORO >C28 - C40	n.a.	31	14	4.6	1
Wet Chemistry	**SM 2540 G-2011 %Moisture Calc**		**%**	**%**	**%**	
00111	Moisture	n.a.	14.0	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: **Test Pit #1 (10-12') Composite Soil**
B0087363.0026/BMS

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 09/29/2018 09:45
Collection Date/Time: 09/28/2018 14:45
SDG#: BMS63-01

ARCADIS U.S., Inc.
ELLE Sample #: SW 9827949
ELLE Group #: 1992839
Matrix: Soil

Sample Comments

State of New York Certification No. 10670

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	SW-846 8260C	1	B182781AA	10/05/2018 13:06	Linda C Pape	0.68
06176	GC/MS - LL DIH2O Prep	SW-846 5035A	1	201827251405	09/29/2018 18:36	Rebecca Williams	1
06176	GC/MS - LL DIH2O Prep	SW-846 5035A	2	201827251405	09/29/2018 18:36	Rebecca Williams	1
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	201827251405	09/28/2018 14:45	Client Supplied	1
10726	SVOA 8270D (microwave)	SW-846 8270D	1	18281SLG026	10/10/2018 16:56	Edward C Monborne	1
10813	BNA Soil Microwave APP IX	SW-846 3546	1	18281SLG026	10/09/2018 09:00	Michelle A Newswanger	1
10599	TPH-GRO soils C6-C10	SW-846 8015D Rev.4, June 2003	1	18275A16A	10/02/2018 22:58	Jeremy C Giffin	19.35
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201827251405	09/28/2018 14:45	Client Supplied	n.a.
13031	Short List Aldehydes- S 8315A	SW-846 8315A	1	182820033A	10/11/2018 22:12	James H Place	1
05876	Formaldehyde Solid Extraction	SW-846 8315A	1	182820033A	10/11/2018 08:00	Olivia Arosemena	1
12925	Glycols in Soil by 8015C	SW-846 8015C Feb 2007 Rev 3	1	182780046A	10/11/2018 00:18	Donald Brown	1
10604	Alcohols in Soil	SW-846 8015D Rev.4, June 2003	1	182830031A	10/10/2018 22:38	Johanna C Kennedy	1
13567	TPH DRO/ORO soil 8015C/D(3546)	SW-846 8015C Feb 2007 Rev 3	1	182830040A	10/11/2018 22:47	Thomas C Wildermuth	1
11221	TPH DRO/ORO Solid 3546 EXT	SW-846 3546	1	182830040A	10/11/2018 08:00	Michelle A Newswanger	1
13121	Glycol Solids Ext. 8015C	SW-846 8015C Feb 2007 Rev 3	1	182780046A	10/10/2018 15:52	Donald Brown	1
00380	Solids Extraction for Alcohols	SW-846 8015D Rev 4 06/2003 Mod	2	182830031A	10/10/2018 15:52	Donald Brown	1
00111	Moisture	SM 2540 G-2011 %Moisture Calc	1	18275820006A	10/02/2018 11:58	Larry E Bevins	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.
BMTP1

Lab Name: Lancaster Laboratories Contract:_____
Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____
Matrix: (soil/water) SOIL Lab Sample ID: 9827949
Sample wt/vol: 7.38 (g/mL) g Lab File ID: HP09953.i/18oct05a.b/bc05s06.d
Level: (low/med) LOW Date Received: 09/29/18
% Moisture: not dec. 14 Date Analyzed: 10/05/18
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.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
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.
BMTP1

Lab Name: Lancaster Laboratories Contract:
Lab Code: LANCAS Case No.: SAS No.: SDG No.:
Matrix: (soil/water) SOIL Lab Sample ID: 9827949
Sample wt/vol: 30.25(g/mL) g Lab File ID: gj0535.d
Level: (low/med) LOW Date Received: 09/29/18
% Moisture: 14 Decanted: (Y/N) Date Extracted: 10/09/18
Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/10/18
Injection Volume: 1 (uL) Dilution Factor: 1
GPC Cleanup: N pH: Extraction: Mic

Number TICs found: 20 CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 109-99-9	Tetrahydrofuran	1.019	12000	JB
2.	Unknown	3.149	9900	JB
3.	Unknown	4.748	1200	J
4.	Unknown	7.684	690	J
5.	Unknown	8.231	8800	J
6.	Unknown	8.342	1800	J
7. 292-46-6	Lenthionine	8.613	660	J
8.	Unknown	8.695	530	J
9.	Unknown	9.001	2800	J
10.	Unknown	9.360	970	J
11.	Unknown	9.413	450	J
12. 6740-88-1	Ketamine	9.542	670	J
13.	Unknown	9.883	480	J
14.	Unknown	9.930	590	J
15.	Unknown	9.989	530	J
16.	Unknown	10.183	800	J
17.	Unknown	10.230	530	J
18.	Unknown	10.283	600	J
19.	Unknown	10.307	710	J
20.	Unknown	10.489	710	J
21.				
22. SVOCTIC	Total SVOC TICs		46000	JB
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

page 1 of 1

FORM I SV-1

Sample Description: **Test Pit #2 (10-12') Composite Soil**
B0087363.0026/BMS

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 09/29/2018 09:45
Collection Date/Time: 09/28/2018 15:45
SDG#: BMS63-02

ARCADIS U.S., Inc.
ELLE Sample #: SW 9827950
ELLE Group #: 1992839
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	0.040	0.017	0.005	0.66
11995	Acetonitrile	75-05-8	N.D.	0.083	0.021	0.66
11995	Benzene	71-43-2	N.D.	0.004	0.0004	0.66
11995	Bromochloromethane	74-97-5	N.D.	0.004	0.0005	0.66
11995	Bromodichloromethane	75-27-4	N.D.	0.004	0.0003	0.66
11995	Bromoform	75-25-2	N.D.	0.008	0.004	0.66
11995	Bromomethane	74-83-9	N.D.	0.004	0.0006	0.66
11995	n-Butanol	71-36-3	N.D.	0.21	0.046	0.66
11995	2-Butanone	78-93-3	0.004 J	0.008	0.0008	0.66
11995	t-Butyl alcohol	75-65-0	N.D.	0.083	0.012	0.66
11995	n-Butylbenzene	104-51-8	N.D.	0.007	0.002	0.66
11995	sec-Butylbenzene	135-98-8	N.D.	0.004	0.002	0.66
11995	tert-Butylbenzene	98-06-6	N.D.	0.004	0.0007	0.66
11995	Carbon Disulfide	75-15-0	0.002 J	0.004	0.0005	0.66
11995	Carbon Tetrachloride	56-23-5	N.D.	0.004	0.0004	0.66
11995	Chlorobenzene	108-90-7	N.D.	0.004	0.0004	0.66
11995	Chlorodifluoromethane	75-45-6	N.D.	0.008	0.002	0.66
11995	Chloroethane	75-00-3	N.D.	0.004	0.0008	0.66
11995	Chloroform	67-66-3	N.D.	0.004	0.0005	0.66
11995	Chloromethane	74-87-3	N.D.	0.004	0.0005	0.66
11995	Cyclohexane	110-82-7	N.D.	0.004	0.0004	0.66
11995	Cyclohexanone	108-94-1	N.D.	0.21	0.021	0.66
11995	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	0.004	0.0003	0.66
11995	Dibromochloromethane	124-48-1	N.D.	0.004	0.0003	0.66
11995	1,2-Dibromoethane	106-93-4	N.D.	0.004	0.0003	0.66
11995	1,2-Dichlorobenzene	95-50-1	N.D.	0.004	0.0004	0.66
11995	1,3-Dichlorobenzene	541-73-1	N.D.	0.004	0.0004	0.66
11995	1,4-Dichlorobenzene	106-46-7	N.D.	0.004	0.0003	0.66
11995	Dichlorodifluoromethane	75-71-8	N.D.	0.004	0.0005	0.66
11995	1,1-Dichloroethane	75-34-3	N.D.	0.004	0.0004	0.66
11995	1,2-Dichloroethane	107-06-2	N.D.	0.004	0.0005	0.66
11995	1,1-Dichloroethene	75-35-4	N.D.	0.004	0.0004	0.66
11995	cis-1,2-Dichloroethene	156-59-2	N.D.	0.004	0.0004	0.66
11995	trans-1,2-Dichloroethene	156-60-5	N.D.	0.004	0.0004	0.66
11995	1,2-Dichloropropane	78-87-5	N.D.	0.004	0.0004	0.66
11995	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.004	0.0003	0.66
11995	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.004	0.0002	0.66
11995	1,4-Dioxane	123-91-1	N.D.	0.21	0.031	0.66
11995	Ethyl Acetate	141-78-6	N.D.	0.004	0.0008	0.66
11995	Ethyl Ether	60-29-7	N.D.	0.004	0.0008	0.66
11995	Ethylbenzene	100-41-4	N.D.	0.004	0.0003	0.66

*=This limit was used in the evaluation of the final result

Sample Description: **Test Pit #2 (10-12') Composite Soil**
B0087363.0026/BMS

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 09/29/2018 09:45
Collection Date/Time: 09/28/2018 15:45
SDG#: BMS63-02

ARCADIS U.S., Inc.
ELLE Sample #: SW 9827950
ELLE Group #: 1992839
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.	0.008	0.0005	0.66
11995	n-Heptane	142-82-5	N.D.	0.007	0.002	0.66
11995	n-Hexane	110-54-3	N.D.	0.004	0.0004	0.66
11995	2-Hexanone	591-78-6	N.D.	0.008	0.0008	0.66
11995	Isobutyl Alcohol	78-83-1	N.D.	0.21	0.031	0.66
11995	Isopropylbenzene	98-82-8	N.D.	0.004	0.0003	0.66
11995	p-Isopropyltoluene	99-87-6	N.D.	0.004	0.002	0.66
11995	Methyl Acetate	79-20-9	N.D.	0.004	0.0008	0.66
11995	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.004	0.0004	0.66
11995	4-Methyl-2-pentanone	108-10-1	N.D.	0.008	0.0008	0.66
11995	Methylcyclohexane	108-87-2	N.D.	0.004	0.0005	0.66
11995	Methylene Chloride	75-09-2	N.D.	0.004	0.002	0.66
11995	Naphthalene	91-20-3	N.D.	0.004	0.002	0.66
11995	2-Nitropropane	79-46-9	N.D.	0.008	0.0008	0.66
11995	Styrene	100-42-5	N.D.	0.004	0.0002	0.66
11995	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.004	0.0003	0.66
11995	Tetrachloroethene	127-18-4	N.D.	0.004	0.0004	0.66
11995	Tetrahydrofuran	109-99-9	N.D.	0.007	0.0008	0.66
11995	Toluene	108-88-3	N.D.	0.004	0.0005	0.66
11995	1,2,3-Trichlorobenzene	87-61-6	N.D.	0.008	0.004	0.66
11995	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.008	0.004	0.66
11995	1,1,1-Trichloroethane	71-55-6	N.D.	0.004	0.0005	0.66
11995	1,1,2-Trichloroethane	79-00-5	N.D.	0.004	0.0004	0.66
11995	Trichloroethene	79-01-6	N.D.	0.004	0.0004	0.66
11995	Trichlorofluoromethane	75-69-4	N.D.	0.004	0.0006	0.66
11995	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.004	0.0004	0.66
11995	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.004	0.0004	0.66
11995	Vinyl Chloride	75-01-4	N.D.	0.004	0.0005	0.66
11995	m+p-Xylene	179601-23-1	N.D.	0.004	0.0008	0.66
11995	o-Xylene	95-47-6	N.D.	0.004	0.0003	0.66
11995	Xylene (Total)	1330-20-7	N.D.	0.004	0.0008	0.66

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.

GC/MS Semivolatiles	**SW-846 8270D**		**ug/kg**	**ug/kg**	**ug/kg**	

*=This limit was used in the evaluation of the final result

Sample Description: **Test Pit #2 (10-12') Composite Soil**
B0087363.0026/BMS

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 09/29/2018 09:45
Collection Date/Time: 09/28/2018 15:45
SDG#: BMS63-02

ARCADIS U.S., Inc.
ELLE Sample #: SW 9827950
ELLE Group #: 1992839
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	Acenaphthene	83-32-9	N.D.	21	4	1
10726	Acenaphthylene	208-96-8	N.D.	21	4	1
10726	Acetophenone	98-86-2	N.D.	62	29	1
10726	Aniline	62-53-3	N.D.	620	210	1
10726	Anthracene	120-12-7	N.D.	21	4	1
10726	Atrazine	1912-24-9	N.D.	210	41	1
10726	Benzaldehyde	100-52-7	N.D.	210	82	1
10726	Benzo(a)anthracene	56-55-3	N.D.	21	4	1
10726	Benzo(a)pyrene	50-32-8	N.D.	21	8	1
10726	Benzo(b)fluoranthene	205-99-2	N.D.	21	4	1
10726	Benzo(g,h,i)perylene	191-24-2	N.D.	21	8	1
10726	Benzo(k)fluoranthene	207-08-9	N.D.	21	4	1
10726	Benzyl alcohol	100-51-6	N.D.	620	210	1
10726	1,1'-Biphenyl	92-52-4	N.D.	45	21	1
10726	4-Bromophenyl-phenylether	101-55-3	N.D.	62	25	1
10726	Butylbenzylphthalate	85-68-7	N.D.	210	82	1
10726	Di-n-butylphthalate	84-74-2	N.D.	210	82	1
10726	Caprolactam	105-60-2	N.D.	210	41	1
10726	Carbazole	86-74-8	N.D.	45	21	1
10726	4-Chloro-3-methylphenol	59-50-7	N.D.	45	21	1
10726	4-Chloroaniline	106-47-8	N.D.	210	41	1
10726	bis(2-Chloroethoxy)methane	111-91-1	N.D.	45	21	1
10726	bis(2-Chloroethyl)ether	111-44-4	N.D.	62	29	1
10726	bis(2-Chloroisopropyl)ether	39638-32-9	N.D.	45	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.	41	8	1
10726	2-Chlorophenol	95-57-8	N.D.	45	21	1
10726	4-Chlorophenyl-phenylether	7005-72-3	N.D.	45	21	1
10726	Chrysene	218-01-9	N.D.	21	4	1
10726	Dibenz(a,h)anthracene	53-70-3	N.D.	21	4	1
10726	Dibenzofuran	132-64-9	N.D.	45	21	1
10726	3,3'-Dichlorobenzidine	91-94-1	N.D.	410	120	1
10726	2,4-Dichlorophenol	120-83-2	N.D.	45	21	1
10726	Dicyclohexylamine	101-83-7	N.D.	2,500	820	1
10726	Diethylphthalate	84-66-2	N.D.	210	82	1
10726	N,N-Dimethylaniline	121-69-7	N.D.	210	41	1
10726	2,4-Dimethylphenol	105-67-9	N.D.	45	21	1
10726	Dimethylphthalate	131-11-3	N.D.	210	82	1
10726	4,6-Dinitro-2-methylphenol	534-52-1	N.D.	620	210	1

*=This limit was used in the evaluation of the final result

Sample Description: **Test Pit #2 (10-12') Composite Soil**
B0087363.0026/BMS

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 09/29/2018 09:45
Collection Date/Time: 09/28/2018 15:45
SDG#: BMS63-02

ARCADIS U.S., Inc.
ELLE Sample #: SW 9827950
ELLE Group #: 1992839
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-Dinitrophenol	51-28-5	N.D.	1,200	450	1
10726	2,4-Dinitrotoluene	121-14-2	N.D.	210	82	1
10726	2,6-Dinitrotoluene	606-20-2	N.D.	62	25	1
10726	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	210	82	1
10726	Fluoranthene	206-44-0	N.D.	21	4	1
10726	Fluorene	86-73-7	N.D.	21	4	1
10726	Hexachlorobenzene	118-74-1	N.D.	21	4	1
10726	Hexachlorobutadiene	87-68-3	N.D.	62	25	1
10726	Hexachlorocyclopentadiene	77-47-4	N.D.	620	210	1
10726	Hexachloroethane	67-72-1	N.D.	210	41	1
10726	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	21	8	1
10726	Isophorone	78-59-1	N.D.	45	21	1
10726	2-Methylnaphthalene	91-57-6	N.D.	41	12	1
10726	2-Methylphenol	95-48-7	N.D.	82	33	1
10726	4-Methylphenol	65794-96-9	N.D.	62	25	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.	21	8	1
10726	2-Nitroaniline	88-74-4	N.D.	62	25	1
10726	3-Nitroaniline	99-09-2	N.D.	210	82	1
10726	4-Nitroaniline	100-01-6	N.D.	210	82	1
10726	Nitrobenzene	98-95-3	N.D.	82	33	1
10726	2-Nitrophenol	88-75-5	N.D.	45	21	1
10726	4-Nitrophenol	100-02-7	N.D.	620	210	1
10726	N-Nitroso-di-n-propylamine	621-64-7	N.D.	62	25	1
10726	N-Nitrosodiphenylamine	86-30-6	N.D.	45	21	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.	210	82	1
10726	Pentachlorophenol	87-86-5	N.D.	210	45	1
10726	Phenanthrene	85-01-8	N.D.	21	4	1
10726	Phenol	108-95-2	N.D.	62	29	1
10726	Pyrene	129-00-0	N.D.	21	4	1
10726	Pyridine	110-86-1	N.D.	210	82	1
10726	1,2,4,5-Tetrachlorobenzene	95-94-3	N.D.	45	21	1
10726	2,3,4,6-Tetrachlorophenol	58-90-2	N.D.	210	82	1
10726	2,4,5-Trichlorophenol	95-95-4	N.D.	62	25	1
10726	2,4,6-Trichlorophenol	88-06-2	N.D.	62	25	1
10726	Triethylamine	121-44-8	N.D.	6,200	2,100	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. The following

*=This limit was used in the evaluation of the final result

Sample Description: **Test Pit #2 (10-12') Composite Soil**
B0087363.0026/BMS

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 09/29/2018 09:45
Collection Date/Time: 09/28/2018 15:45
SDG#: BMS63-02

ARCADIS U.S., Inc.
ELLE Sample #: SW 9827950
ELLE Group #: 1992839
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Limit of Quantitation*	Dry Method Detection Limit	Dilution Factor
	action was taken: The sample was re-extracted within the method required holding time and the QC is again outside of the acceptance limits. The data is reported from the initial 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.					
GC Volatiles	**SW-846 8015D Rev.4, June 2003**		**mg/kg**	**mg/kg**	**mg/kg**	
10599	TPH-GRO soil C6-C10	n.a.	0.2 J	0.9	0.2	17.24
Aldehydes & Ketones	**SW-846 8315A**		**mg/kg**	**mg/kg**	**mg/kg**	
13031	Acetaldehyde	75-07-0	3.0	1.2	0.61	1
13031	Formaldehyde	50-00-0	38	9.2	3.1	5
GC Miscellaneous	**SW-846 8015C Feb 2007 Rev 3**		**mg/kg**	**mg/kg**	**mg/kg**	
12925	Ethylene glycol	107-21-1	N.D.	12	6.2	1
12925	Propylene glycol	57-55-6	N.D.	12	6.2	1
GC Miscellaneous	**SW-846 8015D Rev.4, June 2003**		**mg/kg**	**mg/kg**	**mg/kg**	
10604	Ethanol (by Direct Injection)	64-17-5	N.D. D2	1.2	0.15	1
10604	Isopropanol	67-63-0	N.D. D2	1.2	0.057	1
10604	Methanol (by Direct Injection)	67-56-1	N.D. D2	1.2	0.25	1
GC Petroleum Hydrocarbons	**SW-846 8015C Feb 2007 Rev 3**		**mg/kg**	**mg/kg**	**mg/kg**	
13567	DRO C10-C28	n.a.	6.2 J	15	4.9	1
13567	ORO >C28 - C40	n.a.	N.D.	15	4.9	1
Wet Chemistry	**SM 2540 G-2011 %Moisture Calc**		**%**	**%**	**%**	
00111	Moisture	n.a.	19.8	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: **Test Pit #2 (10-12') Composite Soil**
B0087363.0026/BMS

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 09/29/2018 09:45
Collection Date/Time: 09/28/2018 15:45
SDG#: BMS63-02

ARCADIS U.S., Inc.
ELLE Sample #: SW 9827950
ELLE Group #: 1992839
Matrix: Soil

Sample Comments

State of New York Certification No. 10670

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	SW-846 8260C	1	B182781AA	10/05/2018 13:29	Linda C Pape	0.66
06176	GC/MS - LL DIH2O Prep	SW-846 5035A	1	201827251405	09/29/2018 18:36	Rebecca Williams	1
06176	GC/MS - LL DIH2O Prep	SW-846 5035A	2	201827251405	09/29/2018 18:36	Rebecca Williams	1
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	201827251405	09/28/2018 15:45	Client Supplied	1
10726	SVOA 8270D (microwave)	SW-846 8270D	1	18281SLG026	10/10/2018 17:20	Edward C Monborne	1
10813	BNA Soil Microwave APP IX	SW-846 3546	1	18281SLG026	10/09/2018 09:00	Michelle A Newswanger	1
10599	TPH-GRO soils C6-C10	SW-846 8015D Rev.4, June 2003	1	18275A16A	10/02/2018 23:36	Jeremy C Giffin	17.24
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201827251405	09/28/2018 15:45	Client Supplied	n.a.
13031	Short List Aldehydes- S 8315A	SW-846 8315A	1	182820033A	10/11/2018 22:23	James H Place	1
13031	Short List Aldehydes- S 8315A	SW-846 8315A	1	182820033A	10/14/2018 19:49	James H Place	5
05876	Formaldehyde Solid Extraction	SW-846 8315A	1	182820033A	10/11/2018 08:00	Olivia Arosemena	1
12925	Glycols in Soil by 8015C	SW-846 8015C Feb 2007 Rev 3	1	182780046A	10/11/2018 00:57	Donald Brown	1
10604	Alcohols in Soil	SW-846 8015D Rev.4, June 2003	1	182830031A	10/10/2018 23:47	Johanna C Kennedy	1
13567	TPH DRO/ORO soil 8015C/D(3546)	SW-846 8015C Feb 2007 Rev 3	1	182830040A	10/11/2018 21:47	Thomas C Wildermuth	1
11221	TPH DRO/ORO Solid 3546 EXT	SW-846 3546	1	182830040A	10/11/2018 08:00	Michelle A Newswanger	1
13121	Glycol Solids Ext. 8015C	SW-846 8015C Feb 2007 Rev 3	1	182780046A	10/10/2018 15:52	Donald Brown	1
00380	Solids Extraction for Alcohols	SW-846 8015D Rev 4 06/2003 Mod	2	182830031A	10/10/2018 15:52	Donald Brown	1
00111	Moisture	SM 2540 G-2011 %Moisture Calc	1	18275820006A	10/02/2018 11:58	Larry E Bevins	1

*=This limit was used in the evaluation of the final result

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
BMTP2

Lab Name: Lancaster Laboratories Contract:_____
Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____
Matrix: (soil/water) SOIL Lab Sample ID: 9827950
Sample wt/vol: 7.54 (g/mL) g Lab File ID: HP09953.i/18oct05a.b/bc05s07.d
Level: (low/med) LOW Date Received: 09/29/18
% Moisture: not dec. 19.8 Date Analyzed: 10/05/18
Column: (pack/cap) CAP Dilution Factor: 1.0
CONCENTRATION UNITS:
Number TICs found: 3 (mg/L or mg/Kg) mg/Kg

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	565-59-3	Pentane, 2,3-dimethyl-	3.44	0.008	J
2.	617-78-7	Pentane, 3-ethyl-	3.74	0.005	J
3.	101-84-8	Diphenyl ether	12.05	0.009	J
4.					
5.	VOCTIC	Total VOC TICs		0.021	J
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
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29.					
30.					

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FORM I VOA-TIC

1F

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

BMTP2

Lab Name: Lancaster Laboratories Contract:
Lab Code: LANCAS Case No.: SAS No.: SDG No.:
Matrix: (soil/water) SOIL Lab Sample ID: 9827950
Sample wt/vol: 30.33(g/mL) g Lab File ID: gj0536.d
Level: (low/med) LOW Date Received: 09/29/18
% Moisture: 19.8 Decanted: (Y/N) Date Extracted: 10/09/18
Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/10/18
Injection Volume: 1 (uL) Dilution Factor: 1
GPC Cleanup: N pH: Extraction: Mic

Number TICs found: 20 CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.109-99-9	Tetrahydrofuran	1.019	12000	JB
2.590-90-9	4-Hydroxy-2-butanone	2.384	1900	J
3.	Unknown	3.149	12000	JB
4.	Unknown	4.319	4400	J
5.	Unknown	4.754	1600	J
6.	Unknown	4.801	2200	J
7.	Unknown	6.607	1000	J
8.	Unknown	7.678	910	J
9.	Unknown	8.231	8400	J
10.	Unknown	8.342	1100	J
11.292-46-6	Lenthionine	8.613	2300	J
12.	Unknown	8.995	1000	J
13.	Unknown	9.025	2400	J
14.	Unknown	9.360	610	J
15.	Unknown	10.030	1200	J
16.	Unknown	10.148	820	J
17.	Unknown	10.272	980	J
18.	Unknown	10.313	1300	J
19.10544-50-0	Cyclic octaatomic sulfur	10.407	6100	J
20.	Unknown	10.495	1200	J
21.				
22.SVOCTIC	Total SVOC TICs		63000	JB
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

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FORM I SV-1

Sample Description: **DUP-TP-092818 Composite Soil**
B0087363.0026/BMS

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 09/29/2018 09:45
Collection Date/Time: 09/28/2018
SDG#: BMS63-03FD

ARCADIS U.S., Inc.
ELLE Sample #: SW 9827951
ELLE Group #: 1992839
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	0.031	0.018	0.005	0.73
11995	Acetonitrile	75-05-8	N.D.	0.088	0.022	0.73
11995	Benzene	71-43-2	N.D.	0.004	0.0004	0.73
11995	Bromochloromethane	74-97-5	N.D.	0.004	0.0005	0.73
11995	Bromodichloromethane	75-27-4	N.D.	0.004	0.0004	0.73
11995	Bromoform	75-25-2	N.D.	0.009	0.004	0.73
11995	Bromomethane	74-83-9	N.D.	0.004	0.0006	0.73
11995	n-Butanol	71-36-3	N.D.	0.22	0.049	0.73
11995	2-Butanone	78-93-3	0.004 J	0.009	0.0009	0.73
11995	t-Butyl alcohol	75-65-0	N.D.	0.088	0.013	0.73
11995	n-Butylbenzene	104-51-8	N.D.	0.007	0.003	0.73
11995	sec-Butylbenzene	135-98-8	N.D.	0.004	0.002	0.73
11995	tert-Butylbenzene	98-06-6	N.D.	0.004	0.0007	0.73
11995	Carbon Disulfide	75-15-0	0.002 J	0.004	0.0005	0.73
11995	Carbon Tetrachloride	56-23-5	N.D.	0.004	0.0004	0.73
11995	Chlorobenzene	108-90-7	N.D.	0.004	0.0004	0.73
11995	Chlorodifluoromethane	75-45-6	N.D.	0.009	0.002	0.73
11995	Chloroethane	75-00-3	N.D.	0.004	0.0009	0.73
11995	Chloroform	67-66-3	N.D.	0.004	0.0005	0.73
11995	Chloromethane	74-87-3	N.D.	0.004	0.0005	0.73
11995	Cyclohexane	110-82-7	N.D.	0.004	0.0004	0.73
11995	Cyclohexanone	108-94-1	N.D.	0.22	0.022	0.73
11995	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	0.004	0.0004	0.73
11995	Dibromochloromethane	124-48-1	N.D.	0.004	0.0004	0.73
11995	1,2-Dibromoethane	106-93-4	N.D.	0.004	0.0004	0.73
11995	1,2-Dichlorobenzene	95-50-1	N.D.	0.004	0.0004	0.73
11995	1,3-Dichlorobenzene	541-73-1	N.D.	0.004	0.0004	0.73
11995	1,4-Dichlorobenzene	106-46-7	N.D.	0.004	0.0004	0.73
11995	Dichlorodifluoromethane	75-71-8	N.D.	0.004	0.0005	0.73
11995	1,1-Dichloroethane	75-34-3	N.D.	0.004	0.0004	0.73
11995	1,2-Dichloroethane	107-06-2	N.D.	0.004	0.0005	0.73
11995	1,1-Dichloroethene	75-35-4	N.D.	0.004	0.0004	0.73
11995	cis-1,2-Dichloroethene	156-59-2	N.D.	0.004	0.0004	0.73
11995	trans-1,2-Dichloroethene	156-60-5	N.D.	0.004	0.0004	0.73
11995	1,2-Dichloropropane	78-87-5	N.D.	0.004	0.0004	0.73
11995	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.004	0.0004	0.73
11995	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.004	0.0003	0.73
11995	1,4-Dioxane	123-91-1	N.D.	0.22	0.033	0.73
11995	Ethyl Acetate	141-78-6	N.D.	0.004	0.0009	0.73
11995	Ethyl Ether	60-29-7	N.D.	0.004	0.0009	0.73
11995	Ethylbenzene	100-41-4	N.D.	0.004	0.0004	0.73

*=This limit was used in the evaluation of the final result

Sample Description: **DUP-TP-092818 Composite Soil**
B0087363.0026/BMS

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 09/29/2018 09:45
Collection Date/Time: 09/28/2018
SDG#: BMS63-03FD

ARCADIS U.S., Inc.
ELLE Sample #: SW 9827951
ELLE Group #: 1992839
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	0.0005	0.73
11995	n-Heptane	142-82-5	N.D.	0.007	0.003	0.73
11995	n-Hexane	110-54-3	N.D.	0.004	0.0004	0.73
11995	2-Hexanone	591-78-6	N.D.	0.009	0.0009	0.73
11995	Isobutyl Alcohol	78-83-1	N.D.	0.22	0.034	0.73
11995	Isopropylbenzene	98-82-8	N.D.	0.004	0.0004	0.73
11995	p-Isopropyltoluene	99-87-6	N.D.	0.004	0.002	0.73
11995	Methyl Acetate	79-20-9	N.D.	0.004	0.0009	0.73
11995	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.004	0.0004	0.73
11995	4-Methyl-2-pentanone	108-10-1	N.D.	0.009	0.0009	0.73
11995	Methylcyclohexane	108-87-2	N.D.	0.004	0.0005	0.73
11995	Methylene Chloride	75-09-2	N.D.	0.004	0.002	0.73
11995	Naphthalene	91-20-3	N.D.	0.004	0.002	0.73
11995	2-Nitropropane	79-46-9	N.D.	0.009	0.0009	0.73
11995	Styrene	100-42-5	N.D.	0.004	0.0003	0.73
11995	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.004	0.0004	0.73
11995	Tetrachloroethene	127-18-4	N.D.	0.004	0.0004	0.73
11995	Tetrahydrofuran	109-99-9	N.D.	0.007	0.0009	0.73
11995	Toluene	108-88-3	N.D.	0.004	0.0005	0.73
11995	1,2,3-Trichlorobenzene	87-61-6	N.D.	0.009	0.004	0.73
11995	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.009	0.004	0.73
11995	1,1,1-Trichloroethane	71-55-6	N.D.	0.004	0.0005	0.73
11995	1,1,2-Trichloroethane	79-00-5	N.D.	0.004	0.0004	0.73
11995	Trichloroethene	79-01-6	N.D.	0.004	0.0004	0.73
11995	Trichlorofluoromethane	75-69-4	N.D.	0.004	0.0006	0.73
11995	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.004	0.0004	0.73
11995	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.004	0.0004	0.73
11995	Vinyl Chloride	75-01-4	N.D.	0.004	0.0005	0.73
11995	m+p-Xylene	179601-23-1	N.D.	0.004	0.0009	0.73
11995	o-Xylene	95-47-6	N.D.	0.004	0.0004	0.73
11995	Xylene (Total)	1330-20-7	N.D.	0.004	0.0009	0.73

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.

GC/MS Semivolatiles	**SW-846 8270D**		**ug/kg**	**ug/kg**	**ug/kg**	

*=This limit was used in the evaluation of the final result

Sample Description: **DUP-TP-092818 Composite Soil**
B0087363.0026/BMS

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 09/29/2018 09:45
Collection Date/Time: 09/28/2018
SDG#: BMS63-03FD

ARCADIS U.S., Inc.
ELLE Sample #: SW 9827951
ELLE Group #: 1992839
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	Acenaphthene	83-32-9	N.D.	20	4	1
10726	Acenaphthylene	208-96-8	N.D.	20	4	1
10726	Acetophenone	98-86-2	N.D.	60	28	1
10726	Aniline	62-53-3	N.D.	600	200	1
10726	Anthracene	120-12-7	N.D.	20	4	1
10726	Atrazine	1912-24-9	N.D.	200	40	1
10726	Benzaldehyde	100-52-7	N.D.	200	80	1
10726	Benzo(a)anthracene	56-55-3	N.D.	20	4	1
10726	Benzo(a)pyrene	50-32-8	N.D.	20	8	1
10726	Benzo(b)fluoranthene	205-99-2	N.D.	20	4	1
10726	Benzo(g,h,i)perylene	191-24-2	N.D.	20	8	1
10726	Benzo(k)fluoranthene	207-08-9	N.D.	20	4	1
10726	Benzyl alcohol	100-51-6	N.D.	600	200	1
10726	1,1'-Biphenyl	92-52-4	N.D.	44	20	1
10726	4-Bromophenyl-phenylether	101-55-3	N.D.	60	24	1
10726	Butylbenzylphthalate	85-68-7	N.D.	200	80	1
10726	Di-n-butylphthalate	84-74-2	N.D.	200	80	1
10726	Caprolactam	105-60-2	N.D.	200	40	1
10726	Carbazole	86-74-8	N.D.	44	20	1
10726	4-Chloro-3-methylphenol	59-50-7	N.D.	44	20	1
10726	4-Chloroaniline	106-47-8	N.D.	200	40	1
10726	bis(2-Chloroethoxy)methane	111-91-1	N.D.	44	20	1
10726	bis(2-Chloroethyl)ether	111-44-4	N.D.	60	28	1
10726	bis(2-Chloroisopropyl)ether	39638-32-9	N.D.	44	20	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.	40	8	1
10726	2-Chlorophenol	95-57-8	N.D.	44	20	1
10726	4-Chlorophenyl-phenylether	7005-72-3	N.D.	44	20	1
10726	Chrysene	218-01-9	N.D.	20	4	1
10726	Dibenz(a,h)anthracene	53-70-3	N.D.	20	4	1
10726	Dibenzofuran	132-64-9	N.D.	44	20	1
10726	3,3'-Dichlorobenzidine	91-94-1	N.D.	400	120	1
10726	2,4-Dichlorophenol	120-83-2	N.D.	44	20	1
10726	Dicyclohexylamine	101-83-7	N.D.	2,400	800	1
10726	Diethylphthalate	84-66-2	N.D.	200	80	1
10726	N,N-Dimethylaniline	121-69-7	N.D.	200	40	1
10726	2,4-Dimethylphenol	105-67-9	N.D.	44	20	1
10726	Dimethylphthalate	131-11-3	N.D.	200	80	1
10726	4,6-Dinitro-2-methylphenol	534-52-1	N.D.	600	200	1

*=This limit was used in the evaluation of the final result

Sample Description: **DUP-TP-092818 Composite Soil**
B0087363.0026/BMS

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 09/29/2018 09:45
Collection Date/Time: 09/28/2018
SDG#: BMS63-03FD

ARCADIS U.S., Inc.
ELLE Sample #: SW 9827951
ELLE Group #: 1992839
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-Dinitrophenol	51-28-5	N.D.	1,200	440	1
10726	2,4-Dinitrotoluene	121-14-2	N.D.	200	80	1
10726	2,6-Dinitrotoluene	606-20-2	N.D.	60	24	1
10726	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	200	80	1
10726	Fluoranthene	206-44-0	N.D.	20	4	1
10726	Fluorene	86-73-7	N.D.	20	4	1
10726	Hexachlorobenzene	118-74-1	N.D.	20	4	1
10726	Hexachlorobutadiene	87-68-3	N.D.	60	24	1
10726	Hexachlorocyclopentadiene	77-47-4	N.D.	600	200	1
10726	Hexachloroethane	67-72-1	N.D.	200	40	1
10726	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	20	8	1
10726	Isophorone	78-59-1	N.D.	44	20	1
10726	2-Methylnaphthalene	91-57-6	N.D.	40	12	1
10726	2-Methylphenol	95-48-7	N.D.	80	32	1
10726	4-Methylphenol	65794-96-9	N.D.	60	24	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.	20	8	1
10726	2-Nitroaniline	88-74-4	N.D.	60	24	1
10726	3-Nitroaniline	99-09-2	N.D.	200	80	1
10726	4-Nitroaniline	100-01-6	N.D.	200	80	1
10726	Nitrobenzene	98-95-3	N.D.	80	32	1
10726	2-Nitrophenol	88-75-5	N.D.	44	20	1
10726	4-Nitrophenol	100-02-7	N.D.	600	200	1
10726	N-Nitroso-di-n-propylamine	621-64-7	N.D.	60	24	1
10726	N-Nitrosodiphenylamine	86-30-6	N.D.	44	20	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.	200	80	1
10726	Pentachlorophenol	87-86-5	N.D.	200	44	1
10726	Phenanthrene	85-01-8	N.D.	20	4	1
10726	Phenol	108-95-2	N.D.	60	28	1
10726	Pyrene	129-00-0	N.D.	20	4	1
10726	Pyridine	110-86-1	N.D.	200	80	1
10726	1,2,4,5-Tetrachlorobenzene	95-94-3	N.D.	44	20	1
10726	2,3,4,6-Tetrachlorophenol	58-90-2	N.D.	200	80	1
10726	2,4,5-Trichlorophenol	95-95-4	N.D.	60	24	1
10726	2,4,6-Trichlorophenol	88-06-2	N.D.	60	24	1
10726	Triethylamine	121-44-8	N.D.	6,000	2,000	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. The following

*=This limit was used in the evaluation of the final result

Sample Description: **DUP-TP-092818 Composite Soil**
B0087363.0026/BMS

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 09/29/2018 09:45
Collection Date/Time: 09/28/2018
SDG#: BMS63-03FD

ARCADIS U.S., Inc.
ELLE Sample #: SW 9827951
ELLE Group #: 1992839
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Limit of Quantitation*	Dry Method Detection Limit	Dilution Factor
	action was taken: The sample was re-extracted within the method required holding time and the QC is again outside of the acceptance limits. The data is reported from the initial 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.					
GC Volatiles	**SW-846 8015D Rev.4, June 2003**		**mg/kg**	**mg/kg**	**mg/kg**	
10599	TPH-GRO soil C6-C10	n.a.	0.2 J	0.8	0.2	17.41
Aldehydes & Ketones	**SW-846 8315A**		**mg/kg**	**mg/kg**	**mg/kg**	
13031	Acetaldehyde	75-07-0	0.61 J	1.2	0.59	1
13031	Formaldehyde	50-00-0	36	8.9	3.0	5
GC Miscellaneous	**SW-846 8015C Feb 2007 Rev 3**		**mg/kg**	**mg/kg**	**mg/kg**	
12925	Ethylene glycol	107-21-1	N.D.	12	6.1	1
12925	Propylene glycol	57-55-6	N.D.	12	6.1	1
	The surrogate data is outside the QC limits. Results from the reextraction are within the limits. The hold time had expired prior to the reextraction therefore, all results are reported from the original extract.					
GC Miscellaneous	**SW-846 8015D Rev.4, June 2003**		**mg/kg**	**mg/kg**	**mg/kg**	
10604	Ethanol (by Direct Injection)	64-17-5	N.D. D2	1.2	0.15	1
10604	Isopropanol	67-63-0	N.D. D2	1.2	0.056	1
10604	Methanol (by Direct Injection)	67-56-1	N.D. D2	1.2	0.24	1
GC Petroleum Hydrocarbons	**SW-846 8015C Feb 2007 Rev 3**		**mg/kg**	**mg/kg**	**mg/kg**	
13567	DRO C10-C28	n.a.	5.4 J	14	4.8	1
13567	ORO >C28 - C40	n.a.	N.D.	14	4.8	1
Wet Chemistry	**SM 2540 G-2011 %Moisture Calc**		**%**	**%**	**%**	
00111	Moisture	n.a.	17.7	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-TP-092818 Composite Soil**
B0087363.0026/BMS

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 09/29/2018 09:45
Collection Date/Time: 09/28/2018
SDG#: BMS63-03FD

ARCADIS U.S., Inc.
ELLE Sample #: SW 9827951
ELLE Group #: 1992839
Matrix: Soil

Sample Comments

State of New York Certification No. 10670

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	SW-846 8260C	1	B182781AA	10/05/2018 15:19	Linda C Pape	0.73
06176	GC/MS - LL DIH2O Prep	SW-846 5035A	1	201827251405	09/29/2018 18:36	Rebecca Williams	1
06176	GC/MS - LL DIH2O Prep	SW-846 5035A	2	201827251405	09/29/2018 18:36	Rebecca Williams	1
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	201827251405	09/28/2018 00:00	Client Supplied	1
10726	SVOA 8270D (microwave)	SW-846 8270D	1	18281SLG026	10/10/2018 17:44	Edward C Monborne	1
10813	BNA Soil Microwave APP IX	SW-846 3546	1	18281SLG026	10/09/2018 09:00	Michelle A Newswanger	1
10599	TPH-GRO soils C6-C10	SW-846 8015D Rev.4, June 2003	1	18275A16A	10/03/2018 00:13	Jeremy C Giffin	17.41
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201827251405	09/28/2018 00:00	Client Supplied	n.a.
13031	Short List Aldehydes- S 8315A	SW-846 8315A	1	182820033A	10/11/2018 22:55	James H Place	1
13031	Short List Aldehydes- S 8315A	SW-846 8315A	1	182820033A	10/14/2018 20:21	James H Place	5
05876	Formaldehyde Solid Extraction	SW-846 8315A	1	182820033A	10/11/2018 08:00	Olivia Arosemena	1
12925	Glycols in Soil by 8015C	SW-846 8015C Feb 2007 Rev 3	1	182780046A	10/11/2018 01:10	Donald Brown	1
10604	Alcohols in Soil	SW-846 8015D Rev.4, June 2003	1	182830031A	10/11/2018 00:04	Johanna C Kennedy	1
13567	TPH DRO/ORO soil 8015C/D(3546)	SW-846 8015C Feb 2007 Rev 3	1	182830040A	10/11/2018 21:27	Thomas C Wildermuth	1
11221	TPH DRO/ORO Solid 3546 EXT	SW-846 3546	1	182830040A	10/11/2018 08:00	Michelle A Newswanger	1
13121	Glycol Solids Ext. 8015C	SW-846 8015C Feb 2007 Rev 3	1	182780046A	10/10/2018 15:52	Donald Brown	1
00380	Solids Extraction for Alcohols	SW-846 8015D Rev 4 06/2003 Mod	2	182830031A	10/10/2018 15:52	Donald Brown	1
00111	Moisture	SM 2540 G-2011 %Moisture Calc	1	18275820006A	10/02/2018 11:58	Larry E Bevins	1

*=This limit was used in the evaluation of the final result

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
BMFDT

Lab Name: Lancaster Laboratories Contract:_____
Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____
Matrix: (soil/water) SOIL Lab Sample ID: 9827951
Sample wt/vol: 6.88 (g/mL) g Lab File ID: HP09953.i/18oct05a.b/bc05s09.d
Level: (low/med) LOW Date Received: 09/29/18
% Moisture: not dec. 17.7 Date Analyzed: 10/05/18
Column: (pack/cap) CAP Dilution Factor: 1.0
CONCENTRATION UNITS:
Number TICs found: 2 (mg/L or mg/Kg) mg/Kg

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	565-59-3	Pentane, 2,3-dimethyl-	3.43	0.005	J
2.	101-84-8	Diphenyl ether	12.05	0.006	J
3.					
4.	VOCTIC	Total VOC TICs		0.011	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

BMFDT

Lab Name: Lancaster Laboratories Contract:
Lab Code: LANCAS Case No.: SAS No.: SDG No.:
Matrix: (soil/water) SOIL Lab Sample ID: 9827951
Sample wt/vol: 30.39(g/mL) g Lab File ID: gj0537.d
Level: (low/med) LOW Date Received: 09/29/18
% Moisture: 17.7 Decanted: (Y/N) Date Extracted: 10/09/18
Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/10/18
Injection Volume: 1 (uL) Dilution Factor: 1
GPC Cleanup: N pH: Extraction: Mic

Number TICs found: 20 CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 109-99-9	Tetrahydrofuran	1.013	7500	JB
2.	Unknown	3.143	10000	JB
3.	Unknown	7.689	1100	J
4.	Unknown	8.219	2400	J
5.	Unknown	8.336	1200	J
6. 292-46-6	Lenthionine	8.613	2000	J
7.	Unknown	9.031	2700	J
8.	Unknown	9.360	1100	J
9.	Unknown	9.748	990	J
10.	Unknown	9.825	790	J
11.	Unknown	9.883	1500	J
12.	Unknown	9.930	1500	J
13.	Unknown	9.989	1200	J
14.	Unknown	10.078	2300	J
15.	Unknown	10.148	2800	J
16.	Unknown	10.183	1600	J
17.	Unknown	10.230	2300	J
18.	Unknown	10.295	2400	J
19.	Unknown	10.319	1300	J
20. 10544-50-0	Cyclic octaatomic sulfur	10.425	8600	J
21.				
22. SVOCTIC	Total SVOC TICs		55000	JB
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page 1 of 1

FORM I SV-1

Sample Description: **TB-092818 Water**
B0087363.0026/BMS

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 09/29/2018 09:45
Collection Date/Time: 09/28/2018
SDG#: BMS63-04TB

ARCADIS U.S., Inc.
ELLE Sample #: WW 9827952
ELLE Group #: 1992839
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	0.2	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	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	0.2	1
11997	Cyclohexanone	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: **TB-092818 Water**
B0087363.0026/BMS

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 09/29/2018 09:45
Collection Date/Time: 09/28/2018
SDG#: BMS63-04TB

ARCADIS U.S., Inc.
ELLE Sample #: WW 9827952
ELLE Group #: 1992839
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	142-82-5	N.D.	5	0.2	1
11997	n-Hexane	110-54-3	N.D.	5	0.2	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	0.2	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.	5	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

*=This limit was used in the evaluation of the final result

Sample Description: **TB-092818 Water**
B0087363.0026/BMS

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 09/29/2018 09:45
Collection Date/Time: 09/28/2018
SDG#: BMS63-04TB

ARCADIS U.S., Inc.
ELLE Sample #: WW 9827952
ELLE Group #: 1992839
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	SW-846 8260C	1	L182831AA	10/10/2018 13:11	Linda C Pape	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	L182831AA	10/10/2018 13:11	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.
BMTTB

Lab Name: Lancaster Laboratories Contract:_____
Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____
Matrix: (soil/water) WATER Lab Sample ID: 9827952
Sample wt/vol: 5.0 (g/mL)mL Lab File ID:HP09915.i/18oct10a.b/lc10s10.d
Level: (low/med) LOW Date Received: 09/29/18
% Moisture: not dec. Date Analyzed: 10/10/18
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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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: 1992839
Reported: 10/30/2018 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: B182781AA	Sample number(s): 9827949-9827951		
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	0.0004
Dibromochloromethane	N.D.	0.005	0.0004
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	0.0003
1,4-Dioxane	N.D.	0.25	0.037
Ethyl Acetate	N.D.	0.005	0.001

*- 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.
Reported: 10/30/2018 15:37

Group Number: 1992839

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	0.001
Styrene	N.D.	0.005	0.0003
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.	0.005	0.001
	ug/l	ug/l	ug/l
Batch number: L182831AA	Sample number(s): 9827952		
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	0.2
Bromomethane	N.D.	1	0.3
n-Butanol	N.D.	250	61
2-Butanone	N.D.	10	0.3

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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: 10/30/2018 15:37

Group Number: 1992839

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	0.2
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	0.2
n-Hexane	N.D.	5	0.2
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	0.2
Methylene Chloride	N.D.	1	0.3
Naphthalene	N.D.	5	1

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Quality Control Summary

Client Name: ARCADIS U.S., Inc.
Reported: 10/30/2018 15:37

Group Number: 1992839

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.	5	1
	ug/kg	ug/kg	ug/kg
Batch number: 18281SLG026	Sample number(s): 9827949-9827951		
Acenaphthene	N.D.	17	3
Acenaphthylene	N.D.	17	3
Acetophenone	N.D.	50	23
Aniline	N.D.	500	170
Anthracene	N.D.	17	3
Atrazine	N.D.	170	33
Benzaldehyde	N.D.	170	67
Benzo(a)anthracene	N.D.	17	3
Benzo(a)pyrene	N.D.	17	7
Benzo(b)fluoranthene	N.D.	17	3
Benzo(g,h,i)perylene	N.D.	17	7
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	20
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.	37	17
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.	37	17

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Quality Control Summary

Client Name: ARCADIS U.S., Inc.
Reported: 10/30/2018 15:37

Group Number: 1992839

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.	37	17
Chrysene	N.D.	17	3
Dibenz(a,h)anthracene	N.D.	17	3
Dibenzofuran	N.D.	37	17
3,3'-Dichlorobenzidine	N.D.	330	100
2,4-Dichlorophenol	N.D.	37	17
Dicyclohexylamine	N.D.	2,000	670
Diethylphthalate	N.D.	170	67
N,N-Dimethylaniline	N.D.	170	33
2,4-Dimethylphenol	N.D.	37	17
Dimethylphthalate	N.D.	170	67
4,6-Dinitro-2-methylphenol	N.D.	500	170
2,4-Dinitrophenol	N.D.	1,000	370
2,4-Dinitrotoluene	N.D.	170	67
2,6-Dinitrotoluene	N.D.	50	20
bis(2-Ethylhexyl)phthalate	N.D.	170	67
Fluoranthene	N.D.	17	3
Fluorene	N.D.	17	3
Hexachlorobenzene	N.D.	17	3
Hexachlorobutadiene	N.D.	50	20
Hexachlorocyclopentadiene	N.D.	500	170
Hexachloroethane	N.D.	170	33
Indeno(1,2,3-cd)pyrene	N.D.	17	7
Isophorone	N.D.	37	17
2-Methylnaphthalene	N.D.	33	10
2-Methylphenol	N.D.	67	27
4-Methylphenol	N.D.	50	20
Naphthalene	N.D.	17	7
2-Nitroaniline	N.D.	50	20
3-Nitroaniline	N.D.	170	67
4-Nitroaniline	N.D.	170	67
Nitrobenzene	N.D.	67	27
2-Nitrophenol	N.D.	37	17
4-Nitrophenol	N.D.	500	170
N-Nitroso-di-n-propylamine	N.D.	50	20
N-Nitrosodiphenylamine	N.D.	37	17
Di-n-octylphthalate	N.D.	170	67
Pentachlorophenol	N.D.	170	37
Phenanthrene	N.D.	17	3
Phenol	N.D.	50	23
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.
Reported: 10/30/2018 15:37

Group Number: 1992839

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.	50	20
2,4,6-Trichlorophenol	N.D.	50	20
Triethylamine	N.D.	5,000	1,700
	mg/kg	mg/kg	mg/kg
Batch number: 18275A16A	Sample number(s): 9827949-9827951		
TPH-GRO soil C6-C10	N.D.	1.0	0.2
Batch number: 182820033A	Sample number(s): 9827949-9827951		
Acetaldehyde	N.D.	1.0	0.50
Formaldehyde	N.D.	1.5	1.0
Batch number: 182780046A	Sample number(s): 9827949-9827951		
Ethylene glycol	N.D.	10	5.0
Propylene glycol	N.D.	10	5.0
Batch number: 182830031A	Sample number(s): 9827949-9827951		
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: 182830040A	Sample number(s): 9827949-9827951		
DRO C10-C28	N.D.	12	4.0
ORO >C28 - C40	N.D.	12	4.0

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: B182781AA	Sample number(s): 9827949-9827951								
Acetone	0.150	0.196	0.150	0.187	131	125	41-150	5	30
Acetonitrile	0.150	0.194	0.150	0.157	129*	104	61-120	21	30
Benzene	0.0200	0.0210	0.0200	0.0208	105	104	80-120	1	30
Bromochloromethane	0.0200	0.0187	0.0200	0.0188	93	94	72-124	1	30
Bromodichloromethane	0.0200	0.0178	0.0200	0.0179	89	89	70-120	1	30
Bromoform	0.0200	0.0122	0.0200	0.0127	61	63	51-127	4	30
Bromomethane	0.0200	0.0155	0.0200	0.0149	77	74	45-140	4	30
n-Butanol	1.00	0.758	1.00	0.775	76	78	63-123	2	30
2-Butanone	0.150	0.160	0.150	0.153	106	102	57-128	4	30
t-Butyl alcohol	0.200	0.184	0.200	0.179	92	90	74-121	2	30
n-Butylbenzene	0.0200	0.0218	0.0200	0.0215	109	108	71-121	1	30
sec-Butylbenzene	0.0200	0.0214	0.0200	0.0212	107	106	72-120	1	30

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Quality Control Summary

Client Name: ARCADIS U.S., Inc. Group Number: 1992839
Reported: 10/30/2018 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
tert-Butylbenzene	0.0200	0.0209	0.0200	0.0208	105	104	68-120	0	30
Carbon Disulfide	0.0200	0.0139	0.0200	0.0140	69	70	64-133	1	30
Carbon Tetrachloride	0.0200	0.0186	0.0200	0.0188	93	94	64-134	1	30
Chlorobenzene	0.0200	0.0206	0.0200	0.0203	103	101	80-120	2	30
Chlorodifluoromethane	0.0200	0.0308	0.0200	0.0259	154*	130	60-133	17	30
Chloroethane	0.0200	0.0161	0.0200	0.0159	80	79	43-135	1	30
Chloroform	0.0200	0.0213	0.0200	0.0211	107	106	80-120	1	30
Chloromethane	0.0200	0.0187	0.0200	0.0186	94	93	56-120	1	30
Cyclohexane	0.0200	0.0222	0.0200	0.0221	111	111	58-126	0	30
Cyclohexanone	0.500	0.357	0.500	0.365	71	73	47-136	2	30
1,2-Dibromo-3-chloropropane	0.0200	0.0134	0.0200	0.0139	67	69	48-134	4	30
Dibromochloromethane	0.0200	0.0154	0.0200	0.0157	77	78	69-125	2	30
1,2-Dibromoethane	0.0200	0.0189	0.0200	0.0189	95	94	76-120	0	30
1,2-Dichlorobenzene	0.0200	0.0202	0.0200	0.0200	101	100	76-120	1	30
1,3-Dichlorobenzene	0.0200	0.0202	0.0200	0.0200	101	100	75-120	1	30
1,4-Dichlorobenzene	0.0200	0.0203	0.0200	0.0201	101	100	80-120	1	30
Dichlorodifluoromethane	0.0200	0.0191	0.0200	0.0194	95	97	21-127	2	30
1,1-Dichloroethane	0.0200	0.0213	0.0200	0.0210	106	105	79-120	1	30
1,2-Dichloroethane	0.0200	0.0211	0.0200	0.0208	106	104	71-128	2	30
1,1-Dichloroethene	0.0200	0.0207	0.0200	0.0205	104	102	73-129	1	30
cis-1,2-Dichloroethene	0.0200	0.0220	0.0200	0.0218	110	109	80-123	1	30
trans-1,2-Dichloroethene	0.0200	0.0208	0.0200	0.0209	104	105	80-125	1	30
1,2-Dichloropropane	0.0200	0.0216	0.0200	0.0212	108	106	80-120	2	30
cis-1,3-Dichloropropene	0.0200	0.0191	0.0200	0.0191	95	95	66-120	0	30
trans-1,3-Dichloropropene	0.0200	0.0169	0.0200	0.0169	84	84	68-122	0	30
1,4-Dioxane	0.500	0.496	0.500	0.467	99	93	62-131	6	30
Ethyl Acetate	0.0200	0.0166	0.0200	0.0147	83	74	65-133	12	30
Ethyl Ether	0.0200	0.0165	0.0200	0.0146	83	73	59-135	12	30
Ethylbenzene	0.0200	0.0210	0.0200	0.0206	105	103	78-120	2	30
Freon 113	0.0200	0.0231	0.0200	0.0230	116	115	64-135	0	30
n-Heptane	0.0200	0.0291	0.0200	0.0294	146*	147*	50-141	1	30
n-Hexane	0.0200	0.0247	0.0200	0.0259	123	129	50-132	5	30
2-Hexanone	0.100	0.0771	0.100	0.0784	77	78	54-140	2	30
Isobutyl Alcohol	0.500	0.436	0.500	0.449	87	90	69-129	3	30
Isopropylbenzene	0.0200	0.0213	0.0200	0.0211	106	106	77-120	1	30
p-Isopropyltoluene	0.0200	0.0216	0.0200	0.0215	108	107	72-120	1	30
Methyl Acetate	0.0200	0.0208	0.0200	0.0198	104	99	67-128	5	30
Methyl Tertiary Butyl Ether	0.0200	0.0179	0.0200	0.0178	89	89	72-120	1	30
4-Methyl-2-pentanone	0.100	0.0842	0.100	0.0823	84	82	67-128	2	30
Methylcyclohexane	0.0200	0.0236	0.0200	0.0239	118	119	61-124	1	30
Methylene Chloride	0.0200	0.0199	0.0200	0.0193	99	96	76-122	3	30
Naphthalene	0.0200	0.0170	0.0200	0.0171	85	85	48-130	1	30
2-Nitropropane	0.0200	0.00915	0.0200	0.00950	46	47	27-183	4	30
Styrene	0.0200	0.0196	0.0200	0.0193	98	97	76-120	2	30

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Quality Control Summary

Client Name: ARCADIS U.S., Inc. Group Number: 1992839
Reported: 10/30/2018 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
1,1,2,2-Tetrachloroethane	0.0200	0.0180	0.0200	0.0178	90	89	69-125	1	30
Tetrachloroethene	0.0200	0.0184	0.0200	0.0182	92	91	73-120	1	30
Tetrahydrofuran	0.100	0.106	0.100	0.101	106	101	71-127	4	30
Toluene	0.0200	0.0206	0.0200	0.0204	103	102	80-120	1	30
1,2,3-Trichlorobenzene	0.0200	0.0198	0.0200	0.0196	99	98	57-131	1	30
1,2,4-Trichlorobenzene	0.0200	0.0200	0.0200	0.0198	100	99	56-130	1	30
1,1,1-Trichloroethane	0.0200	0.0177	0.0200	0.0179	88	90	69-123	1	30
1,1,2-Trichloroethane	0.0200	0.0201	0.0200	0.0197	100	98	80-120	2	30
Trichloroethene	0.0200	0.0214	0.0200	0.0211	107	106	80-120	1	30
Trichlorofluoromethane	0.0200	0.0199	0.0200	0.0200	99	100	55-134	1	30
1,2,4-Trimethylbenzene	0.0200	0.0204	0.0200	0.0198	102	99	73-120	3	30
1,3,5-Trimethylbenzene	0.0200	0.0207	0.0200	0.0205	104	102	73-120	1	30
Vinyl Chloride	0.0200	0.0185	0.0200	0.0182	92	91	52-120	1	30
m+p-Xylene	0.0400	0.0424	0.0400	0.0418	106	105	80-120	1	30
o-Xylene	0.0200	0.0204	0.0200	0.0200	102	100	75-120	2	30
Xylene (Total)	0.0600	0.0628	0.0600	0.0618	105	103	75-120	2	30
	ug/l	**ug/l**	**ug/l**	**ug/l**					
Batch number: L182831AA	Sample number(s): 9827952								
Acetone	150	191.38			128		54-157		
Acetonitrile	150	140.56			94		66-149		
Benzene	20	21.08			105		80-120		
Bromochloromethane	20	19.31			97		80-120		
Bromodichloromethane	20	22.14			111		71-120		
Bromoform	20	18.51			93		51-120		
Bromomethane	20	14.99			75		53-128		
n-Butanol	1000	941.17			94		57-130		
2-Butanone	150	151.31			101		59-135		
t-Butyl alcohol	200	227.25			114		60-130		
n-Butylbenzene	20	22.05			110		76-120		
sec-Butylbenzene	20	23.27			116		77-120		
tert-Butylbenzene	20	22.3			111		78-120		
Carbon Disulfide	20	20.93			105		65-128		
Carbon Tetrachloride	20	23.97			120		64-134		
Chlorobenzene	20	21.51			108		80-120		
Chlorodifluoromethane	20	19.24			96		45-149		
Chloroethane	20	16.62			83		55-123		
Chloroform	20	22.13			111		80-120		
Chloromethane	20	14.79			74		56-121		
Cyclohexane	20	20.31			102		68-126		
Cyclohexanone	500	493.3			99		27-141		
1,2-Dibromo-3-chloropropane	20	19.89			99		47-131		
Dibromochloromethane	20	21.1			105		71-120		
1,2-Dibromoethane	20	21.17			106		77-120		

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Quality Control Summary

Client Name: ARCADIS U.S., Inc.
Reported: 10/30/2018 15:37

Group Number: 1992839

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
1,2-Dichlorobenzene	20	21.71			109		80-120		
1,3-Dichlorobenzene	20	21.62			108		80-120		
1,4-Dichlorobenzene	20	21.75			109		80-120		
Dichlorodifluoromethane	20	14.66			73		41-127		
1,1-Dichloroethane	20	21.02			105		80-120		
1,2-Dichloroethane	20	23.38			117		73-124		
1,1-Dichloroethene	20	23.87			119		80-131		
cis-1,2-Dichloroethene	20	22.61			113		80-120		
trans-1,2-Dichloroethene	20	22.97			115		80-120		
1,2-Dichloropropane	20	19.85			99		80-120		
cis-1,3-Dichloropropene	20	21.5			107		75-120		
trans-1,3-Dichloropropene	20	20.55			103		67-120		
1,4-Dioxane	500	495.87			99		63-146		
Ethyl Acetate	20	17.77			89		67-131		
Ethyl ether	20	20.18			101		59-141		
Ethylbenzene	20	21.54			108		80-120		
Freon 113	20	24.61			123		73-139		
n-Heptane	20	20.32			102		56-133		
n-Hexane	20	21.47			107		61-138		
2-Hexanone	100	89.68			90		56-135		
Isobutyl Alcohol	500	457.48			91		61-136		
Isopropylbenzene	20	22.94			115		80-120		
p-Isopropyltoluene	20	23.12			116		76-120		
Methyl Acetate	20	17.68			88		54-136		
Methyl Tertiary Butyl Ether	20	19.9			100		69-122		
4-Methyl-2-pentanone	100	87.51			88		62-133		
Methylcyclohexane	20	20.38			102		67-121		
Methylene Chloride	20	21.22			106		80-120		
Naphthalene	20	19.96			100		53-124		
2-Nitropropane	20	18.8			94		19-144		
Styrene	20	21.96			110		80-120		
1,1,2,2-Tetrachloroethane	20	19.66			98		72-120		
Tetrachloroethene	20	22.8			114		80-120		
Tetrahydrofuran	100	94.64			95		54-144		
Toluene	20	21.42			107		80-120		
1,2,3-Trichlorobenzene	20	21.01			105		66-120		
1,2,4-Trichlorobenzene	20	21.48			107		63-120		
1,1,1-Trichloroethane	20	22.16			111		67-126		
1,1,2-Trichloroethane	20	21.38			107		80-120		
Trichloroethene	20	22.3			111		80-120		
Trichlorofluoromethane	20	20.84			104		55-135		
1,2,4-Trimethylbenzene	20	22.08			110		75-120		
1,3,5-Trimethylbenzene	20	22.31			112		75-120		
Vinyl Chloride	20	17.57			88		56-120		

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Quality Control Summary

Client Name: ARCADIS U.S., Inc. Group Number: 1992839
Reported: 10/30/2018 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
m+p-Xylene	40	44.43			111		80-120		
o-Xylene	20	21.57			108		80-120		
Xylene (Total)	60	66			110		80-120		
	ug/kg	**ug/kg**	**ug/kg**	**ug/kg**					
Batch number: 18281SLG026	Sample number(s): 9827949-9827951								
Acenaphthene	1666.67	1501.16			90		85-114		
Acenaphthylene	1666.67	1576.42			95		80-120		
Acetophenone	1666.67	1319.09			79		77-110		
Aniline	1666.67	1051.41			63		44-113		
Anthracene	1666.67	1521.79			91		82-113		
Atrazine	1666.67	1280.73			77		68-123		
Benzaldehyde	1666.67	1017.17			61		31-119		
Benzo(a)anthracene	1666.67	1389.03			83		76-111		
Benzo(a)pyrene	1666.67	1526.89			92		82-114		
Benzo(b)fluoranthene	1666.67	1537.61			92		78-115		
Benzo(g,h,i)perylene	1666.67	1464.61			88		76-111		
Benzo(k)fluoranthene	1666.67	1426.22			86		78-119		
Benzyl alcohol	1666.67	1403.37			84		69-125		
1,1'-Biphenyl	1666.67	1460.38			88		84-112		
4-Bromophenyl-phenylether	1666.67	1627.47			98		81-116		
Butylbenzylphthalate	1666.67	1269.85			76*		81-113		
Di-n-butylphthalate	1666.67	1413.09			85		85-115		
Caprolactam	1666.67	1436.81			86		75-118		
Carbazole	1666.67	1462.44			88		84-117		
4-Chloro-3-methylphenol	1666.67	1549.96			93		78-127		
4-Chloroaniline	1666.67	1013.61			61		10-125		
bis(2-Chloroethoxy)methane	1666.67	1324.67			79		72-117		
bis(2-Chloroethyl)ether	1666.67	1334.47			80		74-109		
bis(2-Chloroisopropyl)ether	1666.67	1277.94			77		68-115		
2-Chloronaphthalene	1666.67	1210.46			73		62-138		
2-Chlorophenol	1666.67	1552.21			93		85-116		
4-Chlorophenyl-phenylether	1666.67	1506.59			90		79-112		
Chrysene	1666.67	1324.58			79		75-109		
Dibenz(a,h)anthracene	1666.67	1577.35			95		79-117		
Dibenzofuran	1666.67	1518.13			91		84-110		
3,3'-Dichlorobenzidine	1666.67	1311.49			79		26-124		
2,4-Dichlorophenol	1666.67	1648.52			99		80-120		
Dicyclohexylamine	1666.67	502.21			30*		49-141		
Diethylphthalate	1666.67	1401.7			84		81-113		
N,N-Dimethylaniline	1666.67	6.12			0*		32-133		
2,4-Dimethylphenol	1666.67	1211.72			73		66-106		
Dimethylphthalate	1666.67	1416.91			85		82-110		
4,6-Dinitro-2-methylphenol	1666.67	1707.47			102		73-127		

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Quality Control Summary

Client Name: ARCADIS U.S., Inc. Group Number: 1992839
Reported: 10/30/2018 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-Dinitrophenol	3333.33	3009.51			90		41-136		
2,4-Dinitrotoluene	1666.67	1465.18			88		82-116		
2,6-Dinitrotoluene	1666.67	1582.6			95		86-116		
bis(2-Ethylhexyl)phthalate	1666.67	1282.15			77*		78-118		
Fluoranthene	1666.67	1443.48			87		76-115		
Fluorene	1666.67	1427.98			86		80-112		
Hexachlorobenzene	1666.67	1687.09			101		77-114		
Hexachlorobutadiene	1666.67	1604.61			96		75-115		
Hexachlorocyclopentadiene	3333.33	3385.19			102		37-161		
Hexachloroethane	1666.67	1417.46			85		76-106		
Indeno(1,2,3-cd)pyrene	1666.67	1483.63			89		78-113		
Isophorone	1666.67	1301.65			78		76-115		
2-Methylnaphthalene	1666.67	1527.21			92		80-111		
2-Methylphenol	1666.67	1435.63			86		80-122		
4-Methylphenol	1666.67	1484.25			89		75-121		
Naphthalene	1666.67	1454.69			87		81-111		
2-Nitroaniline	1666.67	1528.34			92		81-126		
3-Nitroaniline	1666.67	1424.9			85		60-128		
4-Nitroaniline	1666.67	1200.19			72		54-103		
Nitrobenzene	1666.67	1266.22			76		75-114		
2-Nitrophenol	1666.67	1647.25			99		85-118		
4-Nitrophenol	1666.67	827.15			50*		54-124		
N-Nitroso-di-n-propylamine	1666.67	1237.03			74		70-114		
N-Nitrosodiphenylamine	1666.67	1551.91			93		80-120		
Di-n-octylphthalate	1666.67	1480.09			89		84-128		
Pentachlorophenol	1666.67	1369.02			82		47-134		
Phenanthrene	1666.67	1487.9			89		81-109		
Phenol	1666.67	1437.49			86		74-119		
Pyrene	1666.67	1353.29			81		80-107		
Pyridine	1666.67	906.26			54*		57-96		
1,2,4,5-Tetrachlorobenzene	1666.67	1499.63			90		76-116		
2,3,4,6-Tetrachlorophenol	1666.67	1558.29			93		73-127		
2,4,5-Trichlorophenol	1666.67	1627.55			98		80-120		
2,4,6-Trichlorophenol	1666.67	1556.35			93		80-120		
Triethylamine	3333.33	N.D.			0*		70-130		
	mg/kg	**mg/kg**	**mg/kg**	**mg/kg**					
Batch number: 18275A16A	Sample number(s): 9827949-9827951								
TPH-GRO soil C6-C10	11	9.39	11	9.43	85	86	60-132	0	30
	mg/kg	**mg/kg**	**mg/kg**	**mg/kg**					
Batch number: 182820033A	Sample number(s): 9827949-9827951								
Acetaldehyde	10.03	9.75			97		72-144		
Formaldehyde	10	9.62			96		45-149		

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Quality Control Summary

Client Name: ARCADIS U.S., Inc. Group Number: 1992839
Reported: 10/30/2018 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
	mg/kg	mg/kg	mg/kg	mg/kg					
Batch number: 182780046A	Sample number(s): 9827949-9827951								
Ethylene glycol	102.39	106.1			104		76-122		
Propylene glycol	99.4	103.51			104		67-131		
Batch number: 182830031A	Sample number(s): 9827949-9827951								
Ethanol (by Direct Injection)	2.52	2.44			97		77-120		
Isopropanol	2.52	2.44			97		75-125		
Methanol (by Direct Injection)	2.51	2.44			97		76-119		
	mg/kg	mg/kg	mg/kg	mg/kg					
Batch number: 182830040A	Sample number(s): 9827949-9827951								
DRO C10-C28	133.83	125.62			94		76-117		
	%	%	%	%					
Batch number: 18275820006A	Sample number(s): 9827949-9827951								
Moisture	89.5	89.41			100		99-101		

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc mg/kg	MS Spike Added mg/kg	MS Conc mg/kg	MSD Spike Added mg/kg	MSD Conc mg/kg	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: 182820033A	Sample number(s): 9827949-9827951 UNSPK: 9827950									
Acetaldehyde	2.40	9.84	15.75	9.79	13.39	136	112	72-144	16	50
Formaldehyde	30.58	9.81	34.09	9.77	36.47	36*	60	45-149	7	50
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg					
Batch number: 182780046A	Sample number(s): 9827949-9827951 UNSPK: 9827949									
Ethylene glycol	N.D.	102.39	94.91	102.39	95.83	93	94	76-122	1	20
Propylene glycol	N.D.	99.4	93.5	99.4	92.55	94	93	67-131	1	20
Batch number: 182830031A	Sample number(s): 9827949-9827951 UNSPK: 9827949									
Ethanol (by Direct Injection)	N.D.	2.52	2.23	2.52	2.24	89	89	77-120	0	20
Isopropanol	N.D.	2.52	2.24	2.52	2.25	89	89	75-125	1	20
Methanol (by Direct Injection)	N.D.	2.51	2.25	2.51	2.25	90	90	76-119	0	20
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg					
Batch number: 182830040A	Sample number(s): 9827949-9827951 UNSPK: 9827950									

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Quality Control Summary

Client Name: ARCADIS U.S., Inc.
Reported: 10/30/2018 15:37

Group Number: 1992839

MS/MSD (continued)

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc mg/kg	MS Spike Added mg/kg	MS Conc mg/kg	MSD Spike Added mg/kg	MSD Conc mg/kg	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
DRO C10-C28	4.94	132.64	135.21			98		76-117		

Laboratory Duplicate

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc mg/kg	DUP Conc mg/kg	DUP RPD	DUP RPD Max
Batch number: 182830040A	Sample number(s): 9827949-9827951 BKG: 9827950			
DRO C10-C28	4.94	26.42	137* (1)	20
ORO >C28 - C40	N.D.	N.D.	0 (1)	100

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- Solid by 8260C
Batch number: B182781AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
9827949	97	104	97	94
9827950	95	99	99	93
9827951	96	104	97	93
Blank	97	105	97	94
LCS	98	103	100	99
LCSD	98	102	99	98
Limits:	50-141	54-135	52-141	50-131

Analysis Name: VOCs- 5ml Water by 8260C
Batch number: L182831AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
9827952	104	104	98	98
Blank	102	103	99	98
LCS	103	103	99	100
Limits:	80-120	80-120	80-120	80-120

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Quality Control Summary

Client Name: ARCADIS U.S., Inc. Group Number: 1992839
Reported: 10/30/2018 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: SVOA 8270D (microwave)
Batch number: 18281SLG026

	Phenol-d6	2-Fluorophenol	2,4,6-Tribromophenol	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14
9827949	72	80	84	67	74	81
9827950	71	81	79	67	71	80
9827951	78	85	90	71	76	89
Blank	64	75	90	65	73	83
LCS	77	88	98	73	80	87
Limits:	47-120	51-123	19-137	49-118	57-116	55-118

Analysis Name: TPH-GRO soils C6-C10
Batch number: 18275A16A

	Trifluorotoluene-F
9827949	96
9827950	76
9827951	69
Blank	94
LCS	97
LCSD	97
Limits:	50-142

Analysis Name: Short List Aldehydes- S 8315A
Batch number: 182820033A

	Butyraldehyde
9827949	104
9827950	103
9827951	104
Blank	101
LCS	104
MS	105
MSD	103
Limits:	77-133

Analysis Name: Glycols in Soil by 8015C
Batch number: 182780046A

	Tetramethylene glycol
9827949	47
9827950	37
9827951	32*
Blank	59
LCS	96
MS	79

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Quality Control Summary

Client Name: ARCADIS U.S., Inc. Group Number: 1992839
Reported: 10/30/2018 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: Glycols in Soil by 8015C
Batch number: 182780046A

	Tetramethylene glycol
MSD	81
Limits:	36-143

Analysis Name: Alcohols in Soil
Batch number: 182830031A

	Acetone-D1	Acetone-D2
9827949	131	88
9827950	135	84
9827951	123	83
Blank	132	95
LCS	98	98
MS	90	87
MSD	91	90
Limits:	10-179	10-179

Analysis Name: TPH DRO/ORO soil 8015C/D(3546)
Batch number: 182830040A

	Orthoterphenyl
9827949	96
9827950	98
9827951	94
Blank	100
DUP	91
LCS	100
MS	99
Limits:	42-143

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Environmental Analysis Request/Chain of Custody

eurofins | Lancaster Laboratories Environmental

For Eurofins Lancaster Laboratories Environmental use only

Acct. # 3074 Group # 1992839 Sample # 9827949-52

COC # 566555

Client Information

Client: Arcadis | Acct. #: 03074

Project Name/#: BMS Syracuse | PWSID #:

Project Manager: David Wright | P.O. #: D005736300026

Sampler: D. Zuck | Quote #: 231955

State where samples were collected: NYS | 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#: 231955

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

Sample Identification	Collected Date	Collected Time	Grab	Composite	Soil/Sediment	Water	Other	Total # of Containers	VOCs + TICs	SVOCs + TICs	Glycols + Alcohols	Aldehydes	TPH, diesel range, + Oil range organics
Test Pit #1 (10-12')	9/28/18	1445		X				4	X	X	X	X	X
Test Pit #2 (10-12')	↓	1545		X				4	X	X	X	X	X
DUP-TP-092818		✓		X				4	X	X	X	X	X
TB-092818								1	X				

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: David.Wright@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
S Derue	9/24/18	16:10			
David Zuck	9/28/18	1635			
			Chris SA	9-29-18	0945

EDD Required? (Yes) No

If yes, format: NYSDEC

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: 228552

Group Number(s): 1992839

Client: Arcadis

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Timestamp:	09/29/2018 9:45
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	VOA Vial Headspace ≥ 6mm:	N/A
Samples Chilled:	Yes	Total Trip Blank Qty:	2
Paperwork Enclosed:	Yes	Trip Blank Type:	HCL
Samples Intact:	Yes	Air Quality Samples Present:	No
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Christopher Stief (12429) at 11:12 on 09/29/2018

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	Bagged	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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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 19, 2018 10:23

Project: Bristol-Myers Squibb

Account #: 03074
Group Number: 2004714
SDG: BMS68
PO Number: B0087363.0028
State of Sample Origin: NY

Electronic Copy To	Arcadis	Attn: David Wright
Electronic Copy To	Arcadis	Attn: Clint Catania

Respectfully Submitted,

Megan A. Moeller
Senior Specialist

(717) 556-7261

To view our laboratory's current scopes of accreditation please go to http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/ . Historical copies may be requested through your project manager.

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SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
East Floor Vault Composite Soil	10/31/2018 12:45	9878915
East Floor Vault MS Composite Soil	10/31/2018 12:45	9878916
East Floor Vault MSD Composite Soil	10/31/2018 12:45	9878917
West Floor Vault Composite Soil	10/31/2018 14:00	9878918
Trip Blank-18299 Water	10/29/2018	9878919

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 #: 2004714

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: 9878919

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.

Batch #: B183111AA (Sample number(s): 9878915-9878918 UNSPK: 9878915)

The recovery(ies) for the following analyte(s) in the LCS and/or LCSD exceeded the acceptance window indicating a positive bias: n-Heptane, Chlorodifluoromethane, Acetonitrile

The recovery(ies) for the following analyte(s) in the MS and/or MSD exceeded the acceptance window indicating a positive bias: Acetonitrile

The recovery(ies) for the following analyte(s) in the MS and/or MSD were below the acceptance window: Toluene, Ethylbenzene, m+p-Xylene, Isopropylbenzene, 1,4-Dichlorobenzene, n-Butylbenzene, 4-Methyl-2-pentanone

The relative percent difference(s) for the following analyte(s) in the MS/MSD were outside acceptance windows: Methyl Tertiary Butyl Ether, n-Butanol, Cyclohexanone, Methyl Acetate, Bromochloromethane, 1,2-Dichloroethane, 1,2-Dichloropropane, Bromodichloromethane, 1,1,2-Trichloroethane, Dibromochloromethane, 1,2-Dibromoethane, Bromoform, 1,1,2,2-Tetrachloroethane, 1,2-Dibromo-3-chloropropane, Naphthalene, 1,2,3-Trichlorobenzene, Carbon Disulfide, trans-1,3-Dichloropropene, cis-1,3-Dichloropropene, 4-Methyl-2-pentanone, 2-Hexanone

Batch #: L183131AA (Sample number(s): 9878919)

The recovery(ies) for the following analyte(s) in the LCS and/or LCSD exceeded the acceptance window indicating a positive bias: Acetone

SW-846 8270D, GC/MS Semivolatiles

Sample #s: 9878915, 9878916, 9878917, 9878918

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: Di-n-butylphthalate

Batch #: 18310SLE026 (Sample number(s): 9878915-9878918 UNSPK: 9878915)

The recovery(ies) for the following analyte(s) in the LCS and/or LCSD exceeded the acceptance window indicating a positive bias: Pyridine

The recovery(ies) for the following analyte(s) in the LCS and/or LCSD were below the acceptance window: Di-n-butylphthalate

The recovery(ies) for the following analyte(s) in the MS and/or MSD were below the acceptance window: 4,6-Dinitro-2-methylphenol, Hexachloroethane, Naphthalene, 4-Bromophenyl-phenylether, Anthracene, Hexachlorocyclopentadiene

SW-846 8315A, Aldehydes & Ketones

Batch #: 183060004A (Sample number(s): 9878915-9878918 UNSPK: 9878915)

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

Batch #: 183090035A (Sample number(s): 9878915-9878918 UNSPK: 9878915)

The recovery(ies) for the following analyte(s) in the MS and/or MSD were below the acceptance window: Methanol (by Direct Injection)

SM 2540 G-2011 %Moisture Calc, Wet Chemistry

Batch #: 18306820004B (Sample number(s): 9878915-9878918 BKG: 9878915)

The duplicate RPD for the following analyte(s) exceeded the acceptance window: Moisture, Moisture, Moisture Duplicate

Sample Description: East Floor Vault Composite Soil
B0087363.0028/BMS

Project Name: Bristol-Myers Squibb

Submittal Date/Time: 11/01/2018 10:40
Collection Date/Time: 10/31/2018 12:45
SDG#: BMS68-01BKG

ARCADIS U.S., Inc.
ELLE Sample #: SW 9878915
ELLE Group #: 2004714
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	0.027	0.015	0.005	0.7
11995	Acetonitrile	75-05-8	N.D.	0.077	0.019	0.7
11995	Benzene	71-43-2	N.D.	0.004	0.0004	0.7
11995	Bromochloromethane	74-97-5	N.D.	0.004	0.0005	0.7
11995	Bromodichloromethane	75-27-4	N.D.	0.004	0.0003	0.7
11995	Bromoform	75-25-2	N.D.	0.008	0.004	0.7
11995	Bromomethane	74-83-9	N.D.	0.004	0.0005	0.7
11995	n-Butanol	71-36-3	N.D.	0.19	0.043	0.7
11995	2-Butanone	78-93-3	0.001 J	0.008	0.0008	0.7
11995	t-Butyl alcohol	75-65-0	N.D.	0.077	0.012	0.7
11995	n-Butylbenzene	104-51-8	N.D.	0.006	0.002	0.7
11995	sec-Butylbenzene	135-98-8	N.D.	0.004	0.002	0.7
11995	tert-Butylbenzene	98-06-6	N.D.	0.004	0.0006	0.7
11995	Carbon Disulfide	75-15-0	N.D.	0.004	0.0005	0.7
11995	Carbon Tetrachloride	56-23-5	N.D.	0.004	0.0004	0.7
11995	Chlorobenzene	108-90-7	N.D.	0.004	0.0004	0.7
11995	Chlorodifluoromethane	75-45-6	N.D.	0.008	0.002	0.7
11995	Chloroethane	75-00-3	N.D.	0.004	0.0008	0.7
11995	Chloroform	67-66-3	N.D.	0.004	0.0005	0.7
11995	Chloromethane	74-87-3	N.D.	0.004	0.0005	0.7
11995	Cyclohexane	110-82-7	0.0005 J	0.004	0.0004	0.7
11995	Cyclohexanone	108-94-1	N.D.	0.19	0.019	0.7
11995	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	0.004	0.0003	0.7
11995	Dibromochloromethane	124-48-1	N.D.	0.004	0.0003	0.7
11995	1,2-Dibromoethane	106-93-4	N.D.	0.004	0.0003	0.7
11995	1,2-Dichlorobenzene	95-50-1	N.D.	0.004	0.0004	0.7
11995	1,3-Dichlorobenzene	541-73-1	N.D.	0.004	0.0004	0.7
11995	1,4-Dichlorobenzene	106-46-7	N.D.	0.004	0.0003	0.7
11995	Dichlorodifluoromethane	75-71-8	N.D.	0.004	0.0005	0.7
11995	1,1-Dichloroethane	75-34-3	N.D.	0.004	0.0004	0.7
11995	1,2-Dichloroethane	107-06-2	N.D.	0.004	0.0005	0.7
11995	1,1-Dichloroethene	75-35-4	N.D.	0.004	0.0004	0.7
11995	cis-1,2-Dichloroethene	156-59-2	N.D.	0.004	0.0004	0.7
11995	trans-1,2-Dichloroethene	156-60-5	0.0006 J	0.004	0.0004	0.7
11995	1,2-Dichloropropane	78-87-5	N.D.	0.004	0.0004	0.7
11995	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.004	0.0003	0.7
11995	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.004	0.0002	0.7
11995	1,4-Dioxane	123-91-1	N.D.	0.19	0.029	0.7
11995	Ethyl Acetate	141-78-6	N.D.	0.004	0.0008	0.7
11995	Ethyl Ether	60-29-7	N.D.	0.004	0.0008	0.7
11995	Ethylbenzene	100-41-4	0.0007 J	0.004	0.0003	0.7

*=This limit was used in the evaluation of the final result

Sample Description: East Floor Vault Composite Soil
B0087363.0028/BMS

Project Name: Bristol-Myers Squibb

Submittal Date/Time: 11/01/2018 10:40
Collection Date/Time: 10/31/2018 12:45
SDG#: BMS68-01BKG

ARCADIS U.S., Inc.
ELLE Sample #: SW 9878915
ELLE Group #: 2004714
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.	0.008	0.0005	0.7
11995	n-Heptane	142-82-5	N.D.	0.006	0.002	0.7
11995	n-Hexane	110-54-3	0.0007 J	0.004	0.0004	0.7
11995	2-Hexanone	591-78-6	N.D.	0.008	0.0008	0.7
11995	Isobutyl Alcohol	78-83-1	N.D.	0.19	0.029	0.7
11995	Isopropylbenzene	98-82-8	N.D.	0.004	0.0003	0.7
11995	p-Isopropyltoluene	99-87-6	N.D.	0.004	0.002	0.7
11995	Methyl Acetate	79-20-9	N.D.	0.004	0.0008	0.7
11995	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.004	0.0004	0.7
11995	4-Methyl-2-pentanone	108-10-1	0.002 J	0.008	0.0008	0.7
11995	Methylcyclohexane	108-87-2	N.D.	0.004	0.0005	0.7
11995	Methylene Chloride	75-09-2	N.D.	0.004	0.002	0.7
11995	Naphthalene	91-20-3	N.D.	0.004	0.002	0.7
11995	2-Nitropropane	79-46-9	N.D.	0.008	0.0008	0.7
11995	Styrene	100-42-5	N.D.	0.004	0.0002	0.7
11995	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.004	0.0003	0.7
11995	Tetrachloroethene	127-18-4	N.D.	0.004	0.0004	0.7
11995	Tetrahydrofuran	109-99-9	0.008	0.006	0.0008	0.7
11995	Toluene	108-88-3	0.002 J	0.004	0.0005	0.7
11995	1,2,3-Trichlorobenzene	87-61-6	N.D.	0.008	0.004	0.7
11995	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.008	0.004	0.7
11995	1,1,1-Trichloroethane	71-55-6	N.D.	0.004	0.0005	0.7
11995	1,1,2-Trichloroethane	79-00-5	N.D.	0.004	0.0004	0.7
11995	Trichloroethene	79-01-6	0.004 J	0.004	0.0004	0.7
11995	Trichlorofluoromethane	75-69-4	N.D.	0.004	0.0005	0.7
11995	1,2,4-Trimethylbenzene	95-63-6	0.0004 J	0.004	0.0004	0.7
11995	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.004	0.0004	0.7
11995	Vinyl Chloride	75-01-4	N.D.	0.004	0.0005	0.7
11995	m+p-Xylene	179601-23-1	0.001 J	0.004	0.0008	0.7
11995	o-Xylene	95-47-6	0.0009 J	0.004	0.0003	0.7
11995	Xylene (Total)	1330-20-7	0.002 J	0.004	0.0008	0.7

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.

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.	55	26	1
10726	Aniline	62-53-3	N.D.	550	180	1

*=This limit was used in the evaluation of the final result

Sample Description: East Floor Vault Composite Soil
B0087363.0028/BMS

Project Name: Bristol-Myers Squibb

Submittal Date/Time: 11/01/2018 10:40
Collection Date/Time: 10/31/2018 12:45
SDG#: BMS68-01BKG

ARCADIS U.S., Inc.
ELLE Sample #: SW 9878915
ELLE Group #: 2004714
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	Anthracene	120-12-7	N.D.	18	4	1
10726	Atrazine	1912-24-9	N.D.	180	37	1
10726	Benzaldehyde	100-52-7	N.D.	180	74	1
10726	Benzo(a)anthracene	56-55-3	N.D.	18	4	1
10726	Benzo(a)pyrene	50-32-8	N.D.	18	7	1
10726	Benzo(b)fluoranthene	205-99-2	N.D.	18	4	1
10726	Benzo(g,h,i)perylene	191-24-2	N.D.	18	7	1
10726	Benzo(k)fluoranthene	207-08-9	N.D.	18	4	1
10726	Benzyl alcohol	100-51-6	N.D.	550	180	1
10726	1,1'-Biphenyl	92-52-4	N.D.	40	18	1
10726	4-Bromophenyl-phenylether	101-55-3	N.D.	55	22	1
10726	Butylbenzylphthalate	85-68-7	N.D.	180	74	1
10726	Di-n-butylphthalate	84-74-2	N.D.	180	74	1
10726	Caprolactam	105-60-2	N.D.	180	37	1
10726	Carbazole	86-74-8	N.D.	40	18	1
10726	4-Chloro-3-methylphenol	59-50-7	N.D.	40	18	1
10726	4-Chloroaniline	106-47-8	N.D.	180	37	1
10726	bis(2-Chloroethoxy)methane	111-91-1	N.D.	40	18	1
10726	bis(2-Chloroethyl)ether	111-44-4	N.D.	55	26	1
10726	bis(2-Chloroisopropyl)ether	39638-32-9	N.D.	40	18	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.	37	7	1
10726	2-Chlorophenol	95-57-8	N.D.	40	18	1
10726	4-Chlorophenyl-phenylether	7005-72-3	N.D.	40	18	1
10726	Chrysene	218-01-9	N.D.	18	4	1
10726	Dibenz(a,h)anthracene	53-70-3	N.D.	18	4	1
10726	Dibenzofuran	132-64-9	N.D.	40	18	1
10726	3,3'-Dichlorobenzidine	91-94-1	N.D.	370	110	1
10726	2,4-Dichlorophenol	120-83-2	N.D.	40	18	1
10726	Dicyclohexylamine	101-83-7	N.D.	2,200	740	1
10726	Diethylphthalate	84-66-2	N.D.	180	74	1
10726	N,N-Dimethylaniline	121-69-7	N.D.	180	37	1
10726	2,4-Dimethylphenol	105-67-9	N.D.	40	18	1
10726	Dimethylphthalate	131-11-3	N.D.	180	74	1
10726	4,6-Dinitro-2-methylphenol	534-52-1	N.D.	550	180	1
10726	2,4-Dinitrophenol	51-28-5	N.D.	1,100	400	1
10726	2,4-Dinitrotoluene	121-14-2	N.D.	180	74	1
10726	2,6-Dinitrotoluene	606-20-2	N.D.	55	22	1
10726	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	180	74	1

*=This limit was used in the evaluation of the final result

Sample Description: **East Floor Vault Composite Soil**
B0087363.0028/BMS

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 11/01/2018 10:40
Collection Date/Time: 10/31/2018 12:45
SDG#: BMS68-01BKG

ARCADIS U.S., Inc.
ELLE Sample #: SW 9878915
ELLE Group #: 2004714
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	Fluoranthene	206-44-0	N.D.	18	4	1
10726	Fluorene	86-73-7	N.D.	18	4	1
10726	Hexachlorobenzene	118-74-1	N.D.	18	4	1
10726	Hexachlorobutadiene	87-68-3	N.D.	55	22	1
10726	Hexachlorocyclopentadiene	77-47-4	N.D. K3	550	180	1
10726	Hexachloroethane	67-72-1	N.D.	180	37	1
10726	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	18	7	1
10726	Isophorone	78-59-1	N.D.	40	18	1
10726	2-Methylnaphthalene	91-57-6	N.D.	37	11	1
10726	2-Methylphenol	95-48-7	N.D.	74	29	1
10726	4-Methylphenol	65794-96-9	N.D.	55	22	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.	55	22	1
10726	3-Nitroaniline	99-09-2	N.D.	180	74	1
10726	4-Nitroaniline	100-01-6	N.D.	180	74	1
10726	Nitrobenzene	98-95-3	N.D.	74	29	1
10726	2-Nitrophenol	88-75-5	N.D.	40	18	1
10726	4-Nitrophenol	100-02-7	N.D.	550	180	1
10726	N-Nitroso-di-n-propylamine	621-64-7	N.D.	55	22	1
10726	N-Nitrosodiphenylamine	86-30-6	N.D.	40	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	74	1
10726	Pentachlorophenol	87-86-5	N.D.	180	40	1
10726	Phenanthrene	85-01-8	N.D.	18	4	1
10726	Phenol	108-95-2	N.D.	55	26	1
10726	Pyrene	129-00-0	N.D.	18	4	1
10726	Pyridine	110-86-1	N.D.	180	74	1
10726	1,2,4,5-Tetrachlorobenzene	95-94-3	N.D.	40	18	1
10726	2,3,4,6-Tetrachlorophenol	58-90-2	N.D.	180	74	1
10726	2,4,5-Trichlorophenol	95-95-4	N.D.	55	22	1
10726	2,4,6-Trichlorophenol	88-06-2	N.D.	55	22	1
10726	Triethylamine	121-44-8	N.D.	5,500	1,800	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: Di-n-butylphthalate

00886 SVOA TIC Interpretive(25)

*=This limit was used in the evaluation of the final result

Sample Description: **East Floor Vault Composite Soil**
B0087363.0028/BMS

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 11/01/2018 10:40
Collection Date/Time: 10/31/2018 12:45
SDG#: BMS68-01BKG

ARCADIS U.S., Inc.
ELLE Sample #: SW 9878915
ELLE Group #: 2004714
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Limit of Quantitation*	Dry 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 Volatiles	**SW-846 8015D Rev.4, June 2003**		**mg/kg**	**mg/kg**	**mg/kg**	
10599	TPH-GRO soil C6-C10	n.a.	N.D.	2.0	0.4	45.29
Aldehydes & Ketones	**SW-846 8315A**		**mg/kg**	**mg/kg**	**mg/kg**	
13031	Acetaldehyde	75-07-0	7.4	1.1	0.55	1
13031	Formaldehyde	50-00-0	4.6	1.7	1.4	1
GC Miscellaneous	**SW-846 8015C Feb 2007 Rev 3**		**mg/kg**	**mg/kg**	**mg/kg**	
12925	Ethylene glycol	107-21-1	N.D.	11	5.5	1
12925	Propylene glycol	57-55-6	N.D.	11	5.5	1
GC Miscellaneous	**SW-846 8015D Rev.4, June 2003**		**mg/kg**	**mg/kg**	**mg/kg**	
10604	Ethanol (by Direct Injection)	64-17-5	N.D. D2	1.1	0.13	1
10604	Isopropanol	67-63-0	N.D. D2	1.1	0.051	1
10604	Methanol (by Direct Injection)	67-56-1	0.90 JD2	1.1	0.22	1
GC Petroleum Hydrocarbons	**SW-846 8015C Feb 2007 Rev 3**		**mg/kg**	**mg/kg**	**mg/kg**	
13567	DRO C10-C28	n.a.	40	13	5.8	1
13567	ORO >C28 - C40	n.a.	N.D.	13	5.8	1
Wet Chemistry	**SM 2540 G-2011 %Moisture Calc**		**%**	**%**	**%**	
00111	Moisture	n.a.	9.6	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

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: **East Floor Vault Composite Soil**
B0087363.0028/BMS

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 11/01/2018 10:40
Collection Date/Time: 10/31/2018 12:45
SDG#: BMS68-01BKG

ARCADIS U.S., Inc.
ELLE Sample #: SW 9878915
ELLE Group #: 2004714
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	SW-846 8260C	1	B183111AA	11/07/2018 18:24	Jennifer K Howe	0.7
06176	GC/MS - LL DIH2O Prep	SW-846 5035A	1	201830551784	11/01/2018 22:49	Lois E Hiltz	1
06176	GC/MS - LL DIH2O Prep	SW-846 5035A	2	201830551784	11/01/2018 22:49	Lois E Hiltz	1
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	201830551784	10/31/2018 12:45	Client Supplied	1
10726	SVOA 8270D (microwave)	SW-846 8270D	1	18310SLE026	11/08/2018 20:44	Linda M Hartenstine	1
10813	BNA Soil Microwave APP IX	SW-846 3546	1	18310SLE026	11/06/2018 16:30	Osvaldo R Sanchez	1
10599	TPH-GRO soils C6-C10	SW-846 8015D Rev.4, June 2003	1	18311A34A	11/08/2018 21:08	Jeremy C Giffin	45.29
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201830551784	10/31/2018 12:45	Client Supplied	n.a.
13031	Short List Aldehydes- S 8315A	SW-846 8315A	1	183060004A	11/06/2018 12:21	James H Place	1
05876	Formaldehyde Solid Extraction	SW-846 8315A	1	183060004A	11/03/2018 10:00	Olivia Arosemena	1
12925	Glycols in Soil by 8015C	SW-846 8015C Feb 2007 Rev 3	1	183110035A	11/07/2018 21:18	Donald Brown	1
10604	Alcohols in Soil	SW-846 8015D Rev.4, June 2003	1	183090035A	11/06/2018 15:56	Johanna C Kennedy	1
13567	TPH DRO/ORO soil 8015C/D(3546)	SW-846 8015C Feb 2007 Rev 3	1	183110026A	11/08/2018 16:11	Thomas C Wildermuth	1
11221	TPH DRO/ORO Solid 3546 EXT	SW-846 3546	1	183110026A	11/07/2018 17:00	Osvaldo R Sanchez	1
13121	Glycol Solids Ext. 8015C	SW-846 8015C Feb 2007 Rev 3	1	183110035A	11/07/2018 14:23	Donald Brown	1
00380	Solids Extraction for Alcohols	SW-846 8015D Rev 4 06/2003 Mod	1	183090035A	11/05/2018 14:05	Johanna C Kennedy	1
00111	Moisture	SM 2540 G-2011 %Moisture Calc	1	18306820004B	11/03/2018 22:31	Scott W Freisher	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.
BMEFV

Lab Name: Lancaster Laboratories Contract:_____
Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____
Matrix: (soil/water) SOIL Lab Sample ID: 9878915
Sample wt/vol: 7.18 (g/mL) g Lab File ID: HP09953.i/18nov07a.b/bn07s07.d
Level: (low/med) LOW Date Received: 11/01/18
% Moisture: not dec. 9.6 Date Analyzed: 11/07/18
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.					
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.
BMEFV

Lab Name: Lancaster Laboratories Contract:
Lab Code: LANCAS Case No.: SAS No.: SDG No.:
Matrix: (soil/water) SOIL Lab Sample ID: 9878915
Sample wt/vol: 30.07(g/mL) g Lab File ID: ok0465.d
Level: (low/med) LOW Date Received: 11/01/18
% Moisture: 9.6 Decanted: (Y/N) Date Extracted: 11/06/18
Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/08/18
Injection Volume: 1 (uL) Dilution Factor: 1
GPC Cleanup: N pH: Extraction: Mic
CONCENTRATION UNITS:
Number TICs found: 12 (ug/L or ug/Kg) ug/Kg

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		Unknown	1.010	150	JB
2.		Unknown	1.081	350	JB
3.	625-86-5	Furan, 2,5-dimethyl-	1.434	410	JB
4.		Unknown	1.657	280	JB
5.		Unknown	1.852	240	JB
6.	141-79-7	3-Penten-2-one, 4-methyl-	2.504	5600	JB
7.		Unknown	3.099	990	J
8.		Unknown	6.698	200	JB
9.		Unknown	8.428	58000	J
10.		Unknown	9.322	370	J
11.	57-10-3	n-Hexadecanoic acid	9.822	150	J
12.	301-02-0	9-Octadecenamide, (Z)-	11.292	560	J
13.					
14.	SVOCTIC	Total SVOC TICs		67000	JB
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16.					
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29.					
30.					

page 1 of 1

FORM I SV-1

Sample Description: **East Floor Vault MS Composite Soil**
B0087363.0028/BMS

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 11/01/2018 10:40
Collection Date/Time: 10/31/2018 12:45
SDG#: BMS68-01MS

ARCADIS U.S., Inc.
ELLE Sample #: SW 9878916
ELLE Group #: 2004714
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	0.14	0.015	0.004	0.68
11995	Acetonitrile	75-05-8	0.13	0.074	0.018	0.67
11995	Benzene	71-43-2	0.015	0.004	0.0004	0.68
11995	Bromochloromethane	74-97-5	0.013	0.004	0.0004	0.68
11995	Bromodichloromethane	75-27-4	0.013	0.004	0.0003	0.68
11995	Bromoform	75-25-2	0.009	0.007	0.004	0.68
11995	Bromomethane	74-83-9	0.013	0.004	0.0005	0.68
11995	n-Butanol	71-36-3	0.55	0.19	0.042	0.68
11995	2-Butanone	78-93-3	0.10	0.007	0.0007	0.68
11995	t-Butyl alcohol	75-65-0	0.13	0.075	0.011	0.68
11995	n-Butylbenzene	104-51-8	0.011	0.006	0.002	0.68
11995	sec-Butylbenzene	135-98-8	0.012	0.004	0.001	0.68
11995	tert-Butylbenzene	98-06-6	0.012	0.004	0.0006	0.68
11995	Carbon Disulfide	75-15-0	0.010	0.004	0.0004	0.68
11995	Carbon Tetrachloride	56-23-5	0.016	0.004	0.0004	0.68
11995	Chlorobenzene	108-90-7	0.013	0.004	0.0004	0.68
11995	Chlorodifluoromethane	75-45-6	0.019	0.007	0.001	0.67
11995	Chloroethane	75-00-3	0.014	0.004	0.0007	0.68
11995	Chloroform	67-66-3	0.015	0.004	0.0004	0.68
11995	Chloromethane	74-87-3	0.016	0.004	0.0004	0.68
11995	Cyclohexane	110-82-7	0.017	0.004	0.0004	0.68
11995	Cyclohexanone	108-94-1	0.27	0.19	0.019	0.68
11995	1,2-Dibromo-3-chloropropane	96-12-8	0.009	0.004	0.0003	0.68
11995	Dibromochloromethane	124-48-1	0.012	0.004	0.0003	0.68
11995	1,2-Dibromoethane	106-93-4	0.012	0.004	0.0003	0.68
11995	1,2-Dichlorobenzene	95-50-1	0.012	0.004	0.0004	0.68
11995	1,3-Dichlorobenzene	541-73-1	0.012	0.004	0.0004	0.68
11995	1,4-Dichlorobenzene	106-46-7	0.012	0.004	0.0003	0.68
11995	Dichlorodifluoromethane	75-71-8	0.018	0.004	0.0004	0.68
11995	1,1-Dichloroethane	75-34-3	0.016	0.004	0.0004	0.68
11995	1,2-Dichloroethane	107-06-2	0.014	0.004	0.0004	0.68
11995	1,1-Dichloroethene	75-35-4	0.017	0.004	0.0004	0.68
11995	cis-1,2-Dichloroethene	156-59-2	0.016	0.004	0.0004	0.68
11995	trans-1,2-Dichloroethene	156-60-5	0.016	0.004	0.0004	0.68
11995	1,2-Dichloropropane	78-87-5	0.015	0.004	0.0004	0.68
11995	cis-1,3-Dichloropropene	10061-01-5	0.012	0.004	0.0003	0.68
11995	trans-1,3-Dichloropropene	10061-02-6	0.011	0.004	0.0002	0.68
11995	1,4-Dioxane	123-91-1	0.36	0.19	0.028	0.68
11995	Ethyl Acetate	141-78-6	0.013	0.004	0.0007	0.67
11995	Ethyl Ether	60-29-7	0.013	0.004	0.0007	0.67
11995	Ethylbenzene	100-41-4	0.014	0.004	0.0003	0.68

*=This limit was used in the evaluation of the final result

Sample Description: **East Floor Vault MS Composite Soil**
B0087363.0028/BMS

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 11/01/2018 10:40
Collection Date/Time: 10/31/2018 12:45
SDG#: BMS68-01MS

ARCADIS U.S., Inc.
ELLE Sample #: SW 9878916
ELLE Group #: 2004714
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	0.020	0.007	0.0004	0.68
11995	n-Heptane	142-82-5	0.021	0.006	0.002	0.68
11995	n-Hexane	110-54-3	0.019	0.004	0.0004	0.68
11995	2-Hexanone	591-78-6	0.052	0.007	0.0007	0.68
11995	Isobutyl Alcohol	78-83-1	0.31	0.19	0.028	0.68
11995	Isopropylbenzene	98-82-8	0.012	0.004	0.0003	0.68
11995	p-Isopropyltoluene	99-87-6	0.012	0.004	0.001	0.68
11995	Methyl Acetate	79-20-9	0.011	0.004	0.0007	0.68
11995	Methyl Tertiary Butyl Ether	1634-04-4	0.012	0.004	0.0004	0.68
11995	4-Methyl-2-pentanone	108-10-1	0.051	0.007	0.0007	0.68
11995	Methylcyclohexane	108-87-2	0.018	0.004	0.0004	0.68
11995	Methylene Chloride	75-09-2	0.014	0.004	0.001	0.68
11995	Naphthalene	91-20-3	0.009	0.004	0.001	0.68
11995	2-Nitropropane	79-46-9	0.01	0.007	0.0007	0.68
11995	Styrene	100-42-5	0.012	0.004	0.0002	0.68
11995	1,1,2,2-Tetrachloroethane	79-34-5	0.012	0.004	0.0003	0.68
11995	Tetrachloroethene	127-18-4	0.012	0.004	0.0004	0.68
11995	Tetrahydrofuran	109-99-9	0.076	0.006	0.0007	0.68
11995	Toluene	108-88-3	0.016	0.004	0.0004	0.68
11995	1,2,3-Trichlorobenzene	87-61-6	0.01	0.007	0.004	0.68
11995	1,2,4-Trichlorobenzene	120-82-1	0.01	0.007	0.004	0.68
11995	1,1,1-Trichloroethane	71-55-6	0.014	0.004	0.0004	0.68
11995	1,1,2-Trichloroethane	79-00-5	0.013	0.004	0.0004	0.68
11995	Trichloroethene	79-01-6	0.017	0.004	0.0004	0.68
11995	Trichlorofluoromethane	75-69-4	0.018	0.004	0.0005	0.68
11995	1,2,4-Trimethylbenzene	95-63-6	0.013	0.004	0.0004	0.68
11995	1,3,5-Trimethylbenzene	108-67-8	0.013	0.004	0.0004	0.68
11995	Vinyl Chloride	75-01-4	0.017	0.004	0.0004	0.68
11995	m+p-Xylene	179601-23-1	0.027	0.004	0.0007	0.68
11995	o-Xylene	95-47-6	0.013	0.004	0.0003	0.68
11995	Xylene (Total)	1330-20-7	0.040	0.004	0.0007	0.68
GC/MS Semivolatiles	**SW-846 8270D**		**ug/kg**	**ug/kg**	**ug/kg**	
10726	Acenaphthene	83-32-9	1,800	18	4	1
10726	Acenaphthylene	208-96-8	1,800	18	4	1
10726	Acetophenone	98-86-2	1,600	55	26	1
10726	Aniline	62-53-3	1,100	550	180	1
10726	Anthracene	120-12-7	1,600	18	4	1
10726	Atrazine	1912-24-9	1,500	180	37	1
10726	Benzaldehyde	100-52-7	1,400	180	74	1
10726	Benzo(a)anthracene	56-55-3	1,600	18	4	1

*=This limit was used in the evaluation of the final result

Sample Description: East Floor Vault MS Composite Soil
B0087363.0028/BMS

Project Name: Bristol-Myers Squibb

Submittal Date/Time: 11/01/2018 10:40
Collection Date/Time: 10/31/2018 12:45
SDG#: BMS68-01MS

ARCADIS U.S., Inc.
ELLE Sample #: SW 9878916
ELLE Group #: 2004714
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(a)pyrene	50-32-8	1,700	18	7	1
10726	Benzo(b)fluoranthene	205-99-2	1,700	18	4	1
10726	Benzo(g,h,i)perylene	191-24-2	1,600	18	7	1
10726	Benzo(k)fluoranthene	207-08-9	1,600	18	4	1
10726	Benzyl alcohol	100-51-6	1,500	550	180	1
10726	1,1'-Biphenyl	92-52-4	1,700	41	18	1
10726	4-Bromophenyl-phenylether	101-55-3	1,600	55	22	1
10726	Butylbenzylphthalate	85-68-7	1,700	180	74	1
10726	Di-n-butylphthalate	84-74-2	1,800	180	74	1
10726	Caprolactam	105-60-2	1,700	180	37	1
10726	Carbazole	86-74-8	1,700	41	18	1
10726	4-Chloro-3-methylphenol	59-50-7	1,900	41	18	1
10726	4-Chloroaniline	106-47-8	1,100	180	37	1
10726	bis(2-Chloroethoxy)methane	111-91-1	1,700	41	18	1
10726	bis(2-Chloroethyl)ether	111-44-4	1,600	55	26	1
10726	bis(2-Chloroisopropyl)ether	39638-32-9	1,800	41	18	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	37	7	1
10726	2-Chlorophenol	95-57-8	1,600	41	18	1
10726	4-Chlorophenyl-phenylether	7005-72-3	1,800	41	18	1
10726	Chrysene	218-01-9	1,600	18	4	1
10726	Dibenz(a,h)anthracene	53-70-3	1,700	18	4	1
10726	Dibenzofuran	132-64-9	1,800	41	18	1
10726	3,3'-Dichlorobenzidine	91-94-1	1,400	370	110	1
10726	2,4-Dichlorophenol	120-83-2	1,700	41	18	1
10726	Dicyclohexylamine	101-83-7	N.D.	2,200	740	1
10726	Diethylphthalate	84-66-2	1,800	180	74	1
10726	N,N-Dimethylaniline	121-69-7	N.D.	180	37	1
10726	2,4-Dimethylphenol	105-67-9	1,500	41	18	1
10726	Dimethylphthalate	131-11-3	1,700	180	74	1
10726	4,6-Dinitro-2-methylphenol	534-52-1	1,300	550	180	1
10726	2,4-Dinitrophenol	51-28-5	2,800	1,100	410	1
10726	2,4-Dinitrotoluene	121-14-2	1,800	180	74	1
10726	2,6-Dinitrotoluene	606-20-2	1,700	55	22	1
10726	bis(2-Ethylhexyl)phthalate	117-81-7	1,700	180	74	1
10726	Fluoranthene	206-44-0	1,700	18	4	1
10726	Fluorene	86-73-7	1,900	18	4	1
10726	Hexachlorobenzene	118-74-1	1,600	18	4	1
10726	Hexachlorobutadiene	87-68-3	1,600	55	22	1

*=This limit was used in the evaluation of the final result

Sample Description: East Floor Vault MS Composite Soil
B0087363.0028/BMS

Project Name: Bristol-Myers Squibb

Submittal Date/Time: 11/01/2018 10:40
Collection Date/Time: 10/31/2018 12:45
SDG#: BMS68-01MS

ARCADIS U.S., Inc.
ELLE Sample #: SW 9878916
ELLE Group #: 2004714
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	Hexachlorocyclopentadiene	77-47-4	1,200	550	180	1
10726	Hexachloroethane	67-72-1	1,500	180	37	1
10726	Indeno(1,2,3-cd)pyrene	193-39-5	1,600	18	7	1
10726	Isophorone	78-59-1	1,700	41	18	1
10726	2-Methylnaphthalene	91-57-6	1,600	37	11	1
10726	2-Methylphenol	95-48-7	1,700	74	29	1
10726	4-Methylphenol	65794-96-9	1,600	55	22	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	1,600	18	7	1
10726	2-Nitroaniline	88-74-4	1,800	55	22	1
10726	3-Nitroaniline	99-09-2	1,700	180	74	1
10726	4-Nitroaniline	100-01-6	1,700	180	74	1
10726	Nitrobenzene	98-95-3	1,800	74	29	1
10726	2-Nitrophenol	88-75-5	1,700	41	18	1
10726	4-Nitrophenol	100-02-7	1,600	550	180	1
10726	N-Nitroso-di-n-propylamine	621-64-7	1,600	55	22	1
10726	N-Nitrosodiphenylamine	86-30-6	1,700	41	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	1,900	180	74	1
10726	Pentachlorophenol	87-86-5	1,300	180	41	1
10726	Phenanthrene	85-01-8	1,600	18	4	1
10726	Phenol	108-95-2	1,700	55	26	1
10726	Pyrene	129-00-0	1,600	18	4	1
10726	Pyridine	110-86-1	1,300	180	74	1
10726	1,2,4,5-Tetrachlorobenzene	95-94-3	1,700	41	18	1
10726	2,3,4,6-Tetrachlorophenol	58-90-2	1,600	180	74	1
10726	2,4,5-Trichlorophenol	95-95-4	1,900	55	22	1
10726	2,4,6-Trichlorophenol	88-06-2	1,800	55	22	1
10726	Triethylamine	121-44-8	N.D.	5,500	1,800	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: Di-n-butylphthalate					
GC Volatiles	**SW-846 8015D Rev.4, June 2003**		**mg/kg**	**mg/kg**	**mg/kg**	
10599	TPH-GRO soil C6-C10	n.a.	10	1.6	0.3	36.55
Aldehydes & Ketones	**SW-846 8315A**		**mg/kg**	**mg/kg**	**mg/kg**	

*=This limit was used in the evaluation of the final result

Sample Description: East Floor Vault MS Composite Soil
B0087363.0028/BMS

Project Name: Bristol-Myers Squibb

Submittal Date/Time: 11/01/2018 10:40
Collection Date/Time: 10/31/2018 12:45
SDG#: BMS68-01MS

ARCADIS U.S., Inc.
ELLE Sample #: SW 9878916
ELLE Group #: 2004714
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Limit of Quantitation*	Dry Method Detection Limit	Dilution Factor
Aldehydes & Ketones	**SW-846 8315A**		**mg/kg**	**mg/kg**	**mg/kg**	
13031	Acetaldehyde	75-07-0	17	1.1	0.55	1
13031	Formaldehyde	50-00-0	15	1.7	1.4	1
GC Miscellaneous	**SW-846 8015C Feb 2007 Rev 3**		**mg/kg**	**mg/kg**	**mg/kg**	
12925	Ethylene glycol	107-21-1	110	11	5.5	1
12925	Propylene glycol	57-55-6	110	11	5.5	1
GC Miscellaneous	**SW-846 8015D Rev.4, June 2003**		**mg/kg**	**mg/kg**	**mg/kg**	
10604	Ethanol (by Direct Injection)	64-17-5	2.4 D2	1.1	0.13	1
10604	Isopropanol	67-63-0	2.4 D2	1.1	0.051	1
10604	Methanol (by Direct Injection)	67-56-1	2.7 D2	1.1	0.22	1
GC Petroleum Hydrocarbons	**SW-846 8015C Feb 2007 Rev 3**		**mg/kg**	**mg/kg**	**mg/kg**	
13567	DRO C10-C28	n.a.	180	13	5.8	1
13567	ORO >C28 - C40	n.a.	N.D.	13	5.8	1
Wet Chemistry	**SM 2540 G-2011 %Moisture Calc**		**%**	**%**	**%**	
00118	Moisture	n.a.	9.6	0.50	0.50	1

Sample Comments

State of New York Certification No. 10670

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	SW-846 8260C	1	B183111AA	11/07/2018 16:53	Jennifer K Howe	0.68
11995	VOCs- Solid by 8260C	SW-846 8260C	1	B183111AA	11/07/2018 17:38	Jennifer K Howe	0.67
06176	GC/MS - LL DIH2O Prep	SW-846 5035A	1	201830551784	11/01/2018 22:49	Lois E Hiltz	1
06176	GC/MS - LL DIH2O Prep	SW-846 5035A	2	201830551784	11/01/2018 22:49	Lois E Hiltz	1
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	201830551784	10/31/2018 12:45	Client Supplied	1
10726	SVOA 8270D (microwave)	SW-846 8270D	1	18310SLE026	11/08/2018 21:06	Linda M Hartenstine	1

*=This limit was used in the evaluation of the final result

Sample Description: **East Floor Vault MS Composite Soil**
B0087363.0028/BMS

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 11/01/2018 10:40
Collection Date/Time: 10/31/2018 12:45
SDG#: BMS68-01MS

ARCADIS U.S., Inc.
ELLE Sample #: SW 9878916
ELLE Group #: 2004714
Matrix: Soil

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10813	BNA Soil Microwave APP IX	SW-846 3546	1	18310SLE026	11/06/2018 16:30	Osvaldo R Sanchez	1
10599	TPH-GRO soils C6-C10	SW-846 8015D Rev.4, June 2003	1	18311A34A	11/08/2018 21:43	Jeremy C Giffin	36.55
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201830551784	10/31/2018 12:45	Client Supplied	n.a.
13031	Short List Aldehydes- S 8315A	SW-846 8315A	1	183060004A	11/06/2018 12:32	James H Place	1
05876	Formaldehyde Solid Extraction	SW-846 8315A	1	183060004A	11/03/2018 10:00	Olivia Arosemena	1
12925	Glycols in Soil by 8015C	SW-846 8015C Feb 2007 Rev 3	1	183110035A	11/07/2018 21:31	Donald Brown	1
10604	Alcohols in Soil	SW-846 8015D Rev.4, June 2003	1	183090035A	11/06/2018 16:14	Johanna C Kennedy	1
13567	TPH DRO/ORO soil 8015C/D(3546)	SW-846 8015C Feb 2007 Rev 3	1	183110026A	11/08/2018 16:31	Thomas C Wildermuth	1
11221	TPH DRO/ORO Solid 3546 EXT	SW-846 3546	1	183110026A	11/07/2018 17:00	Osvaldo R Sanchez	1
13121	Glycol Solids Ext. 8015C	SW-846 8015C Feb 2007 Rev 3	1	183110035A	11/07/2018 14:23	Donald Brown	1
00380	Solids Extraction for Alcohols	SW-846 8015D Rev 4 06/2003 Mod	1	183090035A	11/05/2018 14:05	Johanna C Kennedy	1
00118	Moisture	SM 2540 G-2011 %Moisture Calc	1	18306820004B	11/03/2018 22:31	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

Sample Description: East Floor Vault MSD Composite Soil
B0087363.0028/BMS

Project Name: Bristol-Myers Squibb

Submittal Date/Time: 11/01/2018 10:40
Collection Date/Time: 10/31/2018 12:45
SDG#: BMS68-01MSD

ARCADIS U.S., Inc.
ELLE Sample #: SW 9878917
ELLE Group #: 2004714
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	0.15	0.020	0.006	0.91
11995	Acetonitrile	75-05-8	0.16	0.10	0.025	0.92
11995	Benzene	71-43-2	0.019	0.005	0.0005	0.91
11995	Bromochloromethane	74-97-5	0.018	0.005	0.0006	0.91
11995	Bromodichloromethane	75-27-4	0.018	0.005	0.0004	0.91
11995	Bromoform	75-25-2	0.014	0.010	0.005	0.91
11995	Bromomethane	74-83-9	0.015	0.005	0.0007	0.91
11995	n-Butanol	71-36-3	0.77	0.25	0.057	0.91
11995	2-Butanone	78-93-3	0.12	0.010	0.001	0.91
11995	t-Butyl alcohol	75-65-0	0.17	0.10	0.015	0.91
11995	n-Butylbenzene	104-51-8	0.014	0.008	0.003	0.91
11995	sec-Butylbenzene	135-98-8	0.015	0.005	0.002	0.91
11995	tert-Butylbenzene	98-06-6	0.015	0.005	0.0008	0.91
11995	Carbon Disulfide	75-15-0	0.015	0.005	0.0006	0.91
11995	Carbon Tetrachloride	56-23-5	0.019	0.005	0.0005	0.91
11995	Chlorobenzene	108-90-7	0.017	0.005	0.0005	0.91
11995	Chlorodifluoromethane	75-45-6	0.025	0.010	0.002	0.92
11995	Chloroethane	75-00-3	0.016	0.005	0.001	0.91
11995	Chloroform	67-66-3	0.020	0.005	0.0006	0.91
11995	Chloromethane	74-87-3	0.019	0.005	0.0006	0.91
11995	Cyclohexane	110-82-7	0.020	0.005	0.0005	0.91
11995	Cyclohexanone	108-94-1	0.37	0.25	0.025	0.91
11995	1,2-Dibromo-3-chloropropane	96-12-8	0.014	0.005	0.0004	0.91
11995	Dibromochloromethane	124-48-1	0.017	0.005	0.0004	0.91
11995	1,2-Dibromoethane	106-93-4	0.017	0.005	0.0004	0.91
11995	1,2-Dichlorobenzene	95-50-1	0.016	0.005	0.0005	0.91
11995	1,3-Dichlorobenzene	541-73-1	0.016	0.005	0.0005	0.91
11995	1,4-Dichlorobenzene	106-46-7	0.016	0.005	0.0004	0.91
11995	Dichlorodifluoromethane	75-71-8	0.021	0.005	0.0006	0.91
11995	1,1-Dichloroethane	75-34-3	0.020	0.005	0.0005	0.91
11995	1,2-Dichloroethane	107-06-2	0.019	0.005	0.0006	0.91
11995	1,1-Dichloroethene	75-35-4	0.020	0.005	0.0005	0.91
11995	cis-1,2-Dichloroethene	156-59-2	0.021	0.005	0.0005	0.91
11995	trans-1,2-Dichloroethene	156-60-5	0.019	0.005	0.0005	0.91
11995	1,2-Dichloropropane	78-87-5	0.020	0.005	0.0005	0.91
11995	cis-1,3-Dichloropropene	10061-01-5	0.018	0.005	0.0004	0.91
11995	trans-1,3-Dichloropropene	10061-02-6	0.016	0.005	0.0003	0.91
11995	1,4-Dioxane	123-91-1	0.48	0.25	0.037	0.91
11995	Ethyl Acetate	141-78-6	0.017	0.005	0.001	0.92
11995	Ethyl Ether	60-29-7	0.017	0.005	0.001	0.92
11995	Ethylbenzene	100-41-4	0.016	0.005	0.0004	0.91

*=This limit was used in the evaluation of the final result

Sample Description: **East Floor Vault MSD Composite Soil**
B0087363.0028/BMS

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 11/01/2018 10:40
Collection Date/Time: 10/31/2018 12:45
SDG#: BMS68-01MSD

ARCADIS U.S., Inc.
ELLE Sample #: SW 9878917
ELLE Group #: 2004714
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	0.023	0.010	0.0006	0.91
11995	n-Heptane	142-82-5	0.025	0.008	0.003	0.91
11995	n-Hexane	110-54-3	0.021	0.005	0.0005	0.91
11995	2-Hexanone	591-78-6	0.071	0.010	0.001	0.91
11995	Isobutyl Alcohol	78-83-1	0.41	0.25	0.038	0.91
11995	Isopropylbenzene	98-82-8	0.015	0.005	0.0004	0.91
11995	p-Isopropyltoluene	99-87-6	0.015	0.005	0.002	0.91
11995	Methyl Acetate	79-20-9	0.018	0.005	0.001	0.91
11995	Methyl Tertiary Butyl Ether	1634-04-4	0.017	0.005	0.0005	0.91
11995	4-Methyl-2-pentanone	108-10-1	0.075	0.010	0.001	0.91
11995	Methylcyclohexane	108-87-2	0.022	0.005	0.0006	0.91
11995	Methylene Chloride	75-09-2	0.019	0.005	0.002	0.91
11995	Naphthalene	91-20-3	0.012	0.005	0.002	0.91
11995	2-Nitropropane	79-46-9	0.011	0.010	0.001	0.91
11995	Styrene	100-42-5	0.015	0.005	0.0003	0.91
11995	1,1,2,2-Tetrachloroethane	79-34-5	0.017	0.005	0.0004	0.91
11995	Tetrachloroethene	127-18-4	0.016	0.005	0.0005	0.91
11995	Tetrahydrofuran	109-99-9	0.10	0.008	0.001	0.91
11995	Toluene	108-88-3	0.018	0.005	0.0006	0.91
11995	1,2,3-Trichlorobenzene	87-61-6	0.013	0.010	0.005	0.91
11995	1,2,4-Trichlorobenzene	120-82-1	0.013	0.010	0.005	0.91
11995	1,1,1-Trichloroethane	71-55-6	0.017	0.005	0.0006	0.91
11995	1,1,2-Trichloroethane	79-00-5	0.019	0.005	0.0005	0.91
11995	Trichloroethene	79-01-6	0.022	0.005	0.0005	0.91
11995	Trichlorofluoromethane	75-69-4	0.021	0.005	0.0007	0.91
11995	1,2,4-Trimethylbenzene	95-63-6	0.015	0.005	0.0005	0.91
11995	1,3,5-Trimethylbenzene	108-67-8	0.015	0.005	0.0005	0.91
11995	Vinyl Chloride	75-01-4	0.019	0.005	0.0006	0.91
11995	m+p-Xylene	179601-23-1	0.033	0.005	0.001	0.91
11995	o-Xylene	95-47-6	0.016	0.005	0.0004	0.91
11995	Xylene (Total)	1330-20-7	0.049	0.005	0.001	0.91
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	1,700	18	4	1
10726	Acetophenone	98-86-2	1,500	55	26	1
10726	Aniline	62-53-3	1,000	550	180	1
10726	Anthracene	120-12-7	1,500	18	4	1
10726	Atrazine	1912-24-9	1,400	180	37	1
10726	Benzaldehyde	100-52-7	1,300	180	73	1
10726	Benzo(a)anthracene	56-55-3	1,500	18	4	1

*=This limit was used in the evaluation of the final result

Sample Description: East Floor Vault MSD Composite Soil
B0087363.0028/BMS

Project Name: Bristol-Myers Squibb

Submittal Date/Time: 11/01/2018 10:40
Collection Date/Time: 10/31/2018 12:45
SDG#: BMS68-01MSD

ARCADIS U.S., Inc.
ELLE Sample #: SW 9878917
ELLE Group #: 2004714
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(a)pyrene	50-32-8	1,600	18	7	1
10726	Benzo(b)fluoranthene	205-99-2	1,600	18	4	1
10726	Benzo(g,h,i)perylene	191-24-2	1,500	18	7	1
10726	Benzo(k)fluoranthene	207-08-9	1,500	18	4	1
10726	Benzyl alcohol	100-51-6	1,500	550	180	1
10726	1,1'-Biphenyl	92-52-4	1,500	40	18	1
10726	4-Bromophenyl-phenylether	101-55-3	1,500	55	22	1
10726	Butylbenzylphthalate	85-68-7	1,600	180	73	1
10726	Di-n-butylphthalate	84-74-2	1,600	180	73	1
10726	Caprolactam	105-60-2	1,600	180	37	1
10726	Carbazole	86-74-8	1,600	40	18	1
10726	4-Chloro-3-methylphenol	59-50-7	1,900	40	18	1
10726	4-Chloroaniline	106-47-8	1,100	180	37	1
10726	bis(2-Chloroethoxy)methane	111-91-1	1,600	40	18	1
10726	bis(2-Chloroethyl)ether	111-44-4	1,500	55	26	1
10726	bis(2-Chloroisopropyl)ether	39638-32-9	1,700	40	18	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	1,400	37	7	1
10726	2-Chlorophenol	95-57-8	1,600	40	18	1
10726	4-Chlorophenyl-phenylether	7005-72-3	1,700	40	18	1
10726	Chrysene	218-01-9	1,500	18	4	1
10726	Dibenz(a,h)anthracene	53-70-3	1,600	18	4	1
10726	Dibenzofuran	132-64-9	1,700	40	18	1
10726	3,3'-Dichlorobenzidine	91-94-1	1,200	370	110	1
10726	2,4-Dichlorophenol	120-83-2	1,700	40	18	1
10726	Dicyclohexylamine	101-83-7	N.D.	2,200	730	1
10726	Diethylphthalate	84-66-2	1,700	180	73	1
10726	N,N-Dimethylaniline	121-69-7	N.D.	180	37	1
10726	2,4-Dimethylphenol	105-67-9	1,400	40	18	1
10726	Dimethylphthalate	131-11-3	1,600	180	73	1
10726	4,6-Dinitro-2-methylphenol	534-52-1	1,200	550	180	1
10726	2,4-Dinitrophenol	51-28-5	2,500	1,100	400	1
10726	2,4-Dinitrotoluene	121-14-2	1,700	180	73	1
10726	2,6-Dinitrotoluene	606-20-2	1,600	55	22	1
10726	bis(2-Ethylhexyl)phthalate	117-81-7	1,600	180	73	1
10726	Fluoranthene	206-44-0	1,600	18	4	1
10726	Fluorene	86-73-7	1,700	18	4	1
10726	Hexachlorobenzene	118-74-1	1,500	18	4	1
10726	Hexachlorobutadiene	87-68-3	1,500	55	22	1

*=This limit was used in the evaluation of the final result

Sample Description: East Floor Vault MSD Composite Soil
B0087363.0028/BMS

Project Name: Bristol-Myers Squibb

Submittal Date/Time: 11/01/2018 10:40
Collection Date/Time: 10/31/2018 12:45
SDG#: BMS68-01MSD

ARCADIS U.S., Inc.
ELLE Sample #: SW 9878917
ELLE Group #: 2004714
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	Hexachlorocyclopentadiene	77-47-4	1,500	550	180	1
10726	Hexachloroethane	67-72-1	1,400	180	37	1
10726	Indeno(1,2,3-cd)pyrene	193-39-5	1,500	18	7	1
10726	Isophorone	78-59-1	1,600	40	18	1
10726	2-Methylnaphthalene	91-57-6	1,500	37	11	1
10726	2-Methylphenol	95-48-7	1,700	73	29	1
10726	4-Methylphenol	65794-96-9	1,600	55	22	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	1,500	18	7	1
10726	2-Nitroaniline	88-74-4	1,700	55	22	1
10726	3-Nitroaniline	99-09-2	1,600	180	73	1
10726	4-Nitroaniline	100-01-6	1,500	180	73	1
10726	Nitrobenzene	98-95-3	1,600	73	29	1
10726	2-Nitrophenol	88-75-5	1,600	40	18	1
10726	4-Nitrophenol	100-02-7	1,600	550	180	1
10726	N-Nitroso-di-n-propylamine	621-64-7	1,500	55	22	1
10726	N-Nitrosodiphenylamine	86-30-6	1,600	40	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	1,800	180	73	1
10726	Pentachlorophenol	87-86-5	1,200	180	40	1
10726	Phenanthrene	85-01-8	1,500	18	4	1
10726	Phenol	108-95-2	1,600	55	26	1
10726	Pyrene	129-00-0	1,500	18	4	1
10726	Pyridine	110-86-1	1,100	180	73	1
10726	1,2,4,5-Tetrachlorobenzene	95-94-3	1,500	40	18	1
10726	2,3,4,6-Tetrachlorophenol	58-90-2	1,500	180	73	1
10726	2,4,5-Trichlorophenol	95-95-4	1,700	55	22	1
10726	2,4,6-Trichlorophenol	88-06-2	1,700	55	22	1
10726	Triethylamine	121-44-8	N.D.	5,500	1,800	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: Di-n-butylphthalate					
GC Volatiles	**SW-846 8015D Rev.4, June 2003**		**mg/kg**	**mg/kg**	**mg/kg**	
10599	TPH-GRO soil C6-C10	n.a.	14	2.2	0.4	49.31
Aldehydes & Ketones	**SW-846 8315A**		**mg/kg**	**mg/kg**	**mg/kg**	

*=This limit was used in the evaluation of the final result

Sample Description: East Floor Vault MSD Composite Soil
B0087363.0028/BMS

Project Name: Bristol-Myers Squibb

Submittal Date/Time: 11/01/2018 10:40
Collection Date/Time: 10/31/2018 12:45
SDG#: BMS68-01MSD

ARCADIS U.S., Inc.
ELLE Sample #: SW 9878917
ELLE Group #: 2004714
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Limit of Quantitation*	Dry Method Detection Limit	Dilution Factor
Aldehydes & Ketones	**SW-846 8315A**		**mg/kg**	**mg/kg**	**mg/kg**	
13031	Acetaldehyde	75-07-0	13	1.1	0.55	1
13031	Formaldehyde	50-00-0	13	1.7	1.4	1
GC Miscellaneous	**SW-846 8015C Feb 2007 Rev 3**		**mg/kg**	**mg/kg**	**mg/kg**	
12925	Ethylene glycol	107-21-1	110	11	5.5	1
12925	Propylene glycol	57-55-6	110	11	5.5	1
GC Miscellaneous	**SW-846 8015D Rev.4, June 2003**		**mg/kg**	**mg/kg**	**mg/kg**	
10604	Ethanol (by Direct Injection)	64-17-5	2.4 D2	1.1	0.13	1
10604	Isopropanol	67-63-0	2.5 D2	1.1	0.051	1
10604	Methanol (by Direct Injection)	67-56-1	3.2 D2	1.1	0.22	1
GC Petroleum Hydrocarbons	**SW-846 8015C Feb 2007 Rev 3**		**mg/kg**	**mg/kg**	**mg/kg**	
13567	DRO C10-C28	n.a.	180	13	5.8	1
13567	ORO >C28 - C40	n.a.	N.D.	13	5.8	1
Wet Chemistry	**SM 2540 G-2011 %Moisture Calc**		**%**	**%**	**%**	
00118	Moisture	n.a.	9.6	0.50	0.50	1
00121	Moisture Duplicate	n.a.	10.6	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

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	SW-846 8260C	1	B183111AA	11/07/2018 17:16	Jennifer K Howe	0.91
11995	VOCs- Solid by 8260C	SW-846 8260C	1	B183111AA	11/07/2018 18:01	Jennifer K Howe	0.92

*=This limit was used in the evaluation of the final result

Sample Description: **East Floor Vault MSD Composite Soil**
B0087363.0028/BMS

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 11/01/2018 10:40
Collection Date/Time: 10/31/2018 12:45
SDG#: BMS68-01MSD

ARCADIS U.S., Inc.
ELLE Sample #: SW 9878917
ELLE Group #: 2004714
Matrix: Soil

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
00374	GC/MS - Bulk Soil Prep	SW-846 5035A Modified	1	201830551784	11/01/2018 22:50	Lois E Hiltz	n.a.
00374	GC/MS - Bulk Soil Prep	SW-846 5035A Modified	2	201830551784	11/01/2018 22:50	Lois E Hiltz	n.a.
06646	GC/MS HL Bulk Sample Prep	SW-846 5035A Modified	1	201830551784	11/01/2018 22:40	Lois E Hiltz	n.a.
10726	SVOA 8270D (microwave)	SW-846 8270D	1	18310SLE026	11/08/2018 21:29	Linda M Hartenstine	1
10813	BNA Soil Microwave APP IX	SW-846 3546	1	18310SLE026	11/06/2018 16:30	Osvaldo R Sanchez	1
10599	TPH-GRO soils C6-C10	SW-846 8015D Rev.4, June 2003	1	18311A34A	11/08/2018 22:18	Jeremy C Giffin	49.31
01150	GC - Bulk Soil Prep	SW-846 5035A Modified	1	201830551784	11/01/2018 22:41	Lois E Hiltz	n.a.
01150	GC - Bulk Soil Prep	SW-846 5035A Modified	2	201831251835	11/08/2018 16:40	Rebecca Williams	n.a.
13031	Short List Aldehydes- S 8315A	SW-846 8315A	1	183060004A	11/06/2018 12:42	James H Place	1
05876	Formaldehyde Solid Extraction	SW-846 8315A	1	183060004A	11/03/2018 10:00	Olivia Arosemena	1
12925	Glycols in Soil by 8015C	SW-846 8015C Feb 2007 Rev 3	1	183110035A	11/07/2018 21:43	Donald Brown	1
10604	Alcohols in Soil	SW-846 8015D Rev.4, June 2003	1	183090035A	11/06/2018 16:30	Johanna C Kennedy	1
13567	TPH DRO/ORO soil 8015C/D(3546)	SW-846 8015C Feb 2007 Rev 3	1	183110026A	11/08/2018 16:51	Thomas C Wildermuth	1
11221	TPH DRO/ORO Solid 3546 EXT	SW-846 3546	1	183110026A	11/07/2018 17:00	Osvaldo R Sanchez	1
13121	Glycol Solids Ext. 8015C	SW-846 8015C Feb 2007 Rev 3	1	183110035A	11/07/2018 14:23	Donald Brown	1
00380	Solids Extraction for Alcohols	SW-846 8015D Rev 4 06/2003 Mod	1	183090035A	11/05/2018 14:05	Johanna C Kennedy	1
00118	Moisture	SM 2540 G-2011 %Moisture Calc	1	18306820004B	11/03/2018 22:31	Scott W Freisher	1
00121	Moisture Duplicate	SM 2540 G-2011 %Moisture Calc	1	18306820004B	11/03/2018 22:31	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

Sample Description: **West Floor Vault Composite Soil**
B0087363.0028/BMS

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 11/01/2018 10:40
Collection Date/Time: 10/31/2018 14:00
SDG#: BMS68-02

ARCADIS U.S., Inc.
ELLE Sample #: SW 9878918
ELLE Group #: 2004714
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	N.D.	0.014	0.004	0.61
11995	Acetonitrile	75-05-8	N.D.	0.068	0.017	0.61
11995	Benzene	71-43-2	N.D.	0.003	0.0003	0.61
11995	Bromochloromethane	74-97-5	N.D.	0.003	0.0004	0.61
11995	Bromodichloromethane	75-27-4	N.D.	0.003	0.0003	0.61
11995	Bromoform	75-25-2	N.D.	0.007	0.003	0.61
11995	Bromomethane	74-83-9	N.D.	0.003	0.0005	0.61
11995	n-Butanol	71-36-3	N.D.	0.17	0.038	0.61
11995	2-Butanone	78-93-3	0.002 J	0.007	0.0007	0.61
11995	t-Butyl alcohol	75-65-0	N.D.	0.068	0.010	0.61
11995	n-Butylbenzene	104-51-8	N.D.	0.005	0.002	0.61
11995	sec-Butylbenzene	135-98-8	N.D.	0.003	0.001	0.61
11995	tert-Butylbenzene	98-06-6	N.D.	0.003	0.0005	0.61
11995	Carbon Disulfide	75-15-0	N.D.	0.003	0.0004	0.61
11995	Carbon Tetrachloride	56-23-5	N.D.	0.003	0.0003	0.61
11995	Chlorobenzene	108-90-7	N.D.	0.003	0.0003	0.61
11995	Chlorodifluoromethane	75-45-6	N.D.	0.007	0.001	0.61
11995	Chloroethane	75-00-3	N.D.	0.003	0.0007	0.61
11995	Chloroform	67-66-3	N.D.	0.003	0.0004	0.61
11995	Chloromethane	74-87-3	N.D.	0.003	0.0004	0.61
11995	Cyclohexane	110-82-7	N.D.	0.003	0.0003	0.61
11995	Cyclohexanone	108-94-1	N.D.	0.17	0.017	0.61
11995	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	0.003	0.0003	0.61
11995	Dibromochloromethane	124-48-1	N.D.	0.003	0.0003	0.61
11995	1,2-Dibromoethane	106-93-4	N.D.	0.003	0.0003	0.61
11995	1,2-Dichlorobenzene	95-50-1	N.D.	0.003	0.0003	0.61
11995	1,3-Dichlorobenzene	541-73-1	N.D.	0.003	0.0003	0.61
11995	1,4-Dichlorobenzene	106-46-7	N.D.	0.003	0.0003	0.61
11995	Dichlorodifluoromethane	75-71-8	N.D.	0.003	0.0004	0.61
11995	1,1-Dichloroethane	75-34-3	N.D.	0.003	0.0003	0.61
11995	1,2-Dichloroethane	107-06-2	N.D.	0.003	0.0004	0.61
11995	1,1-Dichloroethene	75-35-4	N.D.	0.003	0.0003	0.61
11995	cis-1,2-Dichloroethene	156-59-2	N.D.	0.003	0.0003	0.61
11995	trans-1,2-Dichloroethene	156-60-5	N.D.	0.003	0.0003	0.61
11995	1,2-Dichloropropane	78-87-5	N.D.	0.003	0.0003	0.61
11995	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.003	0.0003	0.61
11995	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.003	0.0002	0.61
11995	1,4-Dioxane	123-91-1	N.D.	0.17	0.025	0.61
11995	Ethyl Acetate	141-78-6	N.D.	0.003	0.0007	0.61
11995	Ethyl Ether	60-29-7	N.D.	0.003	0.0007	0.61
11995	Ethylbenzene	100-41-4	N.D.	0.003	0.0003	0.61

*=This limit was used in the evaluation of the final result

Sample Description: **West Floor Vault Composite Soil**
B0087363.0028/BMS

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 11/01/2018 10:40
Collection Date/Time: 10/31/2018 14:00
SDG#: BMS68-02

ARCADIS U.S., Inc.
ELLE Sample #: SW 9878918
ELLE Group #: 2004714
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.	0.007	0.0004	0.61
11995	n-Heptane	142-82-5	N.D.	0.005	0.002	0.61
11995	n-Hexane	110-54-3	0.0008 J	0.003	0.0003	0.61
11995	2-Hexanone	591-78-6	N.D.	0.007	0.0007	0.61
11995	Isobutyl Alcohol	78-83-1	N.D.	0.17	0.026	0.61
11995	Isopropylbenzene	98-82-8	N.D.	0.003	0.0003	0.61
11995	p-Isopropyltoluene	99-87-6	N.D.	0.003	0.001	0.61
11995	Methyl Acetate	79-20-9	N.D.	0.003	0.0007	0.61
11995	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.003	0.0003	0.61
11995	4-Methyl-2-pentanone	108-10-1	N.D.	0.007	0.0007	0.61
11995	Methylcyclohexane	108-87-2	N.D.	0.003	0.0004	0.61
11995	Methylene Chloride	75-09-2	N.D.	0.003	0.001	0.61
11995	Naphthalene	91-20-3	N.D.	0.003	0.001	0.61
11995	2-Nitropropane	79-46-9	N.D.	0.007	0.0007	0.61
11995	Styrene	100-42-5	N.D.	0.003	0.0002	0.61
11995	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.003	0.0003	0.61
11995	Tetrachloroethene	127-18-4	N.D.	0.003	0.0003	0.61
11995	Tetrahydrofuran	109-99-9	0.010	0.005	0.0007	0.61
11995	Toluene	108-88-3	0.001 J	0.003	0.0004	0.61
11995	1,2,3-Trichlorobenzene	87-61-6	N.D.	0.007	0.003	0.61
11995	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.007	0.003	0.61
11995	1,1,1-Trichloroethane	71-55-6	N.D.	0.003	0.0004	0.61
11995	1,1,2-Trichloroethane	79-00-5	N.D.	0.003	0.0003	0.61
11995	Trichloroethene	79-01-6	0.0008 J	0.003	0.0003	0.61
11995	Trichlorofluoromethane	75-69-4	N.D.	0.003	0.0005	0.61
11995	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.003	0.0003	0.61
11995	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.003	0.0003	0.61
11995	Vinyl Chloride	75-01-4	N.D.	0.003	0.0004	0.61
11995	m+p-Xylene	179601-23-1	N.D.	0.003	0.0007	0.61
11995	o-Xylene	95-47-6	N.D.	0.003	0.0003	0.61
11995	Xylene (Total)	1330-20-7	N.D.	0.003	0.0007	0.61

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.	55	26	1
10726	Aniline	62-53-3	N.D.	550	180	1

*=This limit was used in the evaluation of the final result

Sample Description: **West Floor Vault Composite Soil**
B0087363.0028/BMS

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 11/01/2018 10:40
Collection Date/Time: 10/31/2018 14:00
SDG#: BMS68-02

ARCADIS U.S., Inc.
ELLE Sample #: SW 9878918
ELLE Group #: 2004714
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	Anthracene	120-12-7	N.D.	18	4	1
10726	Atrazine	1912-24-9	N.D.	180	37	1
10726	Benzaldehyde	100-52-7	N.D.	180	73	1
10726	Benzo(a)anthracene	56-55-3	N.D.	18	4	1
10726	Benzo(a)pyrene	50-32-8	N.D.	18	7	1
10726	Benzo(b)fluoranthene	205-99-2	N.D.	18	4	1
10726	Benzo(g,h,i)perylene	191-24-2	N.D.	18	7	1
10726	Benzo(k)fluoranthene	207-08-9	N.D.	18	4	1
10726	Benzyl alcohol	100-51-6	N.D.	550	180	1
10726	1,1'-Biphenyl	92-52-4	N.D.	40	18	1
10726	4-Bromophenyl-phenylether	101-55-3	N.D.	55	22	1
10726	Butylbenzylphthalate	85-68-7	N.D.	180	73	1
10726	Di-n-butylphthalate	84-74-2	N.D.	180	73	1
10726	Caprolactam	105-60-2	N.D.	180	37	1
10726	Carbazole	86-74-8	N.D.	40	18	1
10726	4-Chloro-3-methylphenol	59-50-7	N.D.	40	18	1
10726	4-Chloroaniline	106-47-8	N.D.	180	37	1
10726	bis(2-Chloroethoxy)methane	111-91-1	N.D.	40	18	1
10726	bis(2-Chloroethyl)ether	111-44-4	N.D.	55	26	1
10726	bis(2-Chloroisopropyl)ether	39638-32-9	N.D.	40	18	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.	37	7	1
10726	2-Chlorophenol	95-57-8	N.D.	40	18	1
10726	4-Chlorophenyl-phenylether	7005-72-3	N.D.	40	18	1
10726	Chrysene	218-01-9	N.D.	18	4	1
10726	Dibenz(a,h)anthracene	53-70-3	N.D.	18	4	1
10726	Dibenzofuran	132-64-9	N.D.	40	18	1
10726	3,3'-Dichlorobenzidine	91-94-1	N.D.	370	110	1
10726	2,4-Dichlorophenol	120-83-2	N.D.	40	18	1
10726	Dicyclohexylamine	101-83-7	N.D.	2,200	730	1
10726	Diethylphthalate	84-66-2	N.D.	180	73	1
10726	N,N-Dimethylaniline	121-69-7	N.D.	180	37	1
10726	2,4-Dimethylphenol	105-67-9	N.D.	40	18	1
10726	Dimethylphthalate	131-11-3	N.D.	180	73	1
10726	4,6-Dinitro-2-methylphenol	534-52-1	N.D.	550	180	1
10726	2,4-Dinitrophenol	51-28-5	N.D.	1,100	400	1
10726	2,4-Dinitrotoluene	121-14-2	N.D.	180	73	1
10726	2,6-Dinitrotoluene	606-20-2	N.D.	55	22	1
10726	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	180	73	1

*=This limit was used in the evaluation of the final result

Sample Description: **West Floor Vault Composite Soil**
B0087363.0028/BMS

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 11/01/2018 10:40
Collection Date/Time: 10/31/2018 14:00
SDG#: BMS68-02

ARCADIS U.S., Inc.
ELLE Sample #: SW 9878918
ELLE Group #: 2004714
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	Fluoranthene	206-44-0	N.D.	18	4	1
10726	Fluorene	86-73-7	N.D.	18	4	1
10726	Hexachlorobenzene	118-74-1	N.D.	18	4	1
10726	Hexachlorobutadiene	87-68-3	N.D.	55	22	1
10726	Hexachlorocyclopentadiene	77-47-4	N.D.	550	180	1
10726	Hexachloroethane	67-72-1	N.D.	180	37	1
10726	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	18	7	1
10726	Isophorone	78-59-1	N.D.	40	18	1
10726	2-Methylnaphthalene	91-57-6	N.D.	37	11	1
10726	2-Methylphenol	95-48-7	N.D.	73	29	1
10726	4-Methylphenol	65794-96-9	N.D.	55	22	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.	55	22	1
10726	3-Nitroaniline	99-09-2	N.D.	180	73	1
10726	4-Nitroaniline	100-01-6	N.D.	180	73	1
10726	Nitrobenzene	98-95-3	N.D.	73	29	1
10726	2-Nitrophenol	88-75-5	N.D.	40	18	1
10726	4-Nitrophenol	100-02-7	N.D.	550	180	1
10726	N-Nitroso-di-n-propylamine	621-64-7	N.D.	55	22	1
10726	N-Nitrosodiphenylamine	86-30-6	N.D.	40	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	73	1
10726	Pentachlorophenol	87-86-5	N.D.	180	40	1
10726	Phenanthrene	85-01-8	N.D.	18	4	1
10726	Phenol	108-95-2	N.D.	55	26	1
10726	Pyrene	129-00-0	N.D.	18	4	1
10726	Pyridine	110-86-1	N.D.	180	73	1
10726	1,2,4,5-Tetrachlorobenzene	95-94-3	N.D.	40	18	1
10726	2,3,4,6-Tetrachlorophenol	58-90-2	N.D.	180	73	1
10726	2,4,5-Trichlorophenol	95-95-4	N.D.	55	22	1
10726	2,4,6-Trichlorophenol	88-06-2	N.D.	55	22	1
10726	Triethylamine	121-44-8	N.D.	5,500	1,800	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: Di-n-butylphthalate

00886 SVOA TIC Interpretive(25)

*=This limit was used in the evaluation of the final result

Sample Description: **West Floor Vault Composite Soil**
B0087363.0028/BMS

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 11/01/2018 10:40
Collection Date/Time: 10/31/2018 14:00
SDG#: BMS68-02

ARCADIS U.S., Inc.
ELLE Sample #: SW 9878918
ELLE Group #: 2004714
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Limit of Quantitation*	Dry 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 Volatiles	**SW-846 8015D Rev.4, June 2003**		**mg/kg**	**mg/kg**	**mg/kg**	
10599	TPH-GRO soil C6-C10	n.a.	N.D.	0.7	0.1	16.47
Aldehydes & Ketones	**SW-846 8315A**		**mg/kg**	**mg/kg**	**mg/kg**	
13031	Acetaldehyde	75-07-0	6.1	1.1	0.53	1
13031	Formaldehyde	50-00-0	5.0	1.6	1.4	1
GC Miscellaneous	**SW-846 8015C Feb 2007 Rev 3**		**mg/kg**	**mg/kg**	**mg/kg**	
12925	Ethylene glycol	107-21-1	N.D.	11	5.5	1
12925	Propylene glycol	57-55-6	N.D.	11	5.5	1
GC Miscellaneous	**SW-846 8015D Rev.4, June 2003**		**mg/kg**	**mg/kg**	**mg/kg**	
10604	Ethanol (by Direct Injection)	64-17-5	N.D. D2	1.1	0.13	1
10604	Isopropanol	67-63-0	N.D. D2	1.1	0.051	1
10604	Methanol (by Direct Injection)	67-56-1	0.78 JD2	1.1	0.22	1
GC Petroleum Hydrocarbons	**SW-846 8015C Feb 2007 Rev 3**		**mg/kg**	**mg/kg**	**mg/kg**	
13567	DRO C10-C28	n.a.	54	13	5.8	1
13567	ORO >C28 - C40	n.a.	N.D.	13	5.8	1
Wet Chemistry	**SM 2540 G-2011 %Moisture Calc**		**%**	**%**	**%**	
00111	Moisture	n.a.	9.7	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

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: **West Floor Vault Composite Soil**
B0087363.0028/BMS

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 11/01/2018 10:40
Collection Date/Time: 10/31/2018 14:00
SDG#: BMS68-02

ARCADIS U.S., Inc.
ELLE Sample #: SW 9878918
ELLE Group #: 2004714
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	SW-846 8260C	1	B183111AA	11/07/2018 16:30	Jennifer K Howe	0.61
06176	GC/MS - LL DIH2O Prep	SW-846 5035A	1	201830551784	11/01/2018 22:50	Lois E Hiltz	1
06176	GC/MS - LL DIH2O Prep	SW-846 5035A	2	201830551784	11/01/2018 22:50	Lois E Hiltz	1
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	201830551784	10/31/2018 14:00	Client Supplied	1
10726	SVOA 8270D (microwave)	SW-846 8270D	1	18310SLE026	11/08/2018 21:52	Linda M Hartenstine	1
10813	BNA Soil Microwave APP IX	SW-846 3546	1	18310SLE026	11/06/2018 16:30	Osvaldo R Sanchez	1
10599	TPH-GRO soils C6-C10	SW-846 8015D Rev.4, June 2003	1	18311A34A	11/08/2018 20:33	Jeremy C Giffin	16.47
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201830551784	10/31/2018 14:00	Client Supplied	n.a.
13031	Short List Aldehydes- S 8315A	SW-846 8315A	1	183060004A	11/06/2018 12:53	James H Place	1
05876	Formaldehyde Solid Extraction	SW-846 8315A	1	183060004A	11/03/2018 10:00	Olivia Arosemena	1
12925	Glycols in Soil by 8015C	SW-846 8015C Feb 2007 Rev 3	1	183110035A	11/07/2018 21:56	Donald Brown	1
10604	Alcohols in Soil	SW-846 8015D Rev.4, June 2003	1	183090035A	11/06/2018 16:47	Johanna C Kennedy	1
13567	TPH DRO/ORO soil 8015C/D(3546)	SW-846 8015C Feb 2007 Rev 3	1	183110026A	11/08/2018 17:11	Thomas C Wildermuth	1
11221	TPH DRO/ORO Solid 3546 EXT	SW-846 3546	1	183110026A	11/07/2018 17:00	Osvaldo R Sanchez	1
13121	Glycol Solids Ext. 8015C	SW-846 8015C Feb 2007 Rev 3	1	183110035A	11/07/2018 14:23	Donald Brown	1
00380	Solids Extraction for Alcohols	SW-846 8015D Rev 4 06/2003 Mod	1	183090035A	11/05/2018 14:05	Johanna C Kennedy	1
00111	Moisture	SM 2540 G-2011 %Moisture Calc	1	18306820004B	11/03/2018 22:31	Scott W Freisher	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.
BMWFV

Lab Name: Lancaster Laboratories Contract:_____
Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____
Matrix: (soil/water) SOIL Lab Sample ID: 9878918
Sample wt/vol: 8.16 (g/mL) g Lab File ID: HP09953.i/18nov07a.b/bn07s02.d
Level: (low/med) LOW Date Received: 11/01/18
% Moisture: not dec. 9.7 Date Analyzed: 11/07/18
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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FORM I VOA-TIC

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
BMWFV

Lab Name: Lancaster Laboratories Contract:
Lab Code: LANCAS Case No.: SAS No.: SDG No.:
Matrix: (soil/water) SOIL Lab Sample ID: 9878918
Sample wt/vol: 30.27(g/mL) g Lab File ID: ok0468.d
Level: (low/med) LOW Date Received: 11/01/18
% Moisture: 9.7 Decanted: (Y/N) Date Extracted: 11/06/18
Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/08/18
Injection Volume: 1 (uL) Dilution Factor: 1
GPC Cleanup: N pH: Extraction: Mic
CONCENTRATION UNITS:
Number TICs found: 9 (ug/L or ug/Kg) ug/Kg

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		Unknown	1.081	350	JB
2.	625-86-5	Furan, 2,5-dimethyl-	1.434	180	JB
3.		Unknown	1.852	260	JB
4.	141-79-7	3-Penten-2-one, 4-methyl-	2.504	5200	JB
5.		Unknown	3.099	2000	J
6.		Unknown	7.639	180	J
7.		Unknown	8.439	56000	J
8.		Unknown	9.322	410	J
9.	301-02-0	9-Octadecenamide, (Z)-	11.292	220	J
10.					
11.	SVOCTIC	Total SVOC TICs		65000	JB
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page 1 of 1

FORM I SV-1

Sample Description: **Trip Blank-18299 Water**
B0087363.0028/BMS

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 11/01/2018 10:40
Collection Date/Time: 10/29/2018
SDG#: BMS68-03TB

ARCADIS U.S., Inc.
ELLE Sample #: WW 9878919
ELLE Group #: 2004714
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	0.2	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	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	0.2	1
11997	Cyclohexanone	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-18299 Water**
B0087363.0028/BMS

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 11/01/2018 10:40
Collection Date/Time: 10/29/2018
SDG#: BMS68-03TB

ARCADIS U.S., Inc.
ELLE Sample #: WW 9878919
ELLE Group #: 2004714
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	142-82-5	N.D.	5	0.2	1
11997	n-Hexane	110-54-3	N.D.	5	0.2	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	0.2	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.	5	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.

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-18299 Water**
B0087363.0028/BMS

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 11/01/2018 10:40
Collection Date/Time: 10/29/2018
SDG#: BMS68-03TB

ARCADIS U.S., Inc.
ELLE Sample #: WW 9878919
ELLE Group #: 2004714
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC Volatiles		**SW-846 8015D Rev.4, June 2003**	ug/l	ug/l	ug/l	
10598	TPH-GRO water C6-C10	n.a.	N.D.	50	11	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
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	L183131AA	11/09/2018 13:48	Angela D Sneeringer	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	L183131AA	11/09/2018 13:48	Angela D Sneeringer	1
10598	TPH-GRO water C6-C10	SW-846 8015D Rev.4, June 2003	1	18310A20A	11/06/2018 17:56	Jeremy C Giffin	1
01146	GC VOA Water Prep	SW-846 5030C	1	18310A20A	11/06/2018 17:56	Jeremy C Giffin	1

*=This limit was used in the evaluation of the final result

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
BM-TB

Lab Name: Lancaster Laboratories Contract:_____
Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____
Matrix: (soil/water) WATER Lab Sample ID: 9878919
Sample wt/vol: 5.0 (g/mL)mL Lab File ID:HP09915.i/18nov09a.b/ln09s06.d
Level: (low/med) LOW Date Received: 11/01/18
% Moisture: not dec. Date Analyzed: 11/09/18
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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FORM I VOA-TIC

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Quality Control Summary

Client Name: ARCADIS U.S., Inc. Group Number: 2004714
Reported: 11/19/2018 10:23

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: B183111AA	Sample number(s): 9878915-9878918		
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	0.0004
Dibromochloromethane	N.D.	0.005	0.0004
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	0.0003
1,4-Dioxane	N.D.	0.25	0.037
Ethyl Acetate	N.D.	0.005	0.001

*- 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: 11/19/2018 10:23

Group Number: 2004714

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	0.001
Styrene	N.D.	0.005	0.0003
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.	0.005	0.001
	ug/l	ug/l	ug/l
Batch number: L183131AA	Sample number(s): 9878919		
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	0.2
Bromomethane	N.D.	1	0.3
n-Butanol	N.D.	250	61
2-Butanone	N.D.	10	0.3

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Quality Control Summary

Client Name: ARCADIS U.S., Inc.
Reported: 11/19/2018 10:23

Group Number: 2004714

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	0.2
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	0.2
n-Hexane	N.D.	5	0.2
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	0.2
Methylene Chloride	N.D.	1	0.3
Naphthalene	N.D.	5	1

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Quality Control Summary

Client Name: ARCADIS U.S., Inc.
Reported: 11/19/2018 10:23

Group Number: 2004714

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.	5	1
	ug/kg	ug/kg	ug/kg
Batch number: 18310SLE026	Sample number(s): 9878915-9878918		
Acenaphthene	N.D.	17	3
Acenaphthylene	N.D.	17	3
Acetophenone	N.D.	50	23
Aniline	N.D.	500	170
Anthracene	N.D.	17	3
Atrazine	N.D.	170	33
Benzaldehyde	N.D.	170	67
Benzo(a)anthracene	N.D.	17	3
Benzo(a)pyrene	N.D.	17	7
Benzo(b)fluoranthene	N.D.	17	3
Benzo(g,h,i)perylene	N.D.	17	7
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	20
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.	37	17
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.	37	17

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Quality Control Summary

Client Name: ARCADIS U.S., Inc.
Reported: 11/19/2018 10:23

Group Number: 2004714

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.	37	17
Chrysene	N.D.	17	3
Dibenz(a,h)anthracene	N.D.	17	3
Dibenzofuran	N.D.	37	17
3,3'-Dichlorobenzidine	N.D.	330	100
2,4-Dichlorophenol	N.D.	37	17
Dicyclohexylamine	N.D.	2,000	670
Diethylphthalate	N.D.	170	67
N,N-Dimethylaniline	N.D.	170	33
2,4-Dimethylphenol	N.D.	37	17
Dimethylphthalate	N.D.	170	67
4,6-Dinitro-2-methylphenol	N.D.	500	170
2,4-Dinitrophenol	N.D.	1,000	370
2,4-Dinitrotoluene	N.D.	170	67
2,6-Dinitrotoluene	N.D.	50	20
bis(2-Ethylhexyl)phthalate	N.D.	170	67
Fluoranthene	N.D.	17	3
Fluorene	N.D.	17	3
Hexachlorobenzene	N.D.	17	3
Hexachlorobutadiene	N.D.	50	20
Hexachlorocyclopentadiene	N.D.	500	170
Hexachloroethane	N.D.	170	33
Indeno(1,2,3-cd)pyrene	N.D.	17	7
Isophorone	N.D.	37	17
2-Methylnaphthalene	N.D.	33	10
2-Methylphenol	N.D.	67	27
4-Methylphenol	N.D.	50	20
Naphthalene	N.D.	17	7
2-Nitroaniline	N.D.	50	20
3-Nitroaniline	N.D.	170	67
4-Nitroaniline	N.D.	170	67
Nitrobenzene	N.D.	67	27
2-Nitrophenol	N.D.	37	17
4-Nitrophenol	N.D.	500	170
N-Nitroso-di-n-propylamine	N.D.	50	20
N-Nitrosodiphenylamine	N.D.	37	17
Di-n-octylphthalate	N.D.	170	67
Pentachlorophenol	N.D.	170	37
Phenanthrene	N.D.	17	3
Phenol	N.D.	50	23
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: 2004714
Reported: 11/19/2018 10:23

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.	50	20
2,4,6-Trichlorophenol	N.D.	50	20
Triethylamine	N.D.	5,000	1,700
	mg/kg	mg/kg	mg/kg
Batch number: 18311A34A	Sample number(s): 9878915-9878918		
TPH-GRO soil C6-C10	N.D.	1.0	0.2
	ug/l	ug/l	ug/l
Batch number: 18310A20A	Sample number(s): 9878919		
TPH-GRO water C6-C10	N.D.	50	11
	mg/kg	mg/kg	mg/kg
Batch number: 183060004A	Sample number(s): 9878915-9878918		
Acetaldehyde	N.D.	1.0	0.50
Formaldehyde	N.D.	1.5	1.3
Batch number: 183090035A	Sample number(s): 9878915-9878918		
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: 183110035A	Sample number(s): 9878915-9878918		
Ethylene glycol	N.D.	10	5.0
Propylene glycol	N.D.	10	5.0
Batch number: 183110026A	Sample number(s): 9878915-9878918		
DRO C10-C28	N.D.	12	5.3
ORO >C28 - C40	N.D.	12	5.3

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: B183111AA	Sample number(s): 9878915-9878918								
Acetone	0.150	0.119	0.150	0.112	80	75	41-150	6	30
Acetonitrile	0.150	0.176	0.150	0.194	117	130*	61-120	10	30
Benzene	0.0200	0.0210	0.0200	0.0216	105	108	80-120	3	30
Bromochloromethane	0.0200	0.0197	0.0200	0.0201	98	101	72-124	2	30
Bromodichloromethane	0.0200	0.0201	0.0200	0.0208	100	104	70-120	3	30
Bromoform	0.0200	0.0162	0.0200	0.0172	81	86	51-127	6	30
Bromomethane	0.0200	0.0172	0.0200	0.0173	86	86	45-140	1	30

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Quality Control Summary

Client Name: ARCADIS U.S., Inc.
Reported: 11/19/2018 10:23

Group Number: 2004714

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-Butanol	1.00	0.820	1.00	0.848	82	85	63-123	3	30
2-Butanone	0.150	0.114	0.150	0.110	76	73	57-128	3	30
t-Butyl alcohol	0.200	0.179	0.200	0.188	89	94	74-121	5	30
n-Butylbenzene	0.0200	0.0219	0.0200	0.0220	110	110	71-121	0	30
sec-Butylbenzene	0.0200	0.0207	0.0200	0.0212	104	106	72-120	3	30
tert-Butylbenzene	0.0200	0.0202	0.0200	0.0206	101	103	68-120	2	30
Carbon Disulfide	0.0200	0.0193	0.0200	0.0197	96	99	64-133	2	30
Carbon Tetrachloride	0.0200	0.0214	0.0200	0.0217	107	108	64-134	1	30
Chlorobenzene	0.0200	0.0203	0.0200	0.0208	102	104	80-120	2	30
Chlorodifluoromethane	0.0200	0.0299	0.0200	0.0281	149*	140*	60-133	6	30
Chloroethane	0.0200	0.0184	0.0200	0.0183	92	92	43-135	1	30
Chloroform	0.0200	0.0213	0.0200	0.0217	107	109	80-120	2	30
Chloromethane	0.0200	0.0198	0.0200	0.0197	99	99	56-120	0	30
Cyclohexane	0.0200	0.0231	0.0200	0.0233	115	117	58-126	1	30
Cyclohexanone	0.500	0.345	0.500	0.349	69	70	47-136	1	30
1,2-Dibromo-3-chloropropane	0.0200	0.0167	0.0200	0.0176	84	88	48-134	5	30
Dibromochloromethane	0.0200	0.0183	0.0200	0.0194	91	97	69-125	6	30
1,2-Dibromoethane	0.0200	0.0194	0.0200	0.0201	97	101	76-120	4	30
1,2-Dichlorobenzene	0.0200	0.0199	0.0200	0.0203	99	102	76-120	2	30
1,3-Dichlorobenzene	0.0200	0.0198	0.0200	0.0202	99	101	75-120	2	30
1,4-Dichlorobenzene	0.0200	0.0199	0.0200	0.0203	100	101	80-120	2	30
Dichlorodifluoromethane	0.0200	0.0165	0.0200	0.0169	82	84	21-127	2	30
1,1-Dichloroethane	0.0200	0.0218	0.0200	0.0221	109	111	79-120	1	30
1,2-Dichloroethane	0.0200	0.0212	0.0200	0.0219	106	109	71-128	3	30
1,1-Dichloroethene	0.0200	0.0230	0.0200	0.0230	115	115	73-129	0	30
cis-1,2-Dichloroethene	0.0200	0.0224	0.0200	0.0226	112	113	80-123	1	30
trans-1,2-Dichloroethene	0.0200	0.0217	0.0200	0.0220	109	110	80-125	1	30
1,2-Dichloropropane	0.0200	0.0217	0.0200	0.0222	109	111	80-120	2	30
cis-1,3-Dichloropropene	0.0200	0.0201	0.0200	0.0212	101	106	66-120	5	30
trans-1,3-Dichloropropene	0.0200	0.0183	0.0200	0.0196	92	98	68-122	7	30
1,4-Dioxane	0.500	0.462	0.500	0.452	92	90	62-131	2	30
Ethyl Acetate	0.0200	0.0199	0.0200	0.0192	99	96	65-133	4	30
Ethyl Ether	0.0200	0.0150	0.0200	0.0147	75	73	59-135	2	30
Ethylbenzene	0.0200	0.0207	0.0200	0.0208	104	104	78-120	0	30
Freon 113	0.0200	0.0252	0.0200	0.0254	126	127	64-135	1	30
n-Heptane	0.0200	0.0300	0.0200	0.0303	150*	152*	50-141	1	30
n-Hexane	0.0200	0.0259	0.0200	0.0243	130	122	50-132	6	30
2-Hexanone	0.100	0.0670	0.100	0.0750	67	75	54-140	11	30
Isobutyl Alcohol	0.500	0.465	0.500	0.451	93	90	69-129	3	30
Isopropylbenzene	0.0200	0.0208	0.0200	0.0211	104	105	77-120	1	30
p-Isopropyltoluene	0.0200	0.0212	0.0200	0.0212	106	106	72-120	0	30
Methyl Acetate	0.0200	0.0210	0.0200	0.0214	105	107	67-128	2	30
Methyl Tertiary Butyl Ether	0.0200	0.0188	0.0200	0.0199	94	99	72-120	6	30
4-Methyl-2-pentanone	0.100	0.0753	0.100	0.0835	75	83	67-128	10	30

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Quality Control Summary

Client Name: ARCADIS U.S., Inc. Group Number: 2004714
Reported: 11/19/2018 10:23

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
Methylcyclohexane	0.0200	0.0242	0.0200	0.0246	121	123	61-124	2	30
Methylene Chloride	0.0200	0.0201	0.0200	0.0205	101	103	76-122	2	30
Naphthalene	0.0200	0.0173	0.0200	0.0185	87	93	48-130	7	30
2-Nitropropane	0.0200	0.0117	0.0200	0.0111	59	56	27-183	5	30
Styrene	0.0200	0.0192	0.0200	0.0195	96	98	76-120	2	30
1,1,2,2-Tetrachloroethane	0.0200	0.0184	0.0200	0.0197	92	99	69-125	7	30
Tetrachloroethene	0.0200	0.0180	0.0200	0.0183	90	91	73-120	2	30
Tetrahydrofuran	0.100	0.0857	0.100	0.0832	86	83	71-127	3	30
Toluene	0.0200	0.0205	0.0200	0.0208	102	104	80-120	1	30
1,2,3-Trichlorobenzene	0.0200	0.0198	0.0200	0.0202	99	101	57-131	2	30
1,2,4-Trichlorobenzene	0.0200	0.0199	0.0200	0.0201	99	100	56-130	1	30
1,1,1-Trichloroethane	0.0200	0.0188	0.0200	0.0191	94	95	69-123	2	30
1,1,2-Trichloroethane	0.0200	0.0203	0.0200	0.0212	102	106	80-120	4	30
Trichloroethene	0.0200	0.0215	0.0200	0.0218	108	109	80-120	1	30
Trichlorofluoromethane	0.0200	0.0188	0.0200	0.0188	94	94	55-134	0	30
1,2,4-Trimethylbenzene	0.0200	0.0197	0.0200	0.0201	98	100	73-120	2	30
1,3,5-Trimethylbenzene	0.0200	0.0200	0.0200	0.0205	100	102	73-120	2	30
Vinyl Chloride	0.0200	0.0188	0.0200	0.0192	94	96	52-120	2	30
m+p-Xylene	0.0400	0.0422	0.0400	0.0424	106	106	80-120	0	30
o-Xylene	0.0200	0.0198	0.0200	0.0202	99	101	75-120	2	30
Xylene (Total)	0.0600	0.0620	0.0600	0.0625	103	104	75-120	1	30
	ug/l	**ug/l**	**ug/l**	**ug/l**					
Batch number: L183131AA	Sample number(s): 9878919								
Acetone	150	251.51			168*		54-157		
Acetonitrile	150	120.45	150	135	80	90	66-149	11	30
Benzene	20	22.08			110		80-120		
Bromochloromethane	20	19.98			100		80-120		
Bromodichloromethane	20	19.92			100		71-120		
Bromoform	20	17.6			88		51-120		
Bromomethane	20	14.33			72		53-128		
n-Butanol	1000	990.11			99		57-130		
2-Butanone	150	170.62			114		59-135		
t-Butyl alcohol	200	151.02			76		60-130		
n-Butylbenzene	20	20.22			101		76-120		
sec-Butylbenzene	20	21.64			108		77-120		
tert-Butylbenzene	20	19.39			97		78-120		
Carbon Disulfide	20	18.83			94		65-128		
Carbon Tetrachloride	20	19.05			95		64-134		
Chlorobenzene	20	22.1			111		80-120		
Chlorodifluoromethane	20	14.37	20	14.84	72	74	45-149	3	30
Chloroethane	20	15.44			77		55-123		
Chloroform	20	21.2			106		80-120		
Chloromethane	20	15.28			76		56-121		

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Quality Control Summary

Client Name: ARCADIS U.S., Inc.
Reported: 11/19/2018 10:23

Group Number: 2004714

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	20.32			102		68-126		
Cyclohexanone	500	490.02			98		27-141		
1,2-Dibromo-3-chloropropane	20	19.17			96		47-131		
Dibromochloromethane	20	20.75			104		71-120		
1,2-Dibromoethane	20	22.18			111		77-120		
1,2-Dichlorobenzene	20	21.8			109		80-120		
1,3-Dichlorobenzene	20	21.78			109		80-120		
1,4-Dichlorobenzene	20	21.92			110		80-120		
Dichlorodifluoromethane	20	13.23			66		41-127		
1,1-Dichloroethane	20	21.07			105		80-120		
1,2-Dichloroethane	20	19.82			99		73-124		
1,1-Dichloroethene	20	22.69			113		80-131		
cis-1,2-Dichloroethene	20	22.65			113		80-120		
trans-1,2-Dichloroethene	20	22.77			114		80-120		
1,2-Dichloropropane	20	21.52			108		80-120		
cis-1,3-Dichloropropene	20	20.22			101		75-120		
trans-1,3-Dichloropropene	20	19.37			97		67-120		
1,4-Dioxane	500	592.45			118		63-146		
Ethyl Acetate	20	18.13	20	18.29	91	91	67-131	1	30
Ethyl ether	20	17.54			88		59-141		
Ethylbenzene	20	21.88			109		80-120		
Freon 113	20	22.01			110		73-139		
n-Heptane	20	19.83			99		56-133		
n-Hexane	20	20.66			103		61-138		
2-Hexanone	100	105.02			105		56-135		
Isobutyl Alcohol	500	473.83			95		61-136		
Isopropylbenzene	20	22.24			111		80-120		
p-Isopropyltoluene	20	21.35			107		76-120		
Methyl Acetate	20	19.76			99		54-136		
Methyl Tertiary Butyl Ether	20	19.27			96		69-122		
4-Methyl-2-pentanone	100	97.26			97		62-133		
Methylcyclohexane	20	20.12			101		67-121		
Methylene Chloride	20	21.9			109		80-120		
Naphthalene	20	19.47			97		53-124		
2-Nitropropane	20	12.54			63		19-144		
Styrene	20	22.04			110		80-120		
1,1,2,2-Tetrachloroethane	20	21.14			106		72-120		
Tetrachloroethene	20	22.75			114		80-120		
Tetrahydrofuran	100	118.88			119		54-144		
Toluene	20	22.33			112		80-120		
1,2,3-Trichlorobenzene	20	20.16			101		66-120		
1,2,4-Trichlorobenzene	20	20.7			103		63-120		
1,1,1-Trichloroethane	20	20.27			101		67-126		
1,1,2-Trichloroethane	20	22.75			114		80-120		

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Quality Control Summary

Client Name: ARCADIS U.S., Inc. Group Number: 2004714
Reported: 11/19/2018 10:23

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	21.53			108		80-120		
Trichlorofluoromethane	20	15.59			78		55-135		
1,2,4-Trimethylbenzene	20	21.37			107		75-120		
1,3,5-Trimethylbenzene	20	21.43			107		75-120		
Vinyl Chloride	20	16.15			81		56-120		
m+p-Xylene	40	44.66			112		80-120		
o-Xylene	20	22.06			110		80-120		
Xylene (Total)	60	66.72			111		80-120		
	ug/kg	**ug/kg**	**ug/kg**	**ug/kg**					
Batch number: 18310SLE026	Sample number(s): 9878915-9878918								
Acenaphthene	1666.67	1688.43			101		85-114		
Acenaphthylene	1666.67	1778.48			107		80-120		
Acetophenone	1666.67	1507.71			90		77-110		
Aniline	1666.67	1200.86			72		44-113		
Anthracene	1666.67	1549.33			93		82-113		
Atrazine	1666.67	1547.53			93		68-123		
Benzaldehyde	1666.67	615.11			37		31-119		
Benzo(a)anthracene	1666.67	1559.73			94		76-111		
Benzo(a)pyrene	1666.67	1623.15			97		82-114		
Benzo(b)fluoranthene	1666.67	1573.71			94		78-115		
Benzo(g,h,i)perylene	1666.67	1690.14			101		76-111		
Benzo(k)fluoranthene	1666.67	1618.17			97		78-119		
Benzyl alcohol	1666.67	1424.18			85		69-125		
1,1'-Biphenyl	1666.67	1615.82			97		84-112		
4-Bromophenyl-phenylether	1666.67	1495.51			90		81-116		
Butylbenzylphthalate	1666.67	1679.7			101		81-113		
Di-n-butylphthalate	1666.67	1399.58			84*		85-115		
Caprolactam	1666.67	1643.3			99		75-118		
Carbazole	1666.67	1411.42			85		84-117		
4-Chloro-3-methylphenol	1666.67	1823.13			109		78-127		
4-Chloroaniline	1666.67	654.49			39		10-125		
bis(2-Chloroethoxy)methane	1666.67	1606.52			96		72-117		
bis(2-Chloroethyl)ether	1666.67	1559.01			94		74-109		
bis(2-Chloroisopropyl)ether	1666.67	1754.89			105		68-115		
2-Chloronaphthalene	1666.67	1374.89			82		62-138		
2-Chlorophenol	1666.67	1544.59			93		85-116		
4-Chlorophenyl-phenylether	1666.67	1707.31			102		79-112		
Chrysene	1666.67	1585.65			95		75-109		
Dibenz(a,h)anthracene	1666.67	1729.57			104		79-117		
Dibenzofuran	1666.67	1729.94			104		84-110		
3,3'-Dichlorobenzidine	1666.67	1209.96			73		26-124		
2,4-Dichlorophenol	1666.67	1696.23			102		80-120		
Dicyclohexylamine	1666.67	1706.73	1666.67	1555.87	102	93	49-141	9	30

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Quality Control Summary

Client Name: ARCADIS U.S., Inc. Group Number: 2004714
Reported: 11/19/2018 10:23

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
Diethylphthalate	1666.67	1728.96			104		81-113		
N,N-Dimethylaniline	833.25	763.96	833.25	779.31	92	94	32-133	2	30
2,4-Dimethylphenol	1666.67	1465.54			88		66-106		
Dimethylphthalate	1666.67	1579.1			95		82-110		
4,6-Dinitro-2-methylphenol	1666.67	1489.87			89		73-127		
2,4-Dinitrophenol	3333.33	3104.78			93		41-136		
2,4-Dinitrotoluene	1666.67	1711.8			103		82-116		
2,6-Dinitrotoluene	1666.67	1739.34			104		86-116		
bis(2-Ethylhexyl)phthalate	1666.67	1704.03			102		78-118		
Fluoranthene	1666.67	1346.77			81		76-115		
Fluorene	1666.67	1769.45			106		80-112		
Hexachlorobenzene	1666.67	1447.36			87		77-114		
Hexachlorobutadiene	1666.67	1543.16			93		75-115		
Hexachlorocyclopentadiene	3333.33	2653.35			80		37-161		
Hexachloroethane	1666.67	1386.87			83		76-106		
Indeno(1,2,3-cd)pyrene	1666.67	1595.53			96		78-113		
Isophorone	1666.67	1703.26			102		76-115		
2-Methylnaphthalene	1666.67	1540.01			92		80-111		
2-Methylphenol	1666.67	1617.41			97		80-122		
4-Methylphenol	1666.67	1540.72			92		75-121		
Naphthalene	1666.67	1518.21			91		81-111		
2-Nitroaniline	1666.67	1683.43			101		81-126		
3-Nitroaniline	1666.67	1594.01			96		60-128		
4-Nitroaniline	1666.67	1634.24			98		54-103		
Nitrobenzene	1666.67	1741.95			105		75-114		
2-Nitrophenol	1666.67	1638.02			98		85-118		
4-Nitrophenol	1666.67	1694.53			102		54-124		
N-Nitroso-di-n-propylamine	1666.67	1569.62			94		70-114		
N-Nitrosodiphenylamine	1666.67	1636.47			98		80-120		
Di-n-octylphthalate	1666.67	1837.12			110		84-128		
Pentachlorophenol	1666.67	1158.66			70		47-134		
Phenanthrene	1666.67	1516.69			91		81-109		
Phenol	1666.67	1582.67			95		74-119		
Pyrene	1666.67	1562.44			94		80-107		
Pyridine	1666.67	1794.01			108*		57-96		
1,2,4,5-Tetrachlorobenzene	1666.67	1606.59			96		76-116		
2,3,4,6-Tetrachlorophenol	1666.67	1598.38			96		73-127		
2,4,5-Trichlorophenol	1666.67	1794.21			108		80-120		
2,4,6-Trichlorophenol	1666.67	1768.11			106		80-120		
Triethylamine	1666.67	1821.42	1666.67	1775.14	109	107	70-130	3	30
	mg/kg	**mg/kg**	**mg/kg**	**mg/kg**					
Batch number: 18311A34A	Sample number(s): 9878915-9878918								
TPH-GRO soil C6-C10	11	11.73			107		60-132		

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Quality Control Summary

Client Name: ARCADIS U.S., Inc. Group Number: 2004714
Reported: 11/19/2018 10:23

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
	ug/l	ug/l	ug/l	ug/l					
Batch number: 18310A20A	Sample number(s): 9878919								
TPH-GRO water C6-C10	1100	1084.84			99		70-123		
	mg/kg	mg/kg	mg/kg	mg/kg					
Batch number: 183060004A	Sample number(s): 9878915-9878918								
Acetaldehyde	10	9.56			96		72-144		
Formaldehyde	10	9.18			92		45-149		
	mg/kg	mg/kg	mg/kg	mg/kg					
Batch number: 183090035A	Sample number(s): 9878915-9878918								
Ethanol (by Direct Injection)	2.52	2.26			90		77-120		
Isopropanol	2.52	2.32			92		75-125		
Methanol (by Direct Injection)	2.51	2.37			94		76-119		
Batch number: 183110035A	Sample number(s): 9878915-9878918								
Ethylene glycol	103.98	104.31			100		76-122		
Propylene glycol	102.78	101.26			99		67-131		
	mg/kg	mg/kg	mg/kg	mg/kg					
Batch number: 183110026A	Sample number(s): 9878915-9878918								
DRO C10-C28	133.36	130.55			98		76-117		
	%	%	%	%					
Batch number: 18306820004B	Sample number(s): 9878915-9878918								
Moisture	89.5	89.44			100		99-101		
Moisture	89.5	89.44			100		99-101		
Moisture Duplicate	89.5	89.44			100		99-101		

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc mg/kg	MS Spike Added mg/kg	MS Conc mg/kg	MSD Spike Added mg/kg	MSD Conc mg/kg	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: B183111AA	Sample number(s): 9878915-9878918 UNSPK: 9878915									
Acetone	0.0245	0.101	0.131	0.137	0.132	105	79	41-150	1	30
Acetonitrile	N.D.	0.0999	0.121	0.138	0.145	121*	105	61-120	18	30
Benzene	N.D.	0.0135	0.0136	0.0183	0.0173	100	94	80-120	24	30
Bromochloromethane	N.D.	0.0135	0.0116	0.0183	0.0164	86	90	72-124	34*	30

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Quality Control Summary

Client Name: ARCADIS U.S., Inc. Group Number: 2004714
Reported: 11/19/2018 10:23

MS/MSD (continued)

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc mg/kg	MS Spike Added mg/kg	MS Conc mg/kg	MSD Spike Added mg/kg	MSD Conc mg/kg	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Bromodichloromethane	N.D.	0.0135	0.0118	0.0183	0.0165	88	90	70-120	33*	30
Bromoform	N.D.	0.0135	0.00852	0.0183	0.0124	63	68	51-127	37*	30
Bromomethane	N.D.	0.0135	0.0115	0.0183	0.0137	85	75	45-140	17	30
n-Butanol	N.D.	0.676	0.496	0.914	0.692	73	76	63-123	33*	30
2-Butanone	0.000942	0.101	0.0907	0.137	0.113	89	81	57-128	22	30
t-Butyl alcohol	N.D.	0.135	0.120	0.183	0.150	89	82	74-121	22	30
n-Butylbenzene	N.D.	0.0135	0.0101	0.0183	0.0126	75	69*	71-121	22	30
sec-Butylbenzene	N.D.	0.0135	0.0106	0.0183	0.0132	79	72	72-120	21	30
tert-Butylbenzene	N.D.	0.0135	0.0110	0.0183	0.0138	81	76	68-120	23	30
Carbon Disulfide	N.D.	0.0135	0.00934	0.0183	0.0138	69	75	64-133	38*	30
Carbon Tetrachloride	N.D.	0.0135	0.0142	0.0183	0.0172	105	94	64-134	19	30
Chlorobenzene	N.D.	0.0135	0.0119	0.0183	0.0154	88	84	80-120	25	30
Chlorodifluoromethane	N.D.	0.0133	0.0171	0.0184	0.0227	128	123	60-133	28	30
Chloroethane	N.D.	0.0135	0.0130	0.0183	0.0148	96	81	43-135	13	30
Chloroform	N.D.	0.0135	0.0140	0.0183	0.0181	103	99	80-120	26	30
Chloromethane	N.D.	0.0135	0.0145	0.0183	0.0172	108	94	56-120	17	30
Cyclohexane	0.000474	0.0135	0.0157	0.0183	0.0183	112	98	58-126	16	30
Cyclohexanone	N.D.	0.338	0.240	0.457	0.335	71	73	47-136	33*	30
1,2-Dibromo-3-chloropropane	N.D.	0.0135	0.00858	0.0183	0.0124	63	68	48-134	36*	30
Dibromochloromethane	N.D.	0.0135	0.0105	0.0183	0.0150	78	82	69-125	35*	30
1,2-Dibromoethane	N.D.	0.0135	0.0109	0.0183	0.0154	81	84	76-120	35*	30
1,2-Dichlorobenzene	N.D.	0.0135	0.0109	0.0183	0.0146	81	80	76-120	29	30
1,3-Dichlorobenzene	N.D.	0.0135	0.0107	0.0183	0.0140	79	77	75-120	27	30
1,4-Dichlorobenzene	N.D.	0.0135	0.0106	0.0183	0.0141	79*	77*	80-120	28	30
Dichlorodifluoromethane	N.D.	0.0135	0.0162	0.0183	0.0191	120	104	21-127	16	30
1,1-Dichloroethane	N.D.	0.0135	0.0143	0.0183	0.0183	106	100	79-120	25	30
1,2-Dichloroethane	N.D.	0.0135	0.0125	0.0183	0.0176	92	96	71-128	34*	30
1,1-Dichloroethene	N.D.	0.0135	0.0152	0.0183	0.0181	112	99	73-129	18	30
cis-1,2-Dichloroethene	N.D.	0.0135	0.0145	0.0183	0.0186	107	102	80-123	25	30
trans-1,2-Dichloroethene	0.000562	0.0135	0.0146	0.0183	0.0176	104	93	80-125	18	30
1,2-Dichloropropane	N.D.	0.0135	0.0133	0.0183	0.0182	98	100	80-120	32*	30
cis-1,3-Dichloropropene	N.D.	0.0135	0.0112	0.0183	0.0161	83	88	66-120	36*	30
trans-1,3-Dichloropropene	N.D.	0.0135	0.00987	0.0183	0.0143	73	78	68-122	37*	30
1,4-Dioxane	N.D.	0.338	0.328	0.457	0.437	97	96	62-131	29	30
Ethyl Acetate	N.D.	0.0133	0.0115	0.0184	0.0156	86	85	65-133	30	30
Ethyl Ether	N.D.	0.0133	0.0115	0.0184	0.0153	86	83	59-135	28	30
Ethylbenzene	0.000633	0.0135	0.0123	0.0183	0.0147	86	77*	78-120	18	30
Freon 113	N.D.	0.0135	0.0180	0.0183	0.0210	133	115	64-135	15	30
n-Heptane	N.D.	0.0135	0.0189	0.0183	0.0230	140	126	50-141	19	30
n-Hexane	0.000661	0.0135	0.0167	0.0183	0.0190	119	100	50-132	13	30
2-Hexanone	N.D.	0.0676	0.0466	0.0914	0.0646	69	71	54-140	32*	30
Isobutyl Alcohol	N.D.	0.338	0.279	0.457	0.375	82	82	69-129	29	30
Isopropylbenzene	N.D.	0.0135	0.0111	0.0183	0.0137	82	75*	77-120	20	30

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Quality Control Summary

Client Name: ARCADIS U.S., Inc. Group Number: 2004714
Reported: 11/19/2018 10:23

MS/MSD (continued)

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc mg/kg	MS Spike Added mg/kg	MS Conc mg/kg	MSD Spike Added mg/kg	MSD Conc mg/kg	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
p-Isopropyltoluene	N.D.	0.0135	0.0106	0.0183	0.0133	78	73	72-120	23	30
Methyl Acetate	N.D.	0.0135	0.00998	0.0183	0.0159	74	87	67-128	46*	30
Methyl Tertiary Butyl Ether	N.D.	0.0135	0.0108	0.0183	0.0154	80	84	72-120	35*	30
4-Methyl-2-pentanone	0.00198	0.0676	0.0465	0.0914	0.0681	66*	72	67-128	38*	30
Methylcyclohexane	N.D.	0.0135	0.0159	0.0183	0.0195	117	107	61-124	21	30
Methylene Chloride	N.D.	0.0135	0.0127	0.0183	0.0168	94	92	76-122	28	30
Naphthalene	N.D.	0.0135	0.00788	0.0183	0.0113	58	62	48-130	35*	30
2-Nitropropane	N.D.	0.0135	0.00883	0.0183	0.0104	65	57	27-183	16	30
Styrene	N.D.	0.0135	0.0106	0.0183	0.0138	78	76	76-120	27	30
1,1,2,2-Tetrachloroethane	N.D.	0.0135	0.0109	0.0183	0.0154	81	84	69-125	34*	30
Tetrachloroethene	N.D.	0.0135	0.0111	0.0183	0.0142	82	78	73-120	24	30
Tetrahydrofuran	0.00688	0.0676	0.0686	0.0914	0.0912	91	92	71-127	28	30
Toluene	0.00212	0.0135	0.0143	0.0183	0.0165	90	79*	80-120	14	30
1,2,3-Trichlorobenzene	N.D.	0.0135	0.00883	0.0183	0.0121	65	66	57-131	31*	30
1,2,4-Trichlorobenzene	N.D.	0.0135	0.00880	0.0183	0.0119	65	65	56-130	30	30
1,1,1-Trichloroethane	N.D.	0.0135	0.0127	0.0183	0.0154	94	84	69-123	19	30
1,1,2-Trichloroethane	N.D.	0.0135	0.0118	0.0183	0.0169	88	93	80-120	35*	30
Trichloroethene	0.00343	0.0135	0.0155	0.0183	0.0196	90	88	80-120	23	30
Trichlorofluoromethane	N.D.	0.0135	0.0166	0.0183	0.0193	123	105	55-134	15	30
1,2,4-Trimethylbenzene	0.000361	0.0135	0.0114	0.0183	0.0139	82	74	73-120	20	30
1,3,5-Trimethylbenzene	N.D.	0.0135	0.0114	0.0183	0.0140	84	77	73-120	21	30
Vinyl Chloride	N.D.	0.0135	0.0153	0.0183	0.0176	113	96	52-120	14	30
m+p-Xylene	0.00101	0.0270	0.0243	0.0366	0.0295	86	78*	80-120	19	30
o-Xylene	0.000832	0.0135	0.0120	0.0183	0.0145	83	75	75-120	19	30
Xylene (Total)	0.00184	0.0405	0.0363	0.0548	0.0441	85	77	75-120	19	30
	ug/kg	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**					
Batch number: 18310SLE026	Sample number(s): 9878915-9878918 UNSPK: 9878915									
Acenaphthene	N.D.	1664.45	1604.51	1657.28	1480.81	96	89	85-114	8	30
Acenaphthylene	N.D.	1664.45	1665.3	1657.28	1556.79	100	94	80-120	7	30
Acetophenone	N.D.	1664.45	1412.76	1657.28	1379.15	85	83	77-110	2	30
Aniline	N.D.	1664.45	971.94	1657.28	911.87	58	55	44-113	6	30
Anthracene	N.D.	1664.45	1456.26	1657.28	1337.45	87	81*	82-113	9	30
Atrazine	N.D.	1664.45	1372.71	1657.28	1307.29	82	79	68-123	5	30
Benzaldehyde	N.D.	1664.45	1249.48	1657.28	1159.37	75	70	31-119	7	30
Benzo(a)anthracene	N.D.	1664.45	1408.77	1657.28	1329.53	85	80	76-111	6	30
Benzo(a)pyrene	N.D.	1664.45	1492.56	1657.28	1415.7	90	85	82-114	5	30
Benzo(b)fluoranthene	N.D.	1664.45	1510.06	1657.28	1401.35	91	85	78-115	7	30
Benzo(g,h,i)perylene	N.D.	1664.45	1448.43	1657.28	1382.26	87	83	76-111	5	30
Benzo(k)fluoranthene	N.D.	1664.45	1458.03	1657.28	1383.59	88	83	78-119	5	30
Benzyl alcohol	N.D.	1664.45	1383.06	1657.28	1388.63	83	84	69-125	0	30
1,1'-Biphenyl	N.D.	1664.45	1498.19	1657.28	1395.5	90	84	84-112	7	30
4-Bromophenyl-phenylether	N.D.	1664.45	1444.03	1657.28	1325.62	87	80*	81-116	9	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: 2004714
Reported: 11/19/2018 10:23

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
Butylbenzylphthalate	N.D.	1664.45	1549.51	1657.28	1441.92	93	87	81-113	7	30
Di-n-butylphthalate	N.D.	1664.45	1597.7	1657.28	1475.25	96	89	85-115	8	30
Caprolactam	N.D.	1664.45	1507.34	1657.28	1447.24	91	87	75-118	4	30
Carbazole	N.D.	1664.45	1578.25	1657.28	1457.65	95	88	84-117	8	30
4-Chloro-3-methylphenol	N.D.	1664.45	1756.26	1657.28	1675.2	106	101	78-127	5	30
4-Chloroaniline	N.D.	1664.45	1008.05	1657.28	958.44	61	58	10-125	5	30
bis(2-Chloroethoxy)methane	N.D.	1664.45	1514.04	1657.28	1406.24	91	85	72-117	7	30
bis(2-Chloroethyl)ether	N.D.	1664.45	1443.71	1657.28	1353.86	87	82	74-109	6	30
bis(2-Chloroisopropyl)ether	N.D.	1664.45	1627.58	1657.28	1580.14	98	95	68-115	3	30
2-Chloronaphthalene	N.D.	1664.45	1343.98	1657.28	1246.23	81	75	62-138	8	30
2-Chlorophenol	N.D.	1664.45	1446.02	1657.28	1403.49	87	85	85-116	3	30
4-Chlorophenyl-phenylether	N.D.	1664.45	1585.32	1657.28	1502.13	95	91	79-112	5	30
Chrysene	N.D.	1664.45	1430.18	1657.28	1350.68	86	82	75-109	6	30
Dibenz(a,h)anthracene	N.D.	1664.45	1574.17	1657.28	1490.51	95	90	79-117	5	30
Dibenzofuran	N.D.	1664.45	1635.3	1657.28	1515.59	98	91	84-110	8	30
3,3'-Dichlorobenzidine	N.D.	1664.45	1226.03	1657.28	1082.23	74	65	26-124	12	30
2,4-Dichlorophenol	N.D.	1664.45	1573.2	1657.28	1506.76	95	91	80-120	4	30
Diethylphthalate	N.D.	1664.45	1624.79	1657.28	1531.92	98	92	81-113	6	30
2,4-Dimethylphenol	N.D.	1664.45	1399.78	1657.28	1281.61	84	77	66-106	9	30
Dimethylphthalate	N.D.	1664.45	1537.07	1657.28	1428.46	92	86	82-110	7	30
4,6-Dinitro-2-methylphenol	N.D.	1664.45	1148.26	1657.28	1092.78	69*	66*	73-127	5	30
2,4-Dinitrophenol	N.D.	3328.89	2575.36	3314.55	2261.92	77	68	41-136	13	30
2,4-Dinitrotoluene	N.D.	1664.45	1594.04	1657.28	1555.87	96	94	82-116	2	30
2,6-Dinitrotoluene	N.D.	1664.45	1574.5	1657.28	1482.32	95	89	86-116	6	30
bis(2-Ethylhexyl)phthalate	N.D.	1664.45	1564.53	1657.28	1454.19	94	88	78-118	7	30
Fluoranthene	N.D.	1664.45	1509.47	1657.28	1415.58	91	85	76-115	6	30
Fluorene	N.D.	1664.45	1681.41	1657.28	1548.27	101	93	80-112	8	30
Hexachlorobenzene	N.D.	1664.45	1456.15	1657.28	1364.7	87	82	77-114	6	30
Hexachlorobutadiene	N.D.	1664.45	1442.53	1657.28	1337.37	87	81	75-115	8	30
Hexachlorocyclopentadiene	N.D.	3328.89	1117.54	3314.55	1387.04	34*	42	37-161	22	30
Hexachloroethane	N.D.	1664.45	1337.8	1657.28	1233.53	80	74*	76-106	8	30
Indeno(1,2,3-cd)pyrene	N.D.	1664.45	1440.45	1657.28	1371.25	87	83	78-113	5	30
Isophorone	N.D.	1664.45	1554.86	1657.28	1462.46	93	88	76-115	6	30
2-Methylnaphthalene	N.D.	1664.45	1445.55	1657.28	1317.86	87	80	80-111	9	30
2-Methylphenol	N.D.	1664.45	1527.1	1657.28	1495	92	90	80-122	2	30
4-Methylphenol	N.D.	1664.45	1482.27	1657.28	1418.81	89	86	75-121	4	30
Naphthalene	N.D.	1664.45	1418	1657.28	1324.05	85	80*	81-111	7	30
2-Nitroaniline	N.D.	1664.45	1651.98	1657.28	1554.11	99	94	81-126	6	30
3-Nitroaniline	N.D.	1664.45	1580.02	1657.28	1451.03	95	88	60-128	9	30
4-Nitroaniline	N.D.	1664.45	1496.91	1657.28	1388.91	90	84	54-103	7	30
Nitrobenzene	N.D.	1664.45	1613.4	1657.28	1484.49	97	90	75-114	8	30
2-Nitrophenol	N.D.	1664.45	1501.65	1657.28	1410.83	90	85	85-118	6	30
4-Nitrophenol	N.D.	1664.45	1489.07	1657.28	1430.4	89	86	54-124	4	30

*- 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: 2004714
Reported: 11/19/2018 10:23

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
N-Nitroso-di-n-propylamine	N.D.	1664.45	1438.16	1657.28	1383.28	86	83	70-114	4	30
N-Nitrosodiphenylamine	N.D.	1664.45	1543.83	1657.28	1434.65	93	87	80-120	7	30
Di-n-octylphthalate	N.D.	1664.45	1718.12	1657.28	1598.33	103	96	84-128	7	30
Pentachlorophenol	N.D.	1664.45	1156.28	1657.28	1049.92	69	63	47-134	10	30
Phenanthrene	N.D.	1664.45	1438.38	1657.28	1335.27	86	81	81-109	7	30
Phenol	N.D.	1664.45	1522.27	1657.28	1458.79	91	88	74-119	4	30
Pyrene	N.D.	1664.45	1464.83	1657.28	1366.14	88	82	80-107	7	30
Pyridine	N.D.	1664.45	1142.43	1657.28	1030.41	69	62	57-96	10	30
1,2,4,5-Tetrachlorobenzene	N.D.	1664.45	1511.49	1657.28	1387.02	91	84	76-116	9	30
2,3,4,6-Tetrachlorophenol	N.D.	1664.45	1473.8	1657.28	1352.13	89	82	73-127	9	30
2,4,5-Trichlorophenol	N.D.	1664.45	1708.57	1657.28	1572.41	103	95	80-120	8	30
2,4,6-Trichlorophenol	N.D.	1664.45	1583.01	1657.28	1522.31	95	92	80-120	4	30
	mg/kg	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**					
Batch number: 18311A34A	Sample number(s): 9878915-9878918 UNSPK: 9878915									
TPH-GRO soil C6-C10	N.D.	8.04	9.29	10.82	12.38	116	114	60-132	29	30
	mg/kg	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**					
Batch number: 183060004A	Sample number(s): 9878915-9878918 UNSPK: 9878915									
Acetaldehyde	6.65	9.96	15.64	10	12.1	90	55*	72-144	26	50
Formaldehyde	4.13	9.96	13.42	10	11.8	93	77	45-149	13	50
	mg/kg	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**					
Batch number: 183090035A	Sample number(s): 9878915-9878918 UNSPK: 9878915									
Ethanol (by Direct Injection)	N.D.	2.52	2.13	2.52	2.18	85	87	77-120	2	20
Isopropanol	N.D.	2.52	2.19	2.52	2.23	87	89	75-125	2	20
Methanol (by Direct Injection)	0.816	2.51	2.48	2.51	2.93	66*	84	76-119	16	20
Batch number: 183110035A	Sample number(s): 9878915-9878918 UNSPK: 9878915									
Ethylene glycol	N.D.	103.98	99.44	103.98	102.81	96	99	76-122	3	20
Propylene glycol	N.D.	102.78	96.1	102.78	98.49	93	96	67-131	2	20
	mg/kg	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**					
Batch number: 183110026A	Sample number(s): 9878915-9878918 UNSPK: 9878915									
DRO C10-C28	36.36	132.97	162.1	131.61	165.98	95	98	76-117	2	20

Laboratory Duplicate

Background (BKG) = the sample used in conjunction with the duplicate

*- 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: 2004714
Reported: 11/19/2018 10:23

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: 18306820004B	Sample number(s): 9878915-9878918 BKG: 9878915			
Moisture	9.58	10.6	10*	5
Moisture	9.58	10.6	10*	5
Moisture Duplicate	9.58	10.6	10*	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- Solid by 8260C
Batch number: B183111AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
9878915	101	105	98	93
9878916	98	97	103	96
9878917	101	104	100	97
9878918	103	101	96	91
Blank	101	104	95	94
LCS	100	104	99	99
LCSD	102	105	99	99
MS	98	97	103	96
MSD	101	104	100	97
Limits:	50-141	54-135	52-141	50-131

Analysis Name: VOCs- 5ml Water by 8260C
Batch number: L183131AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
9878919	95	101	100	98
Blank	95	100	99	97
LCS	99	101	100	99
LCSD	95	101	100	97
Limits:	80-120	80-120	80-120	80-120

Analysis Name: SVOA 8270D (microwave)
Batch number: 18310SLE026

	Phenol-d6	2-Fluorophenol	2,4,6-Tribromophenol	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14
9878915	82	87	98	89	90	91
9878916	84	89	95	90	93	94
9878917	82	87	91	86	85	88

*- 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: 2004714
Reported: 11/19/2018 10:23

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: SVOA 8270D (microwave)
Batch number: 18310SLE026

	Phenol-d6	2-Fluorophenol	2,4,6-Tribromophenol	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14
9878918	80	83	91	82	81	87
Blank	87	94	101	97	97	101
LCS	89	93	108	98	98	101
LCSD	90	96	109	102	99	103
MS	84	89	95	90	93	94
MSD	82	87	91	86	85	88
Limits:	47-120	51-123	19-137	49-118	57-116	55-118

Analysis Name: TPH-GRO water C6-C10
Batch number: 18310A20A

	Trifluorotoluene-F
9878919	89
Blank	87
LCS	99
Limits:	63-135

Analysis Name: TPH-GRO soils C6-C10
Batch number: 18311A34A

	Trifluorotoluene-F
9878915	129
9878916	76
9878917	98
9878918	94
Blank	96
LCS	102
MS	76
MSD	98
Limits:	50-142

Analysis Name: Short List Aldehydes- S 8315A
Batch number: 183060004A

	Butyraldehyde
9878915	99
9878916	99
9878917	101
9878918	103
Blank	98
LCS	100
MS	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: 2004714
Reported: 11/19/2018 10:23

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- S 8315A
Batch number: 183060004A

	Butyraldehyde
MSD	101
Limits:	77-133

Analysis Name: Alcohols in Soil
Batch number: 183090035A

	Acetone-D1	Acetone-D2
9878915	92	87
9878916	86	86
9878917	87	87
9878918	90	85
Blank	103	94
LCS	92	91
MS	86	86
MSD	87	87
Limits:	10-179	10-179

Analysis Name: TPH DRO/ORO soil 8015C/D(3546)
Batch number: 183110026A

	Orthoterphenyl
9878915	90
9878916	90
9878917	93
9878918	89
Blank	93
LCS	96
MS	90
MSD	93
Limits:	42-143

Analysis Name: Glycols in Soil by 8015C
Batch number: 183110035A

	Tetramethylene glycol
9878915	63
9878916	89
9878917	88
9878918	64
Blank	65
LCS	98
MS	89

*- 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: 2004714
Reported: 11/19/2018 10:23

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 Soil by 8015C
Batch number: 183110035A

	Tetramethylene glycol
MSD	88
Limits:	36-143

*- 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 2w714 9878915-19

ARCADIS

ID#:

CHAIN OF CUSTODY & LABORATORY ANALYSIS REQUEST FORM

Page 1 of 1

Lab Work Order #

Send Results to:

Contact & Company Name: David Wright Arcadis	Telephone: (315) 671-9260
Address: 110 West Fayette St	Fax:
City: Syracuse State: NY Zip: 13202	E-mail Address: David.Wright@arcadis.com
Project Name/Location (City, State): BMS - Syracuse, NY	Project #: B0087363
Sampler's Printed Name: David Cornell	Sampler's Signature:

Preservative	E	E	E	E	MeOH DI		
Filtered (✓)							
# of Containers							
Container Information							

PARAMETER ANALYSIS & METHOD

Sample ID	Collection Date	Collection Time	Type (✓) Comp	Type (✓) Grab	Matrix	Aldehydes/SVOA 8315A/8270D	Alcohols in Soil	Glycols in Soil	TPH DRO/ORO 8015C/D	TPH-GRO Moisture VOCs 8260C			
East Floor Vault MS/MSD	10/31/18	1245	✓	✓	SO	2	2	2	2	10			
West Floor Vault	10/31/18	1400	✓		SO	1	1	1	1	5			
Trip Blank - 18299	10/27/18	-		✓	W					2			

Keys

Preservation Key:
A. H_2SO_4
B. HCL
C. HNO_3
D. NaOH
E. None
F. Other: _____
G. Other: _____
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

Special Instructions/Comments:

☐ Special QA/QC Instructions(✓):

Laboratory Information and Receipt		Relinquished By	Received By	Relinquished By	Laboratory Received By
Lab Name:	Cooler Custody Seal (✓)	Printed Name: David Cornell	Printed Name:	Printed Name:	Printed Name: Ariel Garcia
☐ Cooler packed with ice (✓)	☑ Intact ☐ Not Intact	Signature:	Signature:	Signature:	Signature:
Specify Turnaround Requirements:	Sample Receipt:	Firm: Arcadis	Firm/Courier:	Firm/Courier:	Firm:
Shipping Tracking #:	Condition/Cooler Temp: 2.3	Date/Time: 10/31/18 1730	Date/Time:	Date/Time:	Date/Time: 1040 11/1/18

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: 231749

Group Number(s): 2004714

Client: Arcadis

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Timestamp:	11/01/2018 10:40
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	VOA Vial Headspace ≥ 6mm:	No
Samples Chilled:	Yes	Total Trip Blank Qty:	2
Paperwork Enclosed:	Yes	Trip Blank Type:	HCl
Samples Intact:	Yes	Air Quality Samples Present:	No
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Ariel Garcia (15332) at 12:53 on 11/01/2018

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	2.3	DT	Wet	Y	Bagged	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.

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Buffalo
10 Hazelwood Drive
Amherst, NY 14228-2298
Tel: (716)691-2600

TestAmerica Job ID: 480-141320-1
Client Project/Site: BMS Soil Analysis

For:
ARCADIS U.S. Inc
One Lincoln Center
110 West Fayette St, Suite 300
Syracuse, New York 13202

Attn: Mr. Clint P Catania

Melissa Deyo

Authorized for release by:
9/17/2018 9:55:12 AM

Melissa Deyo, Project Manager I
(716)504-9874
melissa.deyo@testamericainc.com

LINKS

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Visit us at: www.testamericainc.com

The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

GC/MS Semi VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

GC/MS Semi VOA TICs

Qualifier	Qualifier Description
J	Indicates an Estimated Value for TICs
N	This flag indicates the presumptive evidence of a compound.
T	Result is a tentatively identified compound (TIC) and an estimated value.

GC VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

GC Semi VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.

HPLC/IC

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)

Glossary (Continued)

Abbreviation	These commonly used abbreviations may or may not be present in this report.
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Job ID: 480-141320-1

Laboratory: TestAmerica Buffalo

Narrative

Job Narrative
480-141320-1

Receipt
The sample was received on 9/7/2018 1:00 AM; the sample arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 0.9º C.

GC/MS VOA
Method(s) 8260C: The continuing calibration verification (CCV) associated with batch 480-433425 recovered outside acceptance criteria, low biased, for 2-Nitropropane and Cyclohexanone. A reporting limit (RL) standard was analyzed, and the target analytes were detected. Since the associated samples were non-detects for these analytes, the data have been reported. The following sample is impacted: BLDG 25-UNDER SLAB 1 (480-141320-1).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC/MS Semi VOA
Method(s) 8270D: The following sample was diluted due to color and appearance: BLDG 25-UNDER SLAB 1 (480-141320-1). Elevated reporting limits (RL) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

HPLC/IC
Method(s) 8315A: The method blank for preparation batch 490-541762 and analytical batch 490-541904 contained Acetaldehyde above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed.

Method(s) 8315A: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 490-541762 and analytical batch 490-541904.

Method(s) 8315A: The following sample was diluted to bring the concentration of target analytes within the calibration range: BLDG 25-UNDER SLAB 1 (480-141320-1). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC VOA
Method(s) 8015D: Reported analyte concentrations in the following sample is below 200 ug/kg and may be biased low due to the samples not being collected according to 5035-L/5035A-L low-level specifications: BLDG 25-UNDER SLAB 1 (480-141320-1).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC Semi VOA
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

General Chemistry
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Organic Prep
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Detection Summary

Client: ARCADIS U.S. Inc
Project/Site: BMS Soil Analysis

TestAmerica Job ID: 480-141320-1

Client Sample ID: BLDG 25-UNDER SLAB 1 — Lab Sample ID: 480-141320-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	32		23	3.8	ug/Kg	1	☼	8260C	Total/NA
Diesel Range Organics [C10-C28]	9.8	J	19	5.6	mg/Kg	1	☼	8015D	Total/NA
Acetaldehyde	0.29	J B	1.1	0.12	mg/Kg	1	☼	8315A	Total/NA
Formaldehyde	13		5.6	0.90	mg/Kg	5	☼	8315A	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: BLDG 25-UNDER SLAB 1
Date Collected: 09/06/18 16:35
Date Received: 09/07/18 01:00

Lab Sample ID: 480-141320-1
Matrix: Solid
Percent Solids: 87.9

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	4.5	U	4.5	0.33	ug/Kg	☼	09/07/18 08:00	09/07/18 22:33	1
1,1,2,2-Tetrachloroethane	4.5	U	4.5	0.73	ug/Kg	☼	09/07/18 08:00	09/07/18 22:33	1
1,1,2-Trichloro-1,2,2-trifluoroethane	4.5	U	4.5	1.0	ug/Kg	☼	09/07/18 08:00	09/07/18 22:33	1
1,1,2-Trichloroethane	4.5	U	4.5	0.59	ug/Kg	☼	09/07/18 08:00	09/07/18 22:33	1
1,1-Dichloroethane	4.5	U	4.5	0.55	ug/Kg	☼	09/07/18 08:00	09/07/18 22:33	1
1,1-Dichloroethene	4.5	U	4.5	0.55	ug/Kg	☼	09/07/18 08:00	09/07/18 22:33	1
1,2,3-Trichlorobenzene	4.5	U	4.5	0.48	ug/Kg	☼	09/07/18 08:00	09/07/18 22:33	1
1,2,4-Trichlorobenzene	4.5	U	4.5	0.28	ug/Kg	☼	09/07/18 08:00	09/07/18 22:33	1
1,2,4-Trimethylbenzene	4.5	U	4.5	0.87	ug/Kg	☼	09/07/18 08:00	09/07/18 22:33	1
1,2-Dibromo-3-Chloropropane	4.5	U	4.5	2.3	ug/Kg	☼	09/07/18 08:00	09/07/18 22:33	1
1,2-Dichlorobenzene	4.5	U	4.5	0.35	ug/Kg	☼	09/07/18 08:00	09/07/18 22:33	1
1,2-Dichloroethane	4.5	U	4.5	0.23	ug/Kg	☼	09/07/18 08:00	09/07/18 22:33	1
1,2-Dichloropropane	4.5	U	4.5	2.3	ug/Kg	☼	09/07/18 08:00	09/07/18 22:33	1
1,3,5-Trimethylbenzene	4.5	U	4.5	0.29	ug/Kg	☼	09/07/18 08:00	09/07/18 22:33	1
1,3-Dichlorobenzene	4.5	U	4.5	0.23	ug/Kg	☼	09/07/18 08:00	09/07/18 22:33	1
1,4-Dichlorobenzene	4.5	U	4.5	0.63	ug/Kg	☼	09/07/18 08:00	09/07/18 22:33	1
1,4-Dioxane	91	U	91	20	ug/Kg	☼	09/07/18 08:00	09/07/18 22:33	1
2-Butanone (MEK)	23	U	23	1.7	ug/Kg	☼	09/07/18 08:00	09/07/18 22:33	1
2-Hexanone	23	U	23	2.3	ug/Kg	☼	09/07/18 08:00	09/07/18 22:33	1
tert-Butanol (TBA)	45	U	45	15	ug/Kg	☼	09/07/18 08:00	09/07/18 22:33	1
p-Isopropyltoluene	4.5	U	4.5	0.36	ug/Kg	☼	09/07/18 08:00	09/07/18 22:33	1
4-Methyl-2-pentanone (MIBK)	23	U	23	1.5	ug/Kg	☼	09/07/18 08:00	09/07/18 22:33	1
Acetone	**32**		23	3.8	ug/Kg	☼	09/07/18 08:00	09/07/18 22:33	1
Acetonitrile	45	U	45	5.5	ug/Kg	☼	09/07/18 08:00	09/07/18 22:33	1
Benzene	4.5	U	4.5	0.22	ug/Kg	☼	09/07/18 08:00	09/07/18 22:33	1
Bromoform	4.5	U	4.5	2.3	ug/Kg	☼	09/07/18 08:00	09/07/18 22:33	1
Bromomethane	4.5	U	4.5	0.41	ug/Kg	☼	09/07/18 08:00	09/07/18 22:33	1
Carbon disulfide	4.5	U	4.5	2.3	ug/Kg	☼	09/07/18 08:00	09/07/18 22:33	1
Carbon tetrachloride	4.5	U	4.5	0.44	ug/Kg	☼	09/07/18 08:00	09/07/18 22:33	1
Chlorobenzene	4.5	U	4.5	0.60	ug/Kg	☼	09/07/18 08:00	09/07/18 22:33	1
Bromochloromethane	4.5	U	4.5	0.33	ug/Kg	☼	09/07/18 08:00	09/07/18 22:33	1
Dibromochloromethane	4.5	U	4.5	0.58	ug/Kg	☼	09/07/18 08:00	09/07/18 22:33	1
Chlorodifluoromethane	4.5	U	4.5	0.93	ug/Kg	☼	09/07/18 08:00	09/07/18 22:33	1
Chloroethane	4.5	U	4.5	1.0	ug/Kg	☼	09/07/18 08:00	09/07/18 22:33	1
Chloroform	4.5	U	4.5	0.28	ug/Kg	☼	09/07/18 08:00	09/07/18 22:33	1
Chloromethane	4.5	U	4.5	0.27	ug/Kg	☼	09/07/18 08:00	09/07/18 22:33	1
cis-1,2-Dichloroethene	4.5	U	4.5	0.58	ug/Kg	☼	09/07/18 08:00	09/07/18 22:33	1
Cyclohexane	4.5	U	4.5	0.63	ug/Kg	☼	09/07/18 08:00	09/07/18 22:33	1
Cyclohexanone	45	U	45	16	ug/Kg	☼	09/07/18 08:00	09/07/18 22:33	1
Bromodichloromethane	4.5	U	4.5	0.61	ug/Kg	☼	09/07/18 08:00	09/07/18 22:33	1
Dichlorodifluoromethane	4.5	U	4.5	0.37	ug/Kg	☼	09/07/18 08:00	09/07/18 22:33	1
Ethyl acetate	4.5	U	4.5	1.5	ug/Kg	☼	09/07/18 08:00	09/07/18 22:33	1
Diethyl ether	23	U	23	1.9	ug/Kg	☼	09/07/18 08:00	09/07/18 22:33	1
Ethylbenzene	4.5	U	4.5	0.31	ug/Kg	☼	09/07/18 08:00	09/07/18 22:33	1
1,2-Dibromoethane	4.5	U	4.5	0.58	ug/Kg	☼	09/07/18 08:00	09/07/18 22:33	1
Hexane	45	U	45	2.6	ug/Kg	☼	09/07/18 08:00	09/07/18 22:33	1
Isobutanol	180	U	180	37	ug/Kg	☼	09/07/18 08:00	09/07/18 22:33	1
Isopropylbenzene	4.5	U	4.5	0.68	ug/Kg	☼	09/07/18 08:00	09/07/18 22:33	1
Methyl acetate	23	U	23	2.7	ug/Kg	☼	09/07/18 08:00	09/07/18 22:33	1

Client Sample ID: BLDG 25-UNDER SLAB 1

Date Collected: 09/06/18 16:35
Date Received: 09/07/18 01:00

Lab Sample ID: 480-141320-1

Matrix: Solid
Percent Solids: 87.9

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	4.5	U	4.5	0.44	ug/Kg	☼	09/07/18 08:00	09/07/18 22:33	1
Methylcyclohexane	4.5	U	4.5	0.69	ug/Kg	☼	09/07/18 08:00	09/07/18 22:33	1
Methylene Chloride	4.5	U	4.5	2.1	ug/Kg	☼	09/07/18 08:00	09/07/18 22:33	1
m,p-Xylene	9.1	U	9.1	0.76	ug/Kg	☼	09/07/18 08:00	09/07/18 22:33	1
Naphthalene	4.5	U	4.5	0.61	ug/Kg	☼	09/07/18 08:00	09/07/18 22:33	1
n-Butanol	45	U	45	1.5	ug/Kg	☼	09/07/18 08:00	09/07/18 22:33	1
Butylbenzene	4.5	U	4.5	0.39	ug/Kg	☼	09/07/18 08:00	09/07/18 22:33	1
Heptane	91	U	91	2.4	ug/Kg	☼	09/07/18 08:00	09/07/18 22:33	1
o-Xylene	4.5	U	4.5	0.59	ug/Kg	☼	09/07/18 08:00	09/07/18 22:33	1
sec-Butylbenzene	4.5	U	4.5	0.39	ug/Kg	☼	09/07/18 08:00	09/07/18 22:33	1
Tetrachloroethene	4.5	U	4.5	0.61	ug/Kg	☼	09/07/18 08:00	09/07/18 22:33	1
Tetrahydrofuran	9.1	U	9.1	2.6	ug/Kg	☼	09/07/18 08:00	09/07/18 22:33	1
Toluene	4.5	U	4.5	0.34	ug/Kg	☼	09/07/18 08:00	09/07/18 22:33	1
trans-1,2-Dichloroethene	4.5	U	4.5	0.47	ug/Kg	☼	09/07/18 08:00	09/07/18 22:33	1
trans-1,3-Dichloropropene	4.5	U	4.5	2.0	ug/Kg	☼	09/07/18 08:00	09/07/18 22:33	1
Trichloroethene	4.5	U	4.5	1.0	ug/Kg	☼	09/07/18 08:00	09/07/18 22:33	1
Trichlorofluoromethane	4.5	U	4.5	0.43	ug/Kg	☼	09/07/18 08:00	09/07/18 22:33	1
Vinyl chloride	4.5	U	4.5	0.55	ug/Kg	☼	09/07/18 08:00	09/07/18 22:33	1
Xylenes (total)	9.1	U	9.1	0.76	ug/Kg	☼	09/07/18 08:00	09/07/18 22:33	1
cis-1,3-Dichloropropene	4.5	U	4.5	0.65	ug/Kg	☼	09/07/18 08:00	09/07/18 22:33	1
Styrene	4.5	U	4.5	0.23	ug/Kg	☼	09/07/18 08:00	09/07/18 22:33	1
tert-Butylbenzene	4.5	U	4.5	0.47	ug/Kg	☼	09/07/18 08:00	09/07/18 22:33	1
2-Nitropropane	9.1	U	9.1	0.97	ug/Kg	☼	09/07/18 08:00	09/07/18 22:33	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/Kg*	☼			*09/07/18 08:00*	*09/07/18 22:33*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*103*		*64 - 126*	*09/07/18 08:00*	*09/07/18 22:33*	*1*
4-Bromofluorobenzene (Surr)	*98*		*72 - 126*	*09/07/18 08:00*	*09/07/18 22:33*	*1*
Toluene-d8 (Surr)	*102*		*71 - 125*	*09/07/18 08:00*	*09/07/18 22:33*	*1*
Dibromofluoromethane (Surr)	*102*		*60 - 140*	*09/07/18 08:00*	*09/07/18 22:33*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	940	U	940	140	ug/Kg	☼	09/13/18 09:48	09/16/18 15:19	5
1,2,4,5-Tetrachlorobenzene	940	U	940	160	ug/Kg	☼	09/13/18 09:48	09/16/18 15:19	5
bis(chloroisopropyl) ether	940	U	940	190	ug/Kg	☼	09/13/18 09:48	09/16/18 15:19	5
2,3,4,6-Tetrachlorophenol	940	U	940	190	ug/Kg	☼	09/13/18 09:48	09/16/18 15:19	5
2,4,5-Trichlorophenol	940	U	940	250	ug/Kg	☼	09/13/18 09:48	09/16/18 15:19	5
2,4,6-Trichlorophenol	940	U	940	190	ug/Kg	☼	09/13/18 09:48	09/16/18 15:19	5
2,4-Dichlorophenol	940	U	940	100	ug/Kg	☼	09/13/18 09:48	09/16/18 15:19	5
2,4-Dimethylphenol	940	U	940	230	ug/Kg	☼	09/13/18 09:48	09/16/18 15:19	5
2,4-Dinitrophenol	9200	U	9200	4300	ug/Kg	☼	09/13/18 09:48	09/16/18 15:19	5
2,4-Dinitrotoluene	940	U	940	190	ug/Kg	☼	09/13/18 09:48	09/16/18 15:19	5
2,6-Dinitrotoluene	940	U	940	110	ug/Kg	☼	09/13/18 09:48	09/16/18 15:19	5
2-Chloronaphthalene	940	U	940	150	ug/Kg	☼	09/13/18 09:48	09/16/18 15:19	5
2-Chlorophenol	940	U	940	170	ug/Kg	☼	09/13/18 09:48	09/16/18 15:19	5
2-Methylnaphthalene	940	U	940	190	ug/Kg	☼	09/13/18 09:48	09/16/18 15:19	5
2-Methylphenol	940	U	940	110	ug/Kg	☼	09/13/18 09:48	09/16/18 15:19	5

Client Sample ID: BLDG 25-UNDER SLAB 1
Date Collected: 09/06/18 16:35
Date Received: 09/07/18 01:00

Lab Sample ID: 480-141320-1
Matrix: Solid
Percent Solids: 87.9

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Nitroaniline	1800	U	1800	140	ug/Kg	☼	09/13/18 09:48	09/16/18 15:19	5
2-Nitrophenol	940	U	940	270	ug/Kg	☼	09/13/18 09:48	09/16/18 15:19	5
3 & 4 Methylphenol	1800	U	1800	140	ug/Kg	☼	09/13/18 09:48	09/16/18 15:19	5
3,3'-Dichlorobenzidine	1800	U	1800	1100	ug/Kg	☼	09/13/18 09:48	09/16/18 15:19	5
3-Nitroaniline	1800	U	1800	260	ug/Kg	☼	09/13/18 09:48	09/16/18 15:19	5
4,6-Dinitro-2-methylphenol	1800	U	1800	940	ug/Kg	☼	09/13/18 09:48	09/16/18 15:19	5
4-Bromophenyl phenyl ether	940	U	940	130	ug/Kg	☼	09/13/18 09:48	09/16/18 15:19	5
4-Chloro-3-methylphenol	940	U	940	230	ug/Kg	☼	09/13/18 09:48	09/16/18 15:19	5
4-Chloroaniline	940	U	940	230	ug/Kg	☼	09/13/18 09:48	09/16/18 15:19	5
4-Chlorophenyl phenyl ether	940	U	940	120	ug/Kg	☼	09/13/18 09:48	09/16/18 15:19	5
4-Methylphenol	1800	U	1800	110	ug/Kg	☼	09/13/18 09:48	09/16/18 15:19	5
4-Nitroaniline	1800	U	1800	490	ug/Kg	☼	09/13/18 09:48	09/16/18 15:19	5
4-Nitrophenol	1800	U	1800	660	ug/Kg	☼	09/13/18 09:48	09/16/18 15:19	5
Acenaphthene	940	U	940	140	ug/Kg	☼	09/13/18 09:48	09/16/18 15:19	5
Acenaphthylene	940	U	940	120	ug/Kg	☼	09/13/18 09:48	09/16/18 15:19	5
Acetophenone	940	U	940	130	ug/Kg	☼	09/13/18 09:48	09/16/18 15:19	5
Aniline	1800	U	1800	230	ug/Kg	☼	09/13/18 09:48	09/16/18 15:19	5
Anthracene	940	U	940	230	ug/Kg	☼	09/13/18 09:48	09/16/18 15:19	5
Atrazine	940	U	940	330	ug/Kg	☼	09/13/18 09:48	09/16/18 15:19	5
Benzaldehyde	940	U	940	750	ug/Kg	☼	09/13/18 09:48	09/16/18 15:19	5
Benzo(a)anthracene	940	U	940	94	ug/Kg	☼	09/13/18 09:48	09/16/18 15:19	5
Benzo(a)pyrene	940	U	940	140	ug/Kg	☼	09/13/18 09:48	09/16/18 15:19	5
Benzo(b)fluoranthene	940	U	940	150	ug/Kg	☼	09/13/18 09:48	09/16/18 15:19	5
Benzo(g,h,i)perylene	940	U	940	100	ug/Kg	☼	09/13/18 09:48	09/16/18 15:19	5
Benzo(k)fluoranthene	940	U	940	120	ug/Kg	☼	09/13/18 09:48	09/16/18 15:19	5
Benzyl alcohol	1800	U	1800	130	ug/Kg	☼	09/13/18 09:48	09/16/18 15:19	5
Bis(2-chloroethoxy)methane	940	U	940	200	ug/Kg	☼	09/13/18 09:48	09/16/18 15:19	5
Bis(2-chloroethyl)ether	940	U	940	120	ug/Kg	☼	09/13/18 09:48	09/16/18 15:19	5
Bis(2-ethylhexyl) phthalate	940	U	940	320	ug/Kg	☼	09/13/18 09:48	09/16/18 15:19	5
Butyl benzyl phthalate	940	U	940	150	ug/Kg	☼	09/13/18 09:48	09/16/18 15:19	5
Caprolactam	940	U	940	280	ug/Kg	☼	09/13/18 09:48	09/16/18 15:19	5
Carbazole	940	U	940	110	ug/Kg	☼	09/13/18 09:48	09/16/18 15:19	5
Chrysene	940	U	940	210	ug/Kg	☼	09/13/18 09:48	09/16/18 15:19	5
Dibenz(a,h)anthracene	940	U	940	170	ug/Kg	☼	09/13/18 09:48	09/16/18 15:19	5
Dibenzofuran	940	U	940	110	ug/Kg	☼	09/13/18 09:48	09/16/18 15:19	5
Diethyl phthalate	940	U	940	120	ug/Kg	☼	09/13/18 09:48	09/16/18 15:19	5
Dimethyl phthalate	940	U	940	110	ug/Kg	☼	09/13/18 09:48	09/16/18 15:19	5
Di-n-butyl phthalate	940	U	940	160	ug/Kg	☼	09/13/18 09:48	09/16/18 15:19	5
Di-n-octyl phthalate	940	U	940	110	ug/Kg	☼	09/13/18 09:48	09/16/18 15:19	5
Fluoranthene	940	U	940	100	ug/Kg	☼	09/13/18 09:48	09/16/18 15:19	5
Fluorene	940	U	940	110	ug/Kg	☼	09/13/18 09:48	09/16/18 15:19	5
Hexachlorobenzene	940	U	940	130	ug/Kg	☼	09/13/18 09:48	09/16/18 15:19	5
Hexachlorobutadiene	940	U	940	140	ug/Kg	☼	09/13/18 09:48	09/16/18 15:19	5
Hexachlorocyclopentadiene	940	U	940	130	ug/Kg	☼	09/13/18 09:48	09/16/18 15:19	5
Hexachloroethane	940	U	940	120	ug/Kg	☼	09/13/18 09:48	09/16/18 15:19	5
Indeno(1,2,3-cd)pyrene	940	U	940	120	ug/Kg	☼	09/13/18 09:48	09/16/18 15:19	5
Isophorone	940	U	940	200	ug/Kg	☼	09/13/18 09:48	09/16/18 15:19	5
Naphthalene	940	U	940	120	ug/Kg	☼	09/13/18 09:48	09/16/18 15:19	5
Nitrobenzene	940	U	940	110	ug/Kg	☼	09/13/18 09:48	09/16/18 15:19	5

Client Sample ID: BLDG 25-UNDER SLAB 1
Date Collected: 09/06/18 16:35
Date Received: 09/07/18 01:00

Lab Sample ID: 480-141320-1
Matrix: Solid
Percent Solids: 87.9

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
N-Nitroso-di-n-propylamine	940	U	940	160	ug/Kg	☼	09/13/18 09:48	09/16/18 15:19	5
N-Nitrosodiphenylamine	940	U	940	760	ug/Kg	☼	09/13/18 09:48	09/16/18 15:19	5
Pentachlorophenol	1800	U	1800	940	ug/Kg	☼	09/13/18 09:48	09/16/18 15:19	5
Phenanthrene	940	U	940	140	ug/Kg	☼	09/13/18 09:48	09/16/18 15:19	5
Phenol	940	U	940	140	ug/Kg	☼	09/13/18 09:48	09/16/18 15:19	5
Pyrene	940	U	940	110	ug/Kg	☼	09/13/18 09:48	09/16/18 15:19	5
Pyridine	1800	U	1800	130	ug/Kg	☼	09/13/18 09:48	09/16/18 15:19	5
Dicyclohexylamine	17000	U	17000	8900	ug/Kg	☼	09/13/18 09:48	09/16/18 15:19	5

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Unknown	*4000*	*T J*	*ug/Kg*	☼	*9.21*		*09/13/18 09:48*	*09/16/18 15:19*	*5*
Unknown	*3600*	*T J*	*ug/Kg*	☼	*9.53*		*09/13/18 09:48*	*09/16/18 15:19*	*5*
Unknown	*750*	*T J*	*ug/Kg*	☼	*10.70*		*09/13/18 09:48*	*09/16/18 15:19*	*5*
Cyclic octaatomic sulfur	*8300*	*T J N*	*ug/Kg*	☼	*11.76*	*10544-50-0*	*09/13/18 09:48*	*09/16/18 15:19*	*5*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*64*		*53 - 120*	*09/13/18 09:48*	*09/16/18 15:19*	*5*
p-Terphenyl-d14	*89*		*65 - 121*	*09/13/18 09:48*	*09/16/18 15:19*	*5*
Phenol-d5	*65*		*54 - 120*	*09/13/18 09:48*	*09/16/18 15:19*	*5*
2-Fluorophenol	*58*		*52 - 120*	*09/13/18 09:48*	*09/16/18 15:19*	*5*
2,4,6-Tribromophenol	*68*		*54 - 120*	*09/13/18 09:48*	*09/16/18 15:19*	*5*
2-Fluorobiphenyl	*74*		*60 - 120*	*09/13/18 09:48*	*09/16/18 15:19*	*5*

Method: 8015D - Gasoline Range Organics (GRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
GRO (C6-C10)	1.4	U	1.4	0.36	mg/Kg	☼	09/10/18 08:25	09/10/18 13:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene	*74*		*46 - 156*	*09/10/18 08:25*	*09/10/18 13:24*	*1*

Method: 8015D - Glycols- Direct Injection (GC/FID)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylene glycol	6.3	U	6.3	1.4	mg/Kg	☼	09/10/18 08:24	09/10/18 11:42	1
Propylene glycol	6.3	U	6.3	1.6	mg/Kg	☼	09/10/18 08:24	09/10/18 11:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Butanediol	*99*		*66 - 120*	*09/10/18 08:24*	*09/10/18 11:42*	*1*

Method: 8015D - Nonhalogenated Organic Compounds - Direct Injection (GC) - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	1.1	U	1.1	0.16	mg/Kg	☼		09/10/18 09:25	1
Isopropyl alcohol	1.1	U	1.1	0.26	mg/Kg	☼		09/10/18 09:25	1
Methanol	1.1	U	1.1	0.33	mg/Kg	☼		09/10/18 09:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Hexanone	*79*		*30 - 137*		*09/10/18 09:25*	*1*

Method: 8015D - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	**9.8**	**J**	19	5.6	mg/Kg	☼	09/10/18 07:19	09/10/18 15:56	1
Oil Range Organics (C28-C40)	19	U	19	5.6	mg/Kg	☼	09/10/18 07:19	09/10/18 15:56	1

Client: ARCADIS U.S. Inc
Project/Site: BMS Soil Analysis

TestAmerica Job ID: 480-141320-1

Client Sample ID: BLDG 25-UNDER SLAB 1
Date Collected: 09/06/18 16:35
Date Received: 09/07/18 01:00

Lab Sample ID: 480-141320-1
Matrix: Solid
Percent Solids: 87.9

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*93*		*48 - 125*	*09/10/18 07:19*	*09/10/18 15:56*	*1*

Method: 8315A - Carbonyl Compounds by HPLC

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetaldehyde	**0.29**	**J B**	1.1	0.12	mg/Kg	☼	09/10/18 15:07	09/11/18 13:46	1
Formaldehyde	**13**		5.6	0.90	mg/Kg	☼	09/10/18 15:07	09/11/18 14:07	5
Glutaraldehyde	1.1	U	1.1	0.23	mg/Kg	☼	09/10/18 15:07	09/11/18 13:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Butyraldehyde	*97*		*39 - 134*	*09/10/18 15:07*	*09/11/18 13:46*	*1*

Surrogate Summary

Client: ARCADIS U.S. Inc
Project/Site: BMS Soil Analysis

TestAmerica Job ID: 480-141320-1

Method: 8260C - Volatile Organic Compounds by GC/MS

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)			
		DCA	BFB	TOL	DBFM
Lab Sample ID	Client Sample ID	(64-126)	(72-126)	(71-125)	(60-140)
480-141320-1	BLDG 25-UNDER SLAB 1	103	98	102	102
LCS 480-433432/1-A	Lab Control Sample	100	101	103	102
MB 480-433432/2-A	Method Blank	104	98	101	101

Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
TOL = Toluene-d8 (Surr)
DBFM = Dibromofluoromethane (Surr)

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)					
		NBZ	TPHd14	PHL	2FP	TBP	FBP
Lab Sample ID	Client Sample ID	(53-120)	(65-121)	(54-120)	(52-120)	(54-120)	(60-120)
480-141320-1	BLDG 25-UNDER SLAB 1	64	89	65	58	68	74
LCS 480-434218/2-A	Lab Control Sample	74	96	77	71	84	81
MB 480-434218/1-A	Method Blank	80	93	75	70	70	79

Surrogate Legend

NBZ = Nitrobenzene-d5
TPHd14 = p-Terphenyl-d14
PHL = Phenol-d5
2FP = 2-Fluorophenol
TBP = 2,4,6-Tribromophenol
FBP = 2-Fluorobiphenyl

Method: 8015D - Gasoline Range Organics (GRO) (GC)

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)
		TFT2
Lab Sample ID	Client Sample ID	(46-156)
480-141320-1	BLDG 25-UNDER SLAB 1	74
LCS 480-433537/2-A	Lab Control Sample	89
MB 480-433537/1-A	Method Blank	94

Surrogate Legend

TFT = a,a,a-Trifluorotoluene

Method: 8015D - Glycols- Direct Injection (GC/FID)

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)
		14BD
Lab Sample ID	Client Sample ID	(66-120)
480-141320-1	BLDG 25-UNDER SLAB 1	99
480-141320-1 MS	BLDG 25-UNDER SLAB 1	103
480-141320-1 MSD	BLDG 25-UNDER SLAB 1	101

Method: 8015D - Glycols- Direct Injection (GC/FID) (Continued)

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)
Lab Sample ID	Client Sample ID	14BD (66-120)
LCS 480-433534/2-A	Lab Control Sample	102
MB 480-433534/1-A	Method Blank	98

Surrogate Legend

14BD = 1,4-Butanediol

Method: 8015D - Nonhalogenated Organic Compounds - Direct Injection (GC)

Matrix: Solid **Prep Type: Soluble**

		Percent Surrogate Recovery (Acceptance Limits)
Lab Sample ID	Client Sample ID	2HN1 (30-137)
480-141320-1	BLDG 25-UNDER SLAB 1	79
480-141320-1 MS	BLDG 25-UNDER SLAB 1	73
480-141320-1 MSD	BLDG 25-UNDER SLAB 1	77
LCS 480-433498/2-A	Lab Control Sample	87
MB 480-433498/1-A	Method Blank	96

Surrogate Legend

2HN = 2-Hexanone

Method: 8015D - Diesel Range Organics (DRO) (GC)

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)
Lab Sample ID	Client Sample ID	OTPH (48-125)
480-141320-1	BLDG 25-UNDER SLAB 1	93
480-141320-1 MS	BLDG 25-UNDER SLAB 1	109
480-141320-1 MSD	BLDG 25-UNDER SLAB 1	103
LCS 480-433509/2-A	Lab Control Sample	107
MB 480-433509/1-A	Method Blank	99

Surrogate Legend

OTPH = o-Terphenyl

Method: 8315A - Carbonyl Compounds by HPLC

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)
Lab Sample ID	Client Sample ID	BTRA (39-134)
480-141320-1	BLDG 25-UNDER SLAB 1	97
LCS 490-541762/2-A	Lab Control Sample	117
MB 490-541762/1-A	Method Blank	114

Surrogate Legend

BTRA = Butyraldehyde

Method: 8260C - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 480-433432/2-A
Matrix: Solid
Analysis Batch: 433425

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 433432

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	5.0	U	5.0	0.36	ug/Kg		09/07/18 19:24	09/07/18 21:38	1
1,1,2,2-Tetrachloroethane	5.0	U	5.0	0.81	ug/Kg		09/07/18 19:24	09/07/18 21:38	1
1,1,2-Trichloro-1,2,2-trifluoroethane	5.0	U	5.0	1.1	ug/Kg		09/07/18 19:24	09/07/18 21:38	1
1,1,2-Trichloroethane	5.0	U	5.0	0.65	ug/Kg		09/07/18 19:24	09/07/18 21:38	1
1,1-Dichloroethane	5.0	U	5.0	0.61	ug/Kg		09/07/18 19:24	09/07/18 21:38	1
1,1-Dichloroethene	5.0	U	5.0	0.61	ug/Kg		09/07/18 19:24	09/07/18 21:38	1
1,2,3-Trichlorobenzene	5.0	U	5.0	0.53	ug/Kg		09/07/18 19:24	09/07/18 21:38	1
1,2,4-Trichlorobenzene	5.0	U	5.0	0.30	ug/Kg		09/07/18 19:24	09/07/18 21:38	1
1,2,4-Trimethylbenzene	5.0	U	5.0	0.96	ug/Kg		09/07/18 19:24	09/07/18 21:38	1
1,2-Dibromo-3-Chloropropane	5.0	U	5.0	2.5	ug/Kg		09/07/18 19:24	09/07/18 21:38	1
1,2-Dichlorobenzene	5.0	U	5.0	0.39	ug/Kg		09/07/18 19:24	09/07/18 21:38	1
1,2-Dichloroethane	5.0	U	5.0	0.25	ug/Kg		09/07/18 19:24	09/07/18 21:38	1
1,2-Dichloropropane	5.0	U	5.0	2.5	ug/Kg		09/07/18 19:24	09/07/18 21:38	1
1,3,5-Trimethylbenzene	5.0	U	5.0	0.32	ug/Kg		09/07/18 19:24	09/07/18 21:38	1
1,3-Dichlorobenzene	5.0	U	5.0	0.26	ug/Kg		09/07/18 19:24	09/07/18 21:38	1
1,4-Dichlorobenzene	5.0	U	5.0	0.70	ug/Kg		09/07/18 19:24	09/07/18 21:38	1
1,4-Dioxane	100	U	100	22	ug/Kg		09/07/18 19:24	09/07/18 21:38	1
2-Butanone (MEK)	25	U	25	1.8	ug/Kg		09/07/18 19:24	09/07/18 21:38	1
2-Hexanone	25	U	25	2.5	ug/Kg		09/07/18 19:24	09/07/18 21:38	1
tert-Butanol (TBA)	50	U	50	17	ug/Kg		09/07/18 19:24	09/07/18 21:38	1
p-Isopropyltoluene	5.0	U	5.0	0.40	ug/Kg		09/07/18 19:24	09/07/18 21:38	1
4-Methyl-2-pentanone (MIBK)	25	U	25	1.6	ug/Kg		09/07/18 19:24	09/07/18 21:38	1
Acetone	25	U	25	4.2	ug/Kg		09/07/18 19:24	09/07/18 21:38	1
Acetonitrile	50	U	50	6.1	ug/Kg		09/07/18 19:24	09/07/18 21:38	1
Benzene	5.0	U	5.0	0.25	ug/Kg		09/07/18 19:24	09/07/18 21:38	1
Bromoform	5.0	U	5.0	2.5	ug/Kg		09/07/18 19:24	09/07/18 21:38	1
Bromomethane	5.0	U	5.0	0.45	ug/Kg		09/07/18 19:24	09/07/18 21:38	1
Carbon disulfide	5.0	U	5.0	2.5	ug/Kg		09/07/18 19:24	09/07/18 21:38	1
Carbon tetrachloride	5.0	U	5.0	0.48	ug/Kg		09/07/18 19:24	09/07/18 21:38	1
Chlorobenzene	5.0	U	5.0	0.66	ug/Kg		09/07/18 19:24	09/07/18 21:38	1
Bromochloromethane	5.0	U	5.0	0.36	ug/Kg		09/07/18 19:24	09/07/18 21:38	1
Dibromochloromethane	5.0	U	5.0	0.64	ug/Kg		09/07/18 19:24	09/07/18 21:38	1
Chlorodifluoromethane	5.0	U	5.0	1.0	ug/Kg		09/07/18 19:24	09/07/18 21:38	1
Chloroethane	5.0	U	5.0	1.1	ug/Kg		09/07/18 19:24	09/07/18 21:38	1
Chloroform	5.0	U	5.0	0.31	ug/Kg		09/07/18 19:24	09/07/18 21:38	1
Chloromethane	5.0	U	5.0	0.30	ug/Kg		09/07/18 19:24	09/07/18 21:38	1
cis-1,2-Dichloroethene	5.0	U	5.0	0.64	ug/Kg		09/07/18 19:24	09/07/18 21:38	1
Cyclohexane	5.0	U	5.0	0.70	ug/Kg		09/07/18 19:24	09/07/18 21:38	1
Cyclohexanone	50	U	50	18	ug/Kg		09/07/18 19:24	09/07/18 21:38	1
Bromodichloromethane	5.0	U	5.0	0.67	ug/Kg		09/07/18 19:24	09/07/18 21:38	1
Dichlorodifluoromethane	5.0	U	5.0	0.41	ug/Kg		09/07/18 19:24	09/07/18 21:38	1
Ethyl acetate	5.0	U	5.0	1.7	ug/Kg		09/07/18 19:24	09/07/18 21:38	1
Diethyl ether	25	U	25	2.1	ug/Kg		09/07/18 19:24	09/07/18 21:38	1
Ethylbenzene	5.0	U	5.0	0.35	ug/Kg		09/07/18 19:24	09/07/18 21:38	1
1,2-Dibromoethane	5.0	U	5.0	0.64	ug/Kg		09/07/18 19:24	09/07/18 21:38	1
Hexane	50	U	50	2.9	ug/Kg		09/07/18 19:24	09/07/18 21:38	1
Isobutanol	200	U	200	40	ug/Kg		09/07/18 19:24	09/07/18 21:38	1
Isopropylbenzene	5.0	U	5.0	0.75	ug/Kg		09/07/18 19:24	09/07/18 21:38	1

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 480-433432/2-A
Matrix: Solid
Analysis Batch: 433425

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 433432

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl acetate	25	U	25	3.0	ug/Kg		09/07/18 19:24	09/07/18 21:38	1
Methyl tert-butyl ether	5.0	U	5.0	0.49	ug/Kg		09/07/18 19:24	09/07/18 21:38	1
Methylcyclohexane	5.0	U	5.0	0.76	ug/Kg		09/07/18 19:24	09/07/18 21:38	1
Methylene Chloride	5.0	U	5.0	2.3	ug/Kg		09/07/18 19:24	09/07/18 21:38	1
m,p-Xylene	10	U	10	0.84	ug/Kg		09/07/18 19:24	09/07/18 21:38	1
Naphthalene	5.0	U	5.0	0.67	ug/Kg		09/07/18 19:24	09/07/18 21:38	1
n-Butanol	50	U	50	1.6	ug/Kg		09/07/18 19:24	09/07/18 21:38	1
Butylbenzene	5.0	U	5.0	0.44	ug/Kg		09/07/18 19:24	09/07/18 21:38	1
Heptane	100	U	100	2.7	ug/Kg		09/07/18 19:24	09/07/18 21:38	1
o-Xylene	5.0	U	5.0	0.65	ug/Kg		09/07/18 19:24	09/07/18 21:38	1
sec-Butylbenzene	5.0	U	5.0	0.44	ug/Kg		09/07/18 19:24	09/07/18 21:38	1
Tetrachloroethene	5.0	U	5.0	0.67	ug/Kg		09/07/18 19:24	09/07/18 21:38	1
Tetrahydrofuran	10	U	10	2.9	ug/Kg		09/07/18 19:24	09/07/18 21:38	1
Toluene	5.0	U	5.0	0.38	ug/Kg		09/07/18 19:24	09/07/18 21:38	1
trans-1,2-Dichloroethene	5.0	U	5.0	0.52	ug/Kg		09/07/18 19:24	09/07/18 21:38	1
trans-1,3-Dichloropropene	5.0	U	5.0	2.2	ug/Kg		09/07/18 19:24	09/07/18 21:38	1
Trichloroethene	5.0	U	5.0	1.1	ug/Kg		09/07/18 19:24	09/07/18 21:38	1
Trichlorofluoromethane	5.0	U	5.0	0.47	ug/Kg		09/07/18 19:24	09/07/18 21:38	1
Vinyl chloride	5.0	U	5.0	0.61	ug/Kg		09/07/18 19:24	09/07/18 21:38	1
Xylenes (total)	10	U	10	0.84	ug/Kg		09/07/18 19:24	09/07/18 21:38	1
cis-1,3-Dichloropropene	5.0	U	5.0	0.72	ug/Kg		09/07/18 19:24	09/07/18 21:38	1
Styrene	5.0	U	5.0	0.25	ug/Kg		09/07/18 19:24	09/07/18 21:38	1
tert-Butylbenzene	5.0	U	5.0	0.52	ug/Kg		09/07/18 19:24	09/07/18 21:38	1
2-Nitropropane	10	U	10	1.1	ug/Kg		09/07/18 19:24	09/07/18 21:38	1

Tentatively Identified Compound	*Est. Result*	*MB Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/Kg*				*09/07/18 19:24*	*09/07/18 21:38*	*1*

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*104*		*64 - 126*	*09/07/18 19:24*	*09/07/18 21:38*	*1*
4-Bromofluorobenzene (Surr)	*98*		*72 - 126*	*09/07/18 19:24*	*09/07/18 21:38*	*1*
Toluene-d8 (Surr)	*101*		*71 - 125*	*09/07/18 19:24*	*09/07/18 21:38*	*1*
Dibromofluoromethane (Surr)	*101*		*60 - 140*	*09/07/18 19:24*	*09/07/18 21:38*	*1*

Lab Sample ID: LCS 480-433432/1-A
Matrix: Solid
Analysis Batch: 433425

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 433432

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	50.0	41.7		ug/Kg		83	77 - 121
1,1,2,2-Tetrachloroethane	50.0	48.5		ug/Kg		97	80 - 120
1,1,2-Trichloro-1,2,2-trifluoroetha ne	50.0	41.5		ug/Kg		83	60 - 140
1,1,2-Trichloroethane	50.0	47.9		ug/Kg		96	78 - 122
1,1-Dichloroethane	50.0	45.0		ug/Kg		90	73 - 126
1,1-Dichloroethene	50.0	43.9		ug/Kg		88	59 - 125
1,2,3-Trichlorobenzene	50.0	40.5		ug/Kg		81	60 - 120
1,2,4-Trichlorobenzene	50.0	41.0		ug/Kg		82	64 - 120

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 480-433432/1-A
Matrix: Solid
Analysis Batch: 433425

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 433432

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2,4-Trimethylbenzene	50.0	44.5		ug/Kg		89	74 - 120
1,2-Dibromo-3-Chloropropane	50.0	40.5		ug/Kg		81	63 - 124
1,2-Dichlorobenzene	50.0	44.4		ug/Kg		89	75 - 120
1,2-Dichloroethane	50.0	42.6		ug/Kg		85	77 - 122
1,2-Dichloropropane	50.0	47.0		ug/Kg		94	75 - 124
1,3,5-Trimethylbenzene	50.0	44.9		ug/Kg		90	74 - 120
1,3-Dichlorobenzene	50.0	45.2		ug/Kg		90	74 - 120
1,4-Dichlorobenzene	50.0	44.6		ug/Kg		89	73 - 120
1,4-Dioxane	1000	763		ug/Kg		76	64 - 124
2-Butanone (MEK)	250	242		ug/Kg		97	70 - 134
2-Hexanone	250	226		ug/Kg		90	59 - 130
tert-Butanol (TBA)	500	466		ug/Kg		93	68 - 134
p-Isopropyltoluene	50.0	44.5		ug/Kg		89	74 - 120
4-Methyl-2-pentanone (MIBK)	250	225		ug/Kg		90	65 - 133
Acetone	250	236		ug/Kg		94	61 - 137
Benzene	50.0	47.5		ug/Kg		95	79 - 127
Bromoform	50.0	42.1		ug/Kg		84	68 - 126
Bromomethane	50.0	54.9		ug/Kg		110	37 - 149
Carbon disulfide	50.0	42.6		ug/Kg		85	64 - 131
Carbon tetrachloride	50.0	39.8		ug/Kg		80	75 - 135
Chlorobenzene	50.0	46.1		ug/Kg		92	76 - 124
Bromochloromethane	50.0	46.9		ug/Kg		94	75 - 134
Dibromochloromethane	50.0	44.2		ug/Kg		88	76 - 125
Chloroethane	50.0	61.4		ug/Kg		123	69 - 135
Chloroform	50.0	44.7		ug/Kg		89	80 - 120
Chloromethane	50.0	38.1		ug/Kg		76	63 - 127
cis-1,2-Dichloroethene	50.0	46.8		ug/Kg		94	81 - 120
Cyclohexane	50.0	42.9		ug/Kg		86	65 - 120
Bromodichloromethane	50.0	44.9		ug/Kg		90	80 - 122
Dichlorodifluoromethane	50.0	39.2		ug/Kg		78	57 - 142
Diethyl ether	50.0	43.5		ug/Kg		87	55 - 120
Ethylbenzene	50.0	45.2		ug/Kg		90	80 - 120
1,2-Dibromoethane	50.0	47.4		ug/Kg		95	78 - 120
Hexane	50.0	39.6	J	ug/Kg		79	68 - 120
Isobutanol	1250	1170		ug/Kg		94	71 - 140
Isopropylbenzene	50.0	44.8		ug/Kg		90	72 - 120
Methyl acetate	100	91.0		ug/Kg		91	55 - 136
Methyl tert-butyl ether	50.0	45.4		ug/Kg		91	63 - 125
Methylcyclohexane	50.0	43.7		ug/Kg		87	60 - 140
Methylene Chloride	50.0	42.7		ug/Kg		85	61 - 127
m,p-Xylene	50.0	45.3		ug/Kg		91	70 - 130
Naphthalene	50.0	41.3		ug/Kg		83	38 - 137
Butylbenzene	50.0	43.4		ug/Kg		87	70 - 120
Heptane	50.0	39.5	J	ug/Kg		79	59 - 120
o-Xylene	50.0	45.3		ug/Kg		91	70 - 130
sec-Butylbenzene	50.0	44.6		ug/Kg		89	74 - 120
Tetrachloroethene	50.0	43.8		ug/Kg		88	74 - 122
Tetrahydrofuran	100	95.8		ug/Kg		96	64 - 120

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 480-433432/1-A
Matrix: Solid
Analysis Batch: 433425

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 433432

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Toluene	50.0	45.9		ug/Kg		92	74 - 128
trans-1,2-Dichloroethene	50.0	46.1		ug/Kg		92	78 - 126
trans-1,3-Dichloropropene	50.0	45.4		ug/Kg		91	73 - 123
Trichloroethene	50.0	44.4		ug/Kg		89	77 - 129
Trichlorofluoromethane	50.0	44.2		ug/Kg		88	65 - 146
Vinyl chloride	50.0	38.6		ug/Kg		77	61 - 133
Xylenes (total)	100	90.6		ug/Kg		91	70 - 130
cis-1,3-Dichloropropene	50.0	46.7		ug/Kg		93	80 - 120
Styrene	50.0	46.6		ug/Kg		93	80 - 120
tert-Butylbenzene	50.0	44.0		ug/Kg		88	73 - 120

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*100*		*64 - 126*
4-Bromofluorobenzene (Surr)	*101*		*72 - 126*
Toluene-d8 (Surr)	*103*		*71 - 125*
Dibromofluoromethane (Surr)	*102*		*60 - 140*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 480-434218/1-A
Matrix: Solid
Analysis Batch: 434630

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 434218

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	170	U	170	25	ug/Kg		09/13/18 09:48	09/16/18 14:29	1
1,2,4,5-Tetrachlorobenzene	170	U	170	29	ug/Kg		09/13/18 09:48	09/16/18 14:29	1
bis(chloroisopropyl) ether	170	U	170	34	ug/Kg		09/13/18 09:48	09/16/18 14:29	1
2,3,4,6-Tetrachlorophenol	170	U	170	35	ug/Kg		09/13/18 09:48	09/16/18 14:29	1
2,4,5-Trichlorophenol	170	U	170	46	ug/Kg		09/13/18 09:48	09/16/18 14:29	1
2,4,6-Trichlorophenol	170	U	170	34	ug/Kg		09/13/18 09:48	09/16/18 14:29	1
2,4-Dichlorophenol	170	U	170	18	ug/Kg		09/13/18 09:48	09/16/18 14:29	1
2,4-Dimethylphenol	170	U	170	41	ug/Kg		09/13/18 09:48	09/16/18 14:29	1
2,4-Dinitrophenol	1700	U	1700	780	ug/Kg		09/13/18 09:48	09/16/18 14:29	1
2,4-Dinitrotoluene	170	U	170	35	ug/Kg		09/13/18 09:48	09/16/18 14:29	1
2,6-Dinitrotoluene	170	U	170	20	ug/Kg		09/13/18 09:48	09/16/18 14:29	1
2-Chloronaphthalene	170	U	170	28	ug/Kg		09/13/18 09:48	09/16/18 14:29	1
2-Chlorophenol	170	U	170	31	ug/Kg		09/13/18 09:48	09/16/18 14:29	1
2-Methylnaphthalene	170	U	170	34	ug/Kg		09/13/18 09:48	09/16/18 14:29	1
2-Methylphenol	170	U	170	20	ug/Kg		09/13/18 09:48	09/16/18 14:29	1
2-Nitroaniline	330	U	330	25	ug/Kg		09/13/18 09:48	09/16/18 14:29	1
2-Nitrophenol	170	U	170	48	ug/Kg		09/13/18 09:48	09/16/18 14:29	1
3 & 4 Methylphenol	330	U	330	26	ug/Kg		09/13/18 09:48	09/16/18 14:29	1
3,3'-Dichlorobenzidine	330	U	330	200	ug/Kg		09/13/18 09:48	09/16/18 14:29	1
3-Nitroaniline	330	U	330	47	ug/Kg		09/13/18 09:48	09/16/18 14:29	1
4,6-Dinitro-2-methylphenol	330	U	330	170	ug/Kg		09/13/18 09:48	09/16/18 14:29	1
4-Bromophenyl phenyl ether	170	U	170	24	ug/Kg		09/13/18 09:48	09/16/18 14:29	1
4-Chloro-3-methylphenol	170	U	170	42	ug/Kg		09/13/18 09:48	09/16/18 14:29	1
4-Chloroaniline	170	U	170	42	ug/Kg		09/13/18 09:48	09/16/18 14:29	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 480-434218/1-A
Matrix: Solid
Analysis Batch: 434630

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 434218

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Chlorophenyl phenyl ether	170	U	170	21	ug/Kg		09/13/18 09:48	09/16/18 14:29	1
4-Methylphenol	330	U	330	20	ug/Kg		09/13/18 09:48	09/16/18 14:29	1
4-Nitroaniline	330	U	330	89	ug/Kg		09/13/18 09:48	09/16/18 14:29	1
4-Nitrophenol	330	U	330	120	ug/Kg		09/13/18 09:48	09/16/18 14:29	1
Acenaphthene	170	U	170	25	ug/Kg		09/13/18 09:48	09/16/18 14:29	1
Acenaphthylene	170	U	170	22	ug/Kg		09/13/18 09:48	09/16/18 14:29	1
Acetophenone	170	U	170	23	ug/Kg		09/13/18 09:48	09/16/18 14:29	1
Aniline	330	U	330	41	ug/Kg		09/13/18 09:48	09/16/18 14:29	1
Anthracene	170	U	170	42	ug/Kg		09/13/18 09:48	09/16/18 14:29	1
Atrazine	170	U	170	59	ug/Kg		09/13/18 09:48	09/16/18 14:29	1
Benzaldehyde	170	U	170	130	ug/Kg		09/13/18 09:48	09/16/18 14:29	1
Benzo(a)anthracene	170	U	170	17	ug/Kg		09/13/18 09:48	09/16/18 14:29	1
Benzo(a)pyrene	170	U	170	25	ug/Kg		09/13/18 09:48	09/16/18 14:29	1
Benzo(b)fluoranthene	170	U	170	27	ug/Kg		09/13/18 09:48	09/16/18 14:29	1
Benzo(g,h,i)perylene	170	U	170	18	ug/Kg		09/13/18 09:48	09/16/18 14:29	1
Benzo(k)fluoranthene	170	U	170	22	ug/Kg		09/13/18 09:48	09/16/18 14:29	1
Benzyl alcohol	330	U	330	23	ug/Kg		09/13/18 09:48	09/16/18 14:29	1
Bis(2-chloroethoxy)methane	170	U	170	36	ug/Kg		09/13/18 09:48	09/16/18 14:29	1
Bis(2-chloroethyl)ether	170	U	170	22	ug/Kg		09/13/18 09:48	09/16/18 14:29	1
Bis(2-ethylhexyl) phthalate	170	U	170	58	ug/Kg		09/13/18 09:48	09/16/18 14:29	1
Butyl benzyl phthalate	170	U	170	28	ug/Kg		09/13/18 09:48	09/16/18 14:29	1
Caprolactam	170	U	170	51	ug/Kg		09/13/18 09:48	09/16/18 14:29	1
Carbazole	170	U	170	20	ug/Kg		09/13/18 09:48	09/16/18 14:29	1
Chrysene	170	U	170	38	ug/Kg		09/13/18 09:48	09/16/18 14:29	1
Dibenz(a,h)anthracene	170	U	170	30	ug/Kg		09/13/18 09:48	09/16/18 14:29	1
Dibenzofuran	170	U	170	20	ug/Kg		09/13/18 09:48	09/16/18 14:29	1
Diethyl phthalate	25.2	J	170	22	ug/Kg		09/13/18 09:48	09/16/18 14:29	1
Dimethyl phthalate	170	U	170	20	ug/Kg		09/13/18 09:48	09/16/18 14:29	1
Di-n-butyl phthalate	170	U	170	29	ug/Kg		09/13/18 09:48	09/16/18 14:29	1
Di-n-octyl phthalate	170	U	170	20	ug/Kg		09/13/18 09:48	09/16/18 14:29	1
Fluoranthene	170	U	170	18	ug/Kg		09/13/18 09:48	09/16/18 14:29	1
Fluorene	170	U	170	20	ug/Kg		09/13/18 09:48	09/16/18 14:29	1
Hexachlorobenzene	170	U	170	23	ug/Kg		09/13/18 09:48	09/16/18 14:29	1
Hexachlorobutadiene	170	U	170	25	ug/Kg		09/13/18 09:48	09/16/18 14:29	1
Hexachlorocyclopentadiene	170	U	170	23	ug/Kg		09/13/18 09:48	09/16/18 14:29	1
Hexachloroethane	170	U	170	22	ug/Kg		09/13/18 09:48	09/16/18 14:29	1
Indeno(1,2,3-cd)pyrene	170	U	170	21	ug/Kg		09/13/18 09:48	09/16/18 14:29	1
Isophorone	170	U	170	36	ug/Kg		09/13/18 09:48	09/16/18 14:29	1
Naphthalene	170	U	170	22	ug/Kg		09/13/18 09:48	09/16/18 14:29	1
Nitrobenzene	170	U	170	19	ug/Kg		09/13/18 09:48	09/16/18 14:29	1
N-Nitroso-di-n-propylamine	170	U	170	29	ug/Kg		09/13/18 09:48	09/16/18 14:29	1
N-Nitrosodiphenylamine	170	U	170	140	ug/Kg		09/13/18 09:48	09/16/18 14:29	1
Pentachlorophenol	330	U	330	170	ug/Kg		09/13/18 09:48	09/16/18 14:29	1
Phenanthrene	170	U	170	25	ug/Kg		09/13/18 09:48	09/16/18 14:29	1
Phenol	170	U	170	26	ug/Kg		09/13/18 09:48	09/16/18 14:29	1
Pyrene	170	U	170	20	ug/Kg		09/13/18 09:48	09/16/18 14:29	1
Pyridine	330	U	330	24	ug/Kg		09/13/18 09:48	09/16/18 14:29	1
Dicyclohexylamine	3000	U	3000	1600	ug/Kg		09/13/18 09:48	09/16/18 14:29	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 480-434218/1-A
Matrix: Solid
Analysis Batch: 434630

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 434218

Tentatively Identified Compound	MB Est. Result	MB Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Unknown	494	T J	ug/Kg		1.59		09/13/18 09:48	09/16/18 14:29	1
Unknown	758	T J	ug/Kg		1.71		09/13/18 09:48	09/16/18 14:29	1
Unknown	176	T J	ug/Kg		2.90		09/13/18 09:48	09/16/18 14:29	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	80		53 - 120	09/13/18 09:48	09/16/18 14:29	1
p-Terphenyl-d14	93		65 - 121	09/13/18 09:48	09/16/18 14:29	1
Phenol-d5	75		54 - 120	09/13/18 09:48	09/16/18 14:29	1
2-Fluorophenol	70		52 - 120	09/13/18 09:48	09/16/18 14:29	1
2,4,6-Tribromophenol	70		54 - 120	09/13/18 09:48	09/16/18 14:29	1
2-Fluorobiphenyl	79		60 - 120	09/13/18 09:48	09/16/18 14:29	1

Lab Sample ID: LCS 480-434218/2-A
Matrix: Solid
Analysis Batch: 434630

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 434218

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1'-Biphenyl	1660	1490		ug/Kg		90	59 - 120
1,2,4,5-Tetrachlorobenzene	1660	1440		ug/Kg		87	59 - 125
bis(chloroisopropyl) ether	1660	1310		ug/Kg		79	44 - 120
2,3,4,6-Tetrachlorophenol	1660	1410		ug/Kg		85	64 - 120
2,4,5-Trichlorophenol	1660	1470		ug/Kg		88	59 - 126
2,4,6-Trichlorophenol	1660	1470		ug/Kg		88	59 - 123
2,4-Dichlorophenol	1660	1410		ug/Kg		85	61 - 120
2,4-Dimethylphenol	1660	1470		ug/Kg		89	59 - 120
2,4-Dinitrophenol	3330	2300		ug/Kg		69	41 - 146
2,4-Dinitrotoluene	1660	1490		ug/Kg		90	63 - 120
2,6-Dinitrotoluene	1660	1490		ug/Kg		89	66 - 120
2-Chloronaphthalene	1660	1460		ug/Kg		88	57 - 120
2-Chlorophenol	1660	1350		ug/Kg		81	53 - 120
2-Methylnaphthalene	1660	1440		ug/Kg		87	59 - 120
2-Methylphenol	1660	1430		ug/Kg		86	54 - 120
2-Nitroaniline	1660	1420		ug/Kg		85	61 - 120
2-Nitrophenol	1660	1330		ug/Kg		80	56 - 120
3 & 4 Methylphenol	1660	1480		ug/Kg		89	55 - 120
3,3'-Dichlorobenzidine	3330	2670		ug/Kg		80	54 - 120
3-Nitroaniline	1660	1230		ug/Kg		74	48 - 120
4,6-Dinitro-2-methylphenol	3330	2810		ug/Kg		85	49 - 122
4-Bromophenyl phenyl ether	1660	1600		ug/Kg		96	58 - 120
4-Chloro-3-methylphenol	1660	1430		ug/Kg		86	61 - 120
4-Chloroaniline	1660	1230		ug/Kg		74	38 - 120
4-Chlorophenyl phenyl ether	1660	1530		ug/Kg		92	63 - 124
4-Methylphenol	1660	1480		ug/Kg		89	55 - 120
4-Nitroaniline	1660	1280		ug/Kg		77	56 - 120
4-Nitrophenol	3330	2930		ug/Kg		88	43 - 147
Acenaphthene	1660	1480		ug/Kg		89	62 - 120
Acenaphthylene	1660	1470		ug/Kg		88	58 - 121

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 480-434218/2-A
Matrix: Solid
Analysis Batch: 434630

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 434218

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetophenone	1660	1380		ug/Kg		83	54 - 120
Aniline	1660	1270		ug/Kg		76	27 - 120
Anthracene	1660	1550		ug/Kg		93	62 - 120
Atrazine	3330	2990		ug/Kg		90	60 - 127
Benzaldehyde	3330	2720		ug/Kg		82	10 - 150
Benzo(a)anthracene	1660	1590		ug/Kg		96	65 - 120
Benzo(a)pyrene	1660	1570		ug/Kg		95	64 - 120
Benzo(b)fluoranthene	1660	1520		ug/Kg		91	64 - 120
Benzo(g,h,i)perylene	1660	1360		ug/Kg		82	45 - 145
Benzo(k)fluoranthene	1660	1690		ug/Kg		102	65 - 120
Benzyl alcohol	1660	1460		ug/Kg		88	49 - 120
Bis(2-chloroethoxy)methane	1660	1370		ug/Kg		82	55 - 120
Bis(2-chloroethyl)ether	1660	1330		ug/Kg		80	45 - 120
Bis(2-ethylhexyl) phthalate	1660	1660		ug/Kg		100	61 - 133
Butyl benzyl phthalate	1660	1670		ug/Kg		100	61 - 129
Caprolactam	3330	2750		ug/Kg		83	47 - 120
Carbazole	1660	1510		ug/Kg		91	65 - 120
Chrysene	1660	1560		ug/Kg		94	64 - 120
Dibenz(a,h)anthracene	1660	1400		ug/Kg		84	54 - 132
Dibenzofuran	1660	1490		ug/Kg		90	63 - 120
Diethyl phthalate	1660	1530		ug/Kg		92	66 - 120
Dimethyl phthalate	1660	1530		ug/Kg		92	65 - 124
Di-n-butyl phthalate	1660	1560		ug/Kg		94	58 - 130
Di-n-octyl phthalate	1660	1570		ug/Kg		94	57 - 133
Fluoranthene	1660	1520		ug/Kg		91	62 - 120
Fluorene	1660	1490		ug/Kg		89	63 - 120
Hexachlorobenzene	1660	1580		ug/Kg		95	60 - 120
Hexachlorobutadiene	1660	1360		ug/Kg		81	45 - 120
Hexachlorocyclopentadiene	1660	1540		ug/Kg		93	47 - 120
Hexachloroethane	1660	1250		ug/Kg		75	41 - 120
Indeno(1,2,3-cd)pyrene	1660	1390		ug/Kg		84	56 - 134
Isophorone	1660	1460		ug/Kg		88	56 - 120
Naphthalene	1660	1330		ug/Kg		80	55 - 120
Nitrobenzene	1660	1370		ug/Kg		83	54 - 120
N-Nitroso-di-n-propylamine	1660	1380		ug/Kg		83	52 - 120
N-Nitrosodiphenylamine	1660	1590		ug/Kg		95	51 - 128
Pentachlorophenol	3330	2620		ug/Kg		79	51 - 120
Phenanthrene	1660	1540		ug/Kg		93	60 - 120
Phenol	1660	1290		ug/Kg		77	53 - 120
Pyrene	1660	1740		ug/Kg		104	61 - 133
Pyridine	3330	1860		ug/Kg		56	23 - 120

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Nitrobenzene-d5	*74*		*53 - 120*
p-Terphenyl-d14	*96*		*65 - 121*
Phenol-d5	*77*		*54 - 120*
2-Fluorophenol	*71*		*52 - 120*
2,4,6-Tribromophenol	*84*		*54 - 120*

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 480-434218/2-A
Matrix: Solid
Analysis Batch: 434630

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 434218

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Fluorobiphenyl	*81*		*60 - 120*

Method: 8015D - Gasoline Range Organics (GRO) (GC)

Lab Sample ID: MB 480-433537/1-A
Matrix: Solid
Analysis Batch: 433518

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 433537

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
GRO (C6-C10)	1.2	U	1.2	0.32	mg/Kg		09/10/18 08:25	09/10/18 09:30	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene	*94*		*46 - 156*	*09/10/18 08:25*	*09/10/18 09:30*	*1*

Lab Sample ID: LCS 480-433537/2-A
Matrix: Solid
Analysis Batch: 433518

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 433537

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
GRO (C6-C10)	9.77	7.36		mg/Kg		75	64 - 129

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
a,a,a-Trifluorotoluene	*89*		*46 - 156*

Method: 8015D - Glycols- Direct Injection (GC/FID)

Lab Sample ID: MB 480-433534/1-A
Matrix: Solid
Analysis Batch: 433553

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 433534

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylene glycol	4.9	U	4.9	1.1	mg/Kg		09/10/18 08:24	09/10/18 11:06	1
Propylene glycol	4.9	U	4.9	1.2	mg/Kg		09/10/18 08:24	09/10/18 11:06	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Butanediol	*98*		*66 - 120*	*09/10/18 08:24*	*09/10/18 11:06*	*1*

Lab Sample ID: LCS 480-433534/2-A
Matrix: Solid
Analysis Batch: 433553

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 433534

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethylene glycol	9.53	8.82		mg/Kg		93	49 - 127
Propylene glycol	9.53	8.97		mg/Kg		94	63 - 128

Method: 8015D - Glycols- Direct Injection (GC/FID) (Continued)

Lab Sample ID: LCS 480-433534/2-A
Matrix: Solid
Analysis Batch: 433553

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 433534

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,4-Butanediol	*102*		*66 - 120*

Lab Sample ID: 480-141320-1 MS
Matrix: Solid
Analysis Batch: 433553

Client Sample ID: BLDG 25-UNDER SLAB 1
Prep Type: Total/NA
Prep Batch: 433534

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethylene glycol	6.3	U	11.2	9.31		mg/Kg	☼	83	25 - 148
Propylene glycol	6.3	U	11.2	9.30		mg/Kg	☼	83	60 - 129

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1,4-Butanediol	*103*		*66 - 120*

Lab Sample ID: 480-141320-1 MSD
Matrix: Solid
Analysis Batch: 433553

Client Sample ID: BLDG 25-UNDER SLAB 1
Prep Type: Total/NA
Prep Batch: 433534

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Ethylene glycol	6.3	U	11.3	9.33		mg/Kg	☼	83	25 - 148	0	50
Propylene glycol	6.3	U	11.3	9.14		mg/Kg	☼	81	60 - 129	2	50

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1,4-Butanediol	*101*		*66 - 120*

Method: 8015D - Nonhalogenated Organic Compounds - Direct Injection (GC)

Lab Sample ID: MB 480-433498/1-A
Matrix: Solid
Analysis Batch: 433522

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	0.96	U	0.96	0.14	mg/Kg			09/10/18 08:51	1
Isopropyl alcohol	0.96	U	0.96	0.23	mg/Kg			09/10/18 08:51	1
Methanol	0.96	U	0.96	0.29	mg/Kg			09/10/18 08:51	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Hexanone	*96*		*30 - 137*		*09/10/18 08:51*	*1*

Lab Sample ID: LCS 480-433498/2-A
Matrix: Solid
Analysis Batch: 433522

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethanol	18.5	18.0		mg/Kg		97	55 - 136
Isopropyl alcohol	18.5	18.5		mg/Kg		100	50 - 131
Methanol	18.5	17.4		mg/Kg		94	53 - 140

Method: 8015D - Nonhalogenated Organic Compounds - Direct Injection (GC) (Continued)

Lab Sample ID: LCS 480-433498/2-A
Matrix: Solid
Analysis Batch: 433522

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Hexanone	*87*		*30 - 137*

Lab Sample ID: 480-141320-1 MS
Matrix: Solid
Analysis Batch: 433522

Client Sample ID: BLDG 25-UNDER SLAB 1
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethanol	1.1	U	20.9	18.3		mg/Kg	☼	88	70 - 130
Isopropyl alcohol	1.1	U	20.9	18.4		mg/Kg	☼	88	70 - 130
Methanol	1.1	U	20.9	17.4		mg/Kg	☼	83	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
2-Hexanone	*73*		*30 - 137*

Lab Sample ID: 480-141320-1 MSD
Matrix: Solid
Analysis Batch: 433522

Client Sample ID: BLDG 25-UNDER SLAB 1
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Ethanol	1.1	U	22.1	19.3		mg/Kg	☼	87	70 - 130	5	30
Isopropyl alcohol	1.1	U	22.1	19.4		mg/Kg	☼	88	70 - 130	5	30
Methanol	1.1	U	22.1	18.9		mg/Kg	☼	85	70 - 130	8	30

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
2-Hexanone	*77*		*30 - 137*

Method: 8015D - Diesel Range Organics (DRO) (GC)

Lab Sample ID: MB 480-433509/1-A
Matrix: Solid
Analysis Batch: 433581

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 433509

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	17	U	17	5.0	mg/Kg		09/10/18 07:19	09/10/18 13:33	1
Oil Range Organics (C28-C40)	17	U	17	5.0	mg/Kg		09/10/18 07:19	09/10/18 13:33	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*99*		*48 - 125*	*09/10/18 07:19*	*09/10/18 13:33*	*1*

Lab Sample ID: LCS 480-433509/2-A
Matrix: Solid
Analysis Batch: 433581

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 433509

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Diesel Range Organics [C10-C28]	49.8	53.2		mg/Kg		107	63 - 127

Method: 8015D - Diesel Range Organics (DRO) (GC) (Continued)

Lab Sample ID: LCS 480-433509/2-A
Matrix: Solid
Analysis Batch: 433581

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 433509

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
o-Terphenyl	*107*		*48 - 125*

Lab Sample ID: 480-141320-1 MS
Matrix: Solid
Analysis Batch: 433581

Client Sample ID: BLDG 25-UNDER SLAB 1
Prep Type: Total/NA
Prep Batch: 433509

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Diesel Range Organics [C10-C28]	9.8	J	56.1	70.9		mg/Kg	☼	109	43 - 150

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
o-Terphenyl	*109*		*48 - 125*

Lab Sample ID: 480-141320-1 MSD
Matrix: Solid
Analysis Batch: 433581

Client Sample ID: BLDG 25-UNDER SLAB 1
Prep Type: Total/NA
Prep Batch: 433509

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Diesel Range Organics [C10-C28]	9.8	J	56.6	73.4		mg/Kg	☼	112	43 - 150	3	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
o-Terphenyl	*103*		*48 - 125*

Method: 8315A - Carbonyl Compounds by HPLC

Lab Sample ID: MB 490-541762/1-A
Matrix: Solid
Analysis Batch: 541904

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 541762

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetaldehyde	0.154	J	1.0	0.11	mg/Kg		09/10/18 15:07	09/11/18 14:29	1
Formaldehyde	1.0	U	1.0	0.16	mg/Kg		09/10/18 15:07	09/11/18 14:29	1
Glutaraldehyde	1.0	U	1.0	0.20	mg/Kg		09/10/18 15:07	09/11/18 14:29	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Butyraldehyde	*114*		*39 - 134*	*09/10/18 15:07*	*09/11/18 14:29*	*1*

Lab Sample ID: LCS 490-541762/2-A
Matrix: Solid
Analysis Batch: 541904

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 541762

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetaldehyde	2.00	2.42		mg/Kg		121	44 - 141
Formaldehyde	2.00	2.02		mg/Kg		101	52 - 150
Glutaraldehyde	2.00	2.09		mg/Kg		105	10 - 150

Method: 8315A - Carbonyl Compounds by HPLC (Continued)

Lab Sample ID: LCS 490-541762/2-A
Matrix: Solid
Analysis Batch: 541904

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 541762

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Butyraldehyde	117		39 - 134

GC/MS VOA

Analysis Batch: 433425

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-141320-1	BLDG 25-UNDER SLAB 1	Total/NA	Solid	8260C	433432
MB 480-433432/2-A	Method Blank	Total/NA	Solid	8260C	433432
LCS 480-433432/1-A	Lab Control Sample	Total/NA	Solid	8260C	433432

Prep Batch: 433432

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-141320-1	BLDG 25-UNDER SLAB 1	Total/NA	Solid	5035A_L	
MB 480-433432/2-A	Method Blank	Total/NA	Solid	5035A_L	
LCS 480-433432/1-A	Lab Control Sample	Total/NA	Solid	5035A_L	

GC/MS Semi VOA

Prep Batch: 434218

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-141320-1	BLDG 25-UNDER SLAB 1	Total/NA	Solid	3550C	
MB 480-434218/1-A	Method Blank	Total/NA	Solid	3550C	
LCS 480-434218/2-A	Lab Control Sample	Total/NA	Solid	3550C	

Analysis Batch: 434630

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-141320-1	BLDG 25-UNDER SLAB 1	Total/NA	Solid	8270D	434218
MB 480-434218/1-A	Method Blank	Total/NA	Solid	8270D	434218
LCS 480-434218/2-A	Lab Control Sample	Total/NA	Solid	8270D	434218

GC VOA

Leach Batch: 433498

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-141320-1	BLDG 25-UNDER SLAB 1	Soluble	Solid	DI Leach	
MB 480-433498/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 480-433498/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
480-141320-1 MS	BLDG 25-UNDER SLAB 1	Soluble	Solid	DI Leach	
480-141320-1 MSD	BLDG 25-UNDER SLAB 1	Soluble	Solid	DI Leach	

Analysis Batch: 433518

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-141320-1	BLDG 25-UNDER SLAB 1	Total/NA	Solid	8015D	433537
MB 480-433537/1-A	Method Blank	Total/NA	Solid	8015D	433537
LCS 480-433537/2-A	Lab Control Sample	Total/NA	Solid	8015D	433537

Analysis Batch: 433522

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-141320-1	BLDG 25-UNDER SLAB 1	Soluble	Solid	8015D	433498
MB 480-433498/1-A	Method Blank	Soluble	Solid	8015D	433498
LCS 480-433498/2-A	Lab Control Sample	Soluble	Solid	8015D	433498
480-141320-1 MS	BLDG 25-UNDER SLAB 1	Soluble	Solid	8015D	433498
480-141320-1 MSD	BLDG 25-UNDER SLAB 1	Soluble	Solid	8015D	433498

GC VOA (Continued)

Prep Batch: 433534

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-141320-1	BLDG 25-UNDER SLAB 1	Total/NA	Solid	8015 Prep	
MB 480-433534/1-A	Method Blank	Total/NA	Solid	8015 Prep	
LCS 480-433534/2-A	Lab Control Sample	Total/NA	Solid	8015 Prep	
480-141320-1 MS	BLDG 25-UNDER SLAB 1	Total/NA	Solid	8015 Prep	
480-141320-1 MSD	BLDG 25-UNDER SLAB 1	Total/NA	Solid	8015 Prep	

Prep Batch: 433537

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-141320-1	BLDG 25-UNDER SLAB 1	Total/NA	Solid	5035A_H	
MB 480-433537/1-A	Method Blank	Total/NA	Solid	5035A_H	
LCS 480-433537/2-A	Lab Control Sample	Total/NA	Solid	5035A_H	

Analysis Batch: 433553

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-141320-1	BLDG 25-UNDER SLAB 1	Total/NA	Solid	8015D	433534
MB 480-433534/1-A	Method Blank	Total/NA	Solid	8015D	433534
LCS 480-433534/2-A	Lab Control Sample	Total/NA	Solid	8015D	433534
480-141320-1 MS	BLDG 25-UNDER SLAB 1	Total/NA	Solid	8015D	433534
480-141320-1 MSD	BLDG 25-UNDER SLAB 1	Total/NA	Solid	8015D	433534

GC Semi VOA

Prep Batch: 433509

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-141320-1	BLDG 25-UNDER SLAB 1	Total/NA	Solid	3550C	
MB 480-433509/1-A	Method Blank	Total/NA	Solid	3550C	
LCS 480-433509/2-A	Lab Control Sample	Total/NA	Solid	3550C	
480-141320-1 MS	BLDG 25-UNDER SLAB 1	Total/NA	Solid	3550C	
480-141320-1 MSD	BLDG 25-UNDER SLAB 1	Total/NA	Solid	3550C	

Analysis Batch: 433581

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-141320-1	BLDG 25-UNDER SLAB 1	Total/NA	Solid	8015D	433509
MB 480-433509/1-A	Method Blank	Total/NA	Solid	8015D	433509
LCS 480-433509/2-A	Lab Control Sample	Total/NA	Solid	8015D	433509
480-141320-1 MS	BLDG 25-UNDER SLAB 1	Total/NA	Solid	8015D	433509
480-141320-1 MSD	BLDG 25-UNDER SLAB 1	Total/NA	Solid	8015D	433509

HPLC/IC

Prep Batch: 541762

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-141320-1	BLDG 25-UNDER SLAB 1	Total/NA	Solid	8315A Prep	
MB 490-541762/1-A	Method Blank	Total/NA	Solid	8315A Prep	
LCS 490-541762/2-A	Lab Control Sample	Total/NA	Solid	8315A Prep	

Analysis Batch: 541904

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-141320-1	BLDG 25-UNDER SLAB 1	Total/NA	Solid	8315A	541762
480-141320-1	BLDG 25-UNDER SLAB 1	Total/NA	Solid	8315A	541762

HPLC/IC (Continued)

Analysis Batch: 541904 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 490-541762/1-A	Method Blank	Total/NA	Solid	8315A	541762
LCS 490-541762/2-A	Lab Control Sample	Total/NA	Solid	8315A	541762

General Chemistry

Analysis Batch: 433221

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-141320-1	BLDG 25-UNDER SLAB 1	Total/NA	Solid	Moisture	

Lab Chronicle

Client: ARCADIS U.S. Inc
Project/Site: BMS Soil Analysis

TestAmerica Job ID: 480-141320-1

Client Sample ID: BLDG 25-UNDER SLAB 1

Lab Sample ID: 480-141320-1
Date Collected: 09/06/18 16:35
Matrix: Solid
Date Received: 09/07/18 01:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	433221	09/07/18 05:16	CSW	TAL BUF

Client Sample ID: BLDG 25-UNDER SLAB 1

Lab Sample ID: 480-141320-1
Date Collected: 09/06/18 16:35
Matrix: Solid
Date Received: 09/07/18 01:00
Percent Solids: 87.9

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035A_L			433432	09/07/18 08:00	AEM	TAL BUF
Total/NA	Analysis	8260C		1	433425	09/07/18 22:33	CDC	TAL BUF
Total/NA	Prep	3550C			434218	09/13/18 09:48	SMP	TAL BUF
Total/NA	Analysis	8270D		5	434630	09/16/18 15:19	RJS	TAL BUF
Soluble	Leach	DI Leach			433498	09/10/18 06:50	MAN	TAL BUF
Soluble	Analysis	8015D		1	433522	09/10/18 09:25	MAN	TAL BUF
Total/NA	Prep	5035A_H			433537	09/10/18 08:25	JLS	TAL BUF
Total/NA	Analysis	8015D		1	433518	09/10/18 13:24	JLS	TAL BUF
Total/NA	Prep	8015 Prep			433534	09/10/18 08:24	MAN	TAL BUF
Total/NA	Analysis	8015D		1	433553	09/10/18 11:42	MAN	TAL BUF
Total/NA	Prep	3550C			433509	09/10/18 07:19	SMP	TAL BUF
Total/NA	Analysis	8015D		1	433581	09/10/18 15:56	MAN	TAL BUF
Total/NA	Prep	8315A Prep			541762	09/10/18 15:07	MCO	TAL NSH
Total/NA	Analysis	8315A		1	541904	09/11/18 13:46	PRB	TAL NSH
Total/NA	Prep	8315A Prep			541762	09/10/18 15:07	MCO	TAL NSH
Total/NA	Analysis	8315A		5	541904	09/11/18 14:07	PRB	TAL NSH

Laboratory References:

TAL BUF = TestAmerica Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600
TAL NSH = TestAmerica Nashville, 2960 Foster Creighton Drive, Nashville, TN 37204, TEL (615)726-0177

Accreditation/Certification Summary

Client: ARCADIS U.S. Inc
Project/Site: BMS Soil Analysis

TestAmerica Job ID: 480-141320-1

Laboratory: TestAmerica Buffalo

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	EPA Region	Identification Number	Expiration Date
New York	NELAP	2	10026	03-31-19

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
8015D		Solid	Ethanol
8015D		Solid	Isopropyl alcohol
8015D		Solid	Methanol
8015D	3550C	Solid	Oil Range Organics (C28-C40)
8015D	8015 Prep	Solid	Propylene glycol
8260C	5035A_L	Solid	Chlorodifluoromethane
8260C	5035A_L	Solid	Cyclohexanone
8260C	5035A_L	Solid	Diethyl ether
8260C	5035A_L	Solid	Heptane
8260C	5035A_L	Solid	Hexane
8260C	5035A_L	Solid	n-Butanol
8260C	5035A_L	Solid	Tetrahydrofuran
8270D	3550C	Solid	3 & 4 Methylphenol
8270D	3550C	Solid	Dicyclohexylamine
Moisture		Solid	Percent Moisture
Moisture		Solid	Percent Solids

Laboratory: TestAmerica Nashville

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
A2LA	ISO/IEC 17025		0453.07	12-31-19
Alaska (UST)	State Program	10	UST-087	06-30-19
Arizona	State Program	9	AZ0473	05-05-19
Arkansas DEQ	State Program	6	88-0737	04-25-19
California	State Program	9	2938	10-31-18
Connecticut	State Program	1	PH-0220	12-31-19
Florida	NELAP	4	E87358	06-30-19
Georgia	State Program	4	NA: NELAP & A2LA	12-31-19
Illinois	NELAP	5	200010	12-09-18
Iowa	State Program	7	131	04-01-20
Kansas	NELAP	7	E-10229	10-31-18
Kentucky (UST)	State Program	4	19	06-30-19
Kentucky (WW)	State Program	4	90038	12-31-18
Louisiana	NELAP	6	30613	06-30-19
Maine	State Program	1	TN00032	11-03-19
Maryland	State Program	3	316	03-31-19
Massachusetts	State Program	1	M-TN032	06-30-19
Minnesota	NELAP	5	047-999-345	12-31-18
Mississippi	State Program	4	N/A	06-30-19
Montana (UST)	State Program	8	NA	02-24-20
Nevada	State Program	9	TN00032	07-31-19
New Hampshire	NELAP	1	2963	10-09-18
New Jersey	NELAP	2	TN965	06-30-19
New York	NELAP	2	11342	03-31-19
North Carolina (WW/SW)	State Program	4	387	12-31-18

Accreditation/Certification Summary

Client: ARCADIS U.S. Inc
Project/Site: BMS Soil Analysis

TestAmerica Job ID: 480-141320-1

Laboratory: TestAmerica Nashville (Continued)

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
North Dakota	State Program	8	R-146	06-30-19
Ohio VAP	State Program	5	CL0033	07-06-19
Oklahoma	State Program	6	9412	08-31-19
Oregon	NELAP	10	TN200001	04-26-19
Pennsylvania	NELAP	3	68-00585	07-31-19
Rhode Island	State Program	1	LAO00268	12-30-18
South Carolina	State Program	4	84009 (001)	02-28-19
Tennessee	State Program	4	2008	02-23-20
Texas	NELAP	6	T104704077	08-31-19
USDA	Federal		P330-13-00306	12-01-19
Utah	NELAP	8	TN00032	07-31-19
Virginia	NELAP	3	460152	06-14-19
Washington	State Program	10	C789	07-19-19
West Virginia DEP	State Program	3	219	02-28-19
Wisconsin	State Program	5	998020430	08-31-19
Wyoming (UST)	A2LA	8	453.07	12-31-19

Method Summary

Client: ARCADIS U.S. Inc
Project/Site: BMS Soil Analysis

TestAmerica Job ID: 480-141320-1

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds by GC/MS	SW846	TAL BUF
8270D	Semivolatile Organic Compounds (GC/MS)	SW846	TAL BUF
8015D	Gasoline Range Organics (GRO) (GC)	SW846	TAL BUF
8015D	Glycols- Direct Injection (GC/FID)	SW846	TAL BUF
8015D	Nonhalogenated Organic Compounds - Direct Injection (GC)	SW846	TAL BUF
8015D	Diesel Range Organics (DRO) (GC)	SW846	TAL BUF
8315A	Carbonyl Compounds by HPLC	SW846	TAL NSH
Moisture	Percent Moisture	EPA	TAL BUF
3550C	Ultrasonic Extraction	SW846	TAL BUF
5035A_H	Closed System Purge and Trap	SW846	TAL BUF
5035A_L	Closed System Purge and Trap	SW846	TAL BUF
8015 Prep	8015 Direct Injection Prep (Solid)	SW846	TAL BUF
8315A Prep	Extraction (Carbonyl Compounds)	SW846	TAL NSH
DI Leach	Deionized Water Leaching Procedure	ASTM	TAL BUF

Protocol References:

ASTM = ASTM International

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL BUF = TestAmerica Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

TAL NSH = TestAmerica Nashville, 2960 Foster Creighton Drive, Nashville, TN 37204, TEL (615)726-0177

Sample Summary

Client: ARCADIS U.S. Inc
Project/Site: BMS Soil Analysis

TestAmerica Job ID: 480-141320-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
480-141320-1	BLDG 25-UNDER SLAB 1	Solid	09/06/18 16:35	09/07/18 01:00

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

480-141320 COC

Temperature on Receipt _____

Drinking Water? Yes ☐ No ☒

TAL-4124 (1007)

Client: Arcadis	Project Manager: David Wright : 315-671-9260	Date: 9/6/18	Chain of Custody Number: 275097
Address: one Lincoln Center, Suite 300	Telephone Number (Area Code)/Fax Number: 516-369-2741	Lab Number:	Page 1 of 1
City: Syracuse / State: NY / Zip Code: 13202	Site Contact: Dan Zuck	Lab Contact: Melissa Deyo	
Project Name and Location (State): BMS Syracuse NY	Carrier/Waybill Number:		
Contract/Purchase Order/Quote No.: B008 7363.0024.00001			

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil	Containers & Preservatives: Unpres.	H2SO4	HNO3	H2O	NaOH	ZnAc/NaOH	4H, 0H	Analysis (Attach list if more space is needed): VOCs + TIC 8260	SVOCs + TICs 8270	Glycols/MeOH 8015	TPH 6-D-RO	Aldehydes 8315A	Special Instructions/ Conditions of Receipt
Bldg 25 - Under Slab 1	9/6/18	1635				9	6			2			1	X	X	X	X	X	use BMS Sample List

RE 9-6-18

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☒ Unknown

Sample Disposal
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required
☒ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☐ Other _____

QC Requirements (Specify): NYSDEC EDD Requested, Level 2/4 Report 2 weeks.

	Date	Time		Date	Time
1. Relinquished By: Daniel Zuck	9/6/18	1725	1. Received By: RELinquish, Syn	9-6-18	17:25
2. Relinquished By: RELinquish	9-6-18	19:00	2. Received By: TMS	9-7-18	0100
3. Relinquished By:			3. Received By:		

Comments: Please Report Results To David Wright By COB 9/10/18. 0.9 #1

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
Nashville, TN

COOLER RECEIPT FORM

480-141320 Chain of Custody

Cooler Received/Opened On 9/8/2018 @ 1040

Time Samples Removed From Cooler 13:09 Time Samples Placed In Storage 13:18 (2 Hour Window)

1. Tracking # 6440 (last 4 digits, FedEx) Courier: FedEx

IR Gun ID 17960357 pH Strip Lot _____ Chlorine Strip Lot _____

2. Temperature of rep. sample or temp blank when opened: 1.1 *Degrees Celsius*

3. If Item #2 temperature is 0°C or less, was the representative sample or temp blank frozen? YES NO...(NA)

4. Were custody seals on outside of cooler? (YES)...NO...NA

If yes, how many and where: 1 Front

5. Were the seals intact, signed, and dated correctly? (YES)...NO...NA

6. Were custody papers inside cooler? (YES)...NO...NA

I certify that I opened the cooler and answered questions 1-6 (intial) JH

7. Were custody seals on containers: YES (NO) and Intact YES...NO...(NA)

Were these signed and dated correctly? YES...NO...(NA)

8. Packing mat'l used? (Bubblewrap) Plastic bag Peanuts Vermiculite Foam Insert Paper Other None

9. Cooling process: (Ice) Ice-pack Ice (direct contact) Dry ice Other None

10. Did all containers arrive in good condition (unbroken)? (YES)...NO...NA

11. Were all container labels complete (#, date, signed, pres., etc)? (YES)...NO...NA

12. Did all container labels and tags agree with custody papers? (YES)...NO...NA

13a. Were VOA vials received? YES...(NO)...NA

b. Was there any observable headspace present in any VOA vial? YES...NO...(NA)

Larger than this.

14. Was there a Trip Blank in this cooler? YES...(NO)...NA If multiple coolers, sequence #_____

I certify that I unloaded the cooler and answered questions 7-14 (intial) J.2

15a. On pres'd bottles, did pH test strips suggest preservation reached the correct pH level? YES...NO...(NA)

b. Did the bottle labels indicate that the correct preservatives were used (YES)...NO...NA

16. Was residual chlorine present? YES...NO...(NA)

I certify that I checked for chlorine and pH as per SOP and answered questions 15-16 (intial) J.2

17. Were custody papers properly filled out (ink, signed, etc)? (YES)...NO...NA

18. Did you sign the custody papers in the appropriate place? (YES)...NO...NA

19. Were correct containers used for the analysis requested? (YES)...NO...NA

20. Was sufficient amount of sample sent in each container? (YES)...NO...NA

I certify that I entered this project into LIMS and answered questions 17-20 (intial) J.2

I certify that I attached a label with the unique LIMS number to each container (intial) J.2

21. Were there Non-Conformance issues at login? YES...(NO) Was a NCM generated? YES...(NO)...#_____

BIS = Broken in shipment
Cooler Receipt Form.doc

LF-1
End of Form

Revised 8 23 17

9/17/2018

TestAmerica Buffalo
10 Hazelwood Drive
Amherst, NY 14228-2298
Phone (716) 691-2600 Fax (716) 691-7991

Chain of Custody Record

480-141320

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Deyo, Melissa L	COC No: 480-44677.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: melissa.deyo@testamericainc.com	State of Origin: New York
Company: TestAmerica Laboratories, Inc		Accreditations Required (See note): NELAP - New York	Page: Page 1 of 1
Address: 2960 Foster Creighton Drive,	Due Date Requested: 9/11/2018		Job #: 480-141320-1
City: Nashville	TAT Requested (days):		
State, Zip: TN, 37204			
Phone: 615-726-0177(Tel) 615-726-3404(Fax)	PO #:		
Email:	WO #:		
Project Name: BMS Soil Analysis	Project #: 48018815		
Site:	SSOW#:		

Analysis Requested

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8315A/8316A_S_Prep Carbonyl Compounds by HPLC (All Analytes	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
BLDG 25-UNDER SLAB 1 (480-141320-1)	9/6/18	16:35 Eastern		Solid			X	1	

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to TestAmerica Laboratories, Inc.

Possible Hazard Identification *Unconfirmed*	***Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*** ☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:		Date:		Time:	Method of Shipment:	
Relinquished by:	Date/Time: 9/7/18 1730	Company: TAL	Received by:	Date/Time: 09/08 6:18 10:40	Company: TA-NAS	
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company	
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company	

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 1.6

Ver: 09/20/2016

9/17/2018

Login Sample Receipt Checklist

Client: ARCADIS U.S. Inc

Job Number: 480-141320-1

Login Number: 141320
List Number: 1
Creator: Williams, Christopher S

List Source: TestAmerica Buffalo

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time (Excluding tests with immediate HTs)..	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified	True	FREEZER ON 07SEPT2018 @ 0800
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Sampling Company provided.	True	ARCADIS
Samples received within 48 hours of sampling.	True	
Samples requiring field filtration have been filtered in the field.	N/A	
Chlorine Residual checked.	N/A	

ATTACHMENT 5

Level 4 Laboratory Analytical Reports (provided electronically)

ATTACHMENT 6

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), PCBs, GRO/DRO, Alcohol/Glycol, Formaldehyde and Metals Analyses

SDGs # BMS60, BMS63 and BMS68

Analyses Performed By:
Eurofins Lancaster Laboratories Environmental

Lancaster, PA

Report #31790R
Review Level: Tier III
Project: B0087363.0035.00001

SUMMARY

This data quality assessment summarizes the review of Sample Delivery Groups (SDGs) # BMS60, BMS63 and BMS68 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	PCB	MET	MISC
BMS60	BLDG 25 SW 09282018	9827921	Water	09/28/2018		X	X		X	X[1]
	BLDG 25 SWLNAPL 09282018	9827922	LNAPL	09/28/2018		X	X	X		
BMS63	TEST PIT 1 (10-12)	9827949	Soil	09/28/2018		X	X			X[1]
	TEST PIT 2 (10-12)	9827950	Soil	09/28/2018		X	X			X[1]
	DUP-TP-092818	9827951	Soil	09/28/2018	TEST PIT 1 (10-12)	X	X			X[1]
	TB-092818	9827952	Water	09/28/2018		X				
BMS68	EAST FLOOR VAULT 10312018	9878915	Soil	10/31/2018		X	X			X[1]
	WEST FLOOR VAULT 10312018	9878918	Soil	10/31/2018		X	X			X[1]
	TRIP BLANK-18299 10292018	9878919	Water	10/29/2018		X				

Notes:

[1] Miscellaneous analyses include Aldehydes, Alcohols, Glycols and GRO/DRO 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 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
BLDG 25 SWLNAPL 09282018	CCV %D	Bromomethane	41%
		Ethanol	22%
		n-Heptane	21%
		o-Xylene	-42%
		Styrene	-39%
		Bromoform	-25%
		Isopropylbenzene	-40%
		Cyclohexanone	-47%
BLDG 25 SW 09282018	CCV %D	Trichlorofluoromethane	34%
		Freon 113	26%
		Carbon Tetrachloride	25%
		2-Nitropropane	23%
TEST PIT 1 (10-12) TEST PIT 2 (10-12) DUP-TP-092818	CCV %D	Dichlorodifluoromethane	22%
		Freon 113	26%
		n-Hexane	36%
		n-Heptane	61%
		Methylcyclohexane	31%
		2-Nitropropane	-47%
		2-Hexanone	-26%
		Bromoform	-24%
		1,2-Dibromo-3-chloropropane	-30%
		Chlorodifluoromethane	53%
		Acetonitrile	37%

Sample Locations	Initial/Continuing	Compound	Criteria
TB-092818	CCV %D	Freon 113	26%
		2-Nitropropane	22%
EAST FLOOR VAULT 10312018 WEST FLOOR VAULT 10312018	CCV %D	n-Hexane	29%
		n-Heptane	54%
		Methylcyclohexane	30%
		Chlorodifluoromethane	70%
		Acetonitrile	30%
TRIP BLANK-18299 10292018	CCV %D	Acetone	21%
		Tetrahydrofuran	23%
		Isobutyl Alcohol	27%
		n-Butanol	33%
		1,4-Dioxane	34%
		Chlorodifluoromethane	-24%

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
EAST FLOOR VAULT 10312018	Acetonitrile	>UL	AC
	n-Butylbenzene	AC	<LL but >10%
	1,4-Dichlorobenzene	<LL but >10%	<LL but >10%
	Ethylbenzene	AC	<LL but >10%
	Isopropylbenzene	AC	<LL but >10%
	4-Methyl-2-pentanone	<LL but >10%	AC
	Toluene	AC	<LL but >10%
	m+p-Xylene	AC	<LL but >10%

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 of the control limit presented in the following table.

Sample Locations	Compound
EAST FLOOR VAULT 10312018	Bromodichloromethane
	Bromoform
	n-Butanol
	Carbon Disulfide
	Cyclohexanone
	1,2-Dibromo-3-chloropropane
	Dibromochloromethane
	1,2-Dibromoethane
	1,2-Dichloroethane
	1,2-Dichloropropane
	cis-1,3-Dichloropropene
	trans-1,3-Dichloropropene
	2-Hexanone
	Methyl Acetate
	Methyl Tertiary Butyl Ether
	4-Methyl-2-pentanone
	Naphthalene

Sample Locations	Compound
	1,1,2,2-Tetrachloroethane
	1,2,3-Trichlorobenzene
	1,1,2-Trichloroethane

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
BLDG 25 SWLNAPL 09282018	Bromochloromethane	AC	<LL but >10%
	Tetrahydrofuran	AC	<LL but >10%
TEST PIT 1 (10-12)	Acetonitrile	>UL	AC
TEST PIT 2 (10-12)	Chlorodifluoromethane	>UL	AC
DUP-TP-092818	n-Heptane	>UL	>UL
EAST FLOOR VAULT 10312018	Acetonitrile	AC	>UL
	Chlorodifluoromethane	>UL	>UL
WEST FLOOR VAULT 10312018	n-Heptane	>UL	>UL
TRIP BLANK-18299 10292018	Acetone	>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

Sample locations associated with LCS/LCSD recoveries exhibiting an RPD greater than of the control limit presented in the following table.

Sample Locations	Compound
BLDG 25 SWLNAPL 09282018	Bromochloromethane
	Tetrahydrofuran

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

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
TEST PIT 1 (10-12)/ DUP-TP-092818	Acetone	0.031	0.031	AC
	2-Butanone	0.002 J	0.004 J	AC
	Carbon disulfide	0.0005 J	0.002 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		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
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.

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
TEST PIT 1 (10-12) TEST PIT 2 (10-12) DUP-TP-092818	TIC: Tetrahydrofuran RT 1.019 Unknown TIC: RT 3.143	Detected sample results less than 5 times blank result	R
EAST FLOOR VAULT 10312018	Unknown TIC: RT 1.010 Unknown TIC: RT 1.081 Unknown TIC: RT 1.434 Unknown TIC: RT 1.657 Unknown TIC: RT 1.852 Unknown TIC: RT 2.510 Unknown TIC: RT 6.669	Detected sample results less than 5 times blank result	R

Sample Locations	Analytes	Sample Result	Qualification
WEST FLOOR VAULT 10312018	Unknown TIC: RT 1.081 Unknown TIC: RT 1.434 Unknown TIC: RT 1.852 Unknown TIC: RT 2.510	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
BLDG 25 SWLNAPL 09282018	CCV %D	Pyridine	-29%
		Hexachlorocyclopentadiene	-22%
		4-Nitrophenol	-25%
TEST PIT 1 (10-12) TEST PIT 2 (10-12)	CCV %D	Hexachlorocyclopentadiene	-27%
		2-Chloronaphthalene	-24%

Sample Locations	Initial/Continuing	Compound	Criteria
DUP-TP-092818		Pentachlorophenol	-25%
EAST FLOOR VAULT 10312018 WEST FLOOR VAULT 10312018	CCV %D	2,2'-Oxybis(1-chloropropane)	24%
		bis(2-Chloroisopropyl)ether	24%
		Hexachlorobutadiene	-28%
		Caprolactam	-22%
		2-Methylnaphthalene	-26%
		2,4-Dinitrophenol	-23%
		Pentachlorophenol	-29%

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
BLDG 25 SWLNAPL 09282018	Phenol-d6	AC
	2-Fluorophenol	AC
	2,4,6-Tribromophenol	AC
	Nitrobenzene-d5	AC
	2-Fluorobiphenyl	AC
	Terphenyl-d14	> UL

Notes:

UL Upper 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 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
BLDG 25 SWLNAPL 09282018	bis(2-Ethylhexyl)phthalate	>UL	>UL
	Hexachlorobutadiene	AC	>UL
	Di-n-octylphthalate	<LL but >10%	<LL but >10%
	Pyridine	<LL but >10%	AC
EAST FLOOR VAULT 10312018	Anthracene	AC	<LL but >10%
	4-Bromophenyl-phenylether	AC	<LL but >10%
	4,6-Dinitro-2-methylphenol	<LL but >10%	<LL but >10%
	Hexachlorocyclopentadiene	<LL but >10%	AC
	Hexachloroethane	AC	<LL but >10%
	Naphthalene	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	

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
BLDG 25 SW 09282018	Dicyclohexylamine	<LL but >10%	<LL but >10%
	Triethylamine	<LL but >10%	<LL but >10%
BLDG 25 SWLNAPL 09282018	Triethylamine	<LL but >10%	<LL but >10%
TEST PIT 1 (10-12) TEST PIT 2 (10-12) DUP-TP-092818	Benzaldehyde	<LL but >10%	NA
	2-Chlorophenol	<LL but >10%	NA
	Benzyl alcohol	<LL but >10%	NA
	2-Methylphenol	<LL but >10%	NA
	Hexachloroethane	<LL but >10%	NA
	1,1'-Biphenyl	<LL but >10%	NA
	Dimethylphthalate	<LL but >10%	NA
	Naphthalene	<LL but >10%	NA
	2,4-Dinitrotoluene	<LL but >10%	NA
	2,6-Dinitrotoluene	<LL but >10%	NA
	4-Bromophenyl-phenylether	<LL but >10%	NA
	4-Nitroaniline	<LL but >10%	NA
	Benzo(k)fluoranthene	<LL but >10%	NA
	bis(2-Ethylhexyl)phthalate	<LL but >10%	NA
	Butylbenzylphthalate	<LL but >10%	NA
	Carbazole	<LL but >10%	NA
	Chrysene	<LL but >10%	NA
	Dibenzofuran	<LL but >10%	NA
	Diethylphthalate	<LL but >10%	NA
	Di-n-butylphthalate	<LL but >10%	NA
	Fluorene	<LL but >10%	NA
	Hexachlorobenzene	<LL but >10%	NA
	Pyrene	<LL but >10%	NA
	Triethylamine	<LL but >10%	<LL but >10%

Sample Locations	Compound	LCS Recovery	LCSD Recovery
EAST FLOOR VAULT 10312018	Di-n-butylphthalate	<LL but >10%	NA
WEST FLOOR VAULT 10312018	Pyridine	>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
	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
TEST PIT 1 (10-12)/ DUP-TP-092818	Anthracene	12 J	20 U	AC
	Benzo(a)anthracene	50	20 U	AC
	Benzo(a)pyrene	52	20 U	AC
	Benzo(b)fluoranthene	74	20 U	AC
	Benzo(g,h,i)perylene	37	20 U	AC
	Benzo(k)fluoranthene	30	20 U	AC
	Chrysene	57	20 U	AC
	Dibenz(a,h)anthracene	7 J	20 U	AC
	Fluoranthene	110	20 U	NC
	Indeno(1,2,3-cd)pyrene	32	20 U	AC
	Phenanthrene	37	20 U	AC

Sample ID/Duplicate ID	Compound	Sample Result	Duplicate Result	RPD
	Pyrene	87	20 U	NC

Notes:

NC Not Compliant

U Not detected

The compound Fluoranthene and Pyrene associated with sample locations TEST PIT 1 (10-12) and DUP-TP-092818 exhibited a field duplicate RPD greater than the control limit. The associated sample results from sample locations for the listed analyte 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. 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		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

POLYCHLORINATED BIPHENYLS (PCBs) 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 8082	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

Note:

Sample BLDG 25 SWLNAPL 09282018 was extracted and analyzed 25 days after collection. The holding time above is a recommendation. PCBs are very stable in a variety of matrices, and holding times, under the conditions listed above, may be as long as a year per SW-846 8082A (February 2007); therefore, none of the data were qualified.

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. Multiple-point calibrations were performed for Aroclor 1016 and 1260 only. Single-point calibrations were performed for the remaining Aroclors.

4.2 Continuing Calibration

All target compounds associated with the continuing calibration standard must exhibit a percent difference (%D) less than the control limit (15%).

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. PCB analysis requires that one of the two PCB surrogate compounds exhibit recoveries within the laboratory-established acceptance limits.

All surrogate recoveries reported from the primary column 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 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 for both the primary and confirmation columns. When dual column analysis is performed the relative percent difference (%RPD) of detected sample results must be less than 40%.

The dual column analysis exhibited an acceptable %RPD between columns.

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 PCBs

PCBs; SW-846 8082	Reported		Performance Acceptable		Not Required
	No	Yes	No	Yes	
GAS CHROMATOGRAPHY (GC/ECD)					
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	
Column (RPD) (If dual column is performed-not confirmation purposes only)					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	
B. 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	

%RSD – relative standard deviation, %R - percent recovery, RPD - relative percent difference,

%D – 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		

The analyses that exceeded the holding are presented in the following table.

Sample Locations	Holding Time	Criteria
BLDG 25 SW 09282018	Glycol Analyses Completed in 25 Days	14 Days

Sample results associated with sample locations analyzed by analytical method SW-846 8015D 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

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
DUP-TP-092818	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 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

Control Limit	Sample Result	Qualification
	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
EAST FLOOR VAULT 10312018	Methanol	<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	

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.

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
BLDG 25 SW 09282018	Propylene glycol	<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
	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 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
TEST PIT 1 (10-12)/ DUP-TP-092818	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. 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
Matrix Spike Duplicate(MSD) %R					X
MS/MSD Precision (RPD)					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

DIESEL RANGE ORGANICS (DRO) – GAS RANGE ORGANICS (GRO) ANALYSES

1. Holding Times

The specified holding times for the following methods are presented in the following table.

Method	Matrix	Holding Time	Preservation
GRO SW-846 8015	Water	7 days from collection to analysis (Unpreserved)	Cool to <6 °C
		14 days from collection to analysis	Cool to <6 °C; preserved to a pH of less than 2.
DRO, ERO SW-846 8015	Soil	14 days from collection to extraction and 40 days from extraction to analysis	Cool to <6 °C
	Water	7 days from collection to extraction and 40 days from extraction to analysis	Cool to <6 °C

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 (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% or a correlation coefficient of greater than 0.99 is allowed. VPH-EPH 25%

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%). VPH-EPH 25%

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 surrogate compounds exhibit recoveries 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 (LCS) 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 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 50% 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
TEST PIT 1 (10-12)/ DUP-TP-092818	DRO C10-C28	9.5 J	5.4 J	AC
	ORO >C28 - C40	31	14 U	AC
	TPH-GRO water C6-C10	0.9 U	0.2 J	AC

Notes:

AC Acceptable

U Not detected

The calculated RPDs between the parent sample and field duplicate were acceptable.

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 DRO - GRO

DRO/GRO; SW-846 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					
D. Method blanks		X		X	
E. 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
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	
F. 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.

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
TEST PIT 2 (10-12)	Formaldehyde	<LL but >10%	AC
EAST FLOOR VAULT 10312018	Acetaldehyde	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	

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 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
TEST PIT 1 (10-12)/ DUP-TP-092818	Acetaldehyde	2.3	0.061 J	AC
	Formaldehyde	5.4	36	NC

Notes:

AC Acceptable

The compound Formaldehyde associated with sample locations TEST PIT 1 (10-12) and DUP-TP-092818 exhibited a field duplicate RPD greater than the control limit. The associated sample results from sample locations for the listed analyte were qualified as estimated.

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		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

INORGANIC ANALYSIS INTRODUCTION

Analyses were performed according to United States Environmental Protection Agency (USEPA) SW-846 Methods 6010C and 7470A. 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 analytes associated with RL standard recoveries were within control limits with the exception of the analytes presented in the following table.

Sample Locations	Analytes	RL Recovery
BLDG 25 SW 09282018	Antimony	>UL
	Silver	>UL
	Cobalt	>UL

The criteria applied to evaluate the RL Standard criteria are presented below. In the case of a calibration deviation, the sample results are qualified.

RL Standard Recovery Criteria			
Analytes	**Control Limit**	**Sample Result**	**Qualification**
All analytes, with the exception of Al, Ba, Ca, Fe, Mg, Na, and K	RL %R <50% (<30% for Sb, Pb, Tl) ICP-MS (<30% for Co, Mn, Zn)	Sample results ≥ MDL but <2x RL	R
		Non-detect sample results	R
		Detected sample results ≥ 2x RL	J
	RL %R 50-69% (30-49% for Sb, Pb, Tl) ICP-MS (30-49% for Co, Mn, Zn)	Sample results ≥ MDL but <2x RL	J
		Non-detect sample results	UJ
		Detected sample results ≥ 2x RL	No Action
	%R >130% but <180% (>150% but <200% for Sb, Pb, Tl) ICP-MS (>150% but <200% for Co, Mn, Zn)	Sample results ≥ MDL but <2x RL	J
		Non-detect sample results	No Action
		Detected sample results ≥ 2x RL	No Action

RL Standard Recovery Criteria			
Analytes	**Control Limit**	**Sample Result**	**Qualification**
	CRI %R >180% (>200% for Sb, Pb, Tl) ICP-MS (>200% for Co, Mn, Zn)	Sample results ≥ MDL	R

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.

A MS/MSD analysis was not performed on a sample within this SDG.

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.

A field duplicate was not included with this parameter.

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. 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
	No	Yes	No	Yes	Required
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
Matrix Spike Duplicate (MSD) %R					X
MS/MSD Precision (RPD)					X
Field/Lab Duplicate (RPD)					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

SAMPLE COMPLIANCE REPORT

Sample Delivery Group (SDG)	Sampling Date	Protocol	Sample ID	Matrix	Compliancy[1]					Noncompliance
					VOC	SVOC	PFAS	MET	MISC	
BMS60	09/28/2018	SW846	BLDG 25 SW 09282018	Soil	No	No	-	Yes	No	VOC: CCV %D SVOC: LCS/LCSD %R GLY: HT, LCS %R
	09/28/2018	SW846	BLDG 25 SWLNAPL 09282018	LNAPL	No	No	-	-	Yes	VOC: CCV %D, LCSD %R/RPD SVOC: CCV %D, MS/MSD %R, LCS/LCSD %R
BMS63	09/28/2018	SW846	TEST PIT 1 (10-12)	Soil	No	No	-	-	No	VOC: CCV %D SVOC: CCV %D, LCS/LCSD %R, FD RPD ALD: FD RPD
	09/28/2018	SW846	TEST PIT 2 (10-12)	Soil	No	No	-	-	No	VOC: CCV %D SVOC: CCV %D, LCS/LCSD %R ALD: MS %R
	09/28/2018	SW846	DUP-TP-092818	Soil	No	No	-	-	No	VOC: CCV %D SVOC: CCV %D, LCS/LCSD %R, FD RPD GLY: SSTD %R ALD: FD RPD
	09/28/2018	SW846	TB-092818	Water	No	-	-	-	-	VOC: CCV %D
BMS68	10/31/2018	SW846	EAST FLOOR VAULT 10312018	Soil	No	No	-	-	No	VOC: MS/MSD %R/RPD SVOC: CCV %D, MS/MSD %R, LCS/LCSD %R ALC: MS %R ALD: MS %R
	10/31/2018	SW846	WEST FLOOR VAULT 10312018	Soil	Yes	No	-	-	Yes	SVOC: CCV %D, LCS/LCSD %R
	10/29/2018	SW846	TRIP BLANK-18299 10292018	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: March 13, 2019

PEER REVIEW: Dennis K. Capria

DATE: April 24, 2019

CHAIN OF CUSTODY

CORRECTED SAMPLE ANALYSIS DATA SHEETS (Following 73 pages)

3074 1972835 9827921-22

ARCADIS

CHAIN OF CUSTODY LABORATORY ANALYSIS REQUEST FORM

Lab Work Order #

ARCADIS Design & Consultancy for natural and built assets

ID#:

CHAIN OF CUSTODY & LABORATORY

Page ___ of ___

Lab Work Order #

Send Results to:

Contact & Company Name: Arcadis Clint Catania	Telephone: (315) 671-9261
Address: 110 W. Fayette Street, Suite 300	Fax:
City State Zip: Syracuse, NY 13202	E-mail Address: Clint.Catania@arcadis.com
Project Name/Location (City, State): BMS Syracuse / Syracuse, NY	Project #: B0087363.0033.00004
Sampler's Printed Name:	Sampler's Signature:

Sample ID	Collection Date	Collection Time	Type Comp	Type Grab	Matrix	VOCs 8260C	SIM SVOA8270D / TCL SVOA 8270D	Glycols in Water 8015C	Alcohols in Water	Aldehydes 8315A			REMARKS
Preservative	B	E	E	B	E								
Filtered (✓)													
# of Containers	3	2	2	2	1								
Container Information	1	250mL Amber	1	1	250 mL Glass								
Bldg. 25 Surface Water	9/28/18	15:15		X	W	X	X	X	X	X			

PARAMETER ANALYSIS & METHOD

Keys

Preservation Key:
A. H2SO4
B. HCL
C. HNO3
D.NaOH
E. None
F. MeOH
G. DI
H.

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. 125 mL Plastic
10. 4 oz. Amber

Matrix Key:
SO- Soil
W- Water
T- Tissue
SE- Sediment
SL- Sludge
A- Air
NL- NAPL/Oil
SW- Sample Wipe

Special Instructions/Comments:

☐ Special QA/QC Instructions (✓)

Laboratory Information and Receipt		Relinquished By	Received By	Relinquished By	Laboratory Received By
Lab Name:	Cooler Custody Seal (✓)	Printed Name:	Printed Name:	Printed Name:	Printed Name: Nicole Reitl
☑ Cooler packed with ice (✓)	☑ Intact ☐ Not Intact	Signature:	Signature:	Signature:	Signature:
Specify Turnaround Requirements	Sample Receipt: Intact 2.0°	Firm:	Firm:	Firm:	Firm: EIIE
Shipping Tracking #:	Condition/Cooler Temp:	Date/Time:	Date/Time:	Date/Time:	Date/Time: 9/29/18 0945

3074 1992835 482721-22

ARCADIS

CHAIN OF CUSTODY LABORATORY ANALYSIS REQUEST FORM

Lab Work Order #

Send Results to:

Contact & Company Name:	Telephone:
Arcadis Clint Catania	(315) 671-9261
Address:	**Fax:**
110 W. Fayette Street	
City State Zip	**E-mail Address:**
Syracuse, NY 13202	Clint.Catania@arcadis.com
Project Name/Location (City, State):	**Project #:**
BMS Syracuse / Syracuse, NY	B0087363.0033.00004
Sampler's Printed Name:	**Sampler's Signature:**

Preservative	A	E	C	E	H_3PO_4	A	E
Filtered (✓)			x				
# of Containers	1	2	2 / 1	1	2	1	1
Container Information	500mL Glass	50 mL Plastic	3	3	1	3	4

PARAMETER ANALYSIS & METHOD

Sample ID	Collection Date	Collection Time	Type Comp	Type Grab	Matrix	Nitrogen as Ammonia	Chloride, Fluoride, Nitrate Nitrogen, Nitrite Nitrogen, Sulfate	TAL Metals Total / ~~TAL Metals Dissolved~~	Total Alkalinity	TOC	Total Phosphorus / Chemical Oxygen Demand	Biological Oxygen Demand	REMARKS
Bldg. 25 Surface Water	9/28/18	15:15		x	W	X	X	X	X	X		X	

Keys

Preservation Key:	Container Information Key:
A. H_2SO_4	1. 40 mL Vial
B. HCL	2. 1 L Amber
C. HNO_3	3. 250 mL Plastic
D.NaOH	4. 500 mL Plastic
E. None	5. Encore
F.	6. 2 oz. Glass
G.	7. 4 oz. Glass
H.	8. 8 oz. Glass
	9. 125 mL Plastic
	10. 4 oz. Amber

Matrix Key:

SO- Soil	SE- Sediment	NL- NAPL/Oil
W- Water	SL- Sludge	SW- Sample Wipe
T- Tissue	A- Air	

Special Instructions/Comments:

☐ Special QA/QC Instructions (✓)

Laboratory Information and Receipt		Relinquished By	Received By	Relinquished By	Laboratory Received By
Lab Name:	Cooler Custody Seal (✓)	Printed Name:	Printed Name:	Printed Name:	Printed Name: Nicole Reitz
☑ Cooler packed with ice (✓)	☑ Intact ☐ Not Intact	Signature:	Signature:	Signature:	Signature:
Specify Turnaround Requirements	Sample Receipt: Intact 2.0°	Firm:	Firm:	Firm:	Firm: ELE
Shipping Tracking #:	Condition/Cooler Temp:	Date/Time:	Date/Time:	Date/Time:	Date/Time: 9/29/18 0945

3074 3274 Blvr 9/29/18 1992535 9827921-22

ARCADIS

CHAIN OF CUSTODY LABORATORY ANALYSIS REQUEST FORM

Lab Work Order #

Send Results to:

Contact & Company Name: Arcadis Clint Catania	Telephone: (315) 671-9261
Address: 110 W. Fayette Street	Fax:
City State Zip: Syracuse, NY 13202	E-mail Address: Clint.Catania@arcadis.com
Project Name/Location (City, State): BMS Syracuse / Syracuse, NY	Project #: B0087363.0033.00004
Sampler's Printed Name:	Sampler's Signature:

Keys

Preservation Key:	Container Information Key:
A. H2SO4	1. 40 mL Vial
B. HCL	2. 1 L Amber
C. HNO3	3. 250 mL Plastic
D.NaOH	4. 500 mL Plastic
E. None	5. Encore
F.	6. 2 oz. Glass
G.	7. 4 oz. Glass
H.	8. 8 oz. Glass
	9. 125 mL Plastic
	10. 4 oz. Amber

Matrix Key:

SO- Soil SE- Sediment NL- NAPL/Oil
W- Water SL- Sludge SW- Sample Wipe
T- Tissue A- Air

PARAMETER ANALYSIS & METHOD

Sample ID	Collection Date	Collection Time	Type Comp	Type Grab	Matrix	Preservative	Filtered (✓)	# of Containers	Container Information	TPH GRO water C6 to C10	TPH DRO/ORO water 8015C/D	PFAS in water LC/MS/MS	REMARKS
						B		3	1				
						E		2	1L Amber				
						E		2	3				
B1/dup-25 Surface Water	9/28/18	15:15		X	W					X	X		
B1/dup-25 Surface LNAPL	9/28/18	15:15	X		NL								Contact Clint Catania for analysis

Special Instructions/Comments:

☐ Special QA/QC Instructions (✓)

Laboratory Information and Receipt		Relinquished By	Received By	Relinquished By	Laboratory Received By
Lab Name:	Cooler Custody Seal (✓)	Printed Name:	Printed Name:	Printed Name:	Printed Name: Nicole Reiff
☑ Cooler packed with Ice (✓)	☑ Intact ☐ Not Intact	Signature:	Signature:	Signature:	Signature:
Specify Turnaround Requirements	Sample Receipt: Intact 2.0°	Firm:	Firm:	Firm:	Firm: ELE
Shipping Tracking #:	Condition/Cooler Temp:	Date/Time:	Date/Time:	Date/Time:	Date/Time: 9/29/18 0945

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: **Bldg. 25 Surface Water Grab Surface Water**
B0087363.0033/BMS

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 09/29/2018 09:45
Collection Date/Time: 09/28/2018 15:15
SDG#: BMS60-01

ARCADIS U.S., Inc.
ELLE Sample #: WW 9827921
ELLE Group #: 1992835
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	400		20	0.7	1
11997	Acetonitrile	75-05-8	N.D.		100	16	1
11997	Benzene	71-43-2	1		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	0.2	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	9	J	10	0.3	1
11997	t-Butyl alcohol	75-65-0	31	J	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	0.6	J	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	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	0.6	J	5	0.2	1
11997	Cyclohexanone	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	0.5	J	1	0.4	1

*=This limit was used in the evaluation of the final result

Sample Description: **Bldg. 25 Surface Water Grab Surface Water**
B0087363.0033/BMS

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 09/29/2018 09:45
Collection Date/Time: 09/28/2018 15:15
SDG#: BMS60-01

ARCADIS U.S., Inc.
ELLE Sample #: WW 9827921
ELLE Group #: 1992835
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	142-82-5	N.D.		5	0.2	1
11997	n-Hexane	110-54-3	N.D.		5	0.2	1
11997	2-Hexanone	591-78-6	1	J	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	22		10	0.5	1
11997	Methylcyclohexane	108-87-2	0.4	J	5	0.2	1
11997	Methylene Chloride	75-09-2	6		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	7	J	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	N.D.		1	0.2	1
11997	Trichlorofluoromethane	75-69-4	9	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	1	J	5	1	1
11997	o-Xylene	95-47-6	0.7	J	1	0.4	1
11997	Xylene (Total)	1330-20-7	2	J	5	1	1

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: trichlorofluoromethane.

Project defined calibration criteria are not met. The calibration is compliant with the method defined criteria.

12027 VOA Interp. Library Search-20

*=This limit was used in the evaluation of the final result

Sample Description: **Bldg. 25 Surface Water Grab Surface Water**
B0087363.0033/BMS

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 09/29/2018 09:45
Collection Date/Time: 09/28/2018 15:15
SDG#: BMS60-01

ARCADIS U.S., Inc.
ELLE Sample #: WW 9827921
ELLE Group #: 1992835
Matrix: Surface Water

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.		0.50	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	12	J	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	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	101-83-7	N.D.	J	10	10	1
14241	Diethylphthalate	84-66-2	N.D.		5.0	2.0	1
14241	N,N-Dimethylaniline	121-69-7	0.95	J	1.0	0.50	1
14241	2,4-Dimethylphenol	105-67-9	N.D.		10	3.0	1

*=This limit was used in the evaluation of the final result

Sample Description: **Bldg. 25 Surface Water Grab Surface Water**
B0087363.0033/BMS

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 09/29/2018 09:45
Collection Date/Time: 09/28/2018 15:15
SDG#: BMS60-01

ARCADIS U.S., Inc.
ELLE Sample #: WW 9827921
ELLE Group #: 1992835
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	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
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	0.24 J	0.50	0.10	1
14241	2-Methylphenol	95-48-7	N.D.	2.0	0.50	1
14241	4-Methylphenol	65794-96-9	1.9 J	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	0.20 J	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	51	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

*=This limit was used in the evaluation of the final result

Sample Description: **Bldg. 25 Surface Water Grab Surface Water**
B0087363.0033/BMS

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 09/29/2018 09:45
Collection Date/Time: 09/28/2018 15:15
SDG#: BMS60-01

ARCADIS U.S., Inc.
ELLE Sample #: WW 9827921
ELLE Group #: 1992835
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	Triethylamine	121-44-8	89 J	10	10	1
	The stated QC limits for Dicyclohexylamine and Triethylamine are advisory only until sufficient data points can be obtained to calculate statistical limits.					
GC/MS Semivolatiles	**SW-846 8270D SIM**		**ug/l**	**ug/l**	**ug/l**	
14244	1,4-Dioxane	123-91-1	5	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.					
GC Volatiles	**SW-846 8015D Rev.4, June 2003**		**ug/l**	**ug/l**	**ug/l**	
10598	TPH-GRO water C6-C10	n.a.	340	50	11	1
Aldehydes & Ketones	**SW-846 8315A**		**ug/l**	**ug/l**	**ug/l**	
13022	Acetaldehyde	75-07-0	N.D.	60	30	1
13022	Formaldehyde	50-00-0	N.D.	50	20	1
13022	Glutaraldehyde	111-30-8	N.D.	50	30	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	107-21-1	N.D. J	10,000	5,000	1
10603	Isopropanol	67-63-0	N.D. ~~D2~~	1,000	110	1
10603	Methanol	67-56-1	570 ~~JD2~~ J	1,000	220	1
12926	Propylene glycol	57-55-6	N.D. J	10,000	2,000	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. The holding time was not met. The client was notified and the data reported.					
GC Petroleum Hydrocarbons	**SW-846 8015D Rev.4, June 2003**		**ug/l**	**ug/l**	**ug/l**	
13566	DRO C10-C28	n.a.	500,000	5,000	1,800	50
13566	ORO >C28 - C40	n.a.	220,000	5,000	1,800	50
Metals	**SW-846 6010C**		**mg/l**	**mg/l**	**mg/l**	
07044	Antimony	7440-36-0	0.0331 J	0.0500	0.0100	1
07035	Arsenic	7440-38-2	N.D.	0.0500	0.0160	1
07046	Barium	7440-39-3	0.0703	0.0050	0.0010	1
07047	Beryllium	7440-41-7	N.D.	0.0050	0.0010	1

*=This limit was used in the evaluation of the final result

Sample Description: **Bldg. 25 Surface Water Grab Surface Water**
B0087363.0033/BMS

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 09/29/2018 09:45
Collection Date/Time: 09/28/2018 15:15
SDG#: BMS60-01

ARCADIS U.S., Inc.
ELLE Sample #: WW 9827921
ELLE Group #: 1992835
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
Metals	**SW-846 6010C**		**mg/l**	**mg/l**	**mg/l**	
07049	Cadmium	7440-43-9	0.0017 J	0.0050	0.0010	1
01750	Calcium	7440-70-2	109	0.500	0.0330	1
07051	Chromium	7440-47-3	0.0070 J	0.0150	0.0053	1
07052	Cobalt	7440-48-4	0.0034 J~~K2~~	0.0050	0.0015	1
07053	Copper	7440-50-8	0.0234	0.0200	0.0062	1
01754	Iron	7439-89-6	1.37	0.200	0.0400	1
07055	Lead	7439-92-1	0.0079 J	0.0150	0.0071	1
01757	Magnesium	7439-95-4	13.3	0.100	0.0190	1
07058	Manganese	7439-96-5	0.0364	0.0200	0.0011	1
07061	Nickel	7440-02-0	0.0134	0.0100	0.0031	1
01762	Potassium	7440-09-7	80.7	0.500	0.203	1
07036	Selenium	7782-49-2	N.D.	0.0500	0.0210	1
07066	Silver	7440-22-4	N.D.	0.0100	0.0050	1
01767	Sodium	7440-23-5	719	5.00	1.63	5
07022	Thallium	7440-28-0	N.D.	0.0300	0.0140	1
	SW-846 6010C		**ug/l**	**ug/l**	**ug/l**	
01743	Aluminum	7429-90-5	1,030	300	153	1
07071	Vanadium	7440-62-2	6.9 J	10.0	3.0	1
07072	Zinc	7440-66-6	69.9	20.0	3.0	1
	SW-846 7470A		**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	0.000075 J	0.00020	0.000050	1

Sample Comments

State of New York Certification No. 10670
Trip blank vials were not received by the laboratory for this sample group.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	L182821AA	10/09/2018 13:44	Linda C Pape	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	L182821AA	10/09/2018 13:44	Linda C Pape	1
14241	Semi-annual Groundwater BMS	SW-846 8270D	1	18276WAP026	10/05/2018 08:21	Ashley R Transue	1
14244	SIM SVOAs 8270D MINI	SW-846 8270D SIM	1	18276WAO026	10/05/2018 05:19	Brandon K Cordova	1
10466	BNA Water Extraction SIM	SW-846 3510C	1	18276WAO026	10/04/2018 07:00	Logan M Brosemer	1
11010	8270D BNA Extraction	SW-846 3510C	1	18276WAP026	10/04/2018 07:00	Logan M Brosemer	1
10598	TPH-GRO water C6-C10	SW-846 8015D Rev.4, June 2003	1	18276A53A	10/04/2018 03:09	Jeremy C Giffin	1
01146	GC VOA Water Prep	SW-846 5030C	1	18276A53A	10/04/2018 03:09	Jeremy C Giffin	1
13022	Short List Aldehydes- W 8315A	SW-846 8315A	1	182740031A	10/03/2018 17:31	James H Place	1
01013	Formaldehyde Extraction	SW-846 8315A	1	182740031A	10/01/2018 18:30	Sally L Appleyard	1

*=This limit was used in the evaluation of the final result

Sample Description: **Bldg. 25 Surface Water Grab Surface Water**
B0087363.0033/BMS

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 09/29/2018 09:45
Collection Date/Time: 09/28/2018 15:15
SDG#: BMS60-01

ARCADIS U.S., Inc.
ELLE Sample #: WW 9827921
ELLE Group #: 1992835
Matrix: Surface Water

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	182810026A	10/10/2018 17:26	Johanna C Kennedy	1
12926	Glycols in Water by 8015C	SW-846 8015D Rev.4, June 2003	1	182920046A	10/23/2018 19:56	Donald Brown	1
13566	TPH DRO/ORO water 8015C/D	SW-846 8015D Rev.4, June 2003	1	182760011A	10/08/2018 21:41	Marisa Englebright	50
11183	TPH DRO/ORO Water EXT	SW-846 3510C	1	182760011A	10/03/2018 17:30	Osvaldo R Sanchez	1
01743	Aluminum	SW-846 6010C	1	182761063504	10/08/2018 22:06	Elaine F Stoltzfus	1
07044	Antimony	SW-846 6010C	1	182761063504	10/08/2018 22:06	Elaine F Stoltzfus	1
07035	Arsenic	SW-846 6010C	1	182761063504	10/08/2018 22:06	Elaine F Stoltzfus	1
07046	Barium	SW-846 6010C	1	182761063504	10/08/2018 22:06	Elaine F Stoltzfus	1
07047	Beryllium	SW-846 6010C	1	182761063504	10/08/2018 22:06	Elaine F Stoltzfus	1
07049	Cadmium	SW-846 6010C	1	182761063504	10/08/2018 22:06	Elaine F Stoltzfus	1
01750	Calcium	SW-846 6010C	1	182761063504	10/08/2018 22:06	Elaine F Stoltzfus	1
07051	Chromium	SW-846 6010C	1	182761063504	10/08/2018 22:06	Elaine F Stoltzfus	1
07052	Cobalt	SW-846 6010C	1	182761063504	10/08/2018 22:06	Elaine F Stoltzfus	1
07053	Copper	SW-846 6010C	1	182761063504	10/08/2018 22:06	Elaine F Stoltzfus	1
01754	Iron	SW-846 6010C	1	182761063504	10/08/2018 22:06	Elaine F Stoltzfus	1
07055	Lead	SW-846 6010C	1	182761063504	10/08/2018 22:06	Elaine F Stoltzfus	1
01757	Magnesium	SW-846 6010C	1	182761063504	10/08/2018 22:06	Elaine F Stoltzfus	1
07058	Manganese	SW-846 6010C	1	182761063504	10/08/2018 22:06	Elaine F Stoltzfus	1
07061	Nickel	SW-846 6010C	1	182761063504	10/08/2018 22:06	Elaine F Stoltzfus	1
01762	Potassium	SW-846 6010C	1	182761063504	10/08/2018 22:06	Elaine F Stoltzfus	1
07036	Selenium	SW-846 6010C	1	182761063504	10/11/2018 10:46	Eric L Eby	1
07066	Silver	SW-846 6010C	1	182761063504	10/08/2018 22:06	Elaine F Stoltzfus	1
01767	Sodium	SW-846 6010C	1	182761063504	10/11/2018 10:49	Eric L Eby	5
07022	Thallium	SW-846 6010C	1	182761063504	10/08/2018 22:06	Elaine F Stoltzfus	1
07071	Vanadium	SW-846 6010C	1	182761063504	10/08/2018 22:06	Elaine F Stoltzfus	1
07072	Zinc	SW-846 6010C	1	182761063504	10/08/2018 22:06	Elaine F Stoltzfus	1
00259	Mercury	SW-846 7470A	1	182770571314	10/08/2018 17:18	Parker D Lindstrom	1
10635	ICP-WW, 3005A (tot rec) - U4	SW-846 3005A	1	182761063504	10/04/2018 06:14	Annamaria Kuhns	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	182770571314	10/06/2018 03:30	Annamaria Kuhns	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.
B25SW

Lab Name: Lancaster Laboratories Contract:_____
Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____
Matrix: (soil/water) WATER Lab Sample ID: 9827921
Sample wt/vol: 5.0 (g/mL)mL Lab File ID:HP09915.i/18oct09a.b/lc09s09.d
Level: (low/med) LOW Date Received: 09/29/18
% Moisture: not dec. Date Analyzed: 10/09/18
Column: (pack/cap) CAP Dilution Factor: 1.0
CONCENTRATION UNITS:
Number TICs found: 4 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q	
1.		Unknown	1.84	7	J	N
2.	420-56-4	Trimethylsilyl fluoride	2.06	190	J	
3.		Unknown	2.79	31	J	
4.	1066-40-6	Silanol, trimethyl-	5.28	190	J	
5.						
6.	VOCTIC	Total VOC TICs		420	J	
7.						
8.						
9.						
10.						
11.						
12.						
13.						
14.						
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page 1 of 1

FORM I VOA-TIC

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
B25SW

Lab Name: Lancaster Laboratories Contract:
Lab Code: LANCAS Case No.: SAS No.: SDG No.:
Matrix: (soil/water) WATER Lab Sample ID: 9827921
Sample wt/vol: 248 (g/mL) mL Lab File ID: dj0424.d
Level: (low/med) LOW Date Received: 09/29/18
% Moisture: Decanted: (Y/N) Date Extracted: 10/04/18
Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/05/18
Injection Volume: 0.5 (uL) Dilution Factor: 1
GPC Cleanup: N pH: Extraction: Sepf
CONCENTRATION UNITS:
Number TICs found: 25 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q	
1.		Unknown	11.123	330	J	N
2.		Unknown	12.295	4700	J	
3.		Unknown	15.594	27	J	
4.		Unknown	16.042	41	J	
5.	7225-64-1	Heptadecane, 9-octyl-	16.176	55	J	
6.		Unknown	16.305	24	J	
7.		Unknown	16.345	23	J	
8.	629-97-0	Docosane	16.398	23	J	
9.	19781-73-8	n-Heptadecylcyclohexane	16.532	30	J	
10.	4860-03-1	Hexadecane, 1-chloro-	16.608	23	J	
11.		Unknown	16.666	32	J	
12.	646-31-1	Tetracosane	16.771	82	J	
13.		Unknown	16.905	24	J	
14.		Unknown	16.940	23	J	
15.	630-01-3	Hexacosane	16.998	23	J	
16.		Unknown	17.144	65	J	
17.		Unknown	17.196	31	J	
18.	629-94-7	Heneicosane	17.360	68	J	
19.		Unknown	17.517	33	J	
20.		Unknown	17.727	31	J	
21.		Unknown Alkane	17.943	82	J	
22.		Unknown	18.059	32	J	
23.	14739-72-1	Heneicosane, 11-pentyl-	18.514	56	J	
24.	74685-33-9	3-Eicosene, (E)-	19.085	38	J	
25.		Unknown	20.507	43	J	
26.						
27.	SVOCTIC	Total SVOC TICs		5900	J	
28.						
29.						
30.						

page 1 of 1

FORM I SV-1

Sample Description: **Bldg. 25 Surface LNAPL Composite Oil**
B0087363.0030/BMS

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 09/29/2018 09:45
Collection Date/Time: 09/28/2018 15:00
SDG#: BMS60-02

ARCADIS U.S., Inc.
ELLE Sample #: G5 9827922
ELLE Group #: 1992835
Matrix: Oil

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Limit of Quantitation*	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**mg/kg**	**mg/kg**	**mg/kg**	
11995	Acetone	67-64-1	N.D.	10	3.0	500
11995	Acetonitrile	75-05-8	N.D.	50	13	500
11995	Benzene	71-43-2	N.D.	2.5	0.25	500
11995	Bromochloromethane	74-97-5	N.D. J	2.5	0.30	500
11995	Bromodichloromethane	75-27-4	N.D.	2.5	0.20	500
11995	Bromoform	75-25-2	N.D. J	5.0	2.5	500
11995	Bromomethane	74-83-9	N.D.	2.5	0.35	500
11995	n-Butanol	71-36-3	N.D.	130	28	500
11995	2-Butanone	78-93-3	N.D.	5.0	0.50	500
11995	t-Butyl alcohol	75-65-0	N.D.	50	7.5	500
11995	n-Butylbenzene	104-51-8	N.D.	4.0	1.5	500
11995	sec-Butylbenzene	135-98-8	N.D.	2.5	1.0	500
11995	tert-Butylbenzene	98-06-6	N.D.	2.5	0.40	500
11995	Carbon Disulfide	75-15-0	N.D.	2.5	0.30	500
11995	Carbon Tetrachloride	56-23-5	N.D.	2.5	0.25	500
11995	Chlorobenzene	108-90-7	N.D.	2.5	0.25	500
11995	Chloroethane	75-00-3	N.D.	2.5	0.50	500
11995	Chloroform	67-66-3	N.D.	2.5	0.30	500
11995	Chloromethane	74-87-3	N.D.	2.5	0.30	500
11995	Cyclohexane	110-82-7	0.34 J	2.5	0.25	500
11995	Cyclohexanone	108-94-1	N.D. J	130	13	500
11995	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	2.5	0.20	500
11995	Dibromochloromethane	124-48-1	N.D.	2.5	0.20	500
11995	1,2-Dibromoethane	106-93-4	N.D.	2.5	0.20	500
11995	1,2-Dichlorobenzene	95-50-1	N.D.	2.5	0.25	500
11995	1,3-Dichlorobenzene	541-73-1	N.D.	2.5	0.25	500
11995	1,4-Dichlorobenzene	106-46-7	N.D.	2.5	0.20	500
11995	Dichlorodifluoromethane	75-71-8	N.D.	2.5	0.30	500
11995	1,1-Dichloroethane	75-34-3	N.D.	2.5	0.25	500
11995	1,2-Dichloroethane	107-06-2	N.D.	2.5	0.30	500
11995	1,1-Dichloroethene	75-35-4	N.D.	2.5	0.25	500
11995	cis-1,2-Dichloroethene	156-59-2	N.D.	2.5	0.25	500
11995	trans-1,2-Dichloroethene	156-60-5	N.D.	2.5	0.25	500
11995	1,2-Dichloropropane	78-87-5	N.D.	2.5	0.25	500
11995	cis-1,3-Dichloropropene	10061-01-5	N.D.	2.5	0.20	500
11995	trans-1,3-Dichloropropene	10061-02-6	N.D.	2.5	0.15	500
11995	1,4-Dioxane	123-91-1	N.D.	130	19	500
11995	Ethyl Acetate	141-78-6	N.D.	2.5	0.50	500
11995	Ethyl ether	60-29-7	N.D.	2.5	0.50	500
11995	Ethylbenzene	100-41-4	0.78 J	2.5	0.20	500
11995	Freon 113	76-13-1	N.D.	5.0	0.30	500

*=This limit was used in the evaluation of the final result

Sample Description: **Bldg. 25 Surface LNAPL Composite Oil**
B0087363.0030/BMS

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 09/29/2018 09:45
Collection Date/Time: 09/28/2018 15:00
SDG#: BMS60-02

ARCADIS U.S., Inc.
ELLE Sample #: G5 9827922
ELLE Group #: 1992835
Matrix: Oil

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Limit of Quantitation*	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**mg/kg**	**mg/kg**	**mg/kg**	
11995	n-Heptane	142-82-5	28	4.0	1.5	500
11995	n-Hexane	110-54-3	7.7	2.5	0.25	500
11995	2-Hexanone	591-78-6	N.D.	5.0	0.50	500
11995	Isobutyl Alcohol	78-83-1	N.D.	130	19	500
11995	Isopropylbenzene	98-82-8	0.30 J	2.5	0.20	500
11995	p-Isopropyltoluene	99-87-6	N.D.	2.5	1.0	500
11995	Methyl Acetate	79-20-9	N.D.	2.5	0.50	500
11995	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	2.5	0.25	500
11995	4-Methyl-2-pentanone	108-10-1	N.D.	5.0	0.50	500
11995	Methylcyclohexane	108-87-2	4.6	2.5	0.30	500
11995	Methylene Chloride	75-09-2	N.D.	2.5	1.0	500
11995	Naphthalene	91-20-3	N.D.	2.5	1.0	500
11995	2-Nitropropane	79-46-9	N.D.	5.0	0.50	500
11995	Styrene	100-42-5	N.D. J	2.5	0.15	500
11995	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	2.5	0.20	500
11995	Tetrachloroethene	127-18-4	N.D.	2.5	0.25	500
11995	Tetrahydrofuran	109-99-9	N.D. J	4.0	0.50	500
11995	Toluene	108-88-3	0.97 J	2.5	0.30	500
11995	1,2,3-Trichlorobenzene	87-61-6	N.D.	5.0	2.5	500
11995	1,2,4-Trichlorobenzene	120-82-1	N.D.	5.0	2.5	500
11995	1,1,1-Trichloroethane	71-55-6	N.D.	2.5	0.30	500
11995	1,1,2-Trichloroethane	79-00-5	N.D.	2.5	0.25	500
11995	Trichloroethene	79-01-6	N.D.	2.5	0.25	500
11995	Trichlorofluoromethane	75-69-4	2.1 J	2.5	0.35	500
11995	1,2,4-Trimethylbenzene	95-63-6	4.4	2.5	0.25	500
11995	1,3,5-Trimethylbenzene	108-67-8	1.3 J	2.5	0.25	500
11995	Vinyl Chloride	75-01-4	N.D.	2.5	0.30	500
11995	m+p-Xylene	179601-23-1	2.6	2.5	0.50	500
11995	o-Xylene	95-47-6	1.1 J	2.5	0.20	500
11995	Xylene (Total)	1330-20-7	3.7	2.5	0.50	500

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 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: o-xylene

*=This limit was used in the evaluation of the final result

Sample Description: **Bldg. 25 Surface LNAPL Composite Oil**
B0087363.0030/BMS

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 09/29/2018 09:45
Collection Date/Time: 09/28/2018 15:00
SDG#: BMS60-02

ARCADIS U.S., Inc.
ELLE Sample #: G5 9827922
ELLE Group #: 1992835
Matrix: Oil

and isopropylbenzene.

A targeted library search was performed yielding the following results: dichlorofluoromethane is non-detect.

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. The client was contacted and the data reported.

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	As Received Result		As Received Limit of Quantitation*	As Received Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/kg**		**ug/kg**	**ug/kg**	
10726	Acenaphthene	83-32-9	1,800	J	5,000	1,000	1
10726	Acenaphthylene	208-96-8	N.D.		5,000	1,000	1
10726	Acetophenone	98-86-2	N.D.		15,000	7,000	1
10726	Aniline	62-53-3	N.D.		150,000	50,000	1
10726	Anthracene	120-12-7	N.D.		5,000	1,000	1
10726	Atrazine	1912-24-9	N.D.		50,000	10,000	1
10726	Benzaldehyde	100-52-7	N.D.		50,000	20,000	1
10726	Benzo(a)anthracene	56-55-3	N.D.		5,000	1,000	1
10726	Benzo(a)pyrene	50-32-8	N.D.		5,000	2,000	1
10726	Benzo(b)fluoranthene	205-99-2	N.D.		5,000	1,000	1
10726	Benzo(g,h,i)perylene	191-24-2	N.D.		5,000	2,000	1
10726	Benzo(k)fluoranthene	207-08-9	N.D.		5,000	1,000	1
10726	Benzyl alcohol	100-51-6	N.D.		150,000	50,000	1
10726	1,1'-Biphenyl	92-52-4	N.D.		11,000	5,000	1
10726	4-Bromophenyl-phenylether	101-55-3	N.D.		15,000	6,000	1
10726	Butylbenzylphthalate	85-68-7	N.D.		50,000	20,000	1
10726	Di-n-butylphthalate	84-74-2	N.D.		50,000	20,000	1
10726	Caprolactam	105-60-2	N.D.		50,000	10,000	1
10726	Carbazole	86-74-8	N.D.		11,000	5,000	1
10726	4-Chloro-3-methylphenol	59-50-7	N.D.		11,000	5,000	1
10726	4-Chloroaniline	106-47-8	N.D.		50,000	10,000	1
10726	bis(2-Chloroethoxy)methane	111-91-1	N.D.		11,000	5,000	1
10726	bis(2-Chloroethyl)ether	111-44-4	N.D.		15,000	7,000	1
10726	bis(2-Chloroisopropyl)ether	39638-32-9	N.D.		11,000	5,000	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.		10,000	2,000	1
10726	2-Chlorophenol	95-57-8	N.D.		11,000	5,000	1
10726	4-Chlorophenyl-phenylether	7005-72-3	N.D.		11,000	5,000	1

*=This limit was used in the evaluation of the final result

Sample Description: **Bldg. 25 Surface LNAPL Composite Oil**
B0087363.0030/BMS

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 09/29/2018 09:45
Collection Date/Time: 09/28/2018 15:00
SDG#: BMS60-02

ARCADIS U.S., Inc.
ELLE Sample #: G5 9827922
ELLE Group #: 1992835
Matrix: Oil

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Limit of Quantitation*	As Received Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/kg**	**ug/kg**	**ug/kg**	
10726	Chrysene	218-01-9	N.D.	5,000	1,000	1
10726	Dibenz(a,h)anthracene	53-70-3	N.D.	5,000	1,000	1
10726	Dibenzofuran	132-64-9	N.D.	11,000	5,000	1
10726	3,3'-Dichlorobenzidine	91-94-1	N.D.	100,000	30,000	1
10726	2,4-Dichlorophenol	120-83-2	N.D.	11,000	5,000	1
10726	Dicyclohexylamine	101-83-7	N.D.	600,000	200,000	1
10726	Diethylphthalate	84-66-2	N.D.	50,000	20,000	1
10726	N,N-Dimethylaniline	121-69-7	N.D.	50,000	10,000	1
10726	2,4-Dimethylphenol	105-67-9	N.D.	11,000	5,000	1
10726	Dimethylphthalate	131-11-3	N.D.	50,000	20,000	1
10726	4,6-Dinitro-2-methylphenol	534-52-1	N.D.	150,000	50,000	1
10726	2,4-Dinitrophenol	51-28-5	N.D.	300,000	110,000	1
10726	2,4-Dinitrotoluene	121-14-2	N.D.	50,000	20,000	1
10726	2,6-Dinitrotoluene	606-20-2	N.D.	15,000	6,000	1
10726	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	50,000	20,000	1
10726	Fluoranthene	206-44-0	N.D.	5,000	1,000	1
10726	Fluorene	86-73-7	N.D.	5,000	1,000	1
10726	Hexachlorobenzene	118-74-1	N.D.	5,000	1,000	1
10726	Hexachlorobutadiene	87-68-3	N.D.	15,000	6,000	1
10726	Hexachlorocyclopentadiene	77-47-4	N.D. J	150,000	50,000	1
10726	Hexachloroethane	67-72-1	N.D.	50,000	10,000	1
10726	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	5,000	2,000	1
10726	Isophorone	78-59-1	N.D.	11,000	5,000	1
10726	2-Methylnaphthalene	91-57-6	4,200 J	10,000	3,000	1
10726	2-Methylphenol	95-48-7	N.D.	20,000	8,000	1
10726	4-Methylphenol	65794-96-9	N.D.	15,000	6,000	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.	5,000	2,000	1
10726	2-Nitroaniline	88-74-4	N.D.	15,000	6,000	1
10726	3-Nitroaniline	99-09-2	N.D.	50,000	20,000	1
10726	4-Nitroaniline	100-01-6	N.D.	50,000	20,000	1
10726	Nitrobenzene	98-95-3	N.D.	20,000	8,000	1
10726	2-Nitrophenol	88-75-5	N.D.	11,000	5,000	1
10726	4-Nitrophenol	100-02-7	N.D. J	150,000	50,000	1
10726	N-Nitroso-di-n-propylamine	621-64-7	N.D.	15,000	6,000	1
10726	N-Nitrosodiphenylamine	86-30-6	N.D.	11,000	5,000	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. J	50,000	20,000	1

*=This limit was used in the evaluation of the final result

Sample Description: **Bldg. 25 Surface LNAPL Composite Oil**
B0087363.0030/BMS

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 09/29/2018 09:45
Collection Date/Time: 09/28/2018 15:00
SDG#: BMS60-02

ARCADIS U.S., Inc.
ELLE Sample #: G5 9827922
ELLE Group #: 1992835
Matrix: Oil

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Limit of Quantitation*	As Received Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/kg**	**ug/kg**	**ug/kg**	
10726	Pentachlorophenol	87-86-5	N.D.	50,000	11,000	1
10726	Phenanthrene	85-01-8	1,900 J	5,000	1,000	1
10726	Phenol	108-95-2	N.D.	15,000	7,000	1
10726	Pyrene	129-00-0	N.D.	5,000	1,000	1
10726	Pyridine	110-86-1	N.D. J	50,000	20,000	1
10726	1,2,4,5-Tetrachlorobenzene	95-94-3	N.D.	11,000	5,000	1
10726	2,3,4,6-Tetrachlorophenol	58-90-2	N.D.	50,000	20,000	1
10726	2,4,5-Trichlorophenol	95-95-4	N.D.	15,000	6,000	1
10726	2,4,6-Trichlorophenol	88-06-2	N.D.	15,000	6,000	1
10726	Triethylamine	121-44-8	N.D. J	1,500,000	500,000	1

The stated QC limits for Triethylamine 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.

PCBs	**SW-846 8082A**		**mg/kg**	**mg/kg**	**mg/kg**	
12708	PCB-1016	12674-11-2	N.D. D2	2.5	0.50	1
12708	PCB-1221	11104-28-2	N.D. D1	2.5	0.50	1
12708	PCB-1232	11141-16-5	N.D. D1	2.5	0.50	1
12708	PCB-1242	53469-21-9	N.D. D1	2.5	0.50	1
12708	PCB-1248	12672-29-6	N.D. D1	2.5	0.50	1
12708	PCB-1254	11097-69-1	N.D. D1	2.5	0.50	1
12708	PCB-1260	11096-82-5	N.D. D1	2.5	0.50	1
12708	PCB-1262	37324-23-5	N.D. D1	2.5	0.50	1
12708	PCB-1268	11100-14-4	N.D. D1	2.5	0.50	1
12708	Total PCBs	1336-36-3	N.D.	2.5	0.50	1
GC Petroleum Hydrocarbons	**SW-846 8015D Rev 4 06/2003 Mod**		**see below**	**see below**	**see below**	
02535	Quantitative GC Fingerprint	n.a.	N.D.	100	100	100

The GC fingerprint for this sample is most similar to our Motor Oil Composite reference chromatogram. When we calculate total sample area in the C8-C40 normal hydrocarbon range as petroleum distillate, it is present at 82% by weight.

Sample Comments

State of New York Certification No. 10670
Trip blank vials were not received by the laboratory for this sample group.

*=This limit was used in the evaluation of the final result

Sample Description: **Bldg. 25 Surface LNAPL Composite Oil**
B0087363.0030/BMS

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 09/29/2018 09:45
Collection Date/Time: 09/28/2018 15:00
SDG#: BMS60-02

ARCADIS U.S., Inc.
ELLE Sample #: G5 9827922
ELLE Group #: 1992835
Matrix: Oil

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11995	VOCs- Solid by 8260C	SW-846 8260C	1	Q182851AA	10/12/2018 16:41	Jennifer K Howe	500
00373	DP 21 Bulk Prep of Oil Samples	SW-846 5030C	1	Q182851AA	10/12/2018 11:16	Jennifer K Howe	n.a.
10726	SVOA 8270D (microwave)	SW-846 8270D	1	18285SLE026	10/17/2018 16:04	Edward C Monborne	1
14061	SVOA Waste Dilution	SW-846 3580A	1	18285SLE026	10/12/2018 21:40	Kate E Lutte	1
12708	PCBs in Oil, 8082A	SW-846 8082A	1	182950024A	10/23/2018 19:53	Covenant Mutuku	1
00815	Oil Sample PCB's Cleanup Ext.	SW-846 3580A	1	182950024A	10/23/2018 13:00	Olivia Arosemena	1
02535	Quantitative GC Fingerprint	SW-846 8015D Rev 4 06/2003 Mod	1	182830029A	10/10/2018 17:52	Heather E Williams	100

*=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.
B25LN

Lab Name: Lancaster Laboratories Contract:_____
Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____
Matrix: (soil/water) SOIL Lab Sample ID: 9827922
Sample wt/vol: 1.0 (g/mL) g Lab File ID: HP07536.i/18oct12a.b/qc12s12.d
Level: (low/med) MED Date Received: 09/29/18
% Moisture: not dec. N/A Date Analyzed: 10/12/18
Column: (pack/cap) CAP Dilution Factor: 500.0
CONCENTRATION UNITS:
Number TICs found: 20 (mg/L or mg/Kg) mg/Kg

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q	
1.	592-27-8	Heptane, 2-methyl-	9.25	13	J	N
2.	589-81-1	Heptane, 3-methyl-	9.43	10	J	
3.	111-65-9	Octane	9.93	31	J	
4.		Unknown	10.94	20	J	
5.	2216-33-3	Octane, 3-methyl-	11.05	15	J	
6.	111-84-2	Nonane	11.40	47	J	
7.	5911-04-6	Nonane, 3-methyl-	11.81	8.1	J	
8.		Unknown	11.91	12	J	
9.	124-18-5	Decane	12.46	36	J	
10.	1120-21-4	Undecane	13.31	11	J	
11.		Unknown	14.05	14	J	
12.	527-84-4	o-Cymene	14.10	14	J	
13.		Unknown aromatic	14.33	11	J	
14.		Unknown aromatic	14.42	12	J	
15.		Unknown	14.53	11	J	
16.	629-50-5	Tridecane	14.70	15	J	
17.	4489-84-3	Benzene, (3-methyl-2-butenyl	14.78	9.3	J	
18.		Unknown	15.04	7.4	J	
19.	91-57-6	Naphthalene, 2-methyl-	15.34	17	J	X
20.		Unknown aromatic	15.47	9.5	J	
21.						
22.	VOCTIC	Total VOC TICs		330	J	
23.						
24.						
25.						
26.						
27.						
28.						
29.						
30.						

X = Alternate choice based on known RT.

page 1 of 1

FORM I VOA-TIC

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
B25LN

Lab Name: Lancaster Laboratories Contract:
Lab Code: LANCAS Case No.: SAS No.: SDG No.:
Matrix: (soil/water) SOIL Lab Sample ID: 9827922
Sample wt/vol: 0.5 (g/mL) g Lab File ID: gj1015.d
Level: (low/med) LOW Date Received: 09/29/18
% Moisture: 0 Decanted: (Y/N) Date Extracted: 10/12/18
Concentrated Extract Volume: 5000 (uL) Date Analyzed: 10/17/18
Injection Volume: 1 (uL) Dilution Factor: 1
GPC Cleanup: N pH: Extraction: Mic

CONCENTRATION UNITS:
Number TICs found: 15 (ug/L or ug/Kg) ug/Kg

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q	
1.		Unknown	11.333	910000	J	N
2.	638-67-5	Tricosane	11.851	260000	J	
3.	7225-64-1	Heptadecane, 9-octyl-	11.963	260000	J	
4.	630-02-4	Octacosane	12.016	250000	J	
5.		Unknown	12.080	220000	J	
6.	593-45-3	Octadecane	12.169	280000	J	
7.	13475-77-9	Eicosane, 9-octyl-	12.263	300000	J	
8.		Unknown	12.369	210000	J	
9.		Unknown	12.451	310000	J	
10.	629-94-7	Heneicosane	12.569	270000	J	
11.		Unknown	12.651	210000	J	
12.		Unknown	12.804	230000	J	
13.		Unknown	12.957	290000	J	
14.	55320-06-4	Heneicosane, 11-decyl-	13.163	220000	J	
15.		Unknown	13.345	350000	J	
16.						
17.	SVOCTIC	Total SVOC TICs		4600000	J	
18.						
19.						
20.						
21.						
22.						
23.						
24.						
25.						
26.						
27.						
28.						
29.						
30.						

page 1 of 1

FORM I SV-1

Environmental Analysis Request/Chain of Custody

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For Eurofins Lancaster Laboratories Environmental use only

Acct. # 3074 Group # 1992839 Sample # 9827949-52

COC # 566555

Client Information

Client: Arcadis

Acct. #: 03074

Project Name/#: BMS Syracuse

PWSID #:

Project Manager: David Wright

P.O. #: D0057363.0026

Sampler: D. Zuck

Quote #: 231955

State where samples were collected: NYS

For Compliance: Yes ☐ No ☐

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	VOCs + TICs	SVOCs + TICs	Glycols + Alcohols	Aldehydes	TPH, diesel range, + Oil range organics
Test Pit #1 (10-12')	9/28/18	1445		X	4	X	X	X	X	X
Test Pit #2 (10-12')	↓	1545		X	4	X	X	X	X	X
DUP-TP-092818		✓		X	4	X	X	X	X	X
TB-092818					1	X				

For Lab Use Only

FSC:

SCR#: 231955

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: David.Wright@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
S Derue	9/24/18	16:10			
Daniel Zuck	9/28/18	1635			
			Chris SA	9-29-18	0945

EDD Required? (Yes) No

If yes, format: NYSDEC

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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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: **Test Pit #1 (10-12') Composite Soil**
B0087363.0026/BMS

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 09/29/2018 09:45
Collection Date/Time: 09/28/2018 14:45
SDG#: BMS63-01

ARCADIS U.S., Inc.
ELLE Sample #: SW 9827949
ELLE Group #: 1992839
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	0.031	0.016	0.005	0.68
11995	Acetonitrile	75-05-8	N.D.	0.079	0.020	0.68
11995	Benzene	71-43-2	N.D.	0.004	0.0004	0.68
11995	Bromochloromethane	74-97-5	N.D.	0.004	0.0005	0.68
11995	Bromodichloromethane	75-27-4	N.D.	0.004	0.0003	0.68
11995	Bromoform	75-25-2	N.D. J	0.008	0.004	0.68
11995	Bromomethane	74-83-9	N.D.	0.004	0.0006	0.68
11995	n-Butanol	71-36-3	N.D.	0.20	0.044	0.68
11995	2-Butanone	78-93-3	0.002 J	0.008	0.0008	0.68
11995	t-Butyl alcohol	75-65-0	N.D.	0.079	0.012	0.68
11995	n-Butylbenzene	104-51-8	N.D.	0.006	0.002	0.68
11995	sec-Butylbenzene	135-98-8	N.D.	0.004	0.002	0.68
11995	tert-Butylbenzene	98-06-6	N.D.	0.004	0.0006	0.68
11995	Carbon Disulfide	75-15-0	0.0005 J	0.004	0.0005	0.68
11995	Carbon Tetrachloride	56-23-5	N.D.	0.004	0.0004	0.68
11995	Chlorobenzene	108-90-7	N.D.	0.004	0.0004	0.68
11995	Chlorodifluoromethane	75-45-6	N.D.	0.008	0.002	0.68
11995	Chloroethane	75-00-3	N.D.	0.004	0.0008	0.68
11995	Chloroform	67-66-3	N.D.	0.004	0.0005	0.68
11995	Chloromethane	74-87-3	N.D.	0.004	0.0005	0.68
11995	Cyclohexane	110-82-7	N.D.	0.004	0.0004	0.68
11995	Cyclohexanone	108-94-1	N.D.	0.20	0.020	0.68
11995	1,2-Dibromo-3-chloropropane	96-12-8	N.D. J	0.004	0.0003	0.68
11995	Dibromochloromethane	124-48-1	N.D.	0.004	0.0003	0.68
11995	1,2-Dibromoethane	106-93-4	N.D.	0.004	0.0003	0.68
11995	1,2-Dichlorobenzene	95-50-1	N.D.	0.004	0.0004	0.68
11995	1,3-Dichlorobenzene	541-73-1	N.D.	0.004	0.0004	0.68
11995	1,4-Dichlorobenzene	106-46-7	N.D.	0.004	0.0003	0.68
11995	Dichlorodifluoromethane	75-71-8	N.D.	0.004	0.0005	0.68
11995	1,1-Dichloroethane	75-34-3	N.D.	0.004	0.0004	0.68
11995	1,2-Dichloroethane	107-06-2	N.D.	0.004	0.0005	0.68
11995	1,1-Dichloroethene	75-35-4	N.D.	0.004	0.0004	0.68
11995	cis-1,2-Dichloroethene	156-59-2	N.D.	0.004	0.0004	0.68
11995	trans-1,2-Dichloroethene	156-60-5	N.D.	0.004	0.0004	0.68
11995	1,2-Dichloropropane	78-87-5	N.D.	0.004	0.0004	0.68
11995	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.004	0.0003	0.68
11995	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.004	0.0002	0.68
11995	1,4-Dioxane	123-91-1	N.D.	0.20	0.029	0.68
11995	Ethyl Acetate	141-78-6	N.D.	0.004	0.0008	0.68
11995	Ethyl Ether	60-29-7	N.D.	0.004	0.0008	0.68
11995	Ethylbenzene	100-41-4	N.D.	0.004	0.0003	0.68

*=This limit was used in the evaluation of the final result

Sample Description: **Test Pit #1 (10-12') Composite Soil**
B0087363.0026/BMS

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 09/29/2018 09:45
Collection Date/Time: 09/28/2018 14:45
SDG#: BMS63-01

ARCADIS U.S., Inc.
ELLE Sample #: SW 9827949
ELLE Group #: 1992839
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.	0.008	0.0005	0.68
11995	n-Heptane	142-82-5	N.D.	0.006	0.002	0.68
11995	n-Hexane	110-54-3	N.D.	0.004	0.0004	0.68
11995	2-Hexanone	591-78-6	N.D. J	0.008	0.0008	0.68
11995	Isobutyl Alcohol	78-83-1	N.D.	0.20	0.030	0.68
11995	Isopropylbenzene	98-82-8	N.D.	0.004	0.0003	0.68
11995	p-Isopropyltoluene	99-87-6	N.D.	0.004	0.002	0.68
11995	Methyl Acetate	79-20-9	N.D.	0.004	0.0008	0.68
11995	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.004	0.0004	0.68
11995	4-Methyl-2-pentanone	108-10-1	N.D.	0.008	0.0008	0.68
11995	Methylcyclohexane	108-87-2	N.D.	0.004	0.0005	0.68
11995	Methylene Chloride	75-09-2	N.D.	0.004	0.002	0.68
11995	Naphthalene	91-20-3	N.D.	0.004	0.002	0.68
11995	2-Nitropropane	79-46-9	N.D. J	0.008	0.0008	0.68
11995	Styrene	100-42-5	N.D.	0.004	0.0002	0.68
11995	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.004	0.0003	0.68
11995	Tetrachloroethene	127-18-4	N.D.	0.004	0.0004	0.68
11995	Tetrahydrofuran	109-99-9	N.D.	0.006	0.0008	0.68
11995	Toluene	108-88-3	N.D.	0.004	0.0005	0.68
11995	1,2,3-Trichlorobenzene	87-61-6	N.D.	0.008	0.004	0.68
11995	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.008	0.004	0.68
11995	1,1,1-Trichloroethane	71-55-6	N.D.	0.004	0.0005	0.68
11995	1,1,2-Trichloroethane	79-00-5	N.D.	0.004	0.0004	0.68
11995	Trichloroethene	79-01-6	N.D.	0.004	0.0004	0.68
11995	Trichlorofluoromethane	75-69-4	N.D.	0.004	0.0006	0.68
11995	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.004	0.0004	0.68
11995	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.004	0.0004	0.68
11995	Vinyl Chloride	75-01-4	N.D.	0.004	0.0005	0.68
11995	m+p-Xylene	179601-23-1	N.D.	0.004	0.0008	0.68
11995	o-Xylene	95-47-6	N.D.	0.004	0.0003	0.68
11995	Xylene (Total)	1330-20-7	N.D.	0.004	0.0008	0.68

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.

GC/MS Semivolatiles	**SW-846 8270D**	**ug/kg**	**ug/kg**	**ug/kg**	

*=This limit was used in the evaluation of the final result

Sample Description: **Test Pit #1 (10-12') Composite Soil**
B0087363.0026/BMS

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 09/29/2018 09:45
Collection Date/Time: 09/28/2018 14:45
SDG#: BMS63-01

ARCADIS U.S., Inc.
ELLE Sample #: SW 9827949
ELLE Group #: 1992839
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	Acenaphthene	83-32-9	N.D.	19	4	1
10726	Acenaphthylene	208-96-8	N.D.	19	4	1
10726	Acetophenone	98-86-2	N.D.	58	27	1
10726	Aniline	62-53-3	N.D.	580	190	1
10726	Anthracene	120-12-7	12 J	19	4	1
10726	Atrazine	1912-24-9	N.D.	190	38	1
10726	Benzaldehyde	100-52-7	N.D. J	190	77	1
10726	Benzo(a)anthracene	56-55-3	50	19	4	1
10726	Benzo(a)pyrene	50-32-8	52	19	8	1
10726	Benzo(b)fluoranthene	205-99-2	74	19	4	1
10726	Benzo(g,h,i)perylene	191-24-2	37	19	8	1
10726	Benzo(k)fluoranthene	207-08-9	30 J	19	4	1
10726	Benzyl alcohol	100-51-6	N.D. J	580	190	1
10726	1,1'-Biphenyl	92-52-4	N.D. J	42	19	1
10726	4-Bromophenyl-phenylether	101-55-3	N.D. J	58	23	1
10726	Butylbenzylphthalate	85-68-7	N.D. J	190	77	1
10726	Di-n-butylphthalate	84-74-2	N.D. J	190	77	1
10726	Caprolactam	105-60-2	N.D.	190	38	1
10726	Carbazole	86-74-8	N.D. J	42	19	1
10726	4-Chloro-3-methylphenol	59-50-7	N.D.	42	19	1
10726	4-Chloroaniline	106-47-8	N.D.	190	38	1
10726	bis(2-Chloroethoxy)methane	111-91-1	N.D.	42	19	1
10726	bis(2-Chloroethyl)ether	111-44-4	N.D.	58	27	1
10726	bis(2-Chloroisopropyl)ether	39638-32-9	N.D.	42	19	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. J	38	8	1
10726	2-Chlorophenol	95-57-8	N.D. J	42	19	1
10726	4-Chlorophenyl-phenylether	7005-72-3	N.D.	42	19	1
10726	Chrysene	218-01-9	57 J	19	4	1
10726	Dibenz(a,h)anthracene	53-70-3	7 J	19	4	1
10726	Dibenzofuran	132-64-9	N.D. J	42	19	1
10726	3,3'-Dichlorobenzidine	91-94-1	N.D.	380	120	1
10726	2,4-Dichlorophenol	120-83-2	N.D.	42	19	1
10726	Dicyclohexylamine	101-83-7	N.D.	2,300	770	1
10726	Diethylphthalate	84-66-2	N.D. J	190	77	1
10726	N,N-Dimethylaniline	121-69-7	N.D.	190	38	1
10726	2,4-Dimethylphenol	105-67-9	N.D.	42	19	1
10726	Dimethylphthalate	131-11-3	N.D. J	190	77	1
10726	4,6-Dinitro-2-methylphenol	534-52-1	N.D.	580	190	1

*=This limit was used in the evaluation of the final result

Sample Description: **Test Pit #1 (10-12') Composite Soil**
B0087363.0026/BMS

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 09/29/2018 09:45
Collection Date/Time: 09/28/2018 14:45
SDG#: BMS63-01

ARCADIS U.S., Inc.
ELLE Sample #: SW 9827949
ELLE Group #: 1992839
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-Dinitrophenol	51-28-5	N.D.	1,200	420	1
10726	2,4-Dinitrotoluene	121-14-2	N.D. J	190	77	1
10726	2,6-Dinitrotoluene	606-20-2	N.D. J	58	23	1
10726	bis(2-Ethylhexyl)phthalate	117-81-7	N.D. J	190	77	1
10726	Fluoranthene	206-44-0	110 J	19	4	1
10726	Fluorene	86-73-7	N.D. J	19	4	1
10726	Hexachlorobenzene	118-74-1	N.D. J	19	4	1
10726	Hexachlorobutadiene	87-68-3	N.D.	58	23	1
10726	Hexachlorocyclopentadiene	77-47-4	N.D. J	580	190	1
10726	Hexachloroethane	67-72-1	N.D. J	190	38	1
10726	Indeno(1,2,3-cd)pyrene	193-39-5	32	19	8	1
10726	Isophorone	78-59-1	N.D.	42	19	1
10726	2-Methylnaphthalene	91-57-6	N.D.	38	12	1
10726	2-Methylphenol	95-48-7	N.D. J	77	31	1
10726	4-Methylphenol	65794-96-9	N.D.	58	23	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. J	19	8	1
10726	2-Nitroaniline	88-74-4	N.D.	58	23	1
10726	3-Nitroaniline	99-09-2	N.D.	190	77	1
10726	4-Nitroaniline	100-01-6	N.D. J	190	77	1
10726	Nitrobenzene	98-95-3	N.D.	77	31	1
10726	2-Nitrophenol	88-75-5	N.D.	42	19	1
10726	4-Nitrophenol	100-02-7	N.D.	580	190	1
10726	N-Nitroso-di-n-propylamine	621-64-7	N.D.	58	23	1
10726	N-Nitrosodiphenylamine	86-30-6	N.D.	42	19	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.	190	77	1
10726	Pentachlorophenol	87-86-5	N.D. J	190	42	1
10726	Phenanthrene	85-01-8	37	19	4	1
10726	Phenol	108-95-2	N.D.	58	27	1
10726	Pyrene	129-00-0	87 J	19	4	1
10726	Pyridine	110-86-1	N.D.	190	77	1
10726	1,2,4,5-Tetrachlorobenzene	95-94-3	N.D.	42	19	1
10726	2,3,4,6-Tetrachlorophenol	58-90-2	N.D.	190	77	1
10726	2,4,5-Trichlorophenol	95-95-4	N.D.	58	23	1
10726	2,4,6-Trichlorophenol	88-06-2	N.D.	58	23	1
10726	Triethylamine	121-44-8	N.D. J	5,800	1,900	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. The following

*=This limit was used in the evaluation of the final result

Sample Description: **Test Pit #1 (10-12') Composite Soil**
B0087363.0026/BMS

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 09/29/2018 09:45
Collection Date/Time: 09/28/2018 14:45
SDG#: BMS63-01

ARCADIS U.S., Inc.
ELLE Sample #: SW 9827949
ELLE Group #: 1992839
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Limit of Quantitation*	Dry Method Detection Limit	Dilution Factor
	action was taken: The sample was re-extracted within the method required holding time and the QC is again outside of the acceptance limits. The data is reported from the initial 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.					
GC Volatiles	**SW-846 8015D Rev.4, June 2003**		**mg/kg**	**mg/kg**	**mg/kg**	
10599	TPH-GRO soil C6-C10	n.a.	N.D.	0.9	0.2	19.35
Aldehydes & Ketones	**SW-846 8315A**		**mg/kg**	**mg/kg**	**mg/kg**	
13031	Acetaldehyde	75-07-0	2.3	1.1	0.57	1
13031	Formaldehyde	50-00-0	5.4	1.7	1.2	1
	Reporting limits were raised for formaldehyde due to the detection in the blank.					
GC Miscellaneous	**SW-846 8015C Feb 2007 Rev 3**		**mg/kg**	**mg/kg**	**mg/kg**	
12925	Ethylene glycol	107-21-1	N.D.	12	5.8	1
12925	Propylene glycol	57-55-6	N.D.	12	5.8	1
GC Miscellaneous	**SW-846 8015D Rev.4, June 2003**		**mg/kg**	**mg/kg**	**mg/kg**	
10604	Ethanol (by Direct Injection)	64-17-5	N.D. D2	1.2	0.14	1
10604	Isopropanol	67-63-0	N.D. D2	1.2	0.053	1
10604	Methanol (by Direct Injection)	67-56-1	N.D. D2	1.2	0.23	1
GC Petroleum Hydrocarbons	**SW-846 8015C Feb 2007 Rev 3**		**mg/kg**	**mg/kg**	**mg/kg**	
13567	DRO C10-C28	n.a.	9.5 J	14	4.6	1
13567	ORO >C28 - C40	n.a.	31	14	4.6	1
Wet Chemistry	**SM 2540 G-2011 %Moisture Calc**		**%**	**%**	**%**	
00111	Moisture	n.a.	14.0	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: **Test Pit #1 (10-12') Composite Soil**
B0087363.0026/BMS

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 09/29/2018 09:45
Collection Date/Time: 09/28/2018 14:45
SDG#: BMS63-01

ARCADIS U.S., Inc.
ELLE Sample #: SW 9827949
ELLE Group #: 1992839
Matrix: Soil

Sample Comments

State of New York Certification No. 10670

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	SW-846 8260C	1	B182781AA	10/05/2018 13:06	Linda C Pape	0.68
06176	GC/MS - LL DIH2O Prep	SW-846 5035A	1	201827251405	09/29/2018 18:36	Rebecca Williams	1
06176	GC/MS - LL DIH2O Prep	SW-846 5035A	2	201827251405	09/29/2018 18:36	Rebecca Williams	1
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	201827251405	09/28/2018 14:45	Client Supplied	1
10726	SVOA 8270D (microwave)	SW-846 8270D	1	18281SLG026	10/10/2018 16:56	Edward C Monborne	1
10813	BNA Soil Microwave APP IX	SW-846 3546	1	18281SLG026	10/09/2018 09:00	Michelle A Newswanger	1
10599	TPH-GRO soils C6-C10	SW-846 8015D Rev.4, June 2003	1	18275A16A	10/02/2018 22:58	Jeremy C Giffin	19.35
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201827251405	09/28/2018 14:45	Client Supplied	n.a.
13031	Short List Aldehydes- S 8315A	SW-846 8315A	1	182820033A	10/11/2018 22:12	James H Place	1
05876	Formaldehyde Solid Extraction	SW-846 8315A	1	182820033A	10/11/2018 08:00	Olivia Arosemena	1
12925	Glycols in Soil by 8015C	SW-846 8015C Feb 2007 Rev 3	1	182780046A	10/11/2018 00:18	Donald Brown	1
10604	Alcohols in Soil	SW-846 8015D Rev.4, June 2003	1	182830031A	10/10/2018 22:38	Johanna C Kennedy	1
13567	TPH DRO/ORO soil 8015C/D(3546)	SW-846 8015C Feb 2007 Rev 3	1	182830040A	10/11/2018 22:47	Thomas C Wildermuth	1
11221	TPH DRO/ORO Solid 3546 EXT	SW-846 3546	1	182830040A	10/11/2018 08:00	Michelle A Newswanger	1
13121	Glycol Solids Ext. 8015C	SW-846 8015C Feb 2007 Rev 3	1	182780046A	10/10/2018 15:52	Donald Brown	1
00380	Solids Extraction for Alcohols	SW-846 8015D Rev 4 06/2003 Mod	2	182830031A	10/10/2018 15:52	Donald Brown	1
00111	Moisture	SM 2540 G-2011 %Moisture Calc	1	18275820006A	10/02/2018 11:58	Larry E Bevins	1

*=This limit was used in the evaluation of the final result

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
BMTP1

Lab Name: Lancaster Laboratories Contract:_____
Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____
Matrix: (soil/water) SOIL Lab Sample ID: 9827949
Sample wt/vol: 7.38 (g/mL) g Lab File ID: HP09953.i/18oct05a.b/bc05s06.d
Level: (low/med) LOW Date Received: 09/29/18
% Moisture: not dec. 14 Date Analyzed: 10/05/18
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.					
5.					
6.					
7.					
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9.					
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11.					
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24.					
25.					
26.					
27.					
28.					
29.					
30.					

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FORM I VOA-TIC

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
BMTP1

Lab Name: Lancaster Laboratories Contract:
Lab Code: LANCAS Case No.: SAS No.: SDG No.:
Matrix: (soil/water) SOIL Lab Sample ID: 9827949
Sample wt/vol: 30.25(g/mL) g Lab File ID: gj0535.d
Level: (low/med) LOW Date Received: 09/29/18
% Moisture: 14 Decanted: (Y/N) Date Extracted: 10/09/18
Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/10/18
Injection Volume: 1 (uL) Dilution Factor: 1
GPC Cleanup: N pH: Extraction: Mic
CONCENTRATION UNITS:
Number TICs found: 20 (ug/L or ug/Kg) ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q	
1. 109-99-9	Tetrahydrofuran	1.019	12000	JB	R
2.	Unknown	3.149	9900	JB	R
3.	Unknown	4.748	1200	J	N
4.	Unknown	7.684	690	J	
5.	Unknown	8.231	8800	J	
6.	Unknown	8.342	1800	J	
7. 292-46-6	Lenthionine	8.613	660	J	
8.	Unknown	8.695	530	J	
9.	Unknown	9.001	2800	J	
10.	Unknown	9.360	970	J	
11.	Unknown	9.413	450	J	
12. 6740-88-1	Ketamine	9.542	670	J	
13.	Unknown	9.883	480	J	
14.	Unknown	9.930	590	J	
15.	Unknown	9.989	530	J	
16.	Unknown	10.183	800	J	
17.	Unknown	10.230	530	J	
18.	Unknown	10.283	600	J	
19.	Unknown	10.307	710	J	
20.	Unknown	10.489	710	J	
21.					
22. SVOCTIC	Total SVOC TICs		46000	JB	
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

page 1 of 1

FORM I SV-1

Sample Description: **Test Pit #2 (10-12') Composite Soil**
B0087363.0026/BMS

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 09/29/2018 09:45
Collection Date/Time: 09/28/2018 15:45
SDG#: BMS63-02

ARCADIS U.S., Inc.
ELLE Sample #: SW 9827950
ELLE Group #: 1992839
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	0.040	0.017	0.005	0.66
11995	Acetonitrile	75-05-8	N.D.	0.083	0.021	0.66
11995	Benzene	71-43-2	N.D.	0.004	0.0004	0.66
11995	Bromochloromethane	74-97-5	N.D.	0.004	0.0005	0.66
11995	Bromodichloromethane	75-27-4	N.D.	0.004	0.0003	0.66
11995	Bromoform	75-25-2	N.D. J	0.008	0.004	0.66
11995	Bromomethane	74-83-9	N.D.	0.004	0.0006	0.66
11995	n-Butanol	71-36-3	N.D.	0.21	0.046	0.66
11995	2-Butanone	78-93-3	0.004 J	0.008	0.0008	0.66
11995	t-Butyl alcohol	75-65-0	N.D.	0.083	0.012	0.66
11995	n-Butylbenzene	104-51-8	N.D.	0.007	0.002	0.66
11995	sec-Butylbenzene	135-98-8	N.D.	0.004	0.002	0.66
11995	tert-Butylbenzene	98-06-6	N.D.	0.004	0.0007	0.66
11995	Carbon Disulfide	75-15-0	0.002 J	0.004	0.0005	0.66
11995	Carbon Tetrachloride	56-23-5	N.D.	0.004	0.0004	0.66
11995	Chlorobenzene	108-90-7	N.D.	0.004	0.0004	0.66
11995	Chlorodifluoromethane	75-45-6	N.D.	0.008	0.002	0.66
11995	Chloroethane	75-00-3	N.D.	0.004	0.0008	0.66
11995	Chloroform	67-66-3	N.D.	0.004	0.0005	0.66
11995	Chloromethane	74-87-3	N.D.	0.004	0.0005	0.66
11995	Cyclohexane	110-82-7	N.D.	0.004	0.0004	0.66
11995	Cyclohexanone	108-94-1	N.D.	0.21	0.021	0.66
11995	1,2-Dibromo-3-chloropropane	96-12-8	N.D. J	0.004	0.0003	0.66
11995	Dibromochloromethane	124-48-1	N.D.	0.004	0.0003	0.66
11995	1,2-Dibromoethane	106-93-4	N.D.	0.004	0.0003	0.66
11995	1,2-Dichlorobenzene	95-50-1	N.D.	0.004	0.0004	0.66
11995	1,3-Dichlorobenzene	541-73-1	N.D.	0.004	0.0004	0.66
11995	1,4-Dichlorobenzene	106-46-7	N.D.	0.004	0.0003	0.66
11995	Dichlorodifluoromethane	75-71-8	N.D.	0.004	0.0005	0.66
11995	1,1-Dichloroethane	75-34-3	N.D.	0.004	0.0004	0.66
11995	1,2-Dichloroethane	107-06-2	N.D.	0.004	0.0005	0.66
11995	1,1-Dichloroethene	75-35-4	N.D.	0.004	0.0004	0.66
11995	cis-1,2-Dichloroethene	156-59-2	N.D.	0.004	0.0004	0.66
11995	trans-1,2-Dichloroethene	156-60-5	N.D.	0.004	0.0004	0.66
11995	1,2-Dichloropropane	78-87-5	N.D.	0.004	0.0004	0.66
11995	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.004	0.0003	0.66
11995	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.004	0.0002	0.66
11995	1,4-Dioxane	123-91-1	N.D.	0.21	0.031	0.66
11995	Ethyl Acetate	141-78-6	N.D.	0.004	0.0008	0.66
11995	Ethyl Ether	60-29-7	N.D.	0.004	0.0008	0.66
11995	Ethylbenzene	100-41-4	N.D.	0.004	0.0003	0.66

*=This limit was used in the evaluation of the final result

Sample Description: **Test Pit #2 (10-12') Composite Soil**
B0087363.0026/BMS

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 09/29/2018 09:45
Collection Date/Time: 09/28/2018 15:45
SDG#: BMS63-02

ARCADIS U.S., Inc.
ELLE Sample #: SW 9827950
ELLE Group #: 1992839
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.	0.008	0.0005	0.66
11995	n-Heptane	142-82-5	N.D.	0.007	0.002	0.66
11995	n-Hexane	110-54-3	N.D.	0.004	0.0004	0.66
11995	2-Hexanone	591-78-6	N.D. J	0.008	0.0008	0.66
11995	Isobutyl Alcohol	78-83-1	N.D.	0.21	0.031	0.66
11995	Isopropylbenzene	98-82-8	N.D.	0.004	0.0003	0.66
11995	p-Isopropyltoluene	99-87-6	N.D.	0.004	0.002	0.66
11995	Methyl Acetate	79-20-9	N.D.	0.004	0.0008	0.66
11995	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.004	0.0004	0.66
11995	4-Methyl-2-pentanone	108-10-1	N.D.	0.008	0.0008	0.66
11995	Methylcyclohexane	108-87-2	N.D.	0.004	0.0005	0.66
11995	Methylene Chloride	75-09-2	N.D.	0.004	0.002	0.66
11995	Naphthalene	91-20-3	N.D.	0.004	0.002	0.66
11995	2-Nitropropane	79-46-9	N.D. J	0.008	0.0008	0.66
11995	Styrene	100-42-5	N.D.	0.004	0.0002	0.66
11995	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.004	0.0003	0.66
11995	Tetrachloroethene	127-18-4	N.D.	0.004	0.0004	0.66
11995	Tetrahydrofuran	109-99-9	N.D.	0.007	0.0008	0.66
11995	Toluene	108-88-3	N.D.	0.004	0.0005	0.66
11995	1,2,3-Trichlorobenzene	87-61-6	N.D.	0.008	0.004	0.66
11995	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.008	0.004	0.66
11995	1,1,1-Trichloroethane	71-55-6	N.D.	0.004	0.0005	0.66
11995	1,1,2-Trichloroethane	79-00-5	N.D.	0.004	0.0004	0.66
11995	Trichloroethene	79-01-6	N.D.	0.004	0.0004	0.66
11995	Trichlorofluoromethane	75-69-4	N.D.	0.004	0.0006	0.66
11995	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.004	0.0004	0.66
11995	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.004	0.0004	0.66
11995	Vinyl Chloride	75-01-4	N.D.	0.004	0.0005	0.66
11995	m+p-Xylene	179601-23-1	N.D.	0.004	0.0008	0.66
11995	o-Xylene	95-47-6	N.D.	0.004	0.0003	0.66
11995	Xylene (Total)	1330-20-7	N.D.	0.004	0.0008	0.66

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.

GC/MS Semivolatiles	**SW-846 8270D**	**ug/kg**	**ug/kg**	**ug/kg**	

*=This limit was used in the evaluation of the final result

Sample Description: **Test Pit #2 (10-12') Composite Soil**
B0087363.0026/BMS

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 09/29/2018 09:45
Collection Date/Time: 09/28/2018 15:45
SDG#: BMS63-02

ARCADIS U.S., Inc.
ELLE Sample #: SW 9827950
ELLE Group #: 1992839
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	Acenaphthene	83-32-9	N.D.	21	4	1
10726	Acenaphthylene	208-96-8	N.D.	21	4	1
10726	Acetophenone	98-86-2	N.D.	62	29	1
10726	Aniline	62-53-3	N.D.	620	210	1
10726	Anthracene	120-12-7	N.D.	21	4	1
10726	Atrazine	1912-24-9	N.D.	210	41	1
10726	Benzaldehyde	100-52-7	N.D. J	210	82	1
10726	Benzo(a)anthracene	56-55-3	N.D.	21	4	1
10726	Benzo(a)pyrene	50-32-8	N.D.	21	8	1
10726	Benzo(b)fluoranthene	205-99-2	N.D.	21	4	1
10726	Benzo(g,h,i)perylene	191-24-2	N.D.	21	8	1
10726	Benzo(k)fluoranthene	207-08-9	N.D. J	21	4	1
10726	Benzyl alcohol	100-51-6	N.D. J	620	210	1
10726	1,1'-Biphenyl	92-52-4	N.D. J	45	21	1
10726	4-Bromophenyl-phenylether	101-55-3	N.D. J	62	25	1
10726	Butylbenzylphthalate	85-68-7	N.D. J	210	82	1
10726	Di-n-butylphthalate	84-74-2	N.D. J	210	82	1
10726	Caprolactam	105-60-2	N.D.	210	41	1
10726	Carbazole	86-74-8	N.D. J	45	21	1
10726	4-Chloro-3-methylphenol	59-50-7	N.D.	45	21	1
10726	4-Chloroaniline	106-47-8	N.D.	210	41	1
10726	bis(2-Chloroethoxy)methane	111-91-1	N.D.	45	21	1
10726	bis(2-Chloroethyl)ether	111-44-4	N.D.	62	29	1
10726	bis(2-Chloroisopropyl)ether	39638-32-9	N.D.	45	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. J	41	8	1
10726	2-Chlorophenol	95-57-8	N.D. J	45	21	1
10726	4-Chlorophenyl-phenylether	7005-72-3	N.D.	45	21	1
10726	Chrysene	218-01-9	N.D. J	21	4	1
10726	Dibenz(a,h)anthracene	53-70-3	N.D.	21	4	1
10726	Dibenzofuran	132-64-9	N.D. J	45	21	1
10726	3,3'-Dichlorobenzidine	91-94-1	N.D.	410	120	1
10726	2,4-Dichlorophenol	120-83-2	N.D.	45	21	1
10726	Dicyclohexylamine	101-83-7	N.D.	2,500	820	1
10726	Diethylphthalate	84-66-2	N.D. J	210	82	1
10726	N,N-Dimethylaniline	121-69-7	N.D.	210	41	1
10726	2,4-Dimethylphenol	105-67-9	N.D.	45	21	1
10726	Dimethylphthalate	131-11-3	N.D. J	210	82	1
10726	4,6-Dinitro-2-methylphenol	534-52-1	N.D.	620	210	1

*=This limit was used in the evaluation of the final result

Sample Description: **Test Pit #2 (10-12') Composite Soil**
B0087363.0026/BMS

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 09/29/2018 09:45
Collection Date/Time: 09/28/2018 15:45
SDG#: BMS63-02

ARCADIS U.S., Inc.
ELLE Sample #: SW 9827950
ELLE Group #: 1992839
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-Dinitrophenol	51-28-5	N.D.	1,200	450	1
10726	2,4-Dinitrotoluene	121-14-2	N.D. J	210	82	1
10726	2,6-Dinitrotoluene	606-20-2	N.D. J	62	25	1
10726	bis(2-Ethylhexyl)phthalate	117-81-7	N.D. J	210	82	1
10726	Fluoranthene	206-44-0	N.D.	21	4	1
10726	Fluorene	86-73-7	N.D. J	21	4	1
10726	Hexachlorobenzene	118-74-1	N.D. J	21	4	1
10726	Hexachlorobutadiene	87-68-3	N.D.	62	25	1
10726	Hexachlorocyclopentadiene	77-47-4	N.D. J	620	210	1
10726	Hexachloroethane	67-72-1	N.D. J	210	41	1
10726	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	21	8	1
10726	Isophorone	78-59-1	N.D.	45	21	1
10726	2-Methylnaphthalene	91-57-6	N.D.	41	12	1
10726	2-Methylphenol	95-48-7	N.D. J	82	33	1
10726	4-Methylphenol	65794-96-9	N.D.	62	25	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. J	21	8	1
10726	2-Nitroaniline	88-74-4	N.D.	62	25	1
10726	3-Nitroaniline	99-09-2	N.D.	210	82	1
10726	4-Nitroaniline	100-01-6	N.D. J	210	82	1
10726	Nitrobenzene	98-95-3	N.D.	82	33	1
10726	2-Nitrophenol	88-75-5	N.D.	45	21	1
10726	4-Nitrophenol	100-02-7	N.D.	620	210	1
10726	N-Nitroso-di-n-propylamine	621-64-7	N.D.	62	25	1
10726	N-Nitrosodiphenylamine	86-30-6	N.D.	45	21	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.	210	82	1
10726	Pentachlorophenol	87-86-5	N.D. J	210	45	1
10726	Phenanthrene	85-01-8	N.D.	21	4	1
10726	Phenol	108-95-2	N.D.	62	29	1
10726	Pyrene	129-00-0	N.D. J	21	4	1
10726	Pyridine	110-86-1	N.D.	210	82	1
10726	1,2,4,5-Tetrachlorobenzene	95-94-3	N.D.	45	21	1
10726	2,3,4,6-Tetrachlorophenol	58-90-2	N.D.	210	82	1
10726	2,4,5-Trichlorophenol	95-95-4	N.D.	62	25	1
10726	2,4,6-Trichlorophenol	88-06-2	N.D.	62	25	1
10726	Triethylamine	121-44-8	N.D. J	6,200	2,100	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. The following

*=This limit was used in the evaluation of the final result

Sample Description: **Test Pit #2 (10-12') Composite Soil**
B0087363.0026/BMS

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 09/29/2018 09:45
Collection Date/Time: 09/28/2018 15:45
SDG#: BMS63-02

ARCADIS U.S., Inc.
ELLE Sample #: SW 9827950
ELLE Group #: 1992839
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Limit of Quantitation*	Dry Method Detection Limit	Dilution Factor
	action was taken: The sample was re-extracted within the method required holding time and the QC is again outside of the acceptance limits. The data is reported from the initial 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.					
GC Volatiles	**SW-846 8015D Rev.4, June 2003**		**mg/kg**	**mg/kg**	**mg/kg**	
10599	TPH-GRO soil C6-C10	n.a.	0.2 J	0.9	0.2	17.24
Aldehydes & Ketones	**SW-846 8315A**		**mg/kg**	**mg/kg**	**mg/kg**	
13031	Acetaldehyde	75-07-0	3.0	1.2	0.61	1
13031	Formaldehyde	50-00-0	38 J	9.2	3.1	5
GC Miscellaneous	**SW-846 8015C Feb 2007 Rev 3**		**mg/kg**	**mg/kg**	**mg/kg**	
12925	Ethylene glycol	107-21-1	N.D.	12	6.2	1
12925	Propylene glycol	57-55-6	N.D.	12	6.2	1
GC Miscellaneous	**SW-846 8015D Rev.4, June 2003**		**mg/kg**	**mg/kg**	**mg/kg**	
10604	Ethanol (by Direct Injection)	64-17-5	N.D. D2	1.2	0.15	1
10604	Isopropanol	67-63-0	N.D. D2	1.2	0.057	1
10604	Methanol (by Direct Injection)	67-56-1	N.D. D2	1.2	0.25	1
GC Petroleum Hydrocarbons	**SW-846 8015C Feb 2007 Rev 3**		**mg/kg**	**mg/kg**	**mg/kg**	
13567	DRO C10-C28	n.a.	6.2 J	15	4.9	1
13567	ORO >C28 - C40	n.a.	N.D.	15	4.9	1
Wet Chemistry	**SM 2540 G-2011 %Moisture Calc**		**%**	**%**	**%**	
00111	Moisture	n.a.	19.8	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: **Test Pit #2 (10-12') Composite Soil**
B0087363.0026/BMS

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 09/29/2018 09:45
Collection Date/Time: 09/28/2018 15:45
SDG#: BMS63-02

ARCADIS U.S., Inc.
ELLE Sample #: SW 9827950
ELLE Group #: 1992839
Matrix: Soil

Sample Comments

State of New York Certification No. 10670

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	SW-846 8260C	1	B182781AA	10/05/2018 13:29	Linda C Pape	0.66
06176	GC/MS - LL DIH2O Prep	SW-846 5035A	1	201827251405	09/29/2018 18:36	Rebecca Williams	1
06176	GC/MS - LL DIH2O Prep	SW-846 5035A	2	201827251405	09/29/2018 18:36	Rebecca Williams	1
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	201827251405	09/28/2018 15:45	Client Supplied	1
10726	SVOA 8270D (microwave)	SW-846 8270D	1	18281SLG026	10/10/2018 17:20	Edward C Monborne	1
10813	BNA Soil Microwave APP IX	SW-846 3546	1	18281SLG026	10/09/2018 09:00	Michelle A Newswanger	1
10599	TPH-GRO soils C6-C10	SW-846 8015D Rev.4, June 2003	1	18275A16A	10/02/2018 23:36	Jeremy C Giffin	17.24
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201827251405	09/28/2018 15:45	Client Supplied	n.a.
13031	Short List Aldehydes- S 8315A	SW-846 8315A	1	182820033A	10/11/2018 22:23	James H Place	1
13031	Short List Aldehydes- S 8315A	SW-846 8315A	1	182820033A	10/14/2018 19:49	James H Place	5
05876	Formaldehyde Solid Extraction	SW-846 8315A	1	182820033A	10/11/2018 08:00	Olivia Arosemena	1
12925	Glycols in Soil by 8015C	SW-846 8015C Feb 2007 Rev 3	1	182780046A	10/11/2018 00:57	Donald Brown	1
10604	Alcohols in Soil	SW-846 8015D Rev.4, June 2003	1	182830031A	10/10/2018 23:47	Johanna C Kennedy	1
13567	TPH DRO/ORO soil 8015C/D(3546)	SW-846 8015C Feb 2007 Rev 3	1	182830040A	10/11/2018 21:47	Thomas C Wildermuth	1
11221	TPH DRO/ORO Solid 3546 EXT	SW-846 3546	1	182830040A	10/11/2018 08:00	Michelle A Newswanger	1
13121	Glycol Solids Ext. 8015C	SW-846 8015C Feb 2007 Rev 3	1	182780046A	10/10/2018 15:52	Donald Brown	1
00380	Solids Extraction for Alcohols	SW-846 8015D Rev 4 06/2003 Mod	2	182830031A	10/10/2018 15:52	Donald Brown	1
00111	Moisture	SM 2540 G-2011 %Moisture Calc	1	18275820006A	10/02/2018 11:58	Larry E Bevins	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.
BMTP2

Lab Name: Lancaster Laboratories Contract:_____
Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____
Matrix: (soil/water) SOIL Lab Sample ID: 9827950
Sample wt/vol: 7.54 (g/mL) g Lab File ID: HP09953.i/18oct05a.b/bc05s07.d
Level: (low/med) LOW Date Received: 09/29/18
% Moisture: not dec. 19.8 Date Analyzed: 10/05/18
Column: (pack/cap) CAP Dilution Factor: 1.0
CONCENTRATION UNITS:
Number TICs found: 3 (mg/L or mg/Kg) mg/Kg

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	565-59-3	Pentane, 2,3-dimethyl-	3.44	0.008	JN
2.	617-78-7	Pentane, 3-ethyl-	3.74	0.005	J
3.	101-84-8	Diphenyl ether	12.05	0.009	J
4.					
5.	VOCTIC	Total VOC TICs		0.021	J
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.
BMTP2

Lab Name: Lancaster Laboratories Contract:
Lab Code: LANCAS Case No.: SAS No.: SDG No.:
Matrix: (soil/water) SOIL Lab Sample ID: 9827950
Sample wt/vol: 30.33(g/mL) g Lab File ID: gj0536.d
Level: (low/med) LOW Date Received: 09/29/18
% Moisture: 19.8 Decanted: (Y/N) Date Extracted: 10/09/18
Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/10/18
Injection Volume: 1 (uL) Dilution Factor: 1
GPC Cleanup: N pH: Extraction: Mic
CONCENTRATION UNITS:
Number TICs found: 20 (ug/L or ug/Kg) ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q	
1. 109-99-9	Tetrahydrofuran	1.019	12000	JB	R
2. 590-90-9	4-Hydroxy-2-butanone	2.384	1900	J	N
3.	Unknown	3.149	12000	JB	R
4.	Unknown	4.319	4400	J	N
5.	Unknown	4.754	1600	J	
6.	Unknown	4.801	2200	J	
7.	Unknown	6.607	1000	J	
8.	Unknown	7.678	910	J	
9.	Unknown	8.231	8400	J	
10.	Unknown	8.342	1100	J	
11. 292-46-6	Lenthionine	8.613	2300	J	
12.	Unknown	8.995	1000	J	
13.	Unknown	9.025	2400	J	
14.	Unknown	9.360	610	J	
15.	Unknown	10.030	1200	J	
16.	Unknown	10.148	820	J	
17.	Unknown	10.272	980	J	
18.	Unknown	10.313	1300	J	
19. 10544-50-0	Cyclic octaatomic sulfur	10.407	6100	J	
20.	Unknown	10.495	1200	J	
21.					
22. SVOCTIC	Total SVOC TICs		63000	JB	
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

page 1 of 1

FORM I SV-1

Sample Description: **DUP-TP-092818 Composite Soil**
B0087363.0026/BMS

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 09/29/2018 09:45
Collection Date/Time: 09/28/2018
SDG#: BMS63-03FD

ARCADIS U.S., Inc.
ELLE Sample #: SW 9827951
ELLE Group #: 1992839
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	0.031	0.018	0.005	0.73
11995	Acetonitrile	75-05-8	N.D.	0.088	0.022	0.73
11995	Benzene	71-43-2	N.D.	0.004	0.0004	0.73
11995	Bromochloromethane	74-97-5	N.D.	0.004	0.0005	0.73
11995	Bromodichloromethane	75-27-4	N.D.	0.004	0.0004	0.73
11995	Bromoform	75-25-2	N.D. J	0.009	0.004	0.73
11995	Bromomethane	74-83-9	N.D.	0.004	0.0006	0.73
11995	n-Butanol	71-36-3	N.D.	0.22	0.049	0.73
11995	2-Butanone	78-93-3	0.004 J	0.009	0.0009	0.73
11995	t-Butyl alcohol	75-65-0	N.D.	0.088	0.013	0.73
11995	n-Butylbenzene	104-51-8	N.D.	0.007	0.003	0.73
11995	sec-Butylbenzene	135-98-8	N.D.	0.004	0.002	0.73
11995	tert-Butylbenzene	98-06-6	N.D.	0.004	0.0007	0.73
11995	Carbon Disulfide	75-15-0	0.002 J	0.004	0.0005	0.73
11995	Carbon Tetrachloride	56-23-5	N.D.	0.004	0.0004	0.73
11995	Chlorobenzene	108-90-7	N.D.	0.004	0.0004	0.73
11995	Chlorodifluoromethane	75-45-6	N.D.	0.009	0.002	0.73
11995	Chloroethane	75-00-3	N.D.	0.004	0.0009	0.73
11995	Chloroform	67-66-3	N.D.	0.004	0.0005	0.73
11995	Chloromethane	74-87-3	N.D.	0.004	0.0005	0.73
11995	Cyclohexane	110-82-7	N.D.	0.004	0.0004	0.73
11995	Cyclohexanone	108-94-1	N.D.	0.22	0.022	0.73
11995	1,2-Dibromo-3-chloropropane	96-12-8	N.D. J	0.004	0.0004	0.73
11995	Dibromochloromethane	124-48-1	N.D.	0.004	0.0004	0.73
11995	1,2-Dibromoethane	106-93-4	N.D.	0.004	0.0004	0.73
11995	1,2-Dichlorobenzene	95-50-1	N.D.	0.004	0.0004	0.73
11995	1,3-Dichlorobenzene	541-73-1	N.D.	0.004	0.0004	0.73
11995	1,4-Dichlorobenzene	106-46-7	N.D.	0.004	0.0004	0.73
11995	Dichlorodifluoromethane	75-71-8	N.D.	0.004	0.0005	0.73
11995	1,1-Dichloroethane	75-34-3	N.D.	0.004	0.0004	0.73
11995	1,2-Dichloroethane	107-06-2	N.D.	0.004	0.0005	0.73
11995	1,1-Dichloroethene	75-35-4	N.D.	0.004	0.0004	0.73
11995	cis-1,2-Dichloroethene	156-59-2	N.D.	0.004	0.0004	0.73
11995	trans-1,2-Dichloroethene	156-60-5	N.D.	0.004	0.0004	0.73
11995	1,2-Dichloropropane	78-87-5	N.D.	0.004	0.0004	0.73
11995	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.004	0.0004	0.73
11995	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.004	0.0003	0.73
11995	1,4-Dioxane	123-91-1	N.D.	0.22	0.033	0.73
11995	Ethyl Acetate	141-78-6	N.D.	0.004	0.0009	0.73
11995	Ethyl Ether	60-29-7	N.D.	0.004	0.0009	0.73
11995	Ethylbenzene	100-41-4	N.D.	0.004	0.0004	0.73

*=This limit was used in the evaluation of the final result

Sample Description: **DUP-TP-092818 Composite Soil**
B0087363.0026/BMS

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 09/29/2018 09:45
Collection Date/Time: 09/28/2018
SDG#: BMS63-03FD

ARCADIS U.S., Inc.
ELLE Sample #: SW 9827951
ELLE Group #: 1992839
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	0.0005	0.73
11995	n-Heptane	142-82-5	N.D.	0.007	0.003	0.73
11995	n-Hexane	110-54-3	N.D.	0.004	0.0004	0.73
11995	2-Hexanone	591-78-6	N.D. J	0.009	0.0009	0.73
11995	Isobutyl Alcohol	78-83-1	N.D.	0.22	0.034	0.73
11995	Isopropylbenzene	98-82-8	N.D.	0.004	0.0004	0.73
11995	p-Isopropyltoluene	99-87-6	N.D.	0.004	0.002	0.73
11995	Methyl Acetate	79-20-9	N.D.	0.004	0.0009	0.73
11995	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.004	0.0004	0.73
11995	4-Methyl-2-pentanone	108-10-1	N.D.	0.009	0.0009	0.73
11995	Methylcyclohexane	108-87-2	N.D.	0.004	0.0005	0.73
11995	Methylene Chloride	75-09-2	N.D.	0.004	0.002	0.73
11995	Naphthalene	91-20-3	N.D.	0.004	0.002	0.73
11995	2-Nitropropane	79-46-9	N.D. J	0.009	0.0009	0.73
11995	Styrene	100-42-5	N.D.	0.004	0.0003	0.73
11995	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.004	0.0004	0.73
11995	Tetrachloroethene	127-18-4	N.D.	0.004	0.0004	0.73
11995	Tetrahydrofuran	109-99-9	N.D.	0.007	0.0009	0.73
11995	Toluene	108-88-3	N.D.	0.004	0.0005	0.73
11995	1,2,3-Trichlorobenzene	87-61-6	N.D.	0.009	0.004	0.73
11995	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.009	0.004	0.73
11995	1,1,1-Trichloroethane	71-55-6	N.D.	0.004	0.0005	0.73
11995	1,1,2-Trichloroethane	79-00-5	N.D.	0.004	0.0004	0.73
11995	Trichloroethene	79-01-6	N.D.	0.004	0.0004	0.73
11995	Trichlorofluoromethane	75-69-4	N.D.	0.004	0.0006	0.73
11995	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.004	0.0004	0.73
11995	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.004	0.0004	0.73
11995	Vinyl Chloride	75-01-4	N.D.	0.004	0.0005	0.73
11995	m+p-Xylene	179601-23-1	N.D.	0.004	0.0009	0.73
11995	o-Xylene	95-47-6	N.D.	0.004	0.0004	0.73
11995	Xylene (Total)	1330-20-7	N.D.	0.004	0.0009	0.73

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.

GC/MS Semivolatiles	**SW-846 8270D**		**ug/kg**	**ug/kg**	**ug/kg**	

*=This limit was used in the evaluation of the final result

Sample Description: **DUP-TP-092818 Composite Soil**
B0087363.0026/BMS

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 09/29/2018 09:45
Collection Date/Time: 09/28/2018
SDG#: BMS63-03FD

ARCADIS U.S., Inc.
ELLE Sample #: SW 9827951
ELLE Group #: 1992839
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	Acenaphthene	83-32-9	N.D.	20	4	1
10726	Acenaphthylene	208-96-8	N.D.	20	4	1
10726	Acetophenone	98-86-2	N.D.	60	28	1
10726	Aniline	62-53-3	N.D.	600	200	1
10726	Anthracene	120-12-7	N.D.	20	4	1
10726	Atrazine	1912-24-9	N.D.	200	40	1
10726	Benzaldehyde	100-52-7	N.D. J	200	80	1
10726	Benzo(a)anthracene	56-55-3	N.D.	20	4	1
10726	Benzo(a)pyrene	50-32-8	N.D.	20	8	1
10726	Benzo(b)fluoranthene	205-99-2	N.D.	20	4	1
10726	Benzo(g,h,i)perylene	191-24-2	N.D.	20	8	1
10726	Benzo(k)fluoranthene	207-08-9	N.D. J	20	4	1
10726	Benzyl alcohol	100-51-6	N.D. J	600	200	1
10726	1,1'-Biphenyl	92-52-4	N.D. J	44	20	1
10726	4-Bromophenyl-phenylether	101-55-3	N.D. J	60	24	1
10726	Butylbenzylphthalate	85-68-7	N.D. J	200	80	1
10726	Di-n-butylphthalate	84-74-2	N.D. J	200	80	1
10726	Caprolactam	105-60-2	N.D.	200	40	1
10726	Carbazole	86-74-8	N.D. J	44	20	1
10726	4-Chloro-3-methylphenol	59-50-7	N.D.	44	20	1
10726	4-Chloroaniline	106-47-8	N.D.	200	40	1
10726	bis(2-Chloroethoxy)methane	111-91-1	N.D.	44	20	1
10726	bis(2-Chloroethyl)ether	111-44-4	N.D.	60	28	1
10726	bis(2-Chloroisopropyl)ether	39638-32-9	N.D.	44	20	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. J	40	8	1
10726	2-Chlorophenol	95-57-8	N.D. J	44	20	1
10726	4-Chlorophenyl-phenylether	7005-72-3	N.D.	44	20	1
10726	Chrysene	218-01-9	N.D. J	20	4	1
10726	Dibenz(a,h)anthracene	53-70-3	N.D.	20	4	1
10726	Dibenzofuran	132-64-9	N.D. J	44	20	1
10726	3,3'-Dichlorobenzidine	91-94-1	N.D.	400	120	1
10726	2,4-Dichlorophenol	120-83-2	N.D.	44	20	1
10726	Dicyclohexylamine	101-83-7	N.D.	2,400	800	1
10726	Diethylphthalate	84-66-2	N.D. J	200	80	1
10726	N,N-Dimethylaniline	121-69-7	N.D.	200	40	1
10726	2,4-Dimethylphenol	105-67-9	N.D.	44	20	1
10726	Dimethylphthalate	131-11-3	N.D. J	200	80	1
10726	4,6-Dinitro-2-methylphenol	534-52-1	N.D.	600	200	1

*=This limit was used in the evaluation of the final result

Sample Description: **DUP-TP-092818 Composite Soil**
B0087363.0026/BMS

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 09/29/2018 09:45
Collection Date/Time: 09/28/2018
SDG#: BMS63-03FD

ARCADIS U.S., Inc.
ELLE Sample #: SW 9827951
ELLE Group #: 1992839
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-Dinitrophenol	51-28-5	N.D.	1,200	440	1
10726	2,4-Dinitrotoluene	121-14-2	N.D. J	200	80	1
10726	2,6-Dinitrotoluene	606-20-2	N.D. J	60	24	1
10726	bis(2-Ethylhexyl)phthalate	117-81-7	N.D. J	200	80	1
10726	Fluoranthene	206-44-0	N.D. J	20	4	1
10726	Fluorene	86-73-7	N.D. J	20	4	1
10726	Hexachlorobenzene	118-74-1	N.D. J	20	4	1
10726	Hexachlorobutadiene	87-68-3	N.D.	60	24	1
10726	Hexachlorocyclopentadiene	77-47-4	N.D. J	600	200	1
10726	Hexachloroethane	67-72-1	N.D. J	200	40	1
10726	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	20	8	1
10726	Isophorone	78-59-1	N.D.	44	20	1
10726	2-Methylnaphthalene	91-57-6	N.D.	40	12	1
10726	2-Methylphenol	95-48-7	N.D. J	80	32	1
10726	4-Methylphenol	65794-96-9	N.D.	60	24	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. J	20	8	1
10726	2-Nitroaniline	88-74-4	N.D.	60	24	1
10726	3-Nitroaniline	99-09-2	N.D.	200	80	1
10726	4-Nitroaniline	100-01-6	N.D. J	200	80	1
10726	Nitrobenzene	98-95-3	N.D.	80	32	1
10726	2-Nitrophenol	88-75-5	N.D.	44	20	1
10726	4-Nitrophenol	100-02-7	N.D.	600	200	1
10726	N-Nitroso-di-n-propylamine	621-64-7	N.D.	60	24	1
10726	N-Nitrosodiphenylamine	86-30-6	N.D.	44	20	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.	200	80	1
10726	Pentachlorophenol	87-86-5	N.D. J	200	44	1
10726	Phenanthrene	85-01-8	N.D.	20	4	1
10726	Phenol	108-95-2	N.D.	60	28	1
10726	Pyrene	129-00-0	N.D. J	20	4	1
10726	Pyridine	110-86-1	N.D.	200	80	1
10726	1,2,4,5-Tetrachlorobenzene	95-94-3	N.D.	44	20	1
10726	2,3,4,6-Tetrachlorophenol	58-90-2	N.D.	200	80	1
10726	2,4,5-Trichlorophenol	95-95-4	N.D.	60	24	1
10726	2,4,6-Trichlorophenol	88-06-2	N.D.	60	24	1
10726	Triethylamine	121-44-8	N.D. J	6,000	2,000	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. The following

*=This limit was used in the evaluation of the final result

Sample Description: **DUP-TP-092818 Composite Soil**
B0087363.0026/BMS

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 09/29/2018 09:45
Collection Date/Time: 09/28/2018
SDG#: BMS63-03FD

ARCADIS U.S., Inc.
ELLE Sample #: SW 9827951
ELLE Group #: 1992839
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Limit of Quantitation*	Dry Method Detection Limit	Dilution Factor
	action was taken: The sample was re-extracted within the method required holding time and the QC is again outside of the acceptance limits. The data is reported from the initial 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.					
GC Volatiles	**SW-846 8015D Rev.4, June 2003**		**mg/kg**	**mg/kg**	**mg/kg**	
10599	TPH-GRO soil C6-C10	n.a.	0.2 J	0.8	0.2	17.41
Aldehydes & Ketones	**SW-846 8315A**		**mg/kg**	**mg/kg**	**mg/kg**	
13031	Acetaldehyde	75-07-0	0.61 J	1.2	0.59	1
13031	Formaldehyde	50-00-0	36	8.9	3.0	5
GC Miscellaneous	**SW-846 8015C Feb 2007 Rev 3**		**mg/kg**	**mg/kg**	**mg/kg**	
12925	Ethylene glycol	107-21-1	N.D. J	12	6.1	1
12925	Propylene glycol	57-55-6	N.D. J	12	6.1	1
	The surrogate data is outside the QC limits. Results from the reextraction are within the limits. The hold time had expired prior to the reextraction therefore, all results are reported from the original extract.					
GC Miscellaneous	**SW-846 8015D Rev.4, June 2003**		**mg/kg**	**mg/kg**	**mg/kg**	
10604	Ethanol (by Direct Injection)	64-17-5	N.D. D2	1.2	0.15	1
10604	Isopropanol	67-63-0	N.D. D2	1.2	0.056	1
10604	Methanol (by Direct Injection)	67-56-1	N.D. D2	1.2	0.24	1
GC Petroleum Hydrocarbons	**SW-846 8015C Feb 2007 Rev 3**		**mg/kg**	**mg/kg**	**mg/kg**	
13567	DRO C10-C28	n.a.	5.4 J	14	4.8	1
13567	ORO >C28 - C40	n.a.	N.D.	14	4.8	1
Wet Chemistry	**SM 2540 G-2011 %Moisture Calc**		**%**	**%**	**%**	
00111	Moisture	n.a.	17.7	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-TP-092818 Composite Soil**
B0087363.0026/BMS

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 09/29/2018 09:45
Collection Date/Time: 09/28/2018
SDG#: BMS63-03FD

ARCADIS U.S., Inc.
ELLE Sample #: SW 9827951
ELLE Group #: 1992839
Matrix: Soil

Sample Comments

State of New York Certification No. 10670

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	SW-846 8260C	1	B182781AA	10/05/2018 15:19	Linda C Pape	0.73
06176	GC/MS - LL DIH2O Prep	SW-846 5035A	1	201827251405	09/29/2018 18:36	Rebecca Williams	1
06176	GC/MS - LL DIH2O Prep	SW-846 5035A	2	201827251405	09/29/2018 18:36	Rebecca Williams	1
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	201827251405	09/28/2018 00:00	Client Supplied	1
10726	SVOA 8270D (microwave)	SW-846 8270D	1	18281SLG026	10/10/2018 17:44	Edward C Monborne	1
10813	BNA Soil Microwave APP IX	SW-846 3546	1	18281SLG026	10/09/2018 09:00	Michelle A Newswanger	1
10599	TPH-GRO soils C6-C10	SW-846 8015D Rev.4, June 2003	1	18275A16A	10/03/2018 00:13	Jeremy C Giffin	17.41
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201827251405	09/28/2018 00:00	Client Supplied	n.a.
13031	Short List Aldehydes- S 8315A	SW-846 8315A	1	182820033A	10/11/2018 22:55	James H Place	1
13031	Short List Aldehydes- S 8315A	SW-846 8315A	1	182820033A	10/14/2018 20:21	James H Place	5
05876	Formaldehyde Solid Extraction	SW-846 8315A	1	182820033A	10/11/2018 08:00	Olivia Arosemena	1
12925	Glycols in Soil by 8015C	SW-846 8015C Feb 2007 Rev 3	1	182780046A	10/11/2018 01:10	Donald Brown	1
10604	Alcohols in Soil	SW-846 8015D Rev.4, June 2003	1	182830031A	10/11/2018 00:04	Johanna C Kennedy	1
13567	TPH DRO/ORO soil 8015C/D(3546)	SW-846 8015C Feb 2007 Rev 3	1	182830040A	10/11/2018 21:27	Thomas C Wildermuth	1
11221	TPH DRO/ORO Solid 3546 EXT	SW-846 3546	1	182830040A	10/11/2018 08:00	Michelle A Newswanger	1
13121	Glycol Solids Ext. 8015C	SW-846 8015C Feb 2007 Rev 3	1	182780046A	10/10/2018 15:52	Donald Brown	1
00380	Solids Extraction for Alcohols	SW-846 8015D Rev 4 06/2003 Mod	2	182830031A	10/10/2018 15:52	Donald Brown	1
00111	Moisture	SM 2540 G-2011 %Moisture Calc	1	18275820006A	10/02/2018 11:58	Larry E Bevins	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.
BMFDT

Lab Name: Lancaster Laboratories Contract:_____
Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____
Matrix: (soil/water) SOIL Lab Sample ID: 9827951
Sample wt/vol: 6.88 (g/mL) g Lab File ID: HP09953.i/18oct05a.b/bc05s09.d
Level: (low/med) LOW Date Received: 09/29/18
% Moisture: not dec. 17.7 Date Analyzed: 10/05/18
Column: (pack/cap) CAP Dilution Factor: 1.0
CONCENTRATION UNITS:
Number TICs found: 2 (mg/L or mg/Kg) mg/Kg

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	565-59-3	Pentane, 2,3-dimethyl-	3.43	0.005	J N
2.	101-84-8	Diphenyl ether	12.05	0.006	J
3.					
4.	VOCTIC	Total VOC TICs		0.011	J
5.					
6.					
7.					
8.					
9.					
10.					
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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.
BMFDT

Lab Name: Lancaster Laboratories Contract:
Lab Code: LANCAS Case No.: SAS No.: SDG No.:
Matrix: (soil/water) SOIL Lab Sample ID: 9827951
Sample wt/vol: 30.39(g/mL) g Lab File ID: gj0537.d
Level: (low/med) LOW Date Received: 09/29/18
% Moisture: 17.7 Decanted: (Y/N) Date Extracted: 10/09/18
Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/10/18
Injection Volume: 1 (uL) Dilution Factor: 1
GPC Cleanup: N pH: Extraction: Mic
CONCENTRATION UNITS:
Number TICs found: 20 (ug/L or ug/Kg) ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q	
1.109-99-9	Tetrahydrofuran	1.013	7500	JB	R
2.	Unknown	3.143	10000	JB	R
3.	Unknown	7.689	1100	J	N
4.	Unknown	8.219	2400	J	
5.	Unknown	8.336	1200	J	
6.292-46-6	Lenthionine	8.613	2000	J	
7.	Unknown	9.031	2700	J	
8.	Unknown	9.360	1100	J	
9.	Unknown	9.748	990	J	
10.	Unknown	9.825	790	J	
11.	Unknown	9.883	1500	J	
12.	Unknown	9.930	1500	J	
13.	Unknown	9.989	1200	J	
14.	Unknown	10.078	2300	J	
15.	Unknown	10.148	2800	J	
16.	Unknown	10.183	1600	J	
17.	Unknown	10.230	2300	J	
18.	Unknown	10.295	2400	J	
19.	Unknown	10.319	1300	J	
20.10544-50-0	Cyclic octaatomic sulfur	10.425	8600	J	
21.					
22.SVOCTIC	Total SVOC TICs		55000	JB	
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

page 1 of 1

FORM I SV-1

Sample Description: **TB-092818 Water**
B0087363.0026/BMS

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 09/29/2018 09:45
Collection Date/Time: 09/28/2018
SDG#: BMS63-04TB

ARCADIS U.S., Inc.
ELLE Sample #: WW 9827952
ELLE Group #: 1992839
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	0.2	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	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	0.2	1
11997	Cyclohexanone	108-94-1	N.D.	100	25	1
11997	1,2-Dibromo-3-chloropropane	96-12-8	N.D. J	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: **TB-092818 Water**
B0087363.0026/BMS

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 09/29/2018 09:45
Collection Date/Time: 09/28/2018
SDG#: BMS63-04TB

ARCADIS U.S., Inc.
ELLE Sample #: WW 9827952
ELLE Group #: 1992839
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	142-82-5	N.D.	5	0.2	1
11997	n-Hexane	110-54-3	N.D.	5	0.2	1
11997	2-Hexanone	591-78-6	N.D. J	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	0.2	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. 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.	5	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

*=This limit was used in the evaluation of the final result

Sample Description: **TB-092818 Water**
B0087363.0026/BMS

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 09/29/2018 09:45
Collection Date/Time: 09/28/2018
SDG#: BMS63-04TB

ARCADIS U.S., Inc.
ELLE Sample #: WW 9827952
ELLE Group #: 1992839
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	SW-846 8260C	1	L182831AA	10/10/2018 13:11	Linda C Pape	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	L182831AA	10/10/2018 13:11	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.
BMTTB

Lab Name: Lancaster Laboratories Contract:_____
Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____
Matrix: (soil/water) WATER Lab Sample ID: 9827952
Sample wt/vol: 5.0 (g/mL)mL Lab File ID:HP09915.i/18oct10a.b/lc10s10.d
Level: (low/med) LOW Date Received: 09/29/18
% Moisture: not dec. Date Analyzed: 10/10/18
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

3074 2w714 9878915-19

ARCADIS

ID#:

CHAIN OF CUSTODY & LABORATORY ANALYSIS REQUEST FORM

Page 1 of 1

Lab Work Order #

Send Results to:

Contact & Company Name: David Wright Arcadis	Telephone: (315) 671-9260
Address: 110 West Fayette St	Fax:
City: Syracuse State: NY Zip: 13202	E-mail Address: David.Wright@arcadis.com
Project Name/Location (City, State): BMS - Syracuse, NY	Project #: B0087363
Sampler's Printed Name: David Cornell	Sampler's Signature:

Preservative	E	E	E	E	MeOH DI		
Filtered (✓)							
# of Containers							
Container Information							

PARAMETER ANALYSIS & METHOD

Sample ID	Collection Date	Collection Time	Type (✓) Comp	Type (✓) Grab	Matrix	Aldehydes/SVOA 8315A/8270D	Alcohols in Soil	Glycols in Soil	TPH DRO/ORO 8015C/D	TPH-GRO Moisture VOCs 8260C			
East Floor Vault MS/MSD	10/31/18	1245	✓	✓	SO	2	2	2	2	10			
West Floor Vault	10/31/18	1400	✓		SO	1	1	1	1	5			
Trip Blank - 18299	10/27/18	-		✓	W					2			

Keys

Preservation Key:
A. H_2SO_4
B. HCL
C. HNO_3
D. NaOH
E. None
F. Other: _____
G. Other: _____
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

Special Instructions/Comments:

☐ Special QA/QC Instructions(✓):

Laboratory Information and Receipt		Relinquished By	Received By	Relinquished By	Laboratory Received By
Lab Name:	Cooler Custody Seal (✓)	Printed Name: David Cornell	Printed Name:	Printed Name:	Printed Name: Ariel Garcia
☐ Cooler packed with ice (✓)	☑ Intact ☐ Not Intact	Signature:	Signature:	Signature:	Signature:
Specify Turnaround Requirements:	Sample Receipt:	Firm: Arcadis	Firm/Courier:	Firm/Courier:	Firm:
Shipping Tracking #:	Condition/Cooler Temp: 2.3	Date/Time: 10/31/18 1730	Date/Time:	Date/Time:	Date/Time: 1040 11/1/18

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: East Floor Vault Composite Soil
B0087363.0028/BMS

Project Name: Bristol-Myers Squibb

Submittal Date/Time: 11/01/2018 10:40
Collection Date/Time: 10/31/2018 12:45
SDG#: BMS68-01BKG

ARCADIS U.S., Inc.
ELLE Sample #: SW 9878915
ELLE Group #: 2004714
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	0.027	0.015	0.005	0.7
11995	Acetonitrile	75-05-8	N.D.	0.077	0.019	0.7
11995	Benzene	71-43-2	N.D.	0.004	0.0004	0.7
11995	Bromochloromethane	74-97-5	N.D.	0.004	0.0005	0.7
11995	Bromodichloromethane	75-27-4	N.D. J	0.004	0.0003	0.7
11995	Bromoform	75-25-2	N.D. J	0.008	0.004	0.7
11995	Bromomethane	74-83-9	N.D.	0.004	0.0005	0.7
11995	n-Butanol	71-36-3	N.D. J	0.19	0.043	0.7
11995	2-Butanone	78-93-3	0.001 J	0.008	0.0008	0.7
11995	t-Butyl alcohol	75-65-0	N.D.	0.077	0.012	0.7
11995	n-Butylbenzene	104-51-8	N.D. J	0.006	0.002	0.7
11995	sec-Butylbenzene	135-98-8	N.D.	0.004	0.002	0.7
11995	tert-Butylbenzene	98-06-6	N.D.	0.004	0.0006	0.7
11995	Carbon Disulfide	75-15-0	N.D. J	0.004	0.0005	0.7
11995	Carbon Tetrachloride	56-23-5	N.D.	0.004	0.0004	0.7
11995	Chlorobenzene	108-90-7	N.D.	0.004	0.0004	0.7
11995	Chlorodifluoromethane	75-45-6	N.D.	0.008	0.002	0.7
11995	Chloroethane	75-00-3	N.D.	0.004	0.0008	0.7
11995	Chloroform	67-66-3	N.D.	0.004	0.0005	0.7
11995	Chloromethane	74-87-3	N.D.	0.004	0.0005	0.7
11995	Cyclohexane	110-82-7	0.0005 J	0.004	0.0004	0.7
11995	Cyclohexanone	108-94-1	N.D. J	0.19	0.019	0.7
11995	1,2-Dibromo-3-chloropropane	96-12-8	N.D. J	0.004	0.0003	0.7
11995	Dibromochloromethane	124-48-1	N.D. J	0.004	0.0003	0.7
11995	1,2-Dibromoethane	106-93-4	N.D. J	0.004	0.0003	0.7
11995	1,2-Dichlorobenzene	95-50-1	N.D.	0.004	0.0004	0.7
11995	1,3-Dichlorobenzene	541-73-1	N.D.	0.004	0.0004	0.7
11995	1,4-Dichlorobenzene	106-46-7	N.D. J	0.004	0.0003	0.7
11995	Dichlorodifluoromethane	75-71-8	N.D.	0.004	0.0005	0.7
11995	1,1-Dichloroethane	75-34-3	N.D. J	0.004	0.0004	0.7
11995	1,2-Dichloroethane	107-06-2	N.D.	0.004	0.0005	0.7
11995	1,1-Dichloroethene	75-35-4	N.D.	0.004	0.0004	0.7
11995	cis-1,2-Dichloroethene	156-59-2	N.D.	0.004	0.0004	0.7
11995	trans-1,2-Dichloroethene	156-60-5	0.0006 J	0.004	0.0004	0.7
11995	1,2-Dichloropropane	78-87-5	N.D. J	0.004	0.0004	0.7
11995	cis-1,3-Dichloropropene	10061-01-5	N.D. J	0.004	0.0003	0.7
11995	trans-1,3-Dichloropropene	10061-02-6	N.D. J	0.004	0.0002	0.7
11995	1,4-Dioxane	123-91-1	N.D.	0.19	0.029	0.7
11995	Ethyl Acetate	141-78-6	N.D.	0.004	0.0008	0.7
11995	Ethyl Ether	60-29-7	N.D.	0.004	0.0008	0.7
11995	Ethylbenzene	100-41-4	0.0007 J	0.004	0.0003	0.7

*=This limit was used in the evaluation of the final result

Sample Description: East Floor Vault Composite Soil
B0087363.0028/BMS

Project Name: Bristol-Myers Squibb

Submittal Date/Time: 11/01/2018 10:40
Collection Date/Time: 10/31/2018 12:45
SDG#: BMS68-01BKG

ARCADIS U.S., Inc.
ELLE Sample #: SW 9878915
ELLE Group #: 2004714
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.	0.008	0.0005	0.7
11995	n-Heptane	142-82-5	N.D.	0.006	0.002	0.7
11995	n-Hexane	110-54-3	0.0007 J	0.004	0.0004	0.7
11995	2-Hexanone	591-78-6	N.D. J	0.008	0.0008	0.7
11995	Isobutyl Alcohol	78-83-1	N.D.	0.19	0.029	0.7
11995	Isopropylbenzene	98-82-8	N.D. J	0.004	0.0003	0.7
11995	p-Isopropyltoluene	99-87-6	N.D.	0.004	0.002	0.7
11995	Methyl Acetate	79-20-9	N.D. J	0.004	0.0008	0.7
11995	Methyl Tertiary Butyl Ether	1634-04-4	N.D. J	0.004	0.0004	0.7
11995	4-Methyl-2-pentanone	108-10-1	0.002 J	0.008	0.0008	0.7
11995	Methylcyclohexane	108-87-2	N.D.	0.004	0.0005	0.7
11995	Methylene Chloride	75-09-2	N.D.	0.004	0.002	0.7
11995	Naphthalene	91-20-3	N.D. J	0.004	0.002	0.7
11995	2-Nitropropane	79-46-9	N.D.	0.008	0.0008	0.7
11995	Styrene	100-42-5	N.D.	0.004	0.0002	0.7
11995	1,1,2,2-Tetrachloroethane	79-34-5	N.D. J	0.004	0.0003	0.7
11995	Tetrachloroethene	127-18-4	N.D.	0.004	0.0004	0.7
11995	Tetrahydrofuran	109-99-9	0.008	0.006	0.0008	0.7
11995	Toluene	108-88-3	0.002 J	0.004	0.0005	0.7
11995	1,2,3-Trichlorobenzene	87-61-6	N.D. J	0.008	0.004	0.7
11995	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.008	0.004	0.7
11995	1,1,1-Trichloroethane	71-55-6	N.D.	0.004	0.0005	0.7
11995	1,1,2-Trichloroethane	79-00-5	N.D. J	0.004	0.0004	0.7
11995	Trichloroethene	79-01-6	0.004 J	0.004	0.0004	0.7
11995	Trichlorofluoromethane	75-69-4	N.D.	0.004	0.0005	0.7
11995	1,2,4-Trimethylbenzene	95-63-6	0.0004 J	0.004	0.0004	0.7
11995	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.004	0.0004	0.7
11995	Vinyl Chloride	75-01-4	N.D.	0.004	0.0005	0.7
11995	m+p-Xylene	179601-23-1	0.001 J	0.004	0.0008	0.7
11995	o-Xylene	95-47-6	0.0009 J	0.004	0.0003	0.7
11995	Xylene (Total)	1330-20-7	0.002 J	0.004	0.0008	0.7

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.

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.	55	26	1
10726	Aniline	62-53-3	N.D.	550	180	1

*=This limit was used in the evaluation of the final result

Sample Description: East Floor Vault Composite Soil
B0087363.0028/BMS

Project Name: Bristol-Myers Squibb

Submittal Date/Time: 11/01/2018 10:40
Collection Date/Time: 10/31/2018 12:45
SDG#: BMS68-01BKG

ARCADIS U.S., Inc.
ELLE Sample #: SW 9878915
ELLE Group #: 2004714
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	Anthracene	120-12-7	N.D. J	18	4	1
10726	Atrazine	1912-24-9	N.D.	180	37	1
10726	Benzaldehyde	100-52-7	N.D.	180	74	1
10726	Benzo(a)anthracene	56-55-3	N.D.	18	4	1
10726	Benzo(a)pyrene	50-32-8	N.D.	18	7	1
10726	Benzo(b)fluoranthene	205-99-2	N.D.	18	4	1
10726	Benzo(g,h,i)perylene	191-24-2	N.D.	18	7	1
10726	Benzo(k)fluoranthene	207-08-9	N.D.	18	4	1
10726	Benzyl alcohol	100-51-6	N.D.	550	180	1
10726	1,1'-Biphenyl	92-52-4	N.D.	40	18	1
10726	4-Bromophenyl-phenylether	101-55-3	N.D. J	55	22	1
10726	Butylbenzylphthalate	85-68-7	N.D.	180	74	1
10726	Di-n-butylphthalate	84-74-2	N.D. J	180	74	1
10726	Caprolactam	105-60-2	N.D. J	180	37	1
10726	Carbazole	86-74-8	N.D.	40	18	1
10726	4-Chloro-3-methylphenol	59-50-7	N.D.	40	18	1
10726	4-Chloroaniline	106-47-8	N.D.	180	37	1
10726	bis(2-Chloroethoxy)methane	111-91-1	N.D.	40	18	1
10726	bis(2-Chloroethyl)ether	111-44-4	N.D.	55	26	1
10726	bis(2-Chloroisopropyl)ether	39638-32-9	N.D.	40	18	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.	37	7	1
10726	2-Chlorophenol	95-57-8	N.D.	40	18	1
10726	4-Chlorophenyl-phenylether	7005-72-3	N.D.	40	18	1
10726	Chrysene	218-01-9	N.D.	18	4	1
10726	Dibenz(a,h)anthracene	53-70-3	N.D.	18	4	1
10726	Dibenzofuran	132-64-9	N.D.	40	18	1
10726	3,3'-Dichlorobenzidine	91-94-1	N.D.	370	110	1
10726	2,4-Dichlorophenol	120-83-2	N.D.	40	18	1
10726	Dicyclohexylamine	101-83-7	N.D.	2,200	740	1
10726	Diethylphthalate	84-66-2	N.D.	180	74	1
10726	N,N-Dimethylaniline	121-69-7	N.D.	180	37	1
10726	2,4-Dimethylphenol	105-67-9	N.D.	40	18	1
10726	Dimethylphthalate	131-11-3	N.D.	180	74	1
10726	4,6-Dinitro-2-methylphenol	534-52-1	N.D. J	550	180	1
10726	2,4-Dinitrophenol	51-28-5	N.D. J	1,100	400	1
10726	2,4-Dinitrotoluene	121-14-2	N.D.	180	74	1
10726	2,6-Dinitrotoluene	606-20-2	N.D.	55	22	1
10726	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	180	74	1

*=This limit was used in the evaluation of the final result

Sample Description: East Floor Vault Composite Soil
B0087363.0028/BMS

Project Name: Bristol-Myers Squibb

Submittal Date/Time: 11/01/2018 10:40
Collection Date/Time: 10/31/2018 12:45
SDG#: BMS68-01BKG

ARCADIS U.S., Inc.
ELLE Sample #: SW 9878915
ELLE Group #: 2004714
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	Fluoranthene	206-44-0	N.D.	18	4	1
10726	Fluorene	86-73-7	N.D.	18	4	1
10726	Hexachlorobenzene	118-74-1	N.D.	18	4	1
10726	Hexachlorobutadiene	87-68-3	N.D. J	55	22	1
10726	Hexachlorocyclopentadiene	77-47-4	N.D. ~~K3~~ J	550	180	1
10726	Hexachloroethane	67-72-1	N.D. J	180	37	1
10726	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	18	7	1
10726	Isophorone	78-59-1	N.D.	40	18	1
10726	2-Methylnaphthalene	91-57-6	N.D. J	37	11	1
10726	2-Methylphenol	95-48-7	N.D.	74	29	1
10726	4-Methylphenol	65794-96-9	N.D.	55	22	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. J	18	7	1
10726	2-Nitroaniline	88-74-4	N.D.	55	22	1
10726	3-Nitroaniline	99-09-2	N.D.	180	74	1
10726	4-Nitroaniline	100-01-6	N.D.	180	74	1
10726	Nitrobenzene	98-95-3	N.D.	74	29	1
10726	2-Nitrophenol	88-75-5	N.D.	40	18	1
10726	4-Nitrophenol	100-02-7	N.D.	550	180	1
10726	N-Nitroso-di-n-propylamine	621-64-7	N.D.	55	22	1
10726	N-Nitrosodiphenylamine	86-30-6	N.D.	40	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	74	1
10726	Pentachlorophenol	87-86-5	N.D. J	180	40	1
10726	Phenanthrene	85-01-8	N.D.	18	4	1
10726	Phenol	108-95-2	N.D.	55	26	1
10726	Pyrene	129-00-0	N.D.	18	4	1
10726	Pyridine	110-86-1	N.D.	180	74	1
10726	1,2,4,5-Tetrachlorobenzene	95-94-3	N.D.	40	18	1
10726	2,3,4,6-Tetrachlorophenol	58-90-2	N.D.	180	74	1
10726	2,4,5-Trichlorophenol	95-95-4	N.D.	55	22	1
10726	2,4,6-Trichlorophenol	88-06-2	N.D.	55	22	1
10726	Triethylamine	121-44-8	N.D.	5,500	1,800	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: Di-n-butylphthalate

00886 SVOA TIC Interpretive(25)

*=This limit was used in the evaluation of the final result

Sample Description: East Floor Vault Composite Soil
B0087363.0028/BMS

Project Name: Bristol-Myers Squibb

Submittal Date/Time: 11/01/2018 10:40
Collection Date/Time: 10/31/2018 12:45
SDG#: BMS68-01BKG

ARCADIS U.S., Inc.
ELLE Sample #: SW 9878915
ELLE Group #: 2004714
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Limit of Quantitation*	Dry 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 Volatiles	**SW-846 8015D Rev.4, June 2003**		**mg/kg**	**mg/kg**	**mg/kg**	
10599	TPH-GRO soil C6-C10	n.a.	N.D.	2.0	0.4	45.29
Aldehydes & Ketones	**SW-846 8315A**		**mg/kg**	**mg/kg**	**mg/kg**	
13031	Acetaldehyde	75-07-0	7.4 J	1.1	0.55	1
13031	Formaldehyde	50-00-0	4.6	1.7	1.4	1
GC Miscellaneous	**SW-846 8015C Feb 2007 Rev 3**		**mg/kg**	**mg/kg**	**mg/kg**	
12925	Ethylene glycol	107-21-1	N.D.	11	5.5	1
12925	Propylene glycol	57-55-6	N.D.	11	5.5	1
GC Miscellaneous	**SW-846 8015D Rev.4, June 2003**		**mg/kg**	**mg/kg**	**mg/kg**	
10604	Ethanol (by Direct Injection)	64-17-5	N.D. D2	1.1	0.13	1
10604	Isopropanol	67-63-0	N.D. D2	1.1	0.051	1
10604	Methanol (by Direct Injection)	67-56-1	0.90 JD2	1.1	0.22	1
GC Petroleum Hydrocarbons	**SW-846 8015C Feb 2007 Rev 3**		**mg/kg**	**mg/kg**	**mg/kg**	
13567	DRO C10-C28	n.a.	40	13	5.8	1
13567	ORO >C28 - C40	n.a.	N.D.	13	5.8	1
Wet Chemistry	**SM 2540 G-2011 %Moisture Calc**		**%**	**%**	**%**	
00111	Moisture	n.a.	9.6	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

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: **East Floor Vault Composite Soil**
B0087363.0028/BMS

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 11/01/2018 10:40
Collection Date/Time: 10/31/2018 12:45
SDG#: BMS68-01BKG

ARCADIS U.S., Inc.
ELLE Sample #: SW 9878915
ELLE Group #: 2004714
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	SW-846 8260C	1	B183111AA	11/07/2018 18:24	Jennifer K Howe	0.7
06176	GC/MS - LL DIH2O Prep	SW-846 5035A	1	201830551784	11/01/2018 22:49	Lois E Hiltz	1
06176	GC/MS - LL DIH2O Prep	SW-846 5035A	2	201830551784	11/01/2018 22:49	Lois E Hiltz	1
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	201830551784	10/31/2018 12:45	Client Supplied	1
10726	SVOA 8270D (microwave)	SW-846 8270D	1	18310SLE026	11/08/2018 20:44	Linda M Hartenstine	1
10813	BNA Soil Microwave APP IX	SW-846 3546	1	18310SLE026	11/06/2018 16:30	Osvaldo R Sanchez	1
10599	TPH-GRO soils C6-C10	SW-846 8015D Rev.4, June 2003	1	18311A34A	11/08/2018 21:08	Jeremy C Giffin	45.29
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201830551784	10/31/2018 12:45	Client Supplied	n.a.
13031	Short List Aldehydes- S 8315A	SW-846 8315A	1	183060004A	11/06/2018 12:21	James H Place	1
05876	Formaldehyde Solid Extraction	SW-846 8315A	1	183060004A	11/03/2018 10:00	Olivia Arosemena	1
12925	Glycols in Soil by 8015C	SW-846 8015C Feb 2007 Rev 3	1	183110035A	11/07/2018 21:18	Donald Brown	1
10604	Alcohols in Soil	SW-846 8015D Rev.4, June 2003	1	183090035A	11/06/2018 15:56	Johanna C Kennedy	1
13567	TPH DRO/ORO soil 8015C/D(3546)	SW-846 8015C Feb 2007 Rev 3	1	183110026A	11/08/2018 16:11	Thomas C Wildermuth	1
11221	TPH DRO/ORO Solid 3546 EXT	SW-846 3546	1	183110026A	11/07/2018 17:00	Osvaldo R Sanchez	1
13121	Glycol Solids Ext. 8015C	SW-846 8015C Feb 2007 Rev 3	1	183110035A	11/07/2018 14:23	Donald Brown	1
00380	Solids Extraction for Alcohols	SW-846 8015D Rev 4 06/2003 Mod	1	183090035A	11/05/2018 14:05	Johanna C Kennedy	1
00111	Moisture	SM 2540 G-2011 %Moisture Calc	1	18306820004B	11/03/2018 22:31	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

1E

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

BMEFV

Lab Name: Lancaster Laboratories Contract:_____
Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____
Matrix: (soil/water) SOIL Lab Sample ID: 9878915
Sample wt/vol: 7.18 (g/mL) g Lab File ID: HP09953.i/18nov07a.b/bn07s07.d
Level: (low/med) LOW Date Received: 11/01/18
% Moisture: not dec. 9.6 Date Analyzed: 11/07/18
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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29.					
30.					

page 1 of 1

FORM I VOA-TIC

1F

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

BMEFV

Lab Name: Lancaster Laboratories Contract:
Lab Code: LANCAS Case No.: SAS No.: SDG No.:
Matrix: (soil/water) SOIL Lab Sample ID: 9878915
Sample wt/vol: 30.07(g/mL) g Lab File ID: ok0465.d
Level: (low/med) LOW Date Received: 11/01/18
% Moisture: 9.6 Decanted: (Y/N) Date Extracted: 11/06/18
Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/08/18
Injection Volume: 1 (uL) Dilution Factor: 1
GPC Cleanup: N pH: Extraction: Mic

CONCENTRATION UNITS:
Number TICs found: 12 (ug/L or ug/Kg) ug/Kg

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q	
1.		Unknown	1.010	150	JB	R
2.		Unknown	1.081	350	JB	
3.	625-86-5	Furan, 2,5-dimethyl-	1.434	410	JB	
4.		Unknown	1.657	280	JB	
5.		Unknown	1.852	240	JB	
6.	141-79-7	3-Penten-2-one, 4-methyl-	2.504	5600	JB	N
7.		Unknown	3.099	990	J	R
8.		Unknown	6.698	200	JB	N
9.		Unknown	8.428	58000	J	
10.		Unknown	9.322	370	J	
11.	57-10-3	n-Hexadecanoic acid	9.822	150	J	
12.	301-02-0	9-Octadecenamide, (Z)-	11.292	560	J	
13.						
14.	SVOCTIC	Total SVOC TICs		67000	JB	
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16.						
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page 1 of 1

FORM I SV-1

Sample Description: **West Floor Vault Composite Soil**
B0087363.0028/BMS

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 11/01/2018 10:40
Collection Date/Time: 10/31/2018 14:00
SDG#: BMS68-02

ARCADIS U.S., Inc.
ELLE Sample #: SW 9878918
ELLE Group #: 2004714
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	N.D.	0.014	0.004	0.61
11995	Acetonitrile	75-05-8	N.D.	0.068	0.017	0.61
11995	Benzene	71-43-2	N.D.	0.003	0.0003	0.61
11995	Bromochloromethane	74-97-5	N.D.	0.003	0.0004	0.61
11995	Bromodichloromethane	75-27-4	N.D.	0.003	0.0003	0.61
11995	Bromoform	75-25-2	N.D.	0.007	0.003	0.61
11995	Bromomethane	74-83-9	N.D.	0.003	0.0005	0.61
11995	n-Butanol	71-36-3	N.D.	0.17	0.038	0.61
11995	2-Butanone	78-93-3	0.002 J	0.007	0.0007	0.61
11995	t-Butyl alcohol	75-65-0	N.D.	0.068	0.010	0.61
11995	n-Butylbenzene	104-51-8	N.D.	0.005	0.002	0.61
11995	sec-Butylbenzene	135-98-8	N.D.	0.003	0.001	0.61
11995	tert-Butylbenzene	98-06-6	N.D.	0.003	0.0005	0.61
11995	Carbon Disulfide	75-15-0	N.D.	0.003	0.0004	0.61
11995	Carbon Tetrachloride	56-23-5	N.D.	0.003	0.0003	0.61
11995	Chlorobenzene	108-90-7	N.D.	0.003	0.0003	0.61
11995	Chlorodifluoromethane	75-45-6	N.D.	0.007	0.001	0.61
11995	Chloroethane	75-00-3	N.D.	0.003	0.0007	0.61
11995	Chloroform	67-66-3	N.D.	0.003	0.0004	0.61
11995	Chloromethane	74-87-3	N.D.	0.003	0.0004	0.61
11995	Cyclohexane	110-82-7	N.D.	0.003	0.0003	0.61
11995	Cyclohexanone	108-94-1	N.D.	0.17	0.017	0.61
11995	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	0.003	0.0003	0.61
11995	Dibromochloromethane	124-48-1	N.D.	0.003	0.0003	0.61
11995	1,2-Dibromoethane	106-93-4	N.D.	0.003	0.0003	0.61
11995	1,2-Dichlorobenzene	95-50-1	N.D.	0.003	0.0003	0.61
11995	1,3-Dichlorobenzene	541-73-1	N.D.	0.003	0.0003	0.61
11995	1,4-Dichlorobenzene	106-46-7	N.D.	0.003	0.0003	0.61
11995	Dichlorodifluoromethane	75-71-8	N.D.	0.003	0.0004	0.61
11995	1,1-Dichloroethane	75-34-3	N.D.	0.003	0.0003	0.61
11995	1,2-Dichloroethane	107-06-2	N.D.	0.003	0.0004	0.61
11995	1,1-Dichloroethene	75-35-4	N.D.	0.003	0.0003	0.61
11995	cis-1,2-Dichloroethene	156-59-2	N.D.	0.003	0.0003	0.61
11995	trans-1,2-Dichloroethene	156-60-5	N.D.	0.003	0.0003	0.61
11995	1,2-Dichloropropane	78-87-5	N.D.	0.003	0.0003	0.61
11995	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.003	0.0003	0.61
11995	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.003	0.0002	0.61
11995	1,4-Dioxane	123-91-1	N.D.	0.17	0.025	0.61
11995	Ethyl Acetate	141-78-6	N.D.	0.003	0.0007	0.61
11995	Ethyl Ether	60-29-7	N.D.	0.003	0.0007	0.61
11995	Ethylbenzene	100-41-4	N.D.	0.003	0.0003	0.61

*=This limit was used in the evaluation of the final result

Sample Description: **West Floor Vault Composite Soil**
B0087363.0028/BMS

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 11/01/2018 10:40
Collection Date/Time: 10/31/2018 14:00
SDG#: BMS68-02

ARCADIS U.S., Inc.
ELLE Sample #: SW 9878918
ELLE Group #: 2004714
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.	0.007	0.0004	0.61
11995	n-Heptane	142-82-5	N.D.	0.005	0.002	0.61
11995	n-Hexane	110-54-3	0.0008 J	0.003	0.0003	0.61
11995	2-Hexanone	591-78-6	N.D.	0.007	0.0007	0.61
11995	Isobutyl Alcohol	78-83-1	N.D.	0.17	0.026	0.61
11995	Isopropylbenzene	98-82-8	N.D.	0.003	0.0003	0.61
11995	p-Isopropyltoluene	99-87-6	N.D.	0.003	0.001	0.61
11995	Methyl Acetate	79-20-9	N.D.	0.003	0.0007	0.61
11995	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.003	0.0003	0.61
11995	4-Methyl-2-pentanone	108-10-1	N.D.	0.007	0.0007	0.61
11995	Methylcyclohexane	108-87-2	N.D.	0.003	0.0004	0.61
11995	Methylene Chloride	75-09-2	N.D.	0.003	0.001	0.61
11995	Naphthalene	91-20-3	N.D.	0.003	0.001	0.61
11995	2-Nitropropane	79-46-9	N.D.	0.007	0.0007	0.61
11995	Styrene	100-42-5	N.D.	0.003	0.0002	0.61
11995	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.003	0.0003	0.61
11995	Tetrachloroethene	127-18-4	N.D.	0.003	0.0003	0.61
11995	Tetrahydrofuran	109-99-9	0.010	0.005	0.0007	0.61
11995	Toluene	108-88-3	0.001 J	0.003	0.0004	0.61
11995	1,2,3-Trichlorobenzene	87-61-6	N.D.	0.007	0.003	0.61
11995	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.007	0.003	0.61
11995	1,1,1-Trichloroethane	71-55-6	N.D.	0.003	0.0004	0.61
11995	1,1,2-Trichloroethane	79-00-5	N.D.	0.003	0.0003	0.61
11995	Trichloroethene	79-01-6	0.0008 J	0.003	0.0003	0.61
11995	Trichlorofluoromethane	75-69-4	N.D.	0.003	0.0005	0.61
11995	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.003	0.0003	0.61
11995	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.003	0.0003	0.61
11995	Vinyl Chloride	75-01-4	N.D.	0.003	0.0004	0.61
11995	m+p-Xylene	179601-23-1	N.D.	0.003	0.0007	0.61
11995	o-Xylene	95-47-6	N.D.	0.003	0.0003	0.61
11995	Xylene (Total)	1330-20-7	N.D.	0.003	0.0007	0.61

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.	55	26	1
10726	Aniline	62-53-3	N.D.	550	180	1

*=This limit was used in the evaluation of the final result

Sample Description: **West Floor Vault Composite Soil**
B0087363.0028/BMS

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 11/01/2018 10:40
Collection Date/Time: 10/31/2018 14:00
SDG#: BMS68-02

ARCADIS U.S., Inc.
ELLE Sample #: SW 9878918
ELLE Group #: 2004714
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	Anthracene	120-12-7	N.D.	18	4	1
10726	Atrazine	1912-24-9	N.D.	180	37	1
10726	Benzaldehyde	100-52-7	N.D.	180	73	1
10726	Benzo(a)anthracene	56-55-3	N.D.	18	4	1
10726	Benzo(a)pyrene	50-32-8	N.D.	18	7	1
10726	Benzo(b)fluoranthene	205-99-2	N.D.	18	4	1
10726	Benzo(g,h,i)perylene	191-24-2	N.D.	18	7	1
10726	Benzo(k)fluoranthene	207-08-9	N.D.	18	4	1
10726	Benzyl alcohol	100-51-6	N.D.	550	180	1
10726	1,1'-Biphenyl	92-52-4	N.D.	40	18	1
10726	4-Bromophenyl-phenylether	101-55-3	N.D.	55	22	1
10726	Butylbenzylphthalate	85-68-7	N.D.	180	73	1
10726	Di-n-butylphthalate	84-74-2	N.D. J	180	73	1
10726	Caprolactam	105-60-2	N.D. J	180	37	1
10726	Carbazole	86-74-8	N.D.	40	18	1
10726	4-Chloro-3-methylphenol	59-50-7	N.D.	40	18	1
10726	4-Chloroaniline	106-47-8	N.D.	180	37	1
10726	bis(2-Chloroethoxy)methane	111-91-1	N.D.	40	18	1
10726	bis(2-Chloroethyl)ether	111-44-4	N.D.	55	26	1
10726	bis(2-Chloroisopropyl)ether	39638-32-9	N.D.	40	18	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.	37	7	1
10726	2-Chlorophenol	95-57-8	N.D.	40	18	1
10726	4-Chlorophenyl-phenylether	7005-72-3	N.D.	40	18	1
10726	Chrysene	218-01-9	N.D.	18	4	1
10726	Dibenz(a,h)anthracene	53-70-3	N.D.	18	4	1
10726	Dibenzofuran	132-64-9	N.D.	40	18	1
10726	3,3'-Dichlorobenzidine	91-94-1	N.D.	370	110	1
10726	2,4-Dichlorophenol	120-83-2	N.D.	40	18	1
10726	Dicyclohexylamine	101-83-7	N.D.	2,200	730	1
10726	Diethylphthalate	84-66-2	N.D.	180	73	1
10726	N,N-Dimethylaniline	121-69-7	N.D.	180	37	1
10726	2,4-Dimethylphenol	105-67-9	N.D.	40	18	1
10726	Dimethylphthalate	131-11-3	N.D.	180	73	1
10726	4,6-Dinitro-2-methylphenol	534-52-1	N.D.	550	180	1
10726	2,4-Dinitrophenol	51-28-5	N.D. J	1,100	400	1
10726	2,4-Dinitrotoluene	121-14-2	N.D.	180	73	1
10726	2,6-Dinitrotoluene	606-20-2	N.D.	55	22	1
10726	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	180	73	1

*=This limit was used in the evaluation of the final result

Sample Description: **West Floor Vault Composite Soil**
B0087363.0028/BMS

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 11/01/2018 10:40
Collection Date/Time: 10/31/2018 14:00
SDG#: BMS68-02

ARCADIS U.S., Inc.
ELLE Sample #: SW 9878918
ELLE Group #: 2004714
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	Fluoranthene	206-44-0	N.D.	18	4	1
10726	Fluorene	86-73-7	N.D.	18	4	1
10726	Hexachlorobenzene	118-74-1	N.D.	18	4	1
10726	Hexachlorobutadiene	87-68-3	N.D. J	55	22	1
10726	Hexachlorocyclopentadiene	77-47-4	N.D.	550	180	1
10726	Hexachloroethane	67-72-1	N.D.	180	37	1
10726	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	18	7	1
10726	Isophorone	78-59-1	N.D.	40	18	1
10726	2-Methylnaphthalene	91-57-6	N.D. J	37	11	1
10726	2-Methylphenol	95-48-7	N.D.	73	29	1
10726	4-Methylphenol	65794-96-9	N.D.	55	22	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.	55	22	1
10726	3-Nitroaniline	99-09-2	N.D.	180	73	1
10726	4-Nitroaniline	100-01-6	N.D.	180	73	1
10726	Nitrobenzene	98-95-3	N.D.	73	29	1
10726	2-Nitrophenol	88-75-5	N.D.	40	18	1
10726	4-Nitrophenol	100-02-7	N.D.	550	180	1
10726	N-Nitroso-di-n-propylamine	621-64-7	N.D.	55	22	1
10726	N-Nitrosodiphenylamine	86-30-6	N.D.	40	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	73	1
10726	Pentachlorophenol	87-86-5	N.D. J	180	40	1
10726	Phenanthrene	85-01-8	N.D.	18	4	1
10726	Phenol	108-95-2	N.D.	55	26	1
10726	Pyrene	129-00-0	N.D.	18	4	1
10726	Pyridine	110-86-1	N.D.	180	73	1
10726	1,2,4,5-Tetrachlorobenzene	95-94-3	N.D.	40	18	1
10726	2,3,4,6-Tetrachlorophenol	58-90-2	N.D.	180	73	1
10726	2,4,5-Trichlorophenol	95-95-4	N.D.	55	22	1
10726	2,4,6-Trichlorophenol	88-06-2	N.D.	55	22	1
10726	Triethylamine	121-44-8	N.D.	5,500	1,800	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: Di-n-butylphthalate

00886 SVOA TIC Interpretive(25)

*=This limit was used in the evaluation of the final result

Sample Description: **West Floor Vault Composite Soil**
B0087363.0028/BMS

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 11/01/2018 10:40
Collection Date/Time: 10/31/2018 14:00
SDG#: BMS68-02

ARCADIS U.S., Inc.
ELLE Sample #: SW 9878918
ELLE Group #: 2004714
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Limit of Quantitation*	Dry 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 Volatiles	**SW-846 8015D Rev.4, June 2003**		**mg/kg**	**mg/kg**	**mg/kg**	
10599	TPH-GRO soil C6-C10	n.a.	N.D.	0.7	0.1	16.47
Aldehydes & Ketones	**SW-846 8315A**		**mg/kg**	**mg/kg**	**mg/kg**	
13031	Acetaldehyde	75-07-0	6.1	1.1	0.53	1
13031	Formaldehyde	50-00-0	5.0	1.6	1.4	1
GC Miscellaneous	**SW-846 8015C Feb 2007 Rev 3**		**mg/kg**	**mg/kg**	**mg/kg**	
12925	Ethylene glycol	107-21-1	N.D.	11	5.5	1
12925	Propylene glycol	57-55-6	N.D.	11	5.5	1
GC Miscellaneous	**SW-846 8015D Rev.4, June 2003**		**mg/kg**	**mg/kg**	**mg/kg**	
10604	Ethanol (by Direct Injection)	64-17-5	N.D. D2	1.1	0.13	1
10604	Isopropanol	67-63-0	N.D. D2	1.1	0.051	1
10604	Methanol (by Direct Injection)	67-56-1	0.78 JD2	1.1	0.22	1
GC Petroleum Hydrocarbons	**SW-846 8015C Feb 2007 Rev 3**		**mg/kg**	**mg/kg**	**mg/kg**	
13567	DRO C10-C28	n.a.	54	13	5.8	1
13567	ORO >C28 - C40	n.a.	N.D.	13	5.8	1
Wet Chemistry	**SM 2540 G-2011 %Moisture Calc**		**%**	**%**	**%**	
00111	Moisture	n.a.	9.7	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

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: **West Floor Vault Composite Soil**
B0087363.0028/BMS

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 11/01/2018 10:40
Collection Date/Time: 10/31/2018 14:00
SDG#: BMS68-02

ARCADIS U.S., Inc.
ELLE Sample #: SW 9878918
ELLE Group #: 2004714
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	SW-846 8260C	1	B183111AA	11/07/2018 16:30	Jennifer K Howe	0.61
06176	GC/MS - LL DIH2O Prep	SW-846 5035A	1	201830551784	11/01/2018 22:50	Lois E Hiltz	1
06176	GC/MS - LL DIH2O Prep	SW-846 5035A	2	201830551784	11/01/2018 22:50	Lois E Hiltz	1
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	201830551784	10/31/2018 14:00	Client Supplied	1
10726	SVOA 8270D (microwave)	SW-846 8270D	1	18310SLE026	11/08/2018 21:52	Linda M Hartenstine	1
10813	BNA Soil Microwave APP IX	SW-846 3546	1	18310SLE026	11/06/2018 16:30	Osvaldo R Sanchez	1
10599	TPH-GRO soils C6-C10	SW-846 8015D Rev.4, June 2003	1	18311A34A	11/08/2018 20:33	Jeremy C Giffin	16.47
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201830551784	10/31/2018 14:00	Client Supplied	n.a.
13031	Short List Aldehydes- S 8315A	SW-846 8315A	1	183060004A	11/06/2018 12:53	James H Place	1
05876	Formaldehyde Solid Extraction	SW-846 8315A	1	183060004A	11/03/2018 10:00	Olivia Arosemena	1
12925	Glycols in Soil by 8015C	SW-846 8015C Feb 2007 Rev 3	1	183110035A	11/07/2018 21:56	Donald Brown	1
10604	Alcohols in Soil	SW-846 8015D Rev.4, June 2003	1	183090035A	11/06/2018 16:47	Johanna C Kennedy	1
13567	TPH DRO/ORO soil 8015C/D(3546)	SW-846 8015C Feb 2007 Rev 3	1	183110026A	11/08/2018 17:11	Thomas C Wildermuth	1
11221	TPH DRO/ORO Solid 3546 EXT	SW-846 3546	1	183110026A	11/07/2018 17:00	Osvaldo R Sanchez	1
13121	Glycol Solids Ext. 8015C	SW-846 8015C Feb 2007 Rev 3	1	183110035A	11/07/2018 14:23	Donald Brown	1
00380	Solids Extraction for Alcohols	SW-846 8015D Rev 4 06/2003 Mod	1	183090035A	11/05/2018 14:05	Johanna C Kennedy	1
00111	Moisture	SM 2540 G-2011 %Moisture Calc	1	18306820004B	11/03/2018 22:31	Scott W Freisher	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.
BMWFV

Lab Name: Lancaster Laboratories Contract:_____
Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____
Matrix: (soil/water) SOIL Lab Sample ID: 9878918
Sample wt/vol: 8.16 (g/mL) g Lab File ID: HP09953.i/18nov07a.b/bn07s02.d
Level: (low/med) LOW Date Received: 11/01/18
% Moisture: not dec. 9.7 Date Analyzed: 11/07/18
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

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1F

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

BMWFV

Lab Name: Lancaster Laboratories Contract:
Lab Code: LANCAS Case No.: SAS No.: SDG No.:
Matrix: (soil/water) SOIL Lab Sample ID: 9878918
Sample wt/vol: 30.27(g/mL) g Lab File ID: ok0468.d
Level: (low/med) LOW Date Received: 11/01/18
% Moisture: 9.7 Decanted: (Y/N) Date Extracted: 11/06/18
Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/08/18
Injection Volume: 1 (uL) Dilution Factor: 1
GPC Cleanup: N pH: Extraction: Mic

Number TICs found: 9 CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Unknown	1.081	350	JB
2.625-86-5	Furan, 2,5-dimethyl-	1.434	180	JB
3.	Unknown	1.852	260	JB
4.141-79-7	3-Penten-2-one, 4-methyl-	2.504	5200	JB
5.	Unknown	3.099	2000	J
6.	Unknown	7.639	180	J
7.	Unknown	8.439	56000	J
8.	Unknown	9.322	410	J
9.301-02-0	9-Octadecenamide, (Z)-	11.292	220	J
10.				
11. SVOCTIC	Total SVOC TICs		65000	JB
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Sample Description: **Trip Blank-18299 Water**
B0087363.0028/BMS

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 11/01/2018 10:40
Collection Date/Time: 10/29/2018
SDG#: BMS68-03TB

ARCADIS U.S., Inc.
ELLE Sample #: WW 9878919
ELLE Group #: 2004714
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	0.2	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	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	0.2	1
11997	Cyclohexanone	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-18299 Water**
B0087363.0028/BMS

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 11/01/2018 10:40
Collection Date/Time: 10/29/2018
SDG#: BMS68-03TB

ARCADIS U.S., Inc.
ELLE Sample #: WW 9878919
ELLE Group #: 2004714
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	142-82-5	N.D.	5	0.2	1
11997	n-Hexane	110-54-3	N.D.	5	0.2	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	0.2	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.	5	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.

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-18299 Water**
B0087363.0028/BMS

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 11/01/2018 10:40
Collection Date/Time: 10/29/2018
SDG#: BMS68-03TB

ARCADIS U.S., Inc.
ELLE Sample #: WW 9878919
ELLE Group #: 2004714
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC Volatiles	**SW-846 8015D Rev.4, June 2003**		ug/l	ug/l	ug/l	
10598	TPH-GRO water C6-C10	n.a.	N.D.	50	11	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
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	L183131AA	11/09/2018 13:48	Angela D Sneeringer	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	L183131AA	11/09/2018 13:48	Angela D Sneeringer	1
10598	TPH-GRO water C6-C10	SW-846 8015D Rev.4, June 2003	1	18310A20A	11/06/2018 17:56	Jeremy C Giffin	1
01146	GC VOA Water Prep	SW-846 5030C	1	18310A20A	11/06/2018 17:56	Jeremy C Giffin	1

*=This limit was used in the evaluation of the final result

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
BM-TB

Lab Name: Lancaster Laboratories Contract:_____
Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____
Matrix: (soil/water) WATER Lab Sample ID: 9878919
Sample wt/vol: 5.0 (g/mL)mL Lab File ID:HP09915.i/18nov09a.b/ln09s06.d
Level: (low/med) LOW Date Received: 11/01/18
% Moisture: not dec. Date Analyzed: 11/09/18
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

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), GRO/DRO, Alcohol/Glycol and Formaldehyde Analyses

SDGs # BMS58 and 480-141320

Analyses Performed By:
Eurofins Lancaster Laboratories Environmental

Lancaster, PA

Report #33875R
Review Level: Tier III
Project: B0087363.0035.00001

SUMMARY

This data quality assessment summarizes the review of Sample Delivery Groups (SDGs) # BMS58 and 480-141320 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	PCB	MET	MISC
BMS58	BLDG 25N UNDER SLAB 1	9795317	Soil	9/10/2018		X	X			X[1]
480-141320	BLDG 25-UNDER SLAB 1	480-141320-1	Soil	9/6/2018		X	X			X[1]

Notes:

[1] Miscellaneous analyses include Aldehydes, Alcohols, Glycols and GRO/DRO 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, 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
BLDG 25N UNDER SLAB 1	CCV %D	n-Hexane	23%
		2-Butanone	-29%
		n-Heptane	42%
		2-Nitropropane	-28%
		2-Hexanone	-24%
BLDG 25-UNDER SLAB 1	CCV %D	Bromomethane	33.8%
		Chloroethane	40.4%
		1,4-Dioxane	-29.9%

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

Initial/Continuing	Criteria	Sample Result	Qualification
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.

A MS/MSD analysis was not performed on a sample location within these SDGs.

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
BLDG 25N UNDER SLAB 1	Chlorodifluoromethane	>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.

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.

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
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		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.

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
BLDG 25N UNDER SLAB	CCV %D	Hexachlorocyclopentadiene	-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.

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 these SDGs.

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
BLDG 25N UNDER SLAB	Triethylamine	<LL but >10%	<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

Sample locations associated with LCS/LCSD recoveries exhibiting an RPD greater than of the control limit presented in the following table.

Sample Locations	Compound
BLDG 25N UNDER SLAB	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

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.

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.

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		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		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.

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.

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. 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	
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	
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

DIESEL RANGE ORGANICS (DRO) – GAS RANGE ORGANICS (GRO) ANALYSES

1. Holding Times

The specified holding times for the following methods are presented in the following table.

Method	Matrix	Holding Time	Preservation
GRO SW-846 8015	Water	7 days from collection to analysis (Unpreserved)	Cool to <6 °C
		14 days from collection to analysis	Cool to <6 °C; preserved to a pH of less than 2.
DRO, ERO SW-846 8015	Soil	14 days from collection to extraction and 40 days from extraction to analysis	Cool to <6 °C
	Water	7 days from collection to extraction and 40 days from extraction to analysis	Cool to <6 °C

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 (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% or a correlation coefficient of greater than 0.99 is allowed. VPH-EPH 25%

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%). VPH-EPH 25%

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 surrogate compounds exhibit recoveries 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 (LCS) 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 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 50% 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. 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 DRO - GRO

DRO/GRO; SW-846 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					
D. Method blanks		X		X	
E. 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
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	
F. 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

The analyses that exceeded the holding are presented in the following table.

Sample Locations	Holding Time	Criteria
BLDG 25N UNDER SLAB 1	Analysis completed in 4 Days	3 Days
BLDG 25-UNDER SLAB 1	Extraction completed in 4 Days	3 Days

Sample results associated with sample locations analyzed by analytical method SW-846 8315 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

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
BLDG 25-UNDER SLAB 1	Acetaldehyde	Detected sample results <RL and <BAL	"UB" at the RL

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 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 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.

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		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	
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

SAMPLE COMPLIANCE REPORT

Sample Delivery Group (SDG)	Sampling Date	Protocol	Sample ID	Matrix	Compliancy[1]					Noncompliance
					VOC	SVOC	PFAS	MET	MISC	
BMS58	9/10/2018	SW846	BLDG 25N UNDER SLAB 1	Soil	No	No	-	Yes	No	VOC: CCV %D SVOC: CCV %D, LCS/LCSD%R/RPD ALD: HT
480-141320	9/6/2018	SW846	BLDG 25-UNDER SLAB 1	Soil	No	-	-	-	-	VOC: CCV %D ALD: HT, MB

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: August 23, 2019

PEER REVIEW: Joseph Houser

DATE: August 27, 2019

CHAIN OF CUSTODY

CORRECTED SAMPLE ANALYSIS DATA SHEETS

Environmental Analysis Request/Chain of Custody

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For Eurofins Lancaster Laboratories Environmental use only

Acct. # 3074 Group # 1985552 Sample # 9795317

COC # 577416

Client Information

Client: Arcadis	Acct. #:
Project Name/#: BMS Syracuse - B0087363.0028	PWSID #:
Project Manager: David Wright	P.O. #:
Sampler: David Wright	Quote #:
State where samples were collected: NY	For Compliance: Yes ☐ No ☐

Matrix: Soil ☒ Sediment ☐ Tissue ☐ | Water: Potable ☐ Ground ☐ Surface ☐ NPDES ☐ | Other: ___

Analysis Requested — Preservation and Filtration Codes

Sample Identification	Collected Date	Collected Time	Grab	Composite	Total # of Containers	0	VOC w/TIC 8260	SVOC w/TIC 8270	Glycols + Alcohols 8015	Aldehydes 8315	TPH - G, D, O	Remarks
Bldg 25N Under Slab 1	09/10	0940	X		9	X	X	X	X	X		0 = methanol + DI water vials.

For Lab Use Only

FSC: ____

SCR#: 231133

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

Use BMS Syracuse project-specific analyte list

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: david.wright@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]	9/7/18	16:20	[signature]	9/10/18	0845
[signature]	9/10/18	1040			
			[signature]	9/11/18	10:00

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 ____ Other ____

Temperature upon receipt 1.6 °C

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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: **Bldg 25N Under Slab 1 Grab Soil**
B0087363.0028/BMS

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 09/11/2018 10:00
Collection Date/Time: 09/10/2018 09:40
SDG#: BMS58-01

ARCADIS U.S., Inc.
ELLE Sample #: SW 9795317
ELLE Group #: 1985552
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	0.006 J	0.017	0.005	0.7
11995	Acetonitrile	75-05-8	N.D.	0.083	0.021	0.7
11995	Benzene	71-43-2	N.D.	0.004	0.0004	0.7
11995	Bromochloromethane	74-97-5	N.D.	0.004	0.0005	0.7
11995	Bromodichloromethane	75-27-4	N.D.	0.004	0.0003	0.7
11995	Bromoform	75-25-2	N.D.	0.008	0.004	0.7
11995	Bromomethane	74-83-9	N.D.	0.004	0.0006	0.7
11995	n-Butanol	71-36-3	N.D.	0.21	0.046	0.7
11995	2-Butanone	78-93-3	0.005 J	0.008	0.0008	0.7
11995	t-Butyl alcohol	75-65-0	N.D.	0.083	0.012	0.7
11995	n-Butylbenzene	104-51-8	N.D.	0.007	0.002	0.7
11995	sec-Butylbenzene	135-98-8	N.D.	0.004	0.002	0.7
11995	tert-Butylbenzene	98-06-6	N.D.	0.004	0.0007	0.7
11995	Carbon Disulfide	75-15-0	N.D.	0.004	0.0005	0.7
11995	Carbon Tetrachloride	56-23-5	N.D.	0.004	0.0004	0.7
11995	Chlorobenzene	108-90-7	N.D.	0.004	0.0004	0.7
11995	Chlorodifluoromethane	75-45-6	N.D.	0.008	0.002	0.7
11995	Chloroethane	75-00-3	N.D.	0.004	0.0008	0.7
11995	Chloroform	67-66-3	N.D.	0.004	0.0005	0.7
11995	Chloromethane	74-87-3	N.D.	0.004	0.0005	0.7
11995	Cyclohexane	110-82-7	N.D.	0.004	0.0004	0.7
11995	Cyclohexanone	108-94-1	N.D.	0.21	0.021	0.7
11995	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	0.004	0.0003	0.7
11995	Dibromochloromethane	124-48-1	N.D.	0.004	0.0003	0.7
11995	1,2-Dibromoethane	106-93-4	N.D.	0.004	0.0003	0.7
11995	1,2-Dichlorobenzene	95-50-1	N.D.	0.004	0.0004	0.7
11995	1,3-Dichlorobenzene	541-73-1	N.D.	0.004	0.0004	0.7
11995	1,4-Dichlorobenzene	106-46-7	N.D.	0.004	0.0003	0.7
11995	Dichlorodifluoromethane	75-71-8	N.D.	0.004	0.0005	0.7
11995	1,1-Dichloroethane	75-34-3	N.D.	0.004	0.0004	0.7
11995	1,2-Dichloroethane	107-06-2	N.D.	0.004	0.0005	0.7
11995	1,1-Dichloroethene	75-35-4	N.D.	0.004	0.0004	0.7
11995	cis-1,2-Dichloroethene	156-59-2	N.D.	0.004	0.0004	0.7
11995	trans-1,2-Dichloroethene	156-60-5	N.D.	0.004	0.0004	0.7
11995	1,2-Dichloropropane	78-87-5	N.D.	0.004	0.0004	0.7
11995	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.004	0.0003	0.7
11995	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.004	0.0002	0.7
11995	1,4-Dioxane	123-91-1	N.D.	0.21	0.031	0.7
11995	Ethyl Acetate	141-78-6	N.D.	0.004	0.0008	0.7
11995	Ethyl Ether	60-29-7	N.D.	0.004	0.0008	0.7
11995	Ethylbenzene	100-41-4	N.D.	0.004	0.0003	0.7

*=This limit was used in the evaluation of the final result

Sample Description: **Bldg 25N Under Slab 1 Grab Soil**
B0087363.0028/BMS

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 09/11/2018 10:00
Collection Date/Time: 09/10/2018 09:40
SDG#: BMS58-01

ARCADIS U.S., Inc.
ELLE Sample #: SW 9795317
ELLE Group #: 1985552
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.	0.008	0.0005	0.7
11995	n-Heptane	142-82-5	N.D.	0.007	0.002	0.7
11995	n-Hexane	110-54-3	0.0008 J	0.004	0.0004	0.7
11995	2-Hexanone	591-78-6	N.D. J	0.008	0.0008	0.7
11995	Isobutyl Alcohol	78-83-1	N.D.	0.21	0.031	0.7
11995	Isopropylbenzene	98-82-8	N.D.	0.004	0.0003	0.7
11995	p-Isopropyltoluene	99-87-6	N.D.	0.004	0.002	0.7
11995	Methyl Acetate	79-20-9	N.D.	0.004	0.0008	0.7
11995	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.004	0.0004	0.7
11995	4-Methyl-2-pentanone	108-10-1	N.D.	0.008	0.0008	0.7
11995	Methylcyclohexane	108-87-2	N.D.	0.004	0.0005	0.7
11995	Methylene Chloride	75-09-2	N.D.	0.004	0.002	0.7
11995	Naphthalene	91-20-3	N.D.	0.004	0.002	0.7
11995	2-Nitropropane	79-46-9	N.D. J	0.008	0.0008	0.7
11995	Styrene	100-42-5	N.D.	0.004	0.0002	0.7
11995	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.004	0.0003	0.7
11995	Tetrachloroethene	127-18-4	N.D.	0.004	0.0004	0.7
11995	Tetrahydrofuran	109-99-9	N.D.	0.007	0.0008	0.7
11995	Toluene	108-88-3	0.0006 J	0.004	0.0005	0.7
11995	1,2,3-Trichlorobenzene	87-61-6	N.D.	0.008	0.004	0.7
11995	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.008	0.004	0.7
11995	1,1,1-Trichloroethane	71-55-6	N.D.	0.004	0.0005	0.7
11995	1,1,2-Trichloroethane	79-00-5	N.D.	0.004	0.0004	0.7
11995	Trichloroethene	79-01-6	0.002 J	0.004	0.0004	0.7
11995	Trichlorofluoromethane	75-69-4	N.D.	0.004	0.0006	0.7
11995	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.004	0.0004	0.7
11995	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.004	0.0004	0.7
11995	Vinyl Chloride	75-01-4	N.D.	0.004	0.0005	0.7
11995	m+p-Xylene	179601-23-1	N.D.	0.004	0.0008	0.7
11995	o-Xylene	95-47-6	N.D.	0.004	0.0003	0.7
11995	Xylene (Total)	1330-20-7	N.D.	0.004	0.0008	0.7

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 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:
2-butanone.

*=This limit was used in the evaluation of the final result

Sample Description: **Bldg 25N Under Slab 1 Grab Soil**
B0087363.0028/BMS

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 09/11/2018 10:00
Collection Date/Time: 09/10/2018 09:40
SDG#: BMS58-01

ARCADIS U.S., Inc.
ELLE Sample #: SW 9795317
ELLE Group #: 1985552
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.	19	4	1
10726	Acenaphthylene	208-96-8	N.D.	19	4	1
10726	Acetophenone	98-86-2	N.D.	58	27	1
10726	Aniline	62-53-3	N.D.	580	190	1
10726	Anthracene	120-12-7	N.D.	19	4	1
10726	Atrazine	1912-24-9	N.D.	190	39	1
10726	Benzaldehyde	100-52-7	N.D.	190	78	1
10726	Benzo(a)anthracene	56-55-3	N.D.	19	4	1
10726	Benzo(a)pyrene	50-32-8	N.D.	19	8	1
10726	Benzo(b)fluoranthene	205-99-2	11 J	19	4	1
10726	Benzo(g,h,i)perylene	191-24-2	N.D.	19	8	1
10726	Benzo(k)fluoranthene	207-08-9	N.D.	19	4	1
10726	Benzyl alcohol	100-51-6	N.D.	580	190	1
10726	1,1'-Biphenyl	92-52-4	N.D.	43	19	1
10726	4-Bromophenyl-phenylether	101-55-3	N.D.	58	23	1
10726	Butylbenzylphthalate	85-68-7	N.D.	190	78	1
10726	Di-n-butylphthalate	84-74-2	N.D.	190	78	1
10726	Caprolactam	105-60-2	N.D.	190	39	1
10726	Carbazole	86-74-8	N.D.	43	19	1
10726	4-Chloro-3-methylphenol	59-50-7	N.D.	43	19	1
10726	4-Chloroaniline	106-47-8	N.D.	190	39	1
10726	bis(2-Chloroethoxy)methane	111-91-1	N.D.	43	19	1
10726	bis(2-Chloroethyl)ether	111-44-4	N.D.	58	27	1
10726	bis(2-Chloroisopropyl)ether	39638-32-9	N.D.	43	19	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.	39	8	1
10726	2-Chlorophenol	95-57-8	N.D.	43	19	1
10726	4-Chlorophenyl-phenylether	7005-72-3	N.D.	43	19	1
10726	Chrysene	218-01-9	8 J	19	4	1
10726	Dibenz(a,h)anthracene	53-70-3	N.D.	19	4	1
10726	Dibenzofuran	132-64-9	N.D.	43	19	1
10726	3,3'-Dichlorobenzidine	91-94-1	N.D.	390	120	1
10726	2,4-Dichlorophenol	120-83-2	N.D.	43	19	1
10726	Dicyclohexylamine	101-83-7	N.D.	2,300	780	1
10726	Diethylphthalate	84-66-2	N.D.	190	78	1

*=This limit was used in the evaluation of the final result

Sample Description: **Bldg 25N Under Slab 1 Grab Soil**
B0087363.0028/BMS

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 09/11/2018 10:00
Collection Date/Time: 09/10/2018 09:40
SDG#: BMS58-01

ARCADIS U.S., Inc.
ELLE Sample #: SW 9795317
ELLE Group #: 1985552
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	121-69-7	N.D.	190	39	1
10726	2,4-Dimethylphenol	105-67-9	N.D.	43	19	1
10726	Dimethylphthalate	131-11-3	N.D.	190	78	1
10726	4,6-Dinitro-2-methylphenol	534-52-1	N.D.	580	190	1
10726	2,4-Dinitrophenol	51-28-5	N.D.	1,200	430	1
10726	2,4-Dinitrotoluene	121-14-2	N.D.	190	78	1
10726	2,6-Dinitrotoluene	606-20-2	N.D.	58	23	1
10726	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	190	78	1
10726	Fluoranthene	206-44-0	8 J	19	4	1
10726	Fluorene	86-73-7	N.D.	19	4	1
10726	Hexachlorobenzene	118-74-1	N.D.	19	4	1
10726	Hexachlorobutadiene	87-68-3	N.D.	58	23	1
10726	Hexachlorocyclopentadiene	77-47-4	N.D. J	580	190	1
10726	Hexachloroethane	67-72-1	N.D.	190	39	1
10726	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	19	8	1
10726	Isophorone	78-59-1	N.D.	43	19	1
10726	2-Methylnaphthalene	91-57-6	N.D.	39	12	1
10726	2-Methylphenol	95-48-7	N.D.	78	31	1
10726	4-Methylphenol	65794-96-9	N.D.	58	23	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.	19	8	1
10726	2-Nitroaniline	88-74-4	N.D.	58	23	1
10726	3-Nitroaniline	99-09-2	N.D.	190	78	1
10726	4-Nitroaniline	100-01-6	N.D.	190	78	1
10726	Nitrobenzene	98-95-3	N.D.	78	31	1
10726	2-Nitrophenol	88-75-5	N.D.	43	19	1
10726	4-Nitrophenol	100-02-7	N.D.	580	190	1
10726	N-Nitroso-di-n-propylamine	621-64-7	N.D.	58	23	1
10726	N-Nitrosodiphenylamine	86-30-6	N.D.	43	19	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.	190	78	1
10726	Pentachlorophenol	87-86-5	N.D.	190	43	1
10726	Phenanthrene	85-01-8	8 J	19	4	1
10726	Phenol	108-95-2	N.D.	58	27	1
10726	Pyrene	129-00-0	11 J	19	4	1
10726	Pyridine	110-86-1	N.D.	190	78	1
10726	1,2,4,5-Tetrachlorobenzene	95-94-3	N.D.	43	19	1
10726	2,3,4,6-Tetrachlorophenol	58-90-2	N.D.	190	78	1

*=This limit was used in the evaluation of the final result

Sample Description: **Bldg 25N Under Slab 1 Grab Soil B0087363.0028/BMS**

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 09/11/2018 10:00
Collection Date/Time: 09/10/2018 09:40
SDG#: BMS58-01

ARCADIS U.S., Inc.
ELLE Sample #: SW 9795317
ELLE Group #: 1985552
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.	58	23	1
10726	2,4,6-Trichlorophenol	88-06-2	N.D.	58	23	1
10726	Triethylamine	121-44-8	~~N.D.~~ R	~~5,800~~	~~1,900~~	1

The recovery for Triethylamine in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. The following action was taken:
The sample was originally extracted within method required holding time and the QC is again outside of the acceptance limits. All results are reported from the second 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.

GC Volatiles	**SW-846 8015D Rev.4, June 2003**		**mg/kg**	**mg/kg**	**mg/kg**	
10599	TPH-GRO soil C6-C10	n.a.	0.8 J	1.4	0.2	28.67
Aldehydes & Ketones	**SW-846 8315A**		**mg/kg**	**mg/kg**	**mg/kg**	
13031	Acetaldehyde	75-07-0	0.59 J	1.2	0.59	1
13031	Formaldehyde	50-00-0	1.2 J	1.8	0.59	1
GC Miscellaneous	**SW-846 8015C Feb 2007 Rev 3**		**mg/kg**	**mg/kg**	**mg/kg**	
12925	Ethylene glycol	107-21-1	N.D.	12	5.9	1
12925	Propylene glycol	57-55-6	N.D.	12	5.9	1
GC Miscellaneous	**SW-846 8015D Rev.4, June 2003**		**mg/kg**	**mg/kg**	**mg/kg**	
10604	Ethanol (by Direct Injection)	64-17-5	N.D. D2	1.2	0.14	1
10604	Isopropanol	67-63-0	N.D. D2	1.2	0.055	1
10604	Methanol (by Direct Injection)	67-56-1	N.D. D2	1.2	0.24	1
GC Petroleum Hydrocarbons	**SW-846 8015C Feb 2007 Rev 3**		**mg/kg**	**mg/kg**	**mg/kg**	
13567	DRO C10-C28	n.a.	5.6 J	14	4.7	1
13567	ORO >C28 - C40	n.a.	N.D.	14	4.7	1
Wet Chemistry	**SM 2540 G-2011 %Moisture Calc**		**%**	**%**	**%**	
00111	Moisture	n.a.	15.7	0.50	0.50	1

*=This limit was used in the evaluation of the final result

Sample Description: **Bldg 25N Under Slab 1 Grab Soil**
B0087363.0028/BMS

Project Name: **Bristol-Myers Squibb**

Submittal Date/Time: 09/11/2018 10:00
Collection Date/Time: 09/10/2018 09:40
SDG#: BMS58-01

ARCADIS U.S., Inc.
ELLE Sample #: SW 9795317
ELLE Group #: 1985552
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Limit of Quantitation*	Dry Method Detection Limit	Dilution Factor
Wet Chemistry	**SM 2540 G-2011 %Moisture Calc**		**%**	**%**	**%**	

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

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	SW-846 8260C	1	B182561AA	09/14/2018 00:01	Patrick T Herres	0.7
06176	GC/MS - LL DIH2O Prep	SW-846 5035A	1	201825451179	09/11/2018 16:03	Anastasia K Jaynes	1
06176	GC/MS - LL DIH2O Prep	SW-846 5035A	2	201825451179	09/11/2018 16:03	Anastasia K Jaynes	1
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	201825451179	09/10/2018 09:40	Client Supplied	1
10726	SVOA 8270D (microwave)	SW-846 8270D	1	18260SLE026	09/18/2018 16:20	Linda M Hartenstine	1
10813	BNA Soil Microwave APP IX	SW-846 3546	3	18260SLE026	09/18/2018 02:30	Sherry L Morrow	1
10599	TPH-GRO soils C6-C10	SW-846 8015D Rev.4, June 2003	1	18256A16A	09/13/2018 22:06	Jeremy C Giffin	28.67
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201825451179	09/10/2018 09:40	Client Supplied	n.a.
13031	Short List Aldehydes- S 8315A	SW-846 8315A	1	182550008A	09/17/2018 14:55	James H Place	1
05876	Formaldehyde Solid Extraction	SW-846 8315A	1	182550008A	09/13/2018 23:30	Sally L Appleyard	1
12925	Glycols in Soil by 8015C	SW-846 8015C Feb 2007 Rev 3	1	182540016A	09/11/2018 21:55	Donald Brown	1
10604	Alcohols in Soil	SW-846 8015D Rev.4, June 2003	1	182540017A	09/12/2018 02:00	Donald Brown	1
13567	TPH DRO/ORO soil 8015C/D(3546)	SW-846 8015C Feb 2007 Rev 3	1	182560030A	09/15/2018 16:24	Thomas C Wildermuth	1
11221	TPH DRO/ORO Solid 3546 EXT	SW-846 3546	1	182560030A	09/13/2018 16:45	Elizabeth E Donovan	1
13121	Glycol Solids Ext. 8015C	SW-846 8015C Feb 2007 Rev 3	1	182540016A	09/11/2018 18:05	Donald Brown	1
00380	Solids Extraction for Alcohols	SW-846 8015D Rev 4 06/2003 Mod	1	182540017A	09/11/2018 18:05	Donald Brown	1
00111	Moisture	SM 2540 G-2011 %Moisture Calc	1	18255820003B	09/12/2018 09:41	William C Schwebel	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.
MS581

Lab Name: Lancaster Laboratories Contract:_____
Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____
Matrix: (soil/water) SOIL Lab Sample ID: 9795317
Sample wt/vol: 7.16 (g/mL) g Lab File ID: HP09953.i/18sep13a.b/bs13s06.d
Level: (low/med) LOW Date Received: 09/11/18
% Moisture: not dec. 15.7 Date Analyzed: 09/14/18
Column: (pack/cap) CAP Dilution Factor: 1.0
CONCENTRATION UNITS:
Number TICs found: 2 (mg/L or mg/Kg) mg/Kg

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	107-51-7	Trisiloxane, octamethyl-	7.22	0.005	J N
2.	141-62-8	Tetrasiloxane, decamethyl-	9.27	0.007	J
3.					
4.	VOCTIC	Total VOC TICs		0.012	J
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
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16.					
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25.					
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

MS581

Lab Name: Lancaster Laboratories Contract:
Lab Code: LANCAS Case No.: SAS No.: SDG No.:
Matrix: (soil/water) SOIL Lab Sample ID: 9795317
Sample wt/vol: 30.5 (g/mL) g Lab File ID: pi0738.d
Level: (low/med) LOW Date Received: 09/11/18
% Moisture: 15.7 Decanted: (Y/N) Date Extracted: 09/18/18
Concentrated Extract Volume: 1000 (uL) Date Analyzed: 09/18/18
Injection Volume: 1 (uL) Dilution Factor: 1
GPC Cleanup: N pH: Extraction: Mic

Number TICs found: 18 CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Unknown	1.716	890	J N
2.625-33-2	3-Penten-2-one	1.887	170	J
3.	Unknown	2.669	5000	J
4.	Unknown Aldol Condensate	2.975	230	J
5.	Unknown	3.045	870	J
6.	Unknown	3.110	4400	J
7.	Unknown	3.457	460000	J
8.	Unknown	4.075	1200	J
9.	Unknown	5.428	290	J
10.	Unknown	5.522	840	J
11.107-52-8	Hexasiloxane, tetradecamethy	7.281	340	J
12.	Unknown	8.086	720	J
13.	Unknown	8.416	1700	J
14.	Unknown	8.804	640	J
15.	Unknown	9.463	1200	J
16.	Unknown	10.051	300	J
17.	Unknown	10.592	200	J
18.	Unknown	11.404	190	J
19.				
20.SVOCTIC	Total SVOC TICs		480000	J
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

480-141320 COC

Temperature on Receipt _____

Drinking Water? Yes ☐ No ☒

TAL-4124 (1007)

Client: Arcadis	Project Manager: David Wright : 315-671-9260	Date: 9/6/18	Chain of Custody Number: 275097
Address: one Lincoln Center, Suite 300	Telephone Number (Area Code)/Fax Number: 516-369-2741	Lab Number:	Page 1 of 1
City: Syracuse / State: NY / Zip Code: 13202	Site Contact: Dan Zuck	Lab Contact: Melissa Deyo	
Project Name and Location (State): BMS Syracuse NY	Carrier/Waybill Number:		
Contract/Purchase Order/Quote No.: B00873630028.00001			

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil		Containers & Preservatives: Unpres.	H2SO4	HNO3	H2O	NaOH	ZnAc/NaOH	CH3OH	Analysis (Attach list if more space is needed): VOCs + TIC 8260	SVOCs + TICs 8270	Glycols/Alc. 8015	TPH 6-D-RO	Aldehydes 8315A	Special Instructions/ Conditions of Receipt
Bldg 25 - Under Slab 1	9/6/18	1635				9		6			2			1	X	X	X	X	X	use BMS Sample List

RE 9-6-18

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☒ Unknown

Sample Disposal
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required
☒ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☐ Other _____

QC Requirements (Specify): NYSDEC EDD Required, Level 2/4 Report 2 weeks.

	Relinquished By	Date	Time	Received By	Date	Time
1.	Daniel Zuck	9/6/18	1725	RELINQUISHED	9-6-18	17:25
2.	RELINQUISHED	9-6-18	19:00	TAS	9-7-18	0100
3.						

Comments: Please Report Results To David Wright By COB 9/10/18. 0.9 #1

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.

GC/MS Semi VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.

GC/MS Semi VOA TICs

Qualifier	Qualifier Description
J	Indicates an Estimated Value for TICs
N	This flag indicates the presumptive evidence of a compound.
T	Result is a tentatively identified compound (TIC) and an estimated value.

GC VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

GC Semi VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.

HPLC/IC

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Client Sample ID: BLDG 25-UNDER SLAB 1

Date Collected: 09/06/18 16:35
Date Received: 09/07/18 01:00

Lab Sample ID: 480-141320-1

Matrix: Solid
Percent Solids: 87.9

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	4.5	U	4.5	0.33	ug/Kg	☼	09/07/18 08:00	09/07/18 22:33	1
1,1,2,2-Tetrachloroethane	4.5	U	4.5	0.73	ug/Kg	☼	09/07/18 08:00	09/07/18 22:33	1
1,1,2-Trichloro-1,2,2-trifluoroethane	4.5	U	4.5	1.0	ug/Kg	☼	09/07/18 08:00	09/07/18 22:33	1
1,1,2-Trichloroethane	4.5	U	4.5	0.59	ug/Kg	☼	09/07/18 08:00	09/07/18 22:33	1
1,1-Dichloroethane	4.5	U	4.5	0.55	ug/Kg	☼	09/07/18 08:00	09/07/18 22:33	1
1,1-Dichloroethene	4.5	U	4.5	0.55	ug/Kg	☼	09/07/18 08:00	09/07/18 22:33	1
1,2,3-Trichlorobenzene	4.5	U	4.5	0.48	ug/Kg	☼	09/07/18 08:00	09/07/18 22:33	1
1,2,4-Trichlorobenzene	4.5	U	4.5	0.28	ug/Kg	☼	09/07/18 08:00	09/07/18 22:33	1
1,2,4-Trimethylbenzene	4.5	U	4.5	0.87	ug/Kg	☼	09/07/18 08:00	09/07/18 22:33	1
1,2-Dibromo-3-Chloropropane	4.5	U	4.5	2.3	ug/Kg	☼	09/07/18 08:00	09/07/18 22:33	1
1,2-Dichlorobenzene	4.5	U	4.5	0.35	ug/Kg	☼	09/07/18 08:00	09/07/18 22:33	1
1,2-Dichloroethane	4.5	U	4.5	0.23	ug/Kg	☼	09/07/18 08:00	09/07/18 22:33	1
1,2-Dichloropropane	4.5	U	4.5	2.3	ug/Kg	☼	09/07/18 08:00	09/07/18 22:33	1
1,3,5-Trimethylbenzene	4.5	U	4.5	0.29	ug/Kg	☼	09/07/18 08:00	09/07/18 22:33	1
1,3-Dichlorobenzene	4.5	U	4.5	0.23	ug/Kg	☼	09/07/18 08:00	09/07/18 22:33	1
1,4-Dichlorobenzene	4.5	U	4.5	0.63	ug/Kg	☼	09/07/18 08:00	09/07/18 22:33	1
1,4-Dioxane	91	UJ	91	20	ug/Kg	☼	09/07/18 08:00	09/07/18 22:33	1
2-Butanone (MEK)	23	U	23	1.7	ug/Kg	☼	09/07/18 08:00	09/07/18 22:33	1
2-Hexanone	23	U	23	2.3	ug/Kg	☼	09/07/18 08:00	09/07/18 22:33	1
tert-Butanol (TBA)	45	U	45	15	ug/Kg	☼	09/07/18 08:00	09/07/18 22:33	1
p-Isopropyltoluene	4.5	U	4.5	0.36	ug/Kg	☼	09/07/18 08:00	09/07/18 22:33	1
4-Methyl-2-pentanone (MIBK)	23	U	23	1.5	ug/Kg	☼	09/07/18 08:00	09/07/18 22:33	1
Acetone	**32**		23	3.8	ug/Kg	☼	09/07/18 08:00	09/07/18 22:33	1
Acetonitrile	45	U	45	5.5	ug/Kg	☼	09/07/18 08:00	09/07/18 22:33	1
Benzene	4.5	U	4.5	0.22	ug/Kg	☼	09/07/18 08:00	09/07/18 22:33	1
Bromoform	4.5	U	4.5	2.3	ug/Kg	☼	09/07/18 08:00	09/07/18 22:33	1
Bromomethane	4.5	U	4.5	0.41	ug/Kg	☼	09/07/18 08:00	09/07/18 22:33	1
Carbon disulfide	4.5	U	4.5	2.3	ug/Kg	☼	09/07/18 08:00	09/07/18 22:33	1
Carbon tetrachloride	4.5	U	4.5	0.44	ug/Kg	☼	09/07/18 08:00	09/07/18 22:33	1
Chlorobenzene	4.5	U	4.5	0.60	ug/Kg	☼	09/07/18 08:00	09/07/18 22:33	1
Bromochloromethane	4.5	U	4.5	0.33	ug/Kg	☼	09/07/18 08:00	09/07/18 22:33	1
Dibromochloromethane	4.5	U	4.5	0.58	ug/Kg	☼	09/07/18 08:00	09/07/18 22:33	1
Chlorodifluoromethane	4.5	U	4.5	0.93	ug/Kg	☼	09/07/18 08:00	09/07/18 22:33	1
Chloroethane	4.5	U	4.5	1.0	ug/Kg	☼	09/07/18 08:00	09/07/18 22:33	1
Chloroform	4.5	U	4.5	0.28	ug/Kg	☼	09/07/18 08:00	09/07/18 22:33	1
Chloromethane	4.5	U	4.5	0.27	ug/Kg	☼	09/07/18 08:00	09/07/18 22:33	1
cis-1,2-Dichloroethene	4.5	U	4.5	0.58	ug/Kg	☼	09/07/18 08:00	09/07/18 22:33	1
Cyclohexane	4.5	U	4.5	0.63	ug/Kg	☼	09/07/18 08:00	09/07/18 22:33	1
Cyclohexanone	45	U	45	16	ug/Kg	☼	09/07/18 08:00	09/07/18 22:33	1
Bromodichloromethane	4.5	U	4.5	0.61	ug/Kg	☼	09/07/18 08:00	09/07/18 22:33	1
Dichlorodifluoromethane	4.5	U	4.5	0.37	ug/Kg	☼	09/07/18 08:00	09/07/18 22:33	1
Ethyl acetate	4.5	U	4.5	1.5	ug/Kg	☼	09/07/18 08:00	09/07/18 22:33	1
Diethyl ether	23	U	23	1.9	ug/Kg	☼	09/07/18 08:00	09/07/18 22:33	1
Ethylbenzene	4.5	U	4.5	0.31	ug/Kg	☼	09/07/18 08:00	09/07/18 22:33	1
1,2-Dibromoethane	4.5	U	4.5	0.58	ug/Kg	☼	09/07/18 08:00	09/07/18 22:33	1
Hexane	45	U	45	2.6	ug/Kg	☼	09/07/18 08:00	09/07/18 22:33	1
Isobutanol	180	U	180	37	ug/Kg	☼	09/07/18 08:00	09/07/18 22:33	1
Isopropylbenzene	4.5	U	4.5	0.68	ug/Kg	☼	09/07/18 08:00	09/07/18 22:33	1
Methyl acetate	23	U	23	2.7	ug/Kg	☼	09/07/18 08:00	09/07/18 22:33	1

Client Sample ID: BLDG 25-UNDER SLAB 1

Date Collected: 09/06/18 16:35
Date Received: 09/07/18 01:00

Lab Sample ID: 480-141320-1

Matrix: Solid
Percent Solids: 87.9

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	4.5	U	4.5	0.44	ug/Kg	☼	09/07/18 08:00	09/07/18 22:33	1
Methylcyclohexane	4.5	U	4.5	0.69	ug/Kg	☼	09/07/18 08:00	09/07/18 22:33	1
Methylene Chloride	4.5	U	4.5	2.1	ug/Kg	☼	09/07/18 08:00	09/07/18 22:33	1
m,p-Xylene	9.1	U	9.1	0.76	ug/Kg	☼	09/07/18 08:00	09/07/18 22:33	1
Naphthalene	4.5	U	4.5	0.61	ug/Kg	☼	09/07/18 08:00	09/07/18 22:33	1
n-Butanol	45	U	45	1.5	ug/Kg	☼	09/07/18 08:00	09/07/18 22:33	1
Butylbenzene	4.5	U	4.5	0.39	ug/Kg	☼	09/07/18 08:00	09/07/18 22:33	1
Heptane	91	U	91	2.4	ug/Kg	☼	09/07/18 08:00	09/07/18 22:33	1
o-Xylene	4.5	U	4.5	0.59	ug/Kg	☼	09/07/18 08:00	09/07/18 22:33	1
sec-Butylbenzene	4.5	U	4.5	0.39	ug/Kg	☼	09/07/18 08:00	09/07/18 22:33	1
Tetrachloroethene	4.5	U	4.5	0.61	ug/Kg	☼	09/07/18 08:00	09/07/18 22:33	1
Tetrahydrofuran	9.1	U	9.1	2.6	ug/Kg	☼	09/07/18 08:00	09/07/18 22:33	1
Toluene	4.5	U	4.5	0.34	ug/Kg	☼	09/07/18 08:00	09/07/18 22:33	1
trans-1,2-Dichloroethene	4.5	U	4.5	0.47	ug/Kg	☼	09/07/18 08:00	09/07/18 22:33	1
trans-1,3-Dichloropropene	4.5	U	4.5	2.0	ug/Kg	☼	09/07/18 08:00	09/07/18 22:33	1
Trichloroethene	4.5	U	4.5	1.0	ug/Kg	☼	09/07/18 08:00	09/07/18 22:33	1
Trichlorofluoromethane	4.5	U	4.5	0.43	ug/Kg	☼	09/07/18 08:00	09/07/18 22:33	1
Vinyl chloride	4.5	U	4.5	0.55	ug/Kg	☼	09/07/18 08:00	09/07/18 22:33	1
Xylenes (total)	9.1	U	9.1	0.76	ug/Kg	☼	09/07/18 08:00	09/07/18 22:33	1
cis-1,3-Dichloropropene	4.5	U	4.5	0.65	ug/Kg	☼	09/07/18 08:00	09/07/18 22:33	1
Styrene	4.5	U	4.5	0.23	ug/Kg	☼	09/07/18 08:00	09/07/18 22:33	1
tert-Butylbenzene	4.5	U	4.5	0.47	ug/Kg	☼	09/07/18 08:00	09/07/18 22:33	1
2-Nitropropane	9.1	U	9.1	0.97	ug/Kg	☼	09/07/18 08:00	09/07/18 22:33	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/Kg*	☼			*09/07/18 08:00*	*09/07/18 22:33*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*103*		*64 - 126*	*09/07/18 08:00*	*09/07/18 22:33*	*1*
4-Bromofluorobenzene (Surr)	*98*		*72 - 126*	*09/07/18 08:00*	*09/07/18 22:33*	*1*
Toluene-d8 (Surr)	*102*		*71 - 125*	*09/07/18 08:00*	*09/07/18 22:33*	*1*
Dibromofluoromethane (Surr)	*102*		*60 - 140*	*09/07/18 08:00*	*09/07/18 22:33*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	940	U	940	140	ug/Kg	☼	09/13/18 09:48	09/16/18 15:19	5
1,2,4,5-Tetrachlorobenzene	940	U	940	160	ug/Kg	☼	09/13/18 09:48	09/16/18 15:19	5
bis(chloroisopropyl) ether	940	U	940	190	ug/Kg	☼	09/13/18 09:48	09/16/18 15:19	5
2,3,4,6-Tetrachlorophenol	940	U	940	190	ug/Kg	☼	09/13/18 09:48	09/16/18 15:19	5
2,4,5-Trichlorophenol	940	U	940	250	ug/Kg	☼	09/13/18 09:48	09/16/18 15:19	5
2,4,6-Trichlorophenol	940	U	940	190	ug/Kg	☼	09/13/18 09:48	09/16/18 15:19	5
2,4-Dichlorophenol	940	U	940	100	ug/Kg	☼	09/13/18 09:48	09/16/18 15:19	5
2,4-Dimethylphenol	940	U	940	230	ug/Kg	☼	09/13/18 09:48	09/16/18 15:19	5
2,4-Dinitrophenol	9200	U	9200	4300	ug/Kg	☼	09/13/18 09:48	09/16/18 15:19	5
2,4-Dinitrotoluene	940	U	940	190	ug/Kg	☼	09/13/18 09:48	09/16/18 15:19	5
2,6-Dinitrotoluene	940	U	940	110	ug/Kg	☼	09/13/18 09:48	09/16/18 15:19	5
2-Chloronaphthalene	940	U	940	150	ug/Kg	☼	09/13/18 09:48	09/16/18 15:19	5
2-Chlorophenol	940	U	940	170	ug/Kg	☼	09/13/18 09:48	09/16/18 15:19	5
2-Methylnaphthalene	940	U	940	190	ug/Kg	☼	09/13/18 09:48	09/16/18 15:19	5
2-Methylphenol	940	U	940	110	ug/Kg	☼	09/13/18 09:48	09/16/18 15:19	5

Client Sample ID: BLDG 25-UNDER SLAB 1
Lab Sample ID: 480-141320-1

Date Collected: 09/06/18 16:35
Matrix: Solid
Date Received: 09/07/18 01:00
Percent Solids: 87.9

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Nitroaniline	1800	U	1800	140	ug/Kg	☼	09/13/18 09:48	09/16/18 15:19	5
2-Nitrophenol	940	U	940	270	ug/Kg	☼	09/13/18 09:48	09/16/18 15:19	5
3 & 4 Methylphenol	1800	U	1800	140	ug/Kg	☼	09/13/18 09:48	09/16/18 15:19	5
3,3'-Dichlorobenzidine	1800	U	1800	1100	ug/Kg	☼	09/13/18 09:48	09/16/18 15:19	5
3-Nitroaniline	1800	U	1800	260	ug/Kg	☼	09/13/18 09:48	09/16/18 15:19	5
4,6-Dinitro-2-methylphenol	1800	U	1800	940	ug/Kg	☼	09/13/18 09:48	09/16/18 15:19	5
4-Bromophenyl phenyl ether	940	U	940	130	ug/Kg	☼	09/13/18 09:48	09/16/18 15:19	5
4-Chloro-3-methylphenol	940	U	940	230	ug/Kg	☼	09/13/18 09:48	09/16/18 15:19	5
4-Chloroaniline	940	U	940	230	ug/Kg	☼	09/13/18 09:48	09/16/18 15:19	5
4-Chlorophenyl phenyl ether	940	U	940	120	ug/Kg	☼	09/13/18 09:48	09/16/18 15:19	5
4-Methylphenol	1800	U	1800	110	ug/Kg	☼	09/13/18 09:48	09/16/18 15:19	5
4-Nitroaniline	1800	U	1800	490	ug/Kg	☼	09/13/18 09:48	09/16/18 15:19	5
4-Nitrophenol	1800	U	1800	660	ug/Kg	☼	09/13/18 09:48	09/16/18 15:19	5
Acenaphthene	940	U	940	140	ug/Kg	☼	09/13/18 09:48	09/16/18 15:19	5
Acenaphthylene	940	U	940	120	ug/Kg	☼	09/13/18 09:48	09/16/18 15:19	5
Acetophenone	940	U	940	130	ug/Kg	☼	09/13/18 09:48	09/16/18 15:19	5
Aniline	1800	U	1800	230	ug/Kg	☼	09/13/18 09:48	09/16/18 15:19	5
Anthracene	940	U	940	230	ug/Kg	☼	09/13/18 09:48	09/16/18 15:19	5
Atrazine	940	U	940	330	ug/Kg	☼	09/13/18 09:48	09/16/18 15:19	5
Benzaldehyde	940	U	940	750	ug/Kg	☼	09/13/18 09:48	09/16/18 15:19	5
Benzo(a)anthracene	940	U	940	94	ug/Kg	☼	09/13/18 09:48	09/16/18 15:19	5
Benzo(a)pyrene	940	U	940	140	ug/Kg	☼	09/13/18 09:48	09/16/18 15:19	5
Benzo(b)fluoranthene	940	U	940	150	ug/Kg	☼	09/13/18 09:48	09/16/18 15:19	5
Benzo(g,h,i)perylene	940	U	940	100	ug/Kg	☼	09/13/18 09:48	09/16/18 15:19	5
Benzo(k)fluoranthene	940	U	940	120	ug/Kg	☼	09/13/18 09:48	09/16/18 15:19	5
Benzyl alcohol	1800	U	1800	130	ug/Kg	☼	09/13/18 09:48	09/16/18 15:19	5
Bis(2-chloroethoxy)methane	940	U	940	200	ug/Kg	☼	09/13/18 09:48	09/16/18 15:19	5
Bis(2-chloroethyl)ether	940	U	940	120	ug/Kg	☼	09/13/18 09:48	09/16/18 15:19	5
Bis(2-ethylhexyl) phthalate	940	U	940	320	ug/Kg	☼	09/13/18 09:48	09/16/18 15:19	5
Butyl benzyl phthalate	940	U	940	150	ug/Kg	☼	09/13/18 09:48	09/16/18 15:19	5
Caprolactam	940	U	940	280	ug/Kg	☼	09/13/18 09:48	09/16/18 15:19	5
Carbazole	940	U	940	110	ug/Kg	☼	09/13/18 09:48	09/16/18 15:19	5
Chrysene	940	U	940	210	ug/Kg	☼	09/13/18 09:48	09/16/18 15:19	5
Dibenz(a,h)anthracene	940	U	940	170	ug/Kg	☼	09/13/18 09:48	09/16/18 15:19	5
Dibenzofuran	940	U	940	110	ug/Kg	☼	09/13/18 09:48	09/16/18 15:19	5
Diethyl phthalate	940	U	940	120	ug/Kg	☼	09/13/18 09:48	09/16/18 15:19	5
Dimethyl phthalate	940	U	940	110	ug/Kg	☼	09/13/18 09:48	09/16/18 15:19	5
Di-n-butyl phthalate	940	U	940	160	ug/Kg	☼	09/13/18 09:48	09/16/18 15:19	5
Di-n-octyl phthalate	940	U	940	110	ug/Kg	☼	09/13/18 09:48	09/16/18 15:19	5
Fluoranthene	940	U	940	100	ug/Kg	☼	09/13/18 09:48	09/16/18 15:19	5
Fluorene	940	U	940	110	ug/Kg	☼	09/13/18 09:48	09/16/18 15:19	5
Hexachlorobenzene	940	U	940	130	ug/Kg	☼	09/13/18 09:48	09/16/18 15:19	5
Hexachlorobutadiene	940	U	940	140	ug/Kg	☼	09/13/18 09:48	09/16/18 15:19	5
Hexachlorocyclopentadiene	940	U	940	130	ug/Kg	☼	09/13/18 09:48	09/16/18 15:19	5
Hexachloroethane	940	U	940	120	ug/Kg	☼	09/13/18 09:48	09/16/18 15:19	5
Indeno(1,2,3-cd)pyrene	940	U	940	120	ug/Kg	☼	09/13/18 09:48	09/16/18 15:19	5
Isophorone	940	U	940	200	ug/Kg	☼	09/13/18 09:48	09/16/18 15:19	5
Naphthalene	940	U	940	120	ug/Kg	☼	09/13/18 09:48	09/16/18 15:19	5
Nitrobenzene	940	U	940	110	ug/Kg	☼	09/13/18 09:48	09/16/18 15:19	5

Client Sample ID: BLDG 25-UNDER SLAB 1

Date Collected: 09/06/18 16:35
Date Received: 09/07/18 01:00

Lab Sample ID: 480-141320-1

Matrix: Solid
Percent Solids: 87.9

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
N-Nitroso-di-n-propylamine	940	U	940	160	ug/Kg	☼	09/13/18 09:48	09/16/18 15:19	5
N-Nitrosodiphenylamine	940	U	940	760	ug/Kg	☼	09/13/18 09:48	09/16/18 15:19	5
Pentachlorophenol	1800	U	1800	940	ug/Kg	☼	09/13/18 09:48	09/16/18 15:19	5
Phenanthrene	940	U	940	140	ug/Kg	☼	09/13/18 09:48	09/16/18 15:19	5
Phenol	940	U	940	140	ug/Kg	☼	09/13/18 09:48	09/16/18 15:19	5
Pyrene	940	U	940	110	ug/Kg	☼	09/13/18 09:48	09/16/18 15:19	5
Pyridine	1800	U	1800	130	ug/Kg	☼	09/13/18 09:48	09/16/18 15:19	5
Dicyclohexylamine	17000	U	17000	8900	ug/Kg	☼	09/13/18 09:48	09/16/18 15:19	5

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Unknown	*4000*	*T J N*	*ug/Kg*	☼	*9.21*		*09/13/18 09:48*	*09/16/18 15:19*	*5*
Unknown	*3600*	*T J*	*ug/Kg*	☼	*9.53*		*09/13/18 09:48*	*09/16/18 15:19*	*5*
Unknown	*750*	*T J*	*ug/Kg*	☼	*10.70*		*09/13/18 09:48*	*09/16/18 15:19*	*5*
Cyclic octaatomic sulfur	*8300*	*T J N*	*ug/Kg*	☼	*11.76*	*10544-50-0*	*09/13/18 09:48*	*09/16/18 15:19*	*5*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*64*		*53 - 120*	*09/13/18 09:48*	*09/16/18 15:19*	*5*
p-Terphenyl-d14	*89*		*65 - 121*	*09/13/18 09:48*	*09/16/18 15:19*	*5*
Phenol-d5	*65*		*54 - 120*	*09/13/18 09:48*	*09/16/18 15:19*	*5*
2-Fluorophenol	*58*		*52 - 120*	*09/13/18 09:48*	*09/16/18 15:19*	*5*
2,4,6-Tribromophenol	*68*		*54 - 120*	*09/13/18 09:48*	*09/16/18 15:19*	*5*
2-Fluorobiphenyl	*74*		*60 - 120*	*09/13/18 09:48*	*09/16/18 15:19*	*5*

Method: 8015D - Gasoline Range Organics (GRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
GRO (C6-C10)	1.4	U	1.4	0.36	mg/Kg	☼	09/10/18 08:25	09/10/18 13:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene	*74*		*46 - 156*	*09/10/18 08:25*	*09/10/18 13:24*	*1*

Method: 8015D - Glycols- Direct Injection (GC/FID)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylene glycol	6.3	U	6.3	1.4	mg/Kg	☼	09/10/18 08:24	09/10/18 11:42	1
Propylene glycol	6.3	U	6.3	1.6	mg/Kg	☼	09/10/18 08:24	09/10/18 11:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Butanediol	*99*		*66 - 120*	*09/10/18 08:24*	*09/10/18 11:42*	*1*

Method: 8015D - Nonhalogenated Organic Compounds - Direct Injection (GC) - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	1.1	U	1.1	0.16	mg/Kg	☼		09/10/18 09:25	1
Isopropyl alcohol	1.1	U	1.1	0.26	mg/Kg	☼		09/10/18 09:25	1
Methanol	1.1	U	1.1	0.33	mg/Kg	☼		09/10/18 09:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Hexanone	*79*		*30 - 137*		*09/10/18 09:25*	*1*

Method: 8015D - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	**9.8**	**J**	19	5.6	mg/Kg	☼	09/10/18 07:19	09/10/18 15:56	1
Oil Range Organics (C28-C40)	19	U	19	5.6	mg/Kg	☼	09/10/18 07:19	09/10/18 15:56	1

Client Sample ID: BLDG 25-UNDER SLAB 1
Lab Sample ID: 480-141320-1

Date Collected: 09/06/18 16:35
Matrix: Solid
Date Received: 09/07/18 01:00
Percent Solids: 87.9

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	*93*		*48 - 125*	*09/10/18 07:19*	*09/10/18 15:56*	*1*

Method: 8315A - Carbonyl Compounds by HPLC

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetaldehyde	1.1 ~~0.29~~	~~J B~~ UB J	1.1	0.12	mg/Kg	☼	09/10/18 15:07	09/11/18 13:46	1
Formaldehyde	**13**	J	5.6	0.90	mg/Kg	☼	09/10/18 15:07	09/11/18 14:07	5
Glutaraldehyde	1.1	U J	1.1	0.23	mg/Kg	☼	09/10/18 15:07	09/11/18 13:46	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Butyraldehyde	*97*		*39 - 134*	*09/10/18 15:07*	*09/11/18 13:46*	*1*

ATTACHMENT 7

Waste Management Documentation

Site Address: 6000 Thompson Road
East Syracuse, NY 13057

~~Nat Grid~~ B25 Vault

SC PPW 7/12/2018

WORK ORDER NO. ~~SR0000307 SWC~~

DOCUMENT NO. 1179984

STRAIGHT BILL OF LADING

TRANSPORTER 1 Clean Harbors Environmental Services, Inc. VEHICLE ID # 4353

EPA ID # MAD039322250 TRANS. 1 PHONE (781) 792-5000

TRANSPORTER 2 _____ VEHICLE ID # _____

EPA ID # _____ TRANS. 2 PHONE _____

DESIGNATED FACILITY	SHIPPER
WMI High Acres Landfill	Bristol-Myers Squibb Company
FACILITY EPA ID # NYSDEC8087076	SHIPPER EPA ID # NYD002230902
ADDRESS 425 Perinton Parkway	ADDRESS PO Box 4755
CITY Fairport STATE NY ZIP 14450	CITY Syracuse STATE NY ZIP 13221

CONTAINERS NO. & SIZE	TYPE	HM	DESCRIPTION OF MATERIALS	TOTAL QUANTITY	UNIT WT/VOL
1-25Y	CM		A. NON D.O.T. REGULATED, (SOIL FROM EXCAVATION)	EST 15	T
			B.		
			C.		
			D.		
			E.		
			F.		
			G.		
			H.		

SPECIAL HANDLING INSTRUCTIONS EMERGENCY PHONE #: (800) 483-8718 GENERATOR: Bristol-Myers Squibb Company

A.120021NY Profile #3097 PO# WIS105721O

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	CC Kimball	CC Kimball	12/28/18
TRANSPORTER 1	GERALD CRAVEN	Gerald Craven	12-28-18
TRANSPORTER 2	PRINT	SIGN	DATE
RECEIVED BY	PRINT	SIGN	DATE

CHI 107

Site Address: 6000 Thompson Road
East Syracuse, NY 13057

SC PPW 7/12/2018

WORK ORDER NO. 805200907-006

DOCUMENT NO. 1179984

STRAIGHT BILL OF LADING

TRANSPORTER 1 Clean Harbors Environmental Services, Inc. VEHICLE ID # 4353

EPA ID # MAD039322250 TRANS. 1 PHONE (781) 792-5000

TRANSPORTER 2 _____ VEHICLE ID # _____

EPA ID # _____ TRANS. 2 PHONE _____

DESIGNATED FACILITY	SHIPPER
W M I High Acres Landfill	Bristol-Myers Squibb Company
FACILITY EPA ID # NYSDEC8087076	SHIPPER EPA ID # NYD002230902
ADDRESS 425 Perinton Parkway	ADDRESS PO Box 4755
CITY Fairport STATE NY ZIP 14450	CITY Syracuse STATE NY ZIP 13221

CONTAINERS NO. & SIZE	TYPE	HM	DESCRIPTION OF MATERIALS	TOTAL QUANTITY	UNIT WT/VOL
1-25Y	CM		A. NON D.O.T. REGULATED, (SOIL FROM EXCAVATION)	EST 15	T
			B.		
			C.		
			D.		
			E.		
			F.		
			G.		
			H.		

SPECIAL HANDLING INSTRUCTIONS EMERGENCY PHONE #: (800) 483-8718 GENERATOR: Bristol-Myers Squibb Company

A.120021NY Holder 3097 PO# W18105721O

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	[illegible]	[signature]	12/28/18
TRANSPORTER 1	PRINT GERALD CRAVEN	SIGN [signature]	DATE 12-28-18
TRANSPORTER 2	PRINT	SIGN	DATE
RECEIVED BY	PRINT [illegible]	SIGN [signature]	DATE 12/29

3

CHI 107

WASTE MANAGEMENT

High Acres LF
425 Perinton Pkwy
Fairport, NY, 14450
Ph: (585) 223-6132

Original
Ticket# 1261540

Customer Name CLEANHARBORSAFETYKLEEN-120021
Ticket Date 12/28/2018
Payment Type Credit Account
Manual Ticket#
Hauling Ticket#
Route
State Waste Code
Manifest 1179984
Destination
PO 1) wi81057210 2) TBD
Profile 120021NY (Soil from Roll Off Box Characterization Sample)
Generator 190-BRISTOLMYERSSQUIBB BRISTOL-MYERS SQUIBB

Carrier CLN CLEAN HARBORS
Vehicle# 4353
Container
Driver
Check#
Billing # 0007568
Gen EPA ID N/A
Grid CELL 12A

Volume

	Time	Scale	Operator	Inbound
In	12/28/2018 10:31	A_Scale_1	SD #604682	
Out	12/28/2018 11:10	B_Scale_2	SD #604682	

Gross	68680 lb
Tare	37700 lb
Net	30980 lb
Tons	15.49

Comments

	Product	LD%	Qty	UOM	Rate	Fee	Amount	Origin
1	Cont Soil RCB-Tons	100	15.49	Tons				ONO
2	EVF-P6-Environment	100		X				ONO

Total Fees
Total Ticket

Driver's Signature_____

404WM

Site Address: 6000 Thompson Road
East Syracuse, NY 13057

~~Not Final~~ B25 Vault

SC PPW 7/12/2016

WORK ORDER NO. 80520008807 0005

DOCUMENT NO. 1179985

STRAIGHT BILL OF LADING

4353

TRANSPORTER 1 Clean Harbors Environmental Services, Inc. VEHICLE ID #

EPA ID # MAD039322250 TRANS. 1 PHONE (781) 792-5000

TRANSPORTER 2 VEHICLE ID #

EPA ID # TRANS. 2 PHONE

DESIGNATED FACILITY	SHIPPER
WM I High Acres Landfill	Bristol-Myers Squibb Company
FACILITY EPA ID # NYSDEC8087076	SHIPPER EPA ID # NYD002230902
ADDRESS 425 Perinton Parkway	ADDRESS PO Box 4755
CITY Fairport STATE NY ZIP 14450	CITY Syracuse STATE NY ZIP 13221

CONTAINERS NO. & SIZE	TYPE	HM	DESCRIPTION OF MATERIALS	TOTAL QUANTITY	UNIT WT/VOL
1 25Y	CM		A. NON D.O.T. REGULATED, (SOIL FROM EXCAVATION)	15	T
			B.		
			C.		
			D.		
			E.		
			F.		
			G.		
			H.		

SPECIAL HANDLING INSTRUCTIONS

EMERGENCY PHONE #: (800) 468-9716 GENERATOR: Bristol-Myers Squibb Company

R.120021NY Adler RT 5136 PO# WI8105210

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			
TRANSPORTER 1	PRINT GERALD GRAVEN	SIGN	DATE 12-28-16
TRANSPORTER 2	PRINT	SIGN	DATE
RECEIVED BY	PRINT	SIGN	DATE

CHI 107

Site Address: 6000 Thompson Road
East Syracuse, NY 13057

4353

SC PPW 7/12/2018

WORK ORDER 480520080 7-006

DOCUMENT NO. 1179985

STRAIGHT BILL OF LADING

TRANSPORTER 1 Clean Harbors Environmental Services, Inc — VEHICLE ID # 4353

EPA ID # MAD039322250 — TRANS. 1 PHONE (781) 792-5000

TRANSPORTER 2 — VEHICLE ID #

EPA ID # — TRANS. 2 PHONE

DESIGNATED FACILITY	SHIPPER
WMI High Acres Landfill	Bristol-Myers Squibb Company
FACILITY EPA ID # NYSDEC8087076	SHIPPER EPA ID # NYD002230902
ADDRESS 425 Perinton Parkway	ADDRESS PO Box 4755
CITY Fairport STATE NY ZIP 14450	CITY Syracuse STATE NY ZIP 13221

CONTAINERS NO. & SIZE	TYPE	HM	DESCRIPTION OF MATERIALS	TOTAL QUANTITY	UNIT WT/VOL
1 25Y	CM		A. NON D.O.T. REGULATED, (SOIL FROM EXCAVATION)	15	T
			B.		
			C.		
			D.		
			E.		
			F.		
			G.		
			H.		

SPECIAL HANDLING INSTRUCTIONS — EMERGENCY PHONE #: (800) 468-9718 — GENERATOR: Bristol-Myers Squibb Company

A.120021NY Adler RT 5138 PO# WI 8105721 0

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			
TRANSPORTER 1	PRINT GERARD GRAVEN	SIGN	DATE 12-28-18
TRANSPORTER 2	PRINT	SIGN	DATE
RECEIVED BY	PRINT	SIGN	DATE

3

CHI 107

WASTE MANAGEMENT

High Acres LF
425 Perinton Pkwy
Fairport, NY, 14450
Ph: (585) 223-6132

Original
Ticket# 1261694

Customer Name CLEANHARBORSAFETYKLEEN-120021
Ticket Date 12/28/2018
Payment Type Credit Account
Manual Ticket#
Hauling Ticket#
Route
State Waste Code
Manifest 1179985
Destination
PO 1) W181057210 2) TBD
Profile 120021NY (Soil from Roll Off Box Characterization Sample)
Generator 190-BRISTOLMYERSSQUIBB BRISTOL-MYERS SQUIBB

Carrier CLN CLEAN HARBORS
Vehicle# 4353
Container
Driver
Check#
Billing # 0007568
Gen EPA ID N/A
Grid CELL 12A

Volume

	Time	Scale	Operator	Inbound
In	12/28/2018 14:42	A_Scale_1	SD #604682	
Out	12/28/2018 15:00	B_Scale_2	SD #604682	

Gross	67860 lb
Tare	37560 lb
Net	30300 lb
Tons	15.15

Comments

	Product	LD%	Qty	UOM	Rate	Fee	Amount	Origin
1	Cont Soil RCG-Tons	100	15.15	Tons				ONO
2	EVF-P6-Environment	100		X				ONO

Total Fees

Total Ticket

Driver's Signature_____

404WM

B25 Vault

Site Address: 6000 Thompson Road
East Syracuse, NY 13057

SC PPW 7/12/2018

WORK ORDER NO. ~~SY1805200807-006~~

DOCUMENT NO. 1179986

STRAIGHT BILL OF LADING

TRANSPORTER 1 ~~Clean Harbors Environmental Services, Inc.~~ VEHICLE ID # 4353

EPA ID # ~~MAD039322250~~ TRANS. 1 PHONE ~~(781) 792-5000~~

TRANSPORTER 2 _____ VEHICLE ID # _____

EPA ID # _____ TRANS. 2 PHONE _____

DESIGNATED FACILITY	SHIPPER
W M I High Acres Landfill	Bristol-Myers Squibb Company
FACILITY EPA ID # NYSDEC9087076	SHIPPER EPA ID # NYD002230902
ADDRESS 425 Perinton Parkway	ADDRESS 6000 Thompson Road
CITY Fairport STATE NY ZIP 14450	CITY East Syracuse STATE NY ZIP 13221

CONTAINERS NO. & SIZE	TYPE	HM	DESCRIPTION OF MATERIALS	TOTAL QUANTITY	UNIT WT/VOL
1-25Y	CM		A. NON D.O.T. REGULATED, (SOIL FROM EXCAVATION)	15	T
			B.		
			C.		
			D.		
			E.		
			F.		
			G.		
			H.		

SPECIAL HANDLING INSTRUCTIONS

EMERGENCY PHONE #: (800) 468-9712 GENERATOR: Bristol-Myers Squibb Company

A.120021NY CHRT 26220 PAHW181057210

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	David Hartman		12-21-18
TRANSPORTER 1	Donald Graves		12-21-18
TRANSPORTER 2	PRINT	SIGN	DATE
RECEIVED BY	PRINT	SIGN	DATE

4

CHI 107

Site Address: 6000 Thompson Road
East Syracuse, NY 13057

SC PPW 7/12/2018
WORK ORDER NO. ~~SY1805200807-006~~

DOCUMENT NO. 1179986

STRAIGHT BILL OF LADING

TRANSPORTER 1 ~~Clean Harbors Environmental Services, Inc.~~ VEHICLE ID # 4353

EPA ID # ~~MAD039322250~~ TRANS. 1 PHONE ~~(781) 792-5000~~

TRANSPORTER 2 _____ VEHICLE ID # _____

EPA ID # _____ TRANS. 2 PHONE _____

DESIGNATED FACILITY	SHIPPER
~~W M I High Acres Landfill~~	~~Bristol-Myers Squibb Company~~
FACILITY EPA ID #	SHIPPER EPA ID #
~~NYSDEC8087076~~	~~NYD002230902~~
ADDRESS	ADDRESS
CITY ~~425 Perinton Parkway~~ STATE ZIP	CITY ~~PO Box 4755~~ STATE ZIP
~~Fairport~~ ~~NY~~ ~~14450~~	~~Syracuse~~ ~~NY~~ ~~13221~~

CONTAINERS NO. & SIZE	TYPE	HM	DESCRIPTION OF MATERIALS	TOTAL QUANTITY	UNIT WT/VOL
1-25Y	CM		A. NON D.O.T. REGULATED, (SOIL FROM EXCAVATION)	15	T
			B.		
			C.		
			D.		
			E.		
			F.		
			G.		
			H.		

SPECIAL HANDLING INSTRUCTIONS
EMERGENCY PHONE #: (800) 468-9718 GENERATOR: Bristol-Myers Squibb Company
A.120021NY CHIST 26220 PO# W1810577210

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	DAVID HARRIMAN		12-31-18
TRANSPORTER 1	GERALD CRAVEN	Gerald Craven	12-31-18
TRANSPORTER 2	PRINT	SIGN	DATE
RECEIVED BY	PRINT	SIGN	DATE

3

CHI 107

WASTE MANAGEMENT

High Acres LF
425 Perinton Pkwy
Fairport, NY, 14450
Ph: (585) 223-6132

Original
Ticket# 1262020

Customer Name	CLEANHARBORSAFETYKLEEN-120021	Carrier	CLN CLEAN HARBORS		
Ticket Date	12/31/2018	Vehicle#	4353	Volume	
Payment Type	Credit Account	Container			
Manual Ticket#		Driver			
Hauling Ticket#		Check#			
Route		Billing #	0007568		
State Waste Code		Gen EPA ID	N/A		
Manifest	1179986	Grid	CELL 12A		
Destination					
PO	1) W181057210 2) TBD				
Profile	120021NY (Soil from Roll Off Box Characterization Sample)				
Generator	190-BRISTOLMYERSSQUIBB BRISTOL-MYERS SQUIBB				

	Time	Scale	Operator	Inbound		
In	12/31/2018 09:31	A_Scale_1	SD #604682		Gross	72240 lb
Out	12/31/2018 10:00	B_Scale_2	SD #604682		Tare	37480 lb
					Net	34760 lb
					Tons	17.38

Comments

	Product	LD%	Qty	UOM	Rate	Fee	Amount	Origin
1	Cont Soil RCG-Tons	100	17.38	Tons				ONO
2	EVF-P6-Environment	100		%				ONO

Total Fees

Total Ticket

Driver's Signature_____

404WM

B25 vault

Site Address: 6000 Thompson Road
East Syracuse, NY 13057

SC PPW 7/12/2018

WORK ORDER NO. 80520087005

DOCUMENT NO. 1179987

STRAIGHT BILL OF LADING

TRANSPORTER 1 Clean Harbors Environmental Services, Inc. VEHICLE ID # 4353

EPA ID # MAD039322250 TRANS. 1 PHONE (781) 7925000

TRANSPORTER 2 _____ VEHICLE ID # _____

EPA ID # _____ TRANS. 2 PHONE _____

DESIGNATED FACILITY			SHIPPER		
WM High Acres Landfill			Bristol-Myers Squibb Company		
FACILITY EPA ID # NYSDEC8087076			SHIPPER EPA ID # NYD002230902		
ADDRESS 425 Perinton Parkway			ADDRESS PO Box 4755		
CITY Fairport	STATE NY	ZIP 14450	CITY Syracuse	STATE NY	ZIP 13221

CONTAINERS NO. & SIZE	TYPE	HM	DESCRIPTION OF MATERIALS	TOTAL QUANTITY	UNIT WT/VOL
1-25Y	CM		A. NON D.O.T. REGULATED, (SOIL FROM EXCAVATION)	15	T
			B.		
			C.		
			D.		
			E.		
			F.		
			G.		
			H.		

SPECIAL HANDLING INSTRUCTIONS

EMERGENCY PHONE #: (800) 424-9718 GENERATOR: Bristol-Myers Squibb Company

A.120021NY After RT 1796 Post W181057210

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	David Hartmann	[signature]	12-31-18
TRANSPORTER 1	Gerald Carver	[signature]	12-31-18
TRANSPORTER 2	PRINT	SIGN	DATE
RECEIVED BY	PRINT	SIGN	DATE

CHI 107

Site Address: 6000 Thompson Road
East Syracuse, NY 13057

SC PPW 7/12/2018
WORK ORDER NO. 80520080 7-006

DOCUMENT NO. 1179987 **STRAIGHT BILL OF LADING**

TRANSPORTER 1 Clean Harbors Environmental Services, Inc. VEHICLE ID # 4353

EPA ID # MAD039322250 TRANS. 1 PHONE (781) 792-5000

TRANSPORTER 2 _____ VEHICLE ID # _____

EPA ID # _____ TRANS. 2 PHONE _____

DESIGNATED FACILITY	SHIPPER
WMI High Acres Landfill	Bristol-Myers Squibb Company
FACILITY EPA ID # NYSDEC8087076	SHIPPER EPA ID # NYD002230902
ADDRESS 425 Perinton Parkway	ADDRESS PO Box 4755
CITY Fairport STATE NY ZIP 14450	CITY Syracuse STATE NY ZIP 13221

CONTAINERS NO. & SIZE	TYPE	HM	DESCRIPTION OF MATERIALS	TOTAL QUANTITY	UNIT WT/VOL
1-25Y	CM		A. NON B.O.T REGULATED, (SOIL FROM EXCAVATION)	15	T
			B.		
			C.		
			D.		
			E.		
			F.		
			G.		
			H.		

SPECIAL HANDLING INSTRUCTIONS EMERGENCY PHONE #: (800) 468-8718 GENERATOR: Bristol-Myers Squibb Company

A.120021NY Adler Containers Po# W181057210
RT 1796

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	LARRY HARTMAN		12-31-18
TRANSPORTER 1	GERALD GRAVEN		12-31-18
TRANSPORTER 2	PRINT	SIGN	DATE
RECEIVED BY	SAYRA DUFFY		12-31-18

3

CHI 107

WASTE MANAGEMENT

High Acres LF
425 Perinton Pkwy
Fairport, NY, 14450
Ph: (585) 223-6132

Original
Ticket# 1262198

Customer Name	CLEANHARBORSAFETYKLEEN-120021	Carrier	CLN CLEAN HARBORS		
Ticket Date	12/31/2018	Vehicle#	4353	Volume	
Payment Type	Credit Account	Container			
Manual Ticket#		Driver			
Hauling Ticket#		Check#			
Route		Billing #	0007568		
State Waste Code		Gen EPA ID	N/A		
Manifest	1179987	Grid	CELL 12A		
Destination					
PO	1) W181057210 2) TBD				
Profile	120021NY (Soil from Roll Off Box Characterization Sample)				
Generator	190-BRISTOLMYERSSQUIBB BRISTOL-MYERS SQUIBB				

	Time	Scale	Operator	Inbound		
In	12/31/2018 13:41	A_Scale_1	SD #604682		Gross	67100 lb
Out	12/31/2018 14:06	B_Scale_2	SD #604682		Tare	37300 lb
					Net	29800 lb
					Tons	14.90

Comments

	Product	LD%	Qty	UOM	Rate	Fee	Amount	Origin
1	Cont Soil RCG-Tons	100	14.90	Tons				ONO
2	EVF-P6-Environment	100		%				ONO

Total Fees

Total Ticket

Driver's Signature_____

404WM

B25 Vault

Site Address: 6000 Thompson Road
East Syracuse, NY 13057

SC PPW 7/12/2018

WORK ORDER NO. ~~SI 0052000670005~~

DOCUMENT NO. 1179990

STRAIGHT BILL OF LADING

TRANSPORTER 1 ~~Clean Harbors Environmental Services, Inc.~~ VEHICLE ID # 4353

EPA ID # ~~MAD039322250~~ TRANS. 1 PHONE ~~(781) 792 5000~~

TRANSPORTER 2 _____ VEHICLE ID # _____

EPA ID # _____ TRANS. 2 PHONE _____

DESIGNATED FACILITY	SHIPPER
W M I High Acres Landfill	Bristol-Myers Squibb Company
FACILITY EPA ID # NYSDEC8087076	SHIPPER EPA ID # NYD002230902
ADDRESS 425 Perinton Parkway	ADDRESS PO Box 4755
CITY Fairport STATE NY ZIP 14450	CITY Syracuse STATE NY ZIP 13221

CONTAINERS NO. & SIZE	TYPE	HM	DESCRIPTION OF MATERIALS	TOTAL QUANTITY	UNIT WT/VOL
1-25Y	CM		A. NON D.O.T. REGULATED, (SOIL FROM EXCAVATION)	15	T
			B.		
			C.		
			D.		
			E.		
			F.		
			G.		
			H.		

SPECIAL HANDLING INSTRUCTIONS PO# W1810573 10

EMERGENCY PHONE #: (800) 483-7615 GENERATOR: Bristol-Myers Squibb Company

A120021NY Container # CHOT 27275

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	Dave Gaster		7 Jan 19
TRANSPORTER 1	Gerald Graves		1-7-19
TRANSPORTER 2			
RECEIVED BY			

4

CHI 107

Site Address: 6000 Thompson Road
East Syracuse, NY 13057

SC PPW 7/12/2018
WORK ORDER NO. SI-1805200807-006

DOCUMENT NO. 1179990 **STRAIGHT BILL OF LADING**

TRANSPORTER 1 ~~Clean Harbors Environmental Services, Inc.~~ VEHICLE ID # 4353

EPA ID # ~~MAD039322250~~ TRANS. 1 PHONE ~~(781) 792-5000~~

TRANSPORTER 2 _____ VEHICLE ID # _____

EPA ID # _____ TRANS. 2 PHONE _____

DESIGNATED FACILITY	SHIPPER
W M I High Acres Landfill	~~Bristol-Myers Squibb Company~~
FACILITY EPA ID # NYSDEC8087076	SHIPPER EPA ID # NYD002230902
ADDRESS	ADDRESS
CITY ~~426 Perinton Parkway~~ Fairport STATE NY ZIP 14450	CITY ~~PO Box 4755~~ Syracuse STATE NY ZIP ~~13221~~

CONTAINERS NO. & SIZE	TYPE	HM	DESCRIPTION OF MATERIALS	TOTAL QUANTITY	UNIT WT/VOL
1-25Y	CM		A. NON D.O.T. REGULATED, (SOIL FROM EXCAVATION)	15	T
			B.		
			C.		
			D.		
			E.		
			F.		
			G.		
			H.		

SPECIAL HANDLING INSTRUCTIONS PO# W1810572 10
EMERGENCY PHONE #: (800) ~~489-6711~~ GENERATOR: ~~Bristol-Myers Squibb Company~~
A.120021NY Container # CHIT 27276

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	Dave Custer		2 Jan 19
TRANSPORTER 1	STEVEN GRAVEN		1-7-19
TRANSPORTER 2	PRINT	SIGN	DATE
RECEIVED BY	PRINT	SIGN	DATE 1/7/19

3

CHI 107

WASTE MANAGEMENT

High Acres LF
425 Perinton Pkwy
Fairport, NY, 14450
Ph: (585) 223-6132

Original
Ticket# 1263094

Customer Name CLEANHARBORSAFETYKLEEN-120021
Ticket Date 01/07/2019
Payment Type Credit Account
Manual Ticket#
Hauling Ticket#
Route
State Waste Code
Manifest 1179990
Destination
PO 1) W18057210 2) TBD
Profile 120021NY (Soil from Roll Off Box Characterization Sample)
Generator 190-BRISTOLMYERSSQUIBB BRISTOL-MYERS SQUIBB

Carrier CLN CLEAN HARBORS
Vehicle# 4353
Container
Driver
Check#
Billing # 0007568
Gen EPA ID N/A
Grid CELL 12A

Volume

	Time	Scale	Operator	Inbound
In	01/07/2019 09:22	A_Scale_1	SD #604682	
Out	01/07/2019 10:16	A_Scale_2	SD #604682	

Gross	70460 lb
Tare	37800 lb
Net	32660 lb
Tons	16.33

Comments

	Product	LDX	Qty	UOM	Rate	Fee	Amount	Origin
1	Cont Soil RCG-Tons	100	16.33	Tons				ONO
2	EVF-P6-Environment	100		%				ONO

Total Fees

Total Ticket

Driver's Signature_____

404WM

Bldg 25 Demo w/purple dirt
4353

Site Address: 6000 Thompson Road
East Syracuse, NY 13057

SC PPW 7/12/2018

WORK ORDER NO. 805200807-006

DOCUMENT NO. 1179992

STRAIGHT BILL OF LADING

TRANSPORTER 1 Clean Harbors Environmental Services, Inc. VEHICLE ID # 4353

EPA ID # MAD039322250 TRANS. 1 PHONE (781) 792-5000

TRANSPORTER 2 VEHICLE ID #

EPA ID # TRANS. 2 PHONE

DESIGNATED FACILITY	SHIPPER
WM High Acres Landfill	Bristol-Myers Squibb Company
FACILITY EPA ID # NYSDEC8087076	SHIPPER EPA ID # NYD002230902
ADDRESS 425 Perinton Parkway	ADDRESS PO Box 4755
CITY Fairport STATE NY ZIP 14450	CITY Syracuse STATE NY ZIP 13221

CONTAINERS NO. & SIZE	TYPE	HM	DESCRIPTION OF MATERIALS	TOTAL QUANTITY	UNIT WT/VOL
1-25Y	CM		A. NON D.O.T. REGULATED, (SOIL FROM EXCAVATION)	15	T
			B.		
			C.		
			D.		
			E.		
			F.		
			G.		
			H.		

SPECIAL HANDLING INSTRUCTIONS EMERGENCY PHONE #: (800) 468-8718 PO# WI8105221G GENERATOR: Bristol-Myers Squibb Company

A.120021NY Container # CHRT 25622

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.

SHIPPER	PRINT Anna H Locke	SIGN	DATE 1-8-19
TRANSPORTER 1	PRINT GERALD GRAVEN	SIGN	DATE 1-8-19
TRANSPORTER 2	PRINT	SIGN	DATE
RECEIVED BY	PRINT	SIGN	DATE 1/11

3

CHI 107

WASTE MANAGEMENT

High Acres LF
425 Perinton Pkwy
Fairport, NY, 14450
Ph: (585) 223-6132

Original
Ticket# 1263762

Customer Name CLEANHARBORSAFETYKLEEN-120021
Ticket Date 01/09/2019
Payment Type Credit Account
Manual Ticket#
Hauling Ticket#
Route
State Waste Code
Manifest 1179992
Destination
PO 1) W1B1057210 2) TBD
Profile 120021NY (Soil from Roll Off Box Characterization Sample)
Generator 190-BRISTOLMYERSSQUIBB BRISTOL-MYERS SQUIBB

Carrier CLN CLEAN HARBORS
Vehicle# 4353
Container
Driver
Check#
Billing # 0007568
Gen EPA ID N/A
Grid CELL 12A

Volume

	Time	Scale	Operator	Inbound
In	01/09/2019 09:50	A_Scale_1	SD #604682	
Out	01/09/2019 10:25	A_Scale_2	SD #604682	

Gross	65300 lb
Tare	37120 lb
Net	28180 lb
Tons	14.09

Comments

	Product	LDX	Qty	UOM	Rate	Fee	Amount	Origin
1	Cont Soil RCG-Tons	100	14.09	Tons				ONO
2	EVF-P6-Environment	100		%				ONO

Total Fees

Total Ticket

Driver's Signature_____

404WM

Bldg 25 Demo w/ Purple Dirt
4353

Site Address: 6000 Thompson Road
East Syracuse, NY 13057

SC PPW 7/12/2018
WORK ORDER #: 80200807-006

DOCUMENT NO. 1179996

STRAIGHT BILL OF LADING

TRANSPORTER 1 Clean Harbors Environmental Services, Inc. VEHICLE ID # 4353

EPA ID # MAD039322250 TRANS. 1 PHONE (781) 792-5000

TRANSPORTER 2 _____ VEHICLE ID # _____

EPA ID # _____ TRANS. 2 PHONE _____

DESIGNATED FACILITY	SHIPPER
WM High Acres Landfill	Bristol-Myers Squibb Company
FACILITY EPA ID # NYSDEC8087076	SHIPPER EPA ID # NYD002230902
ADDRESS 425 Perinton Parkway	ADDRESS PO Box 4755
CITY Fairport STATE NY ZIP 14450	CITY Syracuse STATE NY ZIP 13221

CONTAINERS NO. & SIZE	TYPE	HM	DESCRIPTION OF MATERIALS	TOTAL QUANTITY	UNIT WT/VOL
1-25Y	CM		A. NON D.O.T. REGULATED, (SOIL FROM EXCAVATION)	15	T
			B.		
			C.		
			D.		
			E.		
			F.		
			G.		
			H.		

SPECIAL HANDLING INSTRUCTIONS EMERGENCY PHONE #: (800) 483-9718 GENERATOR: Bristol-Myers Squibb Company
A.120021NY Container # CHRT 27275

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	1-8-19
TRANSPORTER 1	Gerald Graven	Gerald Graven	1-8-19
TRANSPORTER 2	PRINT	SIGN	DATE
RECEIVED BY	PRINT	SIGN	DATE 1-8-19

3

CHI 107

WASTE MANAGEMENT

High Acres LF
425 Perinton Pkwy
Fairport, NY, 14450
Ph: (585) 223-6132

Original
Ticket# 1263547

Customer Name CLEANHARBORSAFETYKLEEN-120021
Ticket Date 01/08/2019
Payment Type Credit Account
Manual Ticket#
Hauling Ticket#
Route
State Waste Code
Manifest 1179996
Destination
PO 1) 27275 2) TBD
Profile 120021NY (Soil from Roll Off Box Characterization Sample)
Generator 190-BRISTOLMYERSSQUIBB BRISTOL-MYERS SQUIBB

Carrier CLN CLEAN HARBORS
Vehicle# 4353
Container
Driver
Check#
Billing # 0007568
Gen EPA ID N/A
Grid CELL 12A

Volume

	Time	Scale	Operator
In	01/08/2019 13:36	A_Scale_1	SD #604682
Out	01/08/2019 13:56	B_Scale_2	SD #604682

Inbound

Gross	53500 lb
Tare	38080 lb
Net	15420 lb
Tons	7.71

Comments

	Product	LDX	Qty	UOM	Rate	Fee	Amount	Origin
1	Cont Soil RCB-Tons	100	7.71	Tons				ONO
2	EVF-P6-Environment	100		%				ONO

Total Fees

Total Ticket

Driver's Signature_____

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Buffalo
10 Hazelwood Drive
Amherst, NY 14228-2298
Tel: (716)691-2600

TestAmerica Job ID: 480-144681-1
Client Project/Site: Roll Off Characterization Sample

For:
Bristol-Myers Squibb Company
6000 Thompson Road
East Syracuse, New York 13057

Attn: Anne Locke

Melissa Deyo

Authorized for release by:
11/16/2018 4:36:57 PM

Melissa Deyo, Project Manager I
(716)504-9874
melissa.deyo@testamericainc.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at: www.testamericainc.com

The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Definitions/Glossary

Client: Bristol-Myers Squibb Company
Project/Site: Roll Off Characterization Sample

TestAmerica Job ID: 480-144681-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

GC Semi VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Metals

Qualifier	Qualifier Description
F1	MS and/or MSD Recovery is outside acceptance limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

General Chemistry

Qualifier	Qualifier Description
HF	Field parameter with a holding time of 15 minutes. Test performed by laboratory at client's request.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Case Narrative

Client: Bristol-Myers Squibb Company
Project/Site: Roll Off Characterization Sample

TestAmerica Job ID: 480-144681-1

Job ID: 480-144681-1

Laboratory: TestAmerica Buffalo

Narrative

Job Narrative
480-144681-1

Receipt
The samples were received on 11/3/2018 1:00 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 2.4° C.

GC/MS VOA
Method(s) 8260C: The following samples were diluted due to the nature of the TCLP matrix: Rolloff 25622 (480-144681-1), Rolloff 26220, 27275, 1796 (480-144681-2), Nat Grid Rolloff, 1HR+ 25015, 275023 (480-144681-3) and (LB 480-444175/1-A). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC/MS Semi VOA
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

GC Semi VOA
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Metals
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

General Chemistry
Method(s) 9045D: This analysis is normally performed in the field and has a method-defined holding time of 15 minutes. The following samples has been qualified with the "HF" flag to indicate analysis was performed in the laboratory outside the 15 minute timeframe: Rolloff 25622 (480-144681-1), Rolloff 26220, 27275, 1796 (480-144681-2), Nat Grid Rolloff, 1HR+ 25015, 275023 (480-144681-3) and (480-144681-C-1 DU).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Organic Prep
Method(s) 3510C: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate/sample duplicate (MS/MSD/DUP) associated with preparation batch 480-444139, 480-444180 and 480-444351.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Detection Summary

Client: Bristol-Myers Squibb Company
Project/Site: Roll Off Characterization Sample

TestAmerica Job ID: 480-144681-1

Client Sample ID: Rolloff 25622 — Lab Sample ID: 480-144681-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
PCB-1242	0.81		0.25	0.048	mg/Kg	1	☼	8082A	Total/NA
PCB-1254	0.48		0.25	0.12	mg/Kg	1	☼	8082A	Total/NA
Barium	0.43	J	1.0	0.10	mg/L	1		6010C	TCLP
Cadmium	0.0033		0.0020	0.00050	mg/L	1		6010C	TCLP

Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
Flashpoint	>180		50.0	50.0	Degrees F	1		1010A	Total/NA
pH	8.5	HF	0.1	0.1	SU	1		9045D	Total/NA
Temperature	20.2	HF	0.001	0.001	Degrees C	1		9045D	Total/NA

Client Sample ID: Rolloff 26220, 27275, 1796 — Lab Sample ID: 480-144681-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloroform	0.0034	J B	0.010	0.0034	mg/L	10		8260C	TCLP
PCB-1016	0.55		0.22	0.044	mg/Kg	1	☼	8082A	Total/NA
PCB-1254	0.10	J	0.22	0.10	mg/Kg	1	☼	8082A	Total/NA
Barium	0.65	J	1.0	0.10	mg/L	1		6010C	TCLP
Cadmium	0.0017	J	0.0020	0.00050	mg/L	1		6010C	TCLP

Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
Flashpoint	>180		50.0	50.0	Degrees F	1		1010A	Total/NA
pH	9.7	HF	0.1	0.1	SU	1		9045D	Total/NA
Temperature	19.7	HF	0.001	0.001	Degrees C	1		9045D	Total/NA

Client Sample ID: Nat Grid Rolloff, 1HR+ 25015, 275023 — Lab Sample ID: 480-144681-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.41	J	1.0	0.10	mg/L	1		6010C	TCLP
Cadmium	0.00080	J	0.0020	0.00050	mg/L	1		6010C	TCLP

Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
Flashpoint	>180		50.0	50.0	Degrees F	1		1010A	Total/NA
pH	8.4	HF	0.1	0.1	SU	1		9045D	Total/NA
Temperature	19.8	HF	0.001	0.001	Degrees C	1		9045D	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: Rolloff 25622

Date Collected: 11/02/18 10:00
Date Received: 11/03/18 01:00

Lab Sample ID: 480-144681-1

Matrix: Solid

Method: 8260C - TCLP Volatiles - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.010	0.0041	mg/L			11/14/18 22:38	10
Carbon tetrachloride	ND		0.010	0.0027	mg/L			11/14/18 22:38	10
Chlorobenzene	ND		0.010	0.0075	mg/L			11/14/18 22:38	10
Chloroform	ND		0.010	0.0034	mg/L			11/14/18 22:38	10
1,2-Dichloroethane	ND		0.010	0.0021	mg/L			11/14/18 22:38	10
1,1-Dichloroethene	ND		0.010	0.0029	mg/L			11/14/18 22:38	10
2-Butanone (MEK)	ND		0.050	0.013	mg/L			11/14/18 22:38	10
Tetrachloroethene	ND		0.010	0.0036	mg/L			11/14/18 22:38	10
Trichloroethene	ND		0.010	0.0046	mg/L			11/14/18 22:38	10
Vinyl chloride	ND		0.010	0.0090	mg/L			11/14/18 22:38	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*95*		*77 - 120*		*11/14/18 22:38*	*10*
Toluene-d8 (Surr)	*99*		*80 - 120*		*11/14/18 22:38*	*10*
4-Bromofluorobenzene (Surr)	*98*		*73 - 120*		*11/14/18 22:38*	*10*
Dibromofluoromethane (Surr)	*94*		*75 - 123*		*11/14/18 22:38*	*10*

Method: 8270D - Semivolatile Organic Compounds (GC/MS) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dichlorobenzene	ND		0.010	0.00046	mg/L		11/08/18 10:13	11/13/18 16:44	1
2,4-Dinitrotoluene	ND		0.0050	0.00045	mg/L		11/08/18 10:13	11/13/18 16:44	1
Hexachlorobenzene	ND		0.0050	0.00051	mg/L		11/08/18 10:13	11/13/18 16:44	1
Hexachlorobutadiene	ND		0.0050	0.00068	mg/L		11/08/18 10:13	11/13/18 16:44	1
Hexachloroethane	ND		0.0050	0.00059	mg/L		11/08/18 10:13	11/13/18 16:44	1
3-Methylphenol	ND		0.010	0.00040	mg/L		11/08/18 10:13	11/13/18 16:44	1
2-Methylphenol	ND		0.0050	0.00040	mg/L		11/08/18 10:13	11/13/18 16:44	1
4-Methylphenol	ND		0.010	0.00036	mg/L		11/08/18 10:13	11/13/18 16:44	1
Nitrobenzene	ND		0.0050	0.00029	mg/L		11/08/18 10:13	11/13/18 16:44	1
Pentachlorophenol	ND		0.010	0.0022	mg/L		11/08/18 10:13	11/13/18 16:44	1
Pyridine	ND		0.025	0.00041	mg/L		11/08/18 10:13	11/13/18 16:44	1
2,4,5-Trichlorophenol	ND		0.0050	0.00048	mg/L		11/08/18 10:13	11/13/18 16:44	1
2,4,6-Trichlorophenol	ND		0.0050	0.00061	mg/L		11/08/18 10:13	11/13/18 16:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*90*		*41 - 120*	*11/08/18 10:13*	*11/13/18 16:44*	*1*
2-Fluorobiphenyl	*82*		*48 - 120*	*11/08/18 10:13*	*11/13/18 16:44*	*1*
2-Fluorophenol	*43*		*35 - 120*	*11/08/18 10:13*	*11/13/18 16:44*	*1*
Nitrobenzene-d5	*81*		*46 - 120*	*11/08/18 10:13*	*11/13/18 16:44*	*1*
p-Terphenyl-d14	*100*		*59 - 136*	*11/08/18 10:13*	*11/13/18 16:44*	*1*
Phenol-d5	*32*		*22 - 120*	*11/08/18 10:13*	*11/13/18 16:44*	*1*

Method: 6010C - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.015	0.0056	mg/L		11/08/18 10:38	11/14/18 00:20	1
Barium	**0.43**	**J**	1.0	0.10	mg/L		11/08/18 10:38	11/14/18 00:20	1
Cadmium	**0.0033**		0.0020	0.00050	mg/L		11/08/18 10:38	11/14/18 00:20	1
Chromium	ND		0.020	0.010	mg/L		11/08/18 10:38	11/14/18 00:20	1
Lead	ND		0.020	0.0030	mg/L		11/08/18 10:38	11/14/18 00:20	1
Selenium	ND		0.025	0.0087	mg/L		11/08/18 10:38	11/14/18 00:20	1
Silver	ND		0.0060	0.0017	mg/L		11/08/18 10:38	11/14/18 00:20	1

Client Sample ID: Rolloff 25622

Lab Sample ID: 480-144681-1
Date Collected: 11/02/18 10:00
Matrix: Solid
Date Received: 11/03/18 01:00

Method: 7470A - TCLP Mercury - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND	F1	0.00020	0.00012	mg/L		11/12/18 12:40	11/12/18 16:24	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Flashpoint	**>180**		50.0	50.0	Degrees F			11/09/18 09:33	1
Cyanide, Reactive	ND		10	10	mg/Kg		11/08/18 12:37	11/09/18 09:13	1
Sulfide, Reactive	ND		10	10	mg/Kg		11/08/18 12:37	11/11/18 14:47	1
pH	**8.5**	**HF**	0.1	0.1	SU			11/06/18 12:34	1
Temperature	**20.2**	**HF**	0.001	0.001	Degrees C			11/06/18 12:34	1

Client Sample ID: Rolloff 25622

Lab Sample ID: 480-144681-1
Date Collected: 11/02/18 10:00
Matrix: Solid
Date Received: 11/03/18 01:00
Percent Solids: 92.3

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.25	0.048	mg/Kg	☼	11/07/18 14:27	11/08/18 19:15	1
PCB-1221	ND		0.25	0.048	mg/Kg	☼	11/07/18 14:27	11/08/18 19:15	1
PCB-1232	ND		0.25	0.048	mg/Kg	☼	11/07/18 14:27	11/08/18 19:15	1
PCB-1242	**0.81**		0.25	0.048	mg/Kg	☼	11/07/18 14:27	11/08/18 19:15	1
PCB-1248	ND		0.25	0.048	mg/Kg	☼	11/07/18 14:27	11/08/18 19:15	1
PCB-1254	**0.48**		0.25	0.12	mg/Kg	☼	11/07/18 14:27	11/08/18 19:15	1
PCB-1260	ND		0.25	0.12	mg/Kg	☼	11/07/18 14:27	11/08/18 19:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*119*		*60 - 154*	*11/07/18 14:27*	*11/08/18 19:15*	*1*
DCB Decachlorobiphenyl	*111*		*65 - 174*	*11/07/18 14:27*	*11/08/18 19:15*	*1*

Client Sample ID: Rolloff 26220, 27275, 1796

Lab Sample ID: 480-144681-2
Date Collected: 11/02/18 10:00
Matrix: Solid
Date Received: 11/03/18 01:00

Method: 8260C - TCLP Volatiles - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.010	0.0041	mg/L			11/14/18 23:01	10
Carbon tetrachloride	ND		0.010	0.0027	mg/L			11/14/18 23:01	10
Chlorobenzene	ND		0.010	0.0075	mg/L			11/14/18 23:01	10
Chloroform	**0.0034**	**J B**	0.010	0.0034	mg/L			11/14/18 23:01	10
1,2-Dichloroethane	ND		0.010	0.0021	mg/L			11/14/18 23:01	10
1,1-Dichloroethene	ND		0.010	0.0029	mg/L			11/14/18 23:01	10
2-Butanone (MEK)	ND		0.050	0.013	mg/L			11/14/18 23:01	10
Tetrachloroethene	ND		0.010	0.0036	mg/L			11/14/18 23:01	10
Trichloroethene	ND		0.010	0.0046	mg/L			11/14/18 23:01	10
Vinyl chloride	ND		0.010	0.0090	mg/L			11/14/18 23:01	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*99*		*77 - 120*		*11/14/18 23:01*	*10*
Toluene-d8 (Surr)	*98*		*80 - 120*		*11/14/18 23:01*	*10*
4-Bromofluorobenzene (Surr)	*100*		*73 - 120*		*11/14/18 23:01*	*10*
Dibromofluoromethane (Surr)	*97*		*75 - 123*		*11/14/18 23:01*	*10*

Client Sample ID: Rolloff 26220, 27275, 1796

Lab Sample ID: 480-144681-2
Date Collected: 11/02/18 10:00
Matrix: Solid
Date Received: 11/03/18 01:00

Method: 8270D - Semivolatile Organic Compounds (GC/MS) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dichlorobenzene	ND		0.010	0.00046	mg/L		11/08/18 10:13	11/13/18 17:11	1
2,4-Dinitrotoluene	ND		0.0050	0.00045	mg/L		11/08/18 10:13	11/13/18 17:11	1
Hexachlorobenzene	ND		0.0050	0.00051	mg/L		11/08/18 10:13	11/13/18 17:11	1
Hexachlorobutadiene	ND		0.0050	0.00068	mg/L		11/08/18 10:13	11/13/18 17:11	1
Hexachloroethane	ND		0.0050	0.00059	mg/L		11/08/18 10:13	11/13/18 17:11	1
3-Methylphenol	ND		0.010	0.00040	mg/L		11/08/18 10:13	11/13/18 17:11	1
2-Methylphenol	ND		0.0050	0.00040	mg/L		11/08/18 10:13	11/13/18 17:11	1
4-Methylphenol	ND		0.010	0.00036	mg/L		11/08/18 10:13	11/13/18 17:11	1
Nitrobenzene	ND		0.0050	0.00029	mg/L		11/08/18 10:13	11/13/18 17:11	1
Pentachlorophenol	ND		0.010	0.0022	mg/L		11/08/18 10:13	11/13/18 17:11	1
Pyridine	ND		0.025	0.00041	mg/L		11/08/18 10:13	11/13/18 17:11	1
2,4,5-Trichlorophenol	ND		0.0050	0.00048	mg/L		11/08/18 10:13	11/13/18 17:11	1
2,4,6-Trichlorophenol	ND		0.0050	0.00061	mg/L		11/08/18 10:13	11/13/18 17:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*91*		*41 - 120*	*11/08/18 10:13*	*11/13/18 17:11*	*1*
2-Fluorobiphenyl	*81*		*48 - 120*	*11/08/18 10:13*	*11/13/18 17:11*	*1*
2-Fluorophenol	*44*		*35 - 120*	*11/08/18 10:13*	*11/13/18 17:11*	*1*
Nitrobenzene-d5	*81*		*46 - 120*	*11/08/18 10:13*	*11/13/18 17:11*	*1*
p-Terphenyl-d14	*94*		*59 - 136*	*11/08/18 10:13*	*11/13/18 17:11*	*1*
Phenol-d5	*30*		*22 - 120*	*11/08/18 10:13*	*11/13/18 17:11*	*1*

Method: 6010C - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.015	0.0056	mg/L		11/08/18 10:38	11/14/18 00:39	1
Barium	**0.65**	**J**	1.0	0.10	mg/L		11/08/18 10:38	11/14/18 00:39	1
Cadmium	**0.0017**	**J**	0.0020	0.00050	mg/L		11/08/18 10:38	11/14/18 00:39	1
Chromium	ND		0.020	0.010	mg/L		11/08/18 10:38	11/14/18 00:39	1
Lead	ND		0.020	0.0030	mg/L		11/08/18 10:38	11/14/18 00:39	1
Selenium	ND		0.025	0.0087	mg/L		11/08/18 10:38	11/14/18 00:39	1
Silver	ND		0.0060	0.0017	mg/L		11/08/18 10:38	11/14/18 00:39	1

Method: 7470A - TCLP Mercury - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00012	mg/L		11/12/18 12:40	11/12/18 16:29	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Flashpoint	**>180**		50.0	50.0	Degrees F			11/09/18 09:33	1
Cyanide, Reactive	ND		10	10	mg/Kg		11/08/18 12:37	11/09/18 09:15	1
Sulfide, Reactive	ND		10	10	mg/Kg		11/08/18 12:37	11/11/18 14:47	1
pH	**9.7**	**HF**	0.1	0.1	SU			11/06/18 12:34	1
Temperature	**19.7**	**HF**	0.001	0.001	Degrees C			11/06/18 12:34	1

Client Sample ID: Rolloff 26220, 27275, 1796

Lab Sample ID: 480-144681-2
Date Collected: 11/02/18 10:00
Matrix: Solid
Date Received: 11/03/18 01:00
Percent Solids: 84.1

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	**0.55**		0.22	0.044	mg/Kg	☼	11/07/18 14:27	11/08/18 19:31	1

Client Sample ID: Rolloff 26220, 27275, 1796

Lab Sample ID: 480-144681-2
Date Collected: 11/02/18 10:00
Matrix: Solid
Date Received: 11/03/18 01:00
Percent Solids: 84.1

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1221	ND		0.22	0.044	mg/Kg	☼	11/07/18 14:27	11/08/18 19:31	1
PCB-1232	ND		0.22	0.044	mg/Kg	☼	11/07/18 14:27	11/08/18 19:31	1
PCB-1242	ND		0.22	0.044	mg/Kg	☼	11/07/18 14:27	11/08/18 19:31	1
PCB-1248	ND		0.22	0.044	mg/Kg	☼	11/07/18 14:27	11/08/18 19:31	1
PCB-1254	**0.10**	**J**	0.22	0.10	mg/Kg	☼	11/07/18 14:27	11/08/18 19:31	1
PCB-1260	ND		0.22	0.10	mg/Kg	☼	11/07/18 14:27	11/08/18 19:31	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*114*		*60 - 154*	*11/07/18 14:27*	*11/08/18 19:31*	*1*
DCB Decachlorobiphenyl	*98*		*65 - 174*	*11/07/18 14:27*	*11/08/18 19:31*	*1*

Client Sample ID: Nat Grid Rolloff, 1HR+ 25015, 275023

Lab Sample ID: 480-144681-3
Date Collected: 11/02/18 10:00
Matrix: Solid
Date Received: 11/03/18 01:00

Method: 8260C - TCLP Volatiles - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.010	0.0041	mg/L			11/14/18 23:24	10
Carbon tetrachloride	ND		0.010	0.0027	mg/L			11/14/18 23:24	10
Chlorobenzene	ND		0.010	0.0075	mg/L			11/14/18 23:24	10
Chloroform	ND		0.010	0.0034	mg/L			11/14/18 23:24	10
1,2-Dichloroethane	ND		0.010	0.0021	mg/L			11/14/18 23:24	10
1,1-Dichloroethene	ND		0.010	0.0029	mg/L			11/14/18 23:24	10
2-Butanone (MEK)	ND		0.050	0.013	mg/L			11/14/18 23:24	10
Tetrachloroethene	ND		0.010	0.0036	mg/L			11/14/18 23:24	10
Trichloroethene	ND		0.010	0.0046	mg/L			11/14/18 23:24	10
Vinyl chloride	ND		0.010	0.0090	mg/L			11/14/18 23:24	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*98*		*77 - 120*		*11/14/18 23:24*	*10*
Toluene-d8 (Surr)	*98*		*80 - 120*		*11/14/18 23:24*	*10*
4-Bromofluorobenzene (Surr)	*100*		*73 - 120*		*11/14/18 23:24*	*10*
Dibromofluoromethane (Surr)	*97*		*75 - 123*		*11/14/18 23:24*	*10*

Method: 8270D - Semivolatile Organic Compounds (GC/MS) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dichlorobenzene	ND		0.010	0.00046	mg/L		11/08/18 10:13	11/13/18 17:38	1
2,4-Dinitrotoluene	ND		0.0050	0.00045	mg/L		11/08/18 10:13	11/13/18 17:38	1
Hexachlorobenzene	ND		0.0050	0.00051	mg/L		11/08/18 10:13	11/13/18 17:38	1
Hexachlorobutadiene	ND		0.0050	0.00068	mg/L		11/08/18 10:13	11/13/18 17:38	1
Hexachloroethane	ND		0.0050	0.00059	mg/L		11/08/18 10:13	11/13/18 17:38	1
3-Methylphenol	ND		0.010	0.00040	mg/L		11/08/18 10:13	11/13/18 17:38	1
2-Methylphenol	ND		0.0050	0.00040	mg/L		11/08/18 10:13	11/13/18 17:38	1
4-Methylphenol	ND		0.010	0.00036	mg/L		11/08/18 10:13	11/13/18 17:38	1
Nitrobenzene	ND		0.0050	0.00029	mg/L		11/08/18 10:13	11/13/18 17:38	1
Pentachlorophenol	ND		0.010	0.0022	mg/L		11/08/18 10:13	11/13/18 17:38	1
Pyridine	ND		0.025	0.00041	mg/L		11/08/18 10:13	11/13/18 17:38	1
2,4,5-Trichlorophenol	ND		0.0050	0.00048	mg/L		11/08/18 10:13	11/13/18 17:38	1
2,4,6-Trichlorophenol	ND		0.0050	0.00061	mg/L		11/08/18 10:13	11/13/18 17:38	1

Client Sample ID: Nat Grid Rolloff, 1HR+ 25015, 275023

Lab Sample ID: 480-144681-3

Date Collected: 11/02/18 10:00
Matrix: Solid
Date Received: 11/03/18 01:00

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*90*		*41 - 120*	*11/08/18 10:13*	*11/13/18 17:38*	*1*
2-Fluorobiphenyl	*83*		*48 - 120*	*11/08/18 10:13*	*11/13/18 17:38*	*1*
2-Fluorophenol	*47*		*35 - 120*	*11/08/18 10:13*	*11/13/18 17:38*	*1*
Nitrobenzene-d5	*82*		*46 - 120*	*11/08/18 10:13*	*11/13/18 17:38*	*1*
p-Terphenyl-d14	*96*		*59 - 136*	*11/08/18 10:13*	*11/13/18 17:38*	*1*
Phenol-d5	*33*		*22 - 120*	*11/08/18 10:13*	*11/13/18 17:38*	*1*

Method: 6010C - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.015	0.0056	mg/L		11/08/18 10:38	11/15/18 18:22	1
Barium	**0.41**	**J**	1.0	0.10	mg/L		11/08/18 10:38	11/15/18 18:22	1
Cadmium	**0.00080**	**J**	0.0020	0.00050	mg/L		11/08/18 10:38	11/16/18 13:26	1
Chromium	ND		0.020	0.010	mg/L		11/08/18 10:38	11/15/18 18:22	1
Lead	ND		0.020	0.0030	mg/L		11/08/18 10:38	11/15/18 18:22	1
Selenium	ND		0.025	0.0087	mg/L		11/08/18 10:38	11/15/18 18:22	1
Silver	ND		0.0060	0.0017	mg/L		11/08/18 10:38	11/15/18 18:22	1

Method: 7470A - TCLP Mercury - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00012	mg/L		11/12/18 12:40	11/12/18 16:12	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Flashpoint	**>180**		50.0	50.0	Degrees F			11/09/18 09:33	1
Cyanide, Reactive	ND		10	10	mg/Kg		11/08/18 12:37	11/09/18 09:18	1
Sulfide, Reactive	ND		10	10	mg/Kg		11/08/18 12:37	11/11/18 14:47	1
pH	**8.4**	**HF**	0.1	0.1	SU			11/06/18 12:34	1
Temperature	**19.8**	**HF**	0.001	0.001	Degrees C			11/06/18 12:34	1

Client Sample ID: Nat Grid Rolloff, 1HR+ 25015, 275023

Lab Sample ID: 480-144681-3

Date Collected: 11/02/18 10:00
Matrix: Solid
Date Received: 11/03/18 01:00
Percent Solids: 83.9

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.25	0.048	mg/Kg	☼	11/07/18 14:27	11/08/18 18:59	1
PCB-1221	ND		0.25	0.048	mg/Kg	☼	11/07/18 14:27	11/08/18 18:59	1
PCB-1232	ND		0.25	0.048	mg/Kg	☼	11/07/18 14:27	11/08/18 18:59	1
PCB-1242	ND		0.25	0.048	mg/Kg	☼	11/07/18 14:27	11/08/18 18:59	1
PCB-1248	ND		0.25	0.048	mg/Kg	☼	11/07/18 14:27	11/08/18 18:59	1
PCB-1254	ND		0.25	0.12	mg/Kg	☼	11/07/18 14:27	11/08/18 18:59	1
PCB-1260	ND		0.25	0.12	mg/Kg	☼	11/07/18 14:27	11/08/18 18:59	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*109*		*60 - 154*	*11/07/18 14:27*	*11/08/18 18:59*	*1*
DCB Decachlorobiphenyl	*98*		*65 - 174*	*11/07/18 14:27*	*11/08/18 18:59*	*1*

Surrogate Summary

Client: Bristol-Myers Squibb Company
Project/Site: Roll Off Characterization Sample

TestAmerica Job ID: 480-144681-1

Method: 8260C - TCLP Volatiles

Matrix: Solid — **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)			
		DCA	TOL	BFB	DBFM
Lab Sample ID	Client Sample ID	(77-120)	(80-120)	(73-120)	(75-123)
LCS 480-445641/5	Lab Control Sample	98	98	98	100
MB 480-445641/7	Method Blank	102	98	99	97

Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)
TOL = Toluene-d8 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
DBFM = Dibromofluoromethane (Surr)

Method: 8260C - TCLP Volatiles

Matrix: Solid — **Prep Type: TCLP**

		Percent Surrogate Recovery (Acceptance Limits)			
		DCA	TOL	BFB	DBFM
Lab Sample ID	Client Sample ID	(77-120)	(80-120)	(73-120)	(75-123)
480-144681-1	Rolloff 25622	95	99	98	94
480-144681-2	Rolloff 26220, 27275, 1796	99	98	100	97
480-144681-3	Nat Grid Rolloff, 1HR+ 25015, 275023	98	98	100	97
LB 480-444175/1-A	Method Blank	99	98	98	99

Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)
TOL = Toluene-d8 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
DBFM = Dibromofluoromethane (Surr)

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Matrix: Solid — **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)					
		TBP	FBP	2FP	NBZ	TPHd14	PHL
Lab Sample ID	Client Sample ID	(41-120)	(48-120)	(35-120)	(46-120)	(59-136)	(22-120)
LCS 480-444351/2-A	Lab Control Sample	94	81	46	80	97	32
LCSD 480-444351/3-A	Lab Control Sample Dup	94	84	45	81	96	32
MB 480-444351/1-A	Method Blank	91	89	50	91	100	36

Surrogate Legend

TBP = 2,4,6-Tribromophenol
FBP = 2-Fluorobiphenyl
2FP = 2-Fluorophenol
NBZ = Nitrobenzene-d5
TPHd14 = p-Terphenyl-d14
PHL = Phenol-d5

Surrogate Summary

Client: Bristol-Myers Squibb Company
Project/Site: Roll Off Characterization Sample

TestAmerica Job ID: 480-144681-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Matrix: Solid **Prep Type: TCLP**

		Percent Surrogate Recovery (Acceptance Limits)					
		TBP	FBP	2FP	NBZ	TPHd14	PHL
Lab Sample ID	Client Sample ID	(41-120)	(48-120)	(35-120)	(46-120)	(59-136)	(22-120)
480-144681-1	Rolloff 25622	90	82	43	81	100	32
480-144681-2	Rolloff 26220, 27275, 1796	91	81	44	81	94	30
480-144681-3	Nat Grid Rolloff, 1HR+ 25015, 275023	90	83	47	82	96	33
LB 480-444180/1-B	Method Blank	91	87	44	84	102	31
LB2 480-444139/1-B	Method Blank	84	76	40	74	98	29

Surrogate Legend

TBP = 2,4,6-Tribromophenol
FBP = 2-Fluorobiphenyl
2FP = 2-Fluorophenol
NBZ = Nitrobenzene-d5
TPHd14 = p-Terphenyl-d14
PHL = Phenol-d5

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)	
		TCX1	DCBP1
Lab Sample ID	Client Sample ID	(60-154)	(65-174)
480-144681-1	Rolloff 25622	119	111
480-144681-2	Rolloff 26220, 27275, 1796	114	98
480-144681-3	Nat Grid Rolloff, 1HR+ 25015, 275023	109	98
480-144681-3 MS	Nat Grid Rolloff, 1HR+ 25015, 275023	132	117
480-144681-3 MSD	Nat Grid Rolloff, 1HR+ 25015, 275023	151	123
LCS 480-444198/2-A	Lab Control Sample	153	131
MB 480-444198/1-A	Method Blank	122	116

Surrogate Legend

TCX = Tetrachloro-m-xylene
DCBP = DCB Decachlorobiphenyl

Method: 8260C - TCLP Volatiles

Lab Sample ID: MB 480-445641/7
Matrix: Solid
Analysis Batch: 445641

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.0010	0.00041	mg/L			11/14/18 21:14	1
Carbon tetrachloride	ND		0.0010	0.00027	mg/L			11/14/18 21:14	1
Chlorobenzene	ND		0.0010	0.00075	mg/L			11/14/18 21:14	1
Chloroform	ND		0.0010	0.00034	mg/L			11/14/18 21:14	1
1,2-Dichloroethane	ND		0.0010	0.00021	mg/L			11/14/18 21:14	1
1,1-Dichloroethene	ND		0.0010	0.00029	mg/L			11/14/18 21:14	1
2-Butanone (MEK)	ND		0.0050	0.0013	mg/L			11/14/18 21:14	1
Tetrachloroethene	ND		0.0010	0.00036	mg/L			11/14/18 21:14	1
Trichloroethene	ND		0.0010	0.00046	mg/L			11/14/18 21:14	1
Vinyl chloride	ND		0.0010	0.00090	mg/L			11/14/18 21:14	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*102*		*77 - 120*		*11/14/18 21:14*	*1*
Toluene-d8 (Surr)	*98*		*80 - 120*		*11/14/18 21:14*	*1*
4-Bromofluorobenzene (Surr)	*99*		*73 - 120*		*11/14/18 21:14*	*1*
Dibromofluoromethane (Surr)	*97*		*75 - 123*		*11/14/18 21:14*	*1*

Lab Sample ID: LCS 480-445641/5
Matrix: Solid
Analysis Batch: 445641

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	0.0250	0.0236		mg/L		95	71 - 124
Carbon tetrachloride	0.0250	0.0228		mg/L		91	72 - 134
Chlorobenzene	0.0250	0.0230		mg/L		92	80 - 120
Chloroform	0.0250	0.0229		mg/L		91	73 - 127
1,2-Dichloroethane	0.0250	0.0229		mg/L		92	75 - 120
1,1-Dichloroethene	0.0250	0.0210		mg/L		84	66 - 127
2-Butanone (MEK)	0.125	0.131		mg/L		105	57 - 140
Tetrachloroethene	0.0250	0.0228		mg/L		91	74 - 122
Trichloroethene	0.0250	0.0228		mg/L		91	74 - 123
Vinyl chloride	0.0250	0.0225		mg/L		90	65 - 133

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*98*		*77 - 120*
Toluene-d8 (Surr)	*98*		*80 - 120*
4-Bromofluorobenzene (Surr)	*98*		*73 - 120*
Dibromofluoromethane (Surr)	*100*		*75 - 123*

Lab Sample ID: LB 480-444175/1-A
Matrix: Solid
Analysis Batch: 445641

Client Sample ID: Method Blank
Prep Type: TCLP

Analyte	LB Result	LB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.010	0.0041	mg/L			11/14/18 21:52	10
Carbon tetrachloride	ND		0.010	0.0027	mg/L			11/14/18 21:52	10
Chlorobenzene	ND		0.010	0.0075	mg/L			11/14/18 21:52	10

Method: 8260C - TCLP Volatiles (Continued)

Lab Sample ID: LB 480-444175/1-A
Matrix: Solid
Analysis Batch: 445641

Client Sample ID: Method Blank
Prep Type: TCLP

Analyte	LB Result	LB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroform	0.00376	J	0.010	0.0034	mg/L			11/14/18 21:52	10
1,2-Dichloroethane	ND		0.010	0.0021	mg/L			11/14/18 21:52	10
1,1-Dichloroethene	ND		0.010	0.0029	mg/L			11/14/18 21:52	10
2-Butanone (MEK)	ND		0.050	0.013	mg/L			11/14/18 21:52	10
Tetrachloroethene	ND		0.010	0.0036	mg/L			11/14/18 21:52	10
Trichloroethene	ND		0.010	0.0046	mg/L			11/14/18 21:52	10
Vinyl chloride	ND		0.010	0.0090	mg/L			11/14/18 21:52	10

Surrogate	*LB %Recovery*	*LB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*99*		*77 - 120*		*11/14/18 21:52*	*10*
Toluene-d8 (Surr)	*98*		*80 - 120*		*11/14/18 21:52*	*10*
4-Bromofluorobenzene (Surr)	*98*		*73 - 120*		*11/14/18 21:52*	*10*
Dibromofluoromethane (Surr)	*99*		*75 - 123*		*11/14/18 21:52*	*10*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 480-444351/1-A
Matrix: Solid
Analysis Batch: 445259

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 444351

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dichlorobenzene	ND		0.0025	0.00012	mg/L		11/08/18 10:13	11/13/18 14:27	1
2,4-Dinitrotoluene	ND		0.0013	0.00011	mg/L		11/08/18 10:13	11/13/18 14:27	1
Hexachlorobenzene	ND		0.0013	0.00013	mg/L		11/08/18 10:13	11/13/18 14:27	1
Hexachlorobutadiene	ND		0.0013	0.00017	mg/L		11/08/18 10:13	11/13/18 14:27	1
Hexachloroethane	ND		0.0013	0.00015	mg/L		11/08/18 10:13	11/13/18 14:27	1
3-Methylphenol	ND		0.0025	0.00010	mg/L		11/08/18 10:13	11/13/18 14:27	1
2-Methylphenol	ND		0.0013	0.00010	mg/L		11/08/18 10:13	11/13/18 14:27	1
4-Methylphenol	ND		0.0025	0.000090	mg/L		11/08/18 10:13	11/13/18 14:27	1
Nitrobenzene	ND		0.0013	0.000073	mg/L		11/08/18 10:13	11/13/18 14:27	1
Pentachlorophenol	ND		0.0025	0.00055	mg/L		11/08/18 10:13	11/13/18 14:27	1
Pyridine	ND		0.0063	0.00010	mg/L		11/08/18 10:13	11/13/18 14:27	1
2,4,5-Trichlorophenol	ND		0.0013	0.00012	mg/L		11/08/18 10:13	11/13/18 14:27	1
2,4,6-Trichlorophenol	ND		0.0013	0.00015	mg/L		11/08/18 10:13	11/13/18 14:27	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*91*		*41 - 120*	*11/08/18 10:13*	*11/13/18 14:27*	*1*
2-Fluorobiphenyl	*89*		*48 - 120*	*11/08/18 10:13*	*11/13/18 14:27*	*1*
2-Fluorophenol	*50*		*35 - 120*	*11/08/18 10:13*	*11/13/18 14:27*	*1*
Nitrobenzene-d5	*91*		*46 - 120*	*11/08/18 10:13*	*11/13/18 14:27*	*1*
p-Terphenyl-d14	*100*		*59 - 136*	*11/08/18 10:13*	*11/13/18 14:27*	*1*
Phenol-d5	*36*		*22 - 120*	*11/08/18 10:13*	*11/13/18 14:27*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 480-444351/2-A
Matrix: Solid
Analysis Batch: 445259

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 444351

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
1,4-Dichlorobenzene			0.0500	0.0343		mg/L		69	51 - 120		
2,4-Dinitrotoluene			0.0500	0.0510		mg/L		102	69 - 120		
Hexachlorobenzene			0.0500	0.0443		mg/L		89	61 - 120		
Hexachlorobutadiene			0.0500	0.0381		mg/L		76	35 - 120		
Hexachloroethane			0.0500	0.0321		mg/L		64	43 - 120		
3-Methylphenol			0.0500	0.0338		mg/L		68	39 - 120		
2-Methylphenol			0.0500	0.0375		mg/L		75	39 - 120		
4-Methylphenol			0.0500	0.0338		mg/L		68	29 - 131		
Nitrobenzene			0.0500	0.0431		mg/L		86	53 - 123		
Pentachlorophenol			0.100	0.104		mg/L		104	29 - 136		
Pyridine			0.100	0.0426		mg/L		43	10 - 120		
2,4,5-Trichlorophenol			0.0500	0.0484		mg/L		97	65 - 126		
2,4,6-Trichlorophenol			0.0500	0.0492		mg/L		98	64 - 120		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2,4,6-Tribromophenol	*94*		*41 - 120*
2-Fluorobiphenyl	*81*		*48 - 120*
2-Fluorophenol	*46*		*35 - 120*
Nitrobenzene-d5	*80*		*46 - 120*
p-Terphenyl-d14	*97*		*59 - 136*
Phenol-d5	*32*		*22 - 120*

Lab Sample ID: LCSD 480-444351/3-A
Matrix: Solid
Analysis Batch: 445259

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 444351

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,4-Dichlorobenzene			0.0500	0.0354		mg/L		71	51 - 120	3	36
2,4-Dinitrotoluene			0.0500	0.0543		mg/L		109	69 - 120	6	20
Hexachlorobenzene			0.0500	0.0459		mg/L		92	61 - 120	4	15
Hexachlorobutadiene			0.0500	0.0402		mg/L		80	35 - 120	5	44
Hexachloroethane			0.0500	0.0337		mg/L		67	43 - 120	5	46
3-Methylphenol			0.0500	0.0345		mg/L		69	39 - 120	2	30
2-Methylphenol			0.0500	0.0390		mg/L		78	39 - 120	4	27
4-Methylphenol			0.0500	0.0345		mg/L		69	29 - 131	2	24
Nitrobenzene			0.0500	0.0437		mg/L		87	53 - 123	1	24
Pentachlorophenol			0.100	0.108		mg/L		108	29 - 136	3	37
Pyridine			0.100	0.0381		mg/L		38	10 - 120	11	49
2,4,5-Trichlorophenol			0.0500	0.0504		mg/L		101	65 - 126	4	18
2,4,6-Trichlorophenol			0.0500	0.0499		mg/L		100	64 - 120	1	19

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2,4,6-Tribromophenol	*94*		*41 - 120*
2-Fluorobiphenyl	*84*		*48 - 120*
2-Fluorophenol	*45*		*35 - 120*
Nitrobenzene-d5	*81*		*46 - 120*
p-Terphenyl-d14	*96*		*59 - 136*

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 480-444351/3-A
Matrix: Solid
Analysis Batch: 445259

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 444351

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Phenol-d5	*32*		*22 - 120*

Lab Sample ID: LB 480-444180/1-B
Matrix: Solid
Analysis Batch: 445259

Client Sample ID: Method Blank
Prep Type: TCLP
Prep Batch: 444351

Analyte	LB Result	LB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dichlorobenzene	ND		0.010	0.00046	mg/L		11/08/18 10:13	11/13/18 15:49	1
2,4-Dinitrotoluene	ND		0.0050	0.00045	mg/L		11/08/18 10:13	11/13/18 15:49	1
Hexachlorobenzene	ND		0.0050	0.00051	mg/L		11/08/18 10:13	11/13/18 15:49	1
Hexachlorobutadiene	ND		0.0050	0.00068	mg/L		11/08/18 10:13	11/13/18 15:49	1
Hexachloroethane	ND		0.0050	0.00059	mg/L		11/08/18 10:13	11/13/18 15:49	1
3-Methylphenol	ND		0.010	0.00040	mg/L		11/08/18 10:13	11/13/18 15:49	1
2-Methylphenol	ND		0.0050	0.00040	mg/L		11/08/18 10:13	11/13/18 15:49	1
4-Methylphenol	ND		0.010	0.00036	mg/L		11/08/18 10:13	11/13/18 15:49	1
Nitrobenzene	ND		0.0050	0.00029	mg/L		11/08/18 10:13	11/13/18 15:49	1
Pentachlorophenol	ND		0.010	0.0022	mg/L		11/08/18 10:13	11/13/18 15:49	1
Pyridine	ND		0.025	0.00041	mg/L		11/08/18 10:13	11/13/18 15:49	1
2,4,5-Trichlorophenol	ND		0.0050	0.00048	mg/L		11/08/18 10:13	11/13/18 15:49	1
2,4,6-Trichlorophenol	ND		0.0050	0.00061	mg/L		11/08/18 10:13	11/13/18 15:49	1

Surrogate	*LB %Recovery*	*LB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*91*		*41 - 120*	*11/08/18 10:13*	*11/13/18 15:49*	*1*
2-Fluorobiphenyl	*87*		*48 - 120*	*11/08/18 10:13*	*11/13/18 15:49*	*1*
2-Fluorophenol	*44*		*35 - 120*	*11/08/18 10:13*	*11/13/18 15:49*	*1*
Nitrobenzene-d5	*84*		*46 - 120*	*11/08/18 10:13*	*11/13/18 15:49*	*1*
p-Terphenyl-d14	*102*		*59 - 136*	*11/08/18 10:13*	*11/13/18 15:49*	*1*
Phenol-d5	*31*		*22 - 120*	*11/08/18 10:13*	*11/13/18 15:49*	*1*

Lab Sample ID: LB2 480-444139/1-B
Matrix: Solid
Analysis Batch: 445259

Client Sample ID: Method Blank
Prep Type: TCLP
Prep Batch: 444351

Analyte	LB2 Result	LB2 Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dichlorobenzene	ND		0.010	0.00046	mg/L		11/08/18 10:13	11/13/18 16:16	1
2,4-Dinitrotoluene	ND		0.0050	0.00045	mg/L		11/08/18 10:13	11/13/18 16:16	1
Hexachlorobenzene	ND		0.0050	0.00051	mg/L		11/08/18 10:13	11/13/18 16:16	1
Hexachlorobutadiene	ND		0.0050	0.00068	mg/L		11/08/18 10:13	11/13/18 16:16	1
Hexachloroethane	ND		0.0050	0.00059	mg/L		11/08/18 10:13	11/13/18 16:16	1
3-Methylphenol	ND		0.010	0.00040	mg/L		11/08/18 10:13	11/13/18 16:16	1
2-Methylphenol	ND		0.0050	0.00040	mg/L		11/08/18 10:13	11/13/18 16:16	1
4-Methylphenol	ND		0.010	0.00036	mg/L		11/08/18 10:13	11/13/18 16:16	1
Nitrobenzene	ND		0.0050	0.00029	mg/L		11/08/18 10:13	11/13/18 16:16	1
Pentachlorophenol	ND		0.010	0.0022	mg/L		11/08/18 10:13	11/13/18 16:16	1
Pyridine	ND		0.025	0.00041	mg/L		11/08/18 10:13	11/13/18 16:16	1
2,4,5-Trichlorophenol	ND		0.0050	0.00048	mg/L		11/08/18 10:13	11/13/18 16:16	1
2,4,6-Trichlorophenol	ND		0.0050	0.00061	mg/L		11/08/18 10:13	11/13/18 16:16	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LB2 480-444139/1-B
Matrix: Solid
Analysis Batch: 445259

Client Sample ID: Method Blank
Prep Type: TCLP
Prep Batch: 444351

Surrogate	LB2 %Recovery	LB2 Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol	84		41 - 120	11/08/18 10:13	11/13/18 16:16	1
2-Fluorobiphenyl	76		48 - 120	11/08/18 10:13	11/13/18 16:16	1
2-Fluorophenol	40		35 - 120	11/08/18 10:13	11/13/18 16:16	1
Nitrobenzene-d5	74		46 - 120	11/08/18 10:13	11/13/18 16:16	1
p-Terphenyl-d14	98		59 - 136	11/08/18 10:13	11/13/18 16:16	1
Phenol-d5	29		22 - 120	11/08/18 10:13	11/13/18 16:16	1

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Lab Sample ID: MB 480-444198/1-A
Matrix: Solid
Analysis Batch: 444358

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 444198

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.25	0.049	mg/Kg		11/07/18 14:27	11/08/18 17:56	1
PCB-1221	ND		0.25	0.049	mg/Kg		11/07/18 14:27	11/08/18 17:56	1
PCB-1232	ND		0.25	0.049	mg/Kg		11/07/18 14:27	11/08/18 17:56	1
PCB-1242	ND		0.25	0.049	mg/Kg		11/07/18 14:27	11/08/18 17:56	1
PCB-1248	ND		0.25	0.049	mg/Kg		11/07/18 14:27	11/08/18 17:56	1
PCB-1254	ND		0.25	0.12	mg/Kg		11/07/18 14:27	11/08/18 17:56	1
PCB-1260	ND		0.25	0.12	mg/Kg		11/07/18 14:27	11/08/18 17:56	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	122		60 - 154	11/07/18 14:27	11/08/18 17:56	1
DCB Decachlorobiphenyl	116		65 - 174	11/07/18 14:27	11/08/18 17:56	1

Lab Sample ID: LCS 480-444198/2-A
Matrix: Solid
Analysis Batch: 444358

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 444198

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
PCB-1016	2.10	2.49		mg/Kg		118	51 - 185
PCB-1260	2.10	2.37		mg/Kg		113	61 - 184

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Tetrachloro-m-xylene	153		60 - 154
DCB Decachlorobiphenyl	131		65 - 174

Lab Sample ID: 480-144681-3 MS
Matrix: Solid
Analysis Batch: 444358

Client Sample ID: Nat Grid Rolloff, 1HR+ 25015, 275023
Prep Type: Total/NA
Prep Batch: 444198

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
PCB-1016	ND		2.03	1.99		mg/Kg	☼	98	50 - 177
PCB-1260	ND		2.03	1.88		mg/Kg	☼	93	33 - 200

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

Lab Sample ID: 480-144681-3 MS
Matrix: Solid
Analysis Batch: 444358

Client Sample ID: Nat Grid Rolloff, 1HR+ 25015, 275023
Prep Type: Total/NA
Prep Batch: 444198

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
Tetrachloro-m-xylene	*132*		*60 - 154*
DCB Decachlorobiphenyl	*117*		*65 - 174*

Lab Sample ID: 480-144681-3 MSD
Matrix: Solid
Analysis Batch: 444358

Client Sample ID: Nat Grid Rolloff, 1HR+ 25015, 275023
Prep Type: Total/NA
Prep Batch: 444198

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
PCB-1016	ND		2.76	2.98		mg/Kg	☼	108	50 - 177	40	50
PCB-1260	ND		2.76	2.56		mg/Kg	☼	93	33 - 200	31	50

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
Tetrachloro-m-xylene	*151*		*60 - 154*
DCB Decachlorobiphenyl	*123*		*65 - 174*

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 480-444352/2-A
Matrix: Solid
Analysis Batch: 445996

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 444352

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.015	0.0056	mg/L		11/08/18 10:38	11/15/18 18:14	1
Barium	ND		1.0	0.10	mg/L		11/08/18 10:38	11/15/18 18:14	1
Chromium	ND		0.020	0.010	mg/L		11/08/18 10:38	11/15/18 18:14	1
Lead	ND		0.020	0.0030	mg/L		11/08/18 10:38	11/15/18 18:14	1
Selenium	ND		0.025	0.0087	mg/L		11/08/18 10:38	11/15/18 18:14	1
Silver	ND		0.0060	0.0017	mg/L		11/08/18 10:38	11/15/18 18:14	1

Lab Sample ID: LCS 480-444352/3-A
Matrix: Solid
Analysis Batch: 445996

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 444352

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	1.00	1.08		mg/L		108	80 - 120
Barium	1.00	0.967	J	mg/L		97	80 - 120
Chromium	1.00	0.961		mg/L		96	80 - 120
Lead	1.00	1.08		mg/L		108	80 - 120
Selenium	1.00	1.10		mg/L		110	80 - 120
Silver	1.00	1.07		mg/L		107	80 - 120

Lab Sample ID: LCS 480-444352/3-A
Matrix: Solid
Analysis Batch: 446126

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 444352

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cadmium	1.00	1.01		mg/L		101	80 - 120

Method: 6010C - Metals (ICP) (Continued)

Lab Sample ID: MB 480-444353/2-A
Matrix: Solid
Analysis Batch: 445405

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 444353

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.015	0.0056	mg/L		11/08/18 10:38	11/14/18 00:12	1
Barium	ND		1.0	0.10	mg/L		11/08/18 10:38	11/14/18 00:12	1
Cadmium	ND		0.0020	0.00050	mg/L		11/08/18 10:38	11/14/18 00:12	1
Chromium	ND		0.020	0.010	mg/L		11/08/18 10:38	11/14/18 00:12	1
Lead	ND		0.020	0.0030	mg/L		11/08/18 10:38	11/14/18 00:12	1
Selenium	ND		0.025	0.0087	mg/L		11/08/18 10:38	11/14/18 00:12	1
Silver	ND		0.0060	0.0017	mg/L		11/08/18 10:38	11/14/18 00:12	1

Lab Sample ID: LCS 480-444353/3-A
Matrix: Solid
Analysis Batch: 445405

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 444353

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	1.00	0.935		mg/L		94	80 - 120
Barium	1.00	0.936	J	mg/L		94	80 - 120
Cadmium	1.00	0.869		mg/L		87	80 - 120
Chromium	1.00	0.964		mg/L		96	80 - 120
Lead	1.00	0.906		mg/L		91	80 - 120
Selenium	1.00	0.918		mg/L		92	80 - 120
Silver	1.00	0.929		mg/L		93	80 - 120

Lab Sample ID: LB 480-444180/1-C
Matrix: Solid
Analysis Batch: 445996

Client Sample ID: Method Blank
Prep Type: TCLP
Prep Batch: 444352

Analyte	LB Result	LB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.015	0.0056	mg/L		11/08/18 10:38	11/15/18 18:10	1
Barium	ND		1.0	0.10	mg/L		11/08/18 10:38	11/15/18 18:10	1
Chromium	ND		0.020	0.010	mg/L		11/08/18 10:38	11/15/18 18:10	1
Lead	0.00303	J	0.020	0.0030	mg/L		11/08/18 10:38	11/15/18 18:10	1
Selenium	ND		0.025	0.0087	mg/L		11/08/18 10:38	11/15/18 18:10	1
Silver	ND		0.0060	0.0017	mg/L		11/08/18 10:38	11/15/18 18:10	1

Lab Sample ID: 480-144681-3 MS
Matrix: Solid
Analysis Batch: 445996

Client Sample ID: Nat Grid Rolloff, 1HR+ 25015, 275023
Prep Type: TCLP
Prep Batch: 444352

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	ND		1.00	1.11		mg/L		111	75 - 125
Barium	0.41	J	1.00	1.38		mg/L		98	75 - 125
Chromium	ND		1.00	0.920		mg/L		92	75 - 125
Lead	ND		1.00	1.08		mg/L		108	75 - 125
Selenium	ND		1.00	1.14		mg/L		114	75 - 125
Silver	ND		1.00	1.10		mg/L		110	75 - 125

Method: 6010C - Metals (ICP) (Continued)

Lab Sample ID: 480-144681-3 MS
Matrix: Solid
Analysis Batch: 446126

Client Sample ID: Nat Grid Rolloff, 1HR+ 25015, 275023
Prep Type: TCLP
Prep Batch: 444352

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Cadmium	0.00080	J	1.00	1.01		mg/L		101	75 - 125

Lab Sample ID: 480-144681-3 MSD
Matrix: Solid
Analysis Batch: 445996

Client Sample ID: Nat Grid Rolloff, 1HR+ 25015, 275023
Prep Type: TCLP
Prep Batch: 444352

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	ND		1.00	1.13		mg/L		113	75 - 125	2	20
Barium	0.41	J	1.00	1.40		mg/L		99	75 - 125	1	20
Chromium	ND		1.00	0.925		mg/L		93	75 - 125	1	20
Lead	ND		1.00	1.10		mg/L		110	75 - 125	1	20
Selenium	ND		1.00	1.17		mg/L		117	75 - 125	2	20
Silver	ND		1.00	1.11		mg/L		111	75 - 125	0	20

Lab Sample ID: 480-144681-3 MSD
Matrix: Solid
Analysis Batch: 446126

Client Sample ID: Nat Grid Rolloff, 1HR+ 25015, 275023
Prep Type: TCLP
Prep Batch: 444352

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Cadmium	0.00080	J	1.00	1.02		mg/L		102	75 - 125	1	20

Lab Sample ID: LB2 480-444139/1-C
Matrix: Solid
Analysis Batch: 445405

Client Sample ID: Method Blank
Prep Type: TCLP
Prep Batch: 444353

Analyte	LB2 Result	LB2 Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.015	0.0056	mg/L		11/08/18 10:38	11/14/18 00:08	1
Barium	ND		1.0	0.10	mg/L		11/08/18 10:38	11/14/18 00:08	1
Cadmium	ND		0.0020	0.00050	mg/L		11/08/18 10:38	11/14/18 00:08	1
Chromium	ND		0.020	0.010	mg/L		11/08/18 10:38	11/14/18 00:08	1
Lead	ND		0.020	0.0030	mg/L		11/08/18 10:38	11/14/18 00:08	1
Selenium	ND		0.025	0.0087	mg/L		11/08/18 10:38	11/14/18 00:08	1
Silver	ND		0.0060	0.0017	mg/L		11/08/18 10:38	11/14/18 00:08	1

Lab Sample ID: 480-144681-1 MS
Matrix: Solid
Analysis Batch: 445405

Client Sample ID: Rolloff 25622
Prep Type: TCLP
Prep Batch: 444353

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	ND		1.00	1.07		mg/L		107	75 - 125
Barium	0.43	J	1.00	1.40		mg/L		97	75 - 125
Cadmium	0.0033		1.00	0.980		mg/L		98	75 - 125
Chromium	ND		1.00	0.927		mg/L		93	75 - 125
Lead	ND		1.00	0.975		mg/L		97	75 - 125
Selenium	ND		1.00	1.03		mg/L		103	75 - 125
Silver	ND		1.00	1.06		mg/L		106	75 - 125

Method: 6010C - Metals (ICP) (Continued)

Lab Sample ID: 480-144681-1 MSD
Matrix: Solid
Analysis Batch: 445405

Client Sample ID: Rolloff 25622
Prep Type: TCLP
Prep Batch: 444353

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	ND		1.00	1.04		mg/L		104	75 - 125	3	20
Barium	0.43	J	1.00	1.36		mg/L		93	75 - 125	3	20
Cadmium	0.0033		1.00	0.956		mg/L		95	75 - 125	2	20
Chromium	ND		1.00	0.898		mg/L		90	75 - 125	3	20
Lead	ND		1.00	0.944		mg/L		94	75 - 125	3	20
Selenium	ND		1.00	1.00		mg/L		100	75 - 125	3	20
Silver	ND		1.00	1.02		mg/L		102	75 - 125	3	20

Method: 7470A - TCLP Mercury

Lab Sample ID: MB 480-445013/2-A
Matrix: Solid
Analysis Batch: 445114

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 445013

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00012	mg/L		11/12/18 12:40	11/12/18 16:09	1

Lab Sample ID: LCS 480-445013/3-A
Matrix: Solid
Analysis Batch: 445114

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 445013

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00668	0.00602		mg/L		90	80 - 120

Lab Sample ID: MB 480-445014/2-A
Matrix: Solid
Analysis Batch: 445114

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 445014

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00012	mg/L		11/12/18 12:40	11/12/18 16:19	1

Lab Sample ID: LCS 480-445014/3-A
Matrix: Solid
Analysis Batch: 445114

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 445014

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00668	0.00602		mg/L		90	80 - 120

Lab Sample ID: LB 480-444180/1-D
Matrix: Solid
Analysis Batch: 445114

Client Sample ID: Method Blank
Prep Type: TCLP
Prep Batch: 445013

Analyte	LB Result	LB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00012	mg/L		11/12/18 12:40	11/12/18 16:08	1

Method: 7470A - TCLP Mercury (Continued)

Lab Sample ID: 480-144681-3 MS
Matrix: Solid
Analysis Batch: 445114

Client Sample ID: Nat Grid Rolloff, 1HR+ 25015, 275023
Prep Type: TCLP
Prep Batch: 445013

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	ND		0.00668	0.00572		mg/L		86	80 - 120

Lab Sample ID: 480-144681-3 MSD
Matrix: Solid
Analysis Batch: 445114

Client Sample ID: Nat Grid Rolloff, 1HR+ 25015, 275023
Prep Type: TCLP
Prep Batch: 445013

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	ND		0.00668	0.00575		mg/L		86	80 - 120	1	20

Lab Sample ID: LB2 480-444139/1-D
Matrix: Solid
Analysis Batch: 445114

Client Sample ID: Method Blank
Prep Type: TCLP
Prep Batch: 445014

Analyte	LB2 Result	LB2 Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00012	mg/L		11/12/18 12:40	11/12/18 16:17	1

Lab Sample ID: 480-144681-1 MS
Matrix: Solid
Analysis Batch: 445114

Client Sample ID: Rolloff 25622
Prep Type: TCLP
Prep Batch: 445014

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	ND	F1	0.00668	0.00387	F1	mg/L		58	80 - 120

Lab Sample ID: 480-144681-1 MSD
Matrix: Solid
Analysis Batch: 445114

Client Sample ID: Rolloff 25622
Prep Type: TCLP
Prep Batch: 445014

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	ND	F1	0.00668	0.00392	F1	mg/L		59	80 - 120	1	20

Method: 1010A - Ignitability, Pensky-Martens Closed-Cup Method

Lab Sample ID: LCS 480-444623/1
Matrix: Solid
Analysis Batch: 444623

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Flashpoint	81.0	80.00		Degrees F		99	97.5 - 102.5

Lab Sample ID: 480-144681-3 DU
Matrix: Solid
Analysis Batch: 444623

Client Sample ID: Nat Grid Rolloff, 1HR+ 25015, 275023
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Flashpoint	>180		>180		Degrees F		NC	10

Method: 9012 - Cyanide, Reactive

Lab Sample ID: MB 480-444495/1-A
Matrix: Solid
Analysis Batch: 444702

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 444495

Analyte	MB Result	MB Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Reactive	ND		10.0	10.0	mg/Kg		11/08/18 12:37	11/09/18 09:10	1

Lab Sample ID: LCS 480-444495/2-A
Matrix: Solid
Analysis Batch: 444702

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 444495

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Reactive	1000	260.0		mg/Kg		26	10 - 100

Lab Sample ID: 480-144681-2 DU
Matrix: Solid
Analysis Batch: 444702

Client Sample ID: Rolloff 26220, 27275, 1796
Prep Type: Total/NA
Prep Batch: 444495

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Cyanide, Reactive	ND		ND		mg/Kg		NC	20

Method: 9034 - Sulfide, Reactive

Lab Sample ID: MB 480-444499/1-A
Matrix: Solid
Analysis Batch: 444910

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 444499

Analyte	MB Result	MB Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfide, Reactive	ND		10.0	10.0	mg/Kg		11/08/18 12:37	11/11/18 14:47	1

Lab Sample ID: LCS 480-444499/2-A
Matrix: Solid
Analysis Batch: 444910

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 444499

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfide, Reactive	860	741.4		mg/Kg		86	10 - 100

Lab Sample ID: 480-144681-2 DU
Matrix: Solid
Analysis Batch: 444910

Client Sample ID: Rolloff 26220, 27275, 1796
Prep Type: Total/NA
Prep Batch: 444499

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Sulfide, Reactive	ND		ND		mg/Kg		NC	20

Method: 9045D - pH

Lab Sample ID: LCS 480-443966/1
Matrix: Solid
Analysis Batch: 443966

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
pH	7.00	7.1		SU		101	99 - 101

Method: 9045D - pH (Continued)

Lab Sample ID: 480-144681-1 DU
Matrix: Solid
Analysis Batch: 443966

Client Sample ID: Rolloff 25622
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
pH	8.5	HF		8.6		SU				1	5
Temperature	20.2	HF		20.1		Degrees C				0.5	10

QC Association Summary

Client: Bristol-Myers Squibb Company
Project/Site: Roll Off Characterization Sample

TestAmerica Job ID: 480-144681-1

GC/MS VOA

Leach Batch: 444175

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-144681-1	Rolloff 25622	TCLP	Solid	1311	
480-144681-2	Rolloff 26220, 27275, 1796	TCLP	Solid	1311	
480-144681-3	Nat Grid Rolloff, 1HR+ 25015, 275023	TCLP	Solid	1311	
LB 480-444175/1-A	Method Blank	TCLP	Solid	1311	

Analysis Batch: 445641

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-144681-1	Rolloff 25622	TCLP	Solid	8260C	444175
480-144681-2	Rolloff 26220, 27275, 1796	TCLP	Solid	8260C	444175
480-144681-3	Nat Grid Rolloff, 1HR+ 25015, 275023	TCLP	Solid	8260C	444175
LB 480-444175/1-A	Method Blank	TCLP	Solid	8260C	444175
MB 480-445641/7	Method Blank	Total/NA	Solid	8260C	
LCS 480-445641/5	Lab Control Sample	Total/NA	Solid	8260C	

GC/MS Semi VOA

Leach Batch: 444139

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-144681-1	Rolloff 25622	TCLP	Solid	1311	
480-144681-2	Rolloff 26220, 27275, 1796	TCLP	Solid	1311	
LB2 480-444139/1-B	Method Blank	TCLP	Solid	1311	

Leach Batch: 444180

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-144681-3	Nat Grid Rolloff, 1HR+ 25015, 275023	TCLP	Solid	1311	
LB 480-444180/1-B	Method Blank	TCLP	Solid	1311	

Prep Batch: 444351

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-144681-1	Rolloff 25622	TCLP	Solid	3510C	444139
480-144681-2	Rolloff 26220, 27275, 1796	TCLP	Solid	3510C	444139
480-144681-3	Nat Grid Rolloff, 1HR+ 25015, 275023	TCLP	Solid	3510C	444180
LB 480-444180/1-B	Method Blank	TCLP	Solid	3510C	444180
LB2 480-444139/1-B	Method Blank	TCLP	Solid	3510C	444139
MB 480-444351/1-A	Method Blank	Total/NA	Solid	3510C	
LCS 480-444351/2-A	Lab Control Sample	Total/NA	Solid	3510C	
LCSD 480-444351/3-A	Lab Control Sample Dup	Total/NA	Solid	3510C	

Analysis Batch: 445259

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-144681-1	Rolloff 25622	TCLP	Solid	8270D	444351
480-144681-2	Rolloff 26220, 27275, 1796	TCLP	Solid	8270D	444351
480-144681-3	Nat Grid Rolloff, 1HR+ 25015, 275023	TCLP	Solid	8270D	444351
LB 480-444180/1-B	Method Blank	TCLP	Solid	8270D	444351
LB2 480-444139/1-B	Method Blank	TCLP	Solid	8270D	444351
MB 480-444351/1-A	Method Blank	Total/NA	Solid	8270D	444351
LCS 480-444351/2-A	Lab Control Sample	Total/NA	Solid	8270D	444351
LCSD 480-444351/3-A	Lab Control Sample Dup	Total/NA	Solid	8270D	444351

GC Semi VOA

Prep Batch: 444198

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-144681-1	Rolloff 25622	Total/NA	Solid	3550C	
480-144681-2	Rolloff 26220, 27275, 1796	Total/NA	Solid	3550C	
480-144681-3	Nat Grid Rolloff, 1HR+ 25015, 275023	Total/NA	Solid	3550C	
MB 480-444198/1-A	Method Blank	Total/NA	Solid	3550C	
LCS 480-444198/2-A	Lab Control Sample	Total/NA	Solid	3550C	
480-144681-3 MS	Nat Grid Rolloff, 1HR+ 25015, 275023	Total/NA	Solid	3550C	
480-144681-3 MSD	Nat Grid Rolloff, 1HR+ 25015, 275023	Total/NA	Solid	3550C	

Analysis Batch: 444358

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-144681-1	Rolloff 25622	Total/NA	Solid	8082A	444198
480-144681-2	Rolloff 26220, 27275, 1796	Total/NA	Solid	8082A	444198
480-144681-3	Nat Grid Rolloff, 1HR+ 25015, 275023	Total/NA	Solid	8082A	444198
MB 480-444198/1-A	Method Blank	Total/NA	Solid	8082A	444198
LCS 480-444198/2-A	Lab Control Sample	Total/NA	Solid	8082A	444198
480-144681-3 MS	Nat Grid Rolloff, 1HR+ 25015, 275023	Total/NA	Solid	8082A	444198
480-144681-3 MSD	Nat Grid Rolloff, 1HR+ 25015, 275023	Total/NA	Solid	8082A	444198

Metals

Leach Batch: 444139

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-144681-1	Rolloff 25622	TCLP	Solid	1311	
480-144681-2	Rolloff 26220, 27275, 1796	TCLP	Solid	1311	
LB2 480-444139/1-C	Method Blank	TCLP	Solid	1311	
LB2 480-444139/1-D	Method Blank	TCLP	Solid	1311	
480-144681-1 MS	Rolloff 25622	TCLP	Solid	1311	
480-144681-1 MSD	Rolloff 25622	TCLP	Solid	1311	

Leach Batch: 444180

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-144681-3	Nat Grid Rolloff, 1HR+ 25015, 275023	TCLP	Solid	1311	
LB 480-444180/1-C	Method Blank	TCLP	Solid	1311	
LB 480-444180/1-D	Method Blank	TCLP	Solid	1311	
480-144681-3 MS	Nat Grid Rolloff, 1HR+ 25015, 275023	TCLP	Solid	1311	
480-144681-3 MSD	Nat Grid Rolloff, 1HR+ 25015, 275023	TCLP	Solid	1311	

Prep Batch: 444352

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-144681-3	Nat Grid Rolloff, 1HR+ 25015, 275023	TCLP	Solid	3010A	444180
LB 480-444180/1-C	Method Blank	TCLP	Solid	3010A	444180
MB 480-444352/2-A	Method Blank	Total/NA	Solid	3010A	
LCS 480-444352/3-A	Lab Control Sample	Total/NA	Solid	3010A	
480-144681-3 MS	Nat Grid Rolloff, 1HR+ 25015, 275023	TCLP	Solid	3010A	444180
480-144681-3 MSD	Nat Grid Rolloff, 1HR+ 25015, 275023	TCLP	Solid	3010A	444180

Prep Batch: 444353

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-144681-1	Rolloff 25622	TCLP	Solid	3010A	444139
480-144681-2	Rolloff 26220, 27275, 1796	TCLP	Solid	3010A	444139

Metals (Continued)

Prep Batch: 444353 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LB2 480-444139/1-C	Method Blank	TCLP	Solid	3010A	444139
MB 480-444353/2-A	Method Blank	Total/NA	Solid	3010A	
LCS 480-444353/3-A	Lab Control Sample	Total/NA	Solid	3010A	
480-144681-1 MS	Rolloff 25622	TCLP	Solid	3010A	444139
480-144681-1 MSD	Rolloff 25622	TCLP	Solid	3010A	444139

Prep Batch: 445013

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-144681-3	Nat Grid Rolloff, 1HR+ 25015, 275023	TCLP	Solid	7470A	444180
LB 480-444180/1-D	Method Blank	TCLP	Solid	7470A	444180
MB 480-445013/2-A	Method Blank	Total/NA	Solid	7470A	
LCS 480-445013/3-A	Lab Control Sample	Total/NA	Solid	7470A	
480-144681-3 MS	Nat Grid Rolloff, 1HR+ 25015, 275023	TCLP	Solid	7470A	444180
480-144681-3 MSD	Nat Grid Rolloff, 1HR+ 25015, 275023	TCLP	Solid	7470A	444180

Prep Batch: 445014

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-144681-1	Rolloff 25622	TCLP	Solid	7470A	444139
480-144681-2	Rolloff 26220, 27275, 1796	TCLP	Solid	7470A	444139
LB2 480-444139/1-D	Method Blank	TCLP	Solid	7470A	444139
MB 480-445014/2-A	Method Blank	Total/NA	Solid	7470A	
LCS 480-445014/3-A	Lab Control Sample	Total/NA	Solid	7470A	
480-144681-1 MS	Rolloff 25622	TCLP	Solid	7470A	444139
480-144681-1 MSD	Rolloff 25622	TCLP	Solid	7470A	444139

Analysis Batch: 445114

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-144681-1	Rolloff 25622	TCLP	Solid	7470A	445014
480-144681-2	Rolloff 26220, 27275, 1796	TCLP	Solid	7470A	445014
480-144681-3	Nat Grid Rolloff, 1HR+ 25015, 275023	TCLP	Solid	7470A	445013
LB 480-444180/1-D	Method Blank	TCLP	Solid	7470A	445013
LB2 480-444139/1-D	Method Blank	TCLP	Solid	7470A	445014
MB 480-445013/2-A	Method Blank	Total/NA	Solid	7470A	445013
MB 480-445014/2-A	Method Blank	Total/NA	Solid	7470A	445014
LCS 480-445013/3-A	Lab Control Sample	Total/NA	Solid	7470A	445013
LCS 480-445014/3-A	Lab Control Sample	Total/NA	Solid	7470A	445014
480-144681-1 MS	Rolloff 25622	TCLP	Solid	7470A	445014
480-144681-1 MSD	Rolloff 25622	TCLP	Solid	7470A	445014
480-144681-3 MS	Nat Grid Rolloff, 1HR+ 25015, 275023	TCLP	Solid	7470A	445013
480-144681-3 MSD	Nat Grid Rolloff, 1HR+ 25015, 275023	TCLP	Solid	7470A	445013

Analysis Batch: 445405

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-144681-1	Rolloff 25622	TCLP	Solid	6010C	444353
480-144681-2	Rolloff 26220, 27275, 1796	TCLP	Solid	6010C	444353
LB2 480-444139/1-C	Method Blank	TCLP	Solid	6010C	444353
MB 480-444353/2-A	Method Blank	Total/NA	Solid	6010C	444353
LCS 480-444353/3-A	Lab Control Sample	Total/NA	Solid	6010C	444353
480-144681-1 MS	Rolloff 25622	TCLP	Solid	6010C	444353
480-144681-1 MSD	Rolloff 25622	TCLP	Solid	6010C	444353

Metals (Continued)

Analysis Batch: 445996

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-144681-3	Nat Grid Rolloff, 1HR+ 25015, 275023	TCLP	Solid	6010C	444352
LB 480-444180/1-C	Method Blank	TCLP	Solid	6010C	444352
MB 480-444352/2-A	Method Blank	Total/NA	Solid	6010C	444352
LCS 480-444352/3-A	Lab Control Sample	Total/NA	Solid	6010C	444352
480-144681-3 MS	Nat Grid Rolloff, 1HR+ 25015, 275023	TCLP	Solid	6010C	444352
480-144681-3 MSD	Nat Grid Rolloff, 1HR+ 25015, 275023	TCLP	Solid	6010C	444352

Analysis Batch: 446126

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-144681-3	Nat Grid Rolloff, 1HR+ 25015, 275023	TCLP	Solid	6010C	444352
LCS 480-444352/3-A	Lab Control Sample	Total/NA	Solid	6010C	444352
480-144681-3 MS	Nat Grid Rolloff, 1HR+ 25015, 275023	TCLP	Solid	6010C	444352
480-144681-3 MSD	Nat Grid Rolloff, 1HR+ 25015, 275023	TCLP	Solid	6010C	444352

General Chemistry

Analysis Batch: 443439

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-144681-1	Rolloff 25622	Total/NA	Solid	Moisture	
480-144681-2	Rolloff 26220, 27275, 1796	Total/NA	Solid	Moisture	
480-144681-3	Nat Grid Rolloff, 1HR+ 25015, 275023	Total/NA	Solid	Moisture	

Analysis Batch: 443966

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-144681-1	Rolloff 25622	Total/NA	Solid	9045D	
480-144681-2	Rolloff 26220, 27275, 1796	Total/NA	Solid	9045D	
480-144681-3	Nat Grid Rolloff, 1HR+ 25015, 275023	Total/NA	Solid	9045D	
LCS 480-443966/1	Lab Control Sample	Total/NA	Solid	9045D	
480-144681-1 DU	Rolloff 25622	Total/NA	Solid	9045D	

Prep Batch: 444495

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-144681-1	Rolloff 25622	Total/NA	Solid	7.3.3	
480-144681-2	Rolloff 26220, 27275, 1796	Total/NA	Solid	7.3.3	
480-144681-3	Nat Grid Rolloff, 1HR+ 25015, 275023	Total/NA	Solid	7.3.3	
MB 480-444495/1-A	Method Blank	Total/NA	Solid	7.3.3	
LCS 480-444495/2-A	Lab Control Sample	Total/NA	Solid	7.3.3	
480-144681-2 DU	Rolloff 26220, 27275, 1796	Total/NA	Solid	7.3.3	

Prep Batch: 444499

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-144681-1	Rolloff 25622	Total/NA	Solid	7.3.4	
480-144681-2	Rolloff 26220, 27275, 1796	Total/NA	Solid	7.3.4	
480-144681-3	Nat Grid Rolloff, 1HR+ 25015, 275023	Total/NA	Solid	7.3.4	
MB 480-444499/1-A	Method Blank	Total/NA	Solid	7.3.4	
LCS 480-444499/2-A	Lab Control Sample	Total/NA	Solid	7.3.4	
480-144681-2 DU	Rolloff 26220, 27275, 1796	Total/NA	Solid	7.3.4	

General Chemistry (Continued)

Analysis Batch: 444623

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-144681-1	Rolloff 25622	Total/NA	Solid	1010A	
480-144681-2	Rolloff 26220, 27275, 1796	Total/NA	Solid	1010A	
480-144681-3	Nat Grid Rolloff, 1HR+ 25015, 275023	Total/NA	Solid	1010A	
LCS 480-444623/1	Lab Control Sample	Total/NA	Solid	1010A	
480-144681-3 DU	Nat Grid Rolloff, 1HR+ 25015, 275023	Total/NA	Solid	1010A	

Analysis Batch: 444702

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-144681-1	Rolloff 25622	Total/NA	Solid	9012	444495
480-144681-2	Rolloff 26220, 27275, 1796	Total/NA	Solid	9012	444495
480-144681-3	Nat Grid Rolloff, 1HR+ 25015, 275023	Total/NA	Solid	9012	444495
MB 480-444495/1-A	Method Blank	Total/NA	Solid	9012	444495
LCS 480-444495/2-A	Lab Control Sample	Total/NA	Solid	9012	444495
480-144681-2 DU	Rolloff 26220, 27275, 1796	Total/NA	Solid	9012	444495

Analysis Batch: 444910

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-144681-1	Rolloff 25622	Total/NA	Solid	9034	444499
480-144681-2	Rolloff 26220, 27275, 1796	Total/NA	Solid	9034	444499
480-144681-3	Nat Grid Rolloff, 1HR+ 25015, 275023	Total/NA	Solid	9034	444499
MB 480-444499/1-A	Method Blank	Total/NA	Solid	9034	444499
LCS 480-444499/2-A	Lab Control Sample	Total/NA	Solid	9034	444499
480-144681-2 DU	Rolloff 26220, 27275, 1796	Total/NA	Solid	9034	444499

Lab Chronicle

Client: Bristol-Myers Squibb Company
Project/Site: Roll Off Characterization Sample

TestAmerica Job ID: 480-144681-1

Client Sample ID: Rolloff 25622
Date Collected: 11/02/18 10:00
Date Received: 11/03/18 01:00

Lab Sample ID: 480-144681-1
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
TCLP	Leach	1311			444175	11/07/18 12:39	LMS	TAL BUF
TCLP	Analysis	8260C		10	445641	11/14/18 22:38	AMM	TAL BUF
TCLP	Leach	1311			444139	11/07/18 11:02	LMS	TAL BUF
TCLP	Prep	3510C			444351	11/08/18 10:13	JMP	TAL BUF
TCLP	Analysis	8270D		1	445259	11/13/18 16:44	MKP	TAL BUF
TCLP	Leach	1311			444139	11/07/18 11:02	LMS	TAL BUF
TCLP	Prep	3010A			444353	11/08/18 10:38	VEG	TAL BUF
TCLP	Analysis	6010C		1	445405	11/14/18 00:20	LMH	TAL BUF
TCLP	Leach	1311			444139	11/07/18 11:02	LMS	TAL BUF
TCLP	Prep	7470A			445014	11/12/18 12:40	VEG	TAL BUF
TCLP	Analysis	7470A		1	445114	11/12/18 16:24	BMB	TAL BUF
Total/NA	Analysis	1010A		1	444623	11/09/18 09:33	MV	TAL BUF
Total/NA	Prep	7.3.3			444495	11/08/18 12:37	MJB	TAL BUF
Total/NA	Analysis	9012		1	444702	11/09/18 09:13	CAP	TAL BUF
Total/NA	Prep	7.3.4			444499	11/08/18 12:37	MJB	TAL BUF
Total/NA	Analysis	9034		1	444910	11/11/18 14:47	MJB	TAL BUF
Total/NA	Analysis	9045D		1	443966	11/06/18 12:34	AJS	TAL BUF
Total/NA	Analysis	Moisture		1	443439	11/03/18 09:46	KPK	TAL BUF

Client Sample ID: Rolloff 25622
Date Collected: 11/02/18 10:00
Date Received: 11/03/18 01:00

Lab Sample ID: 480-144681-1
Matrix: Solid
Percent Solids: 92.3

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			444198	11/07/18 14:27	SGD	TAL BUF
Total/NA	Analysis	8082A		1	444358	11/08/18 19:15	W1T	TAL BUF

Client Sample ID: Rolloff 26220, 27275, 1796
Date Collected: 11/02/18 10:00
Date Received: 11/03/18 01:00

Lab Sample ID: 480-144681-2
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
TCLP	Leach	1311			444175	11/07/18 12:39	LMS	TAL BUF
TCLP	Analysis	8260C		10	445641	11/14/18 23:01	AMM	TAL BUF
TCLP	Leach	1311			444139	11/07/18 11:02	LMS	TAL BUF
TCLP	Prep	3510C			444351	11/08/18 10:13	JMP	TAL BUF
TCLP	Analysis	8270D		1	445259	11/13/18 17:11	MKP	TAL BUF
TCLP	Leach	1311			444139	11/07/18 11:02	LMS	TAL BUF
TCLP	Prep	3010A			444353	11/08/18 10:38	VEG	TAL BUF
TCLP	Analysis	6010C		1	445405	11/14/18 00:39	LMH	TAL BUF
TCLP	Leach	1311			444139	11/07/18 11:02	LMS	TAL BUF
TCLP	Prep	7470A			445014	11/12/18 12:40	VEG	TAL BUF
TCLP	Analysis	7470A		1	445114	11/12/18 16:29	BMB	TAL BUF

Lab Chronicle

Client: Bristol-Myers Squibb Company
Project/Site: Roll Off Characterization Sample

TestAmerica Job ID: 480-144681-1

Client Sample ID: Rolloff 26220, 27275, 1796

Lab Sample ID: 480-144681-2

Date Collected: 11/02/18 10:00
Matrix: Solid
Date Received: 11/03/18 01:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	1010A		1	444623	11/09/18 09:33	MV	TAL BUF
Total/NA	Prep	7.3.3			444495	11/08/18 12:37	MJB	TAL BUF
Total/NA	Analysis	9012		1	444702	11/09/18 09:15	CAP	TAL BUF
Total/NA	Prep	7.3.4			444499	11/08/18 12:37	MJB	TAL BUF
Total/NA	Analysis	9034		1	444910	11/11/18 14:47	MJB	TAL BUF
Total/NA	Analysis	9045D		1	443966	11/06/18 12:34	AJS	TAL BUF
Total/NA	Analysis	Moisture		1	443439	11/03/18 09:46	KPK	TAL BUF

Client Sample ID: Rolloff 26220, 27275, 1796

Lab Sample ID: 480-144681-2

Date Collected: 11/02/18 10:00
Matrix: Solid
Date Received: 11/03/18 01:00
Percent Solids: 84.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			444198	11/07/18 14:27	SGD	TAL BUF
Total/NA	Analysis	8082A		1	444358	11/08/18 19:31	W1T	TAL BUF

Client Sample ID: Nat Grid Rolloff, 1HR+ 25015, 275023

Lab Sample ID: 480-144681-3

Date Collected: 11/02/18 10:00
Matrix: Solid
Date Received: 11/03/18 01:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
TCLP	Leach	1311			444175	11/07/18 12:39	LMS	TAL BUF
TCLP	Analysis	8260C		10	445641	11/14/18 23:24	AMM	TAL BUF
TCLP	Leach	1311			444180	11/07/18 12:58	LMS	TAL BUF
TCLP	Prep	3510C			444351	11/08/18 10:13	JMP	TAL BUF
TCLP	Analysis	8270D		1	445259	11/13/18 17:38	MKP	TAL BUF
TCLP	Leach	1311			444180	11/07/18 12:58	LMS	TAL BUF
TCLP	Prep	3010A			444352	11/08/18 10:38	VEG	TAL BUF
TCLP	Analysis	6010C		1	445996	11/15/18 18:22	LMH	TAL BUF
TCLP	Leach	1311			444180	11/07/18 12:58	LMS	TAL BUF
TCLP	Prep	3010A			444352	11/08/18 10:38	VEG	TAL BUF
TCLP	Analysis	6010C		1	446126	11/16/18 13:26	AMH	TAL BUF
TCLP	Leach	1311			444180	11/07/18 12:58	LMS	TAL BUF
TCLP	Prep	7470A			445013	11/12/18 12:40	VEG	TAL BUF
TCLP	Analysis	7470A		1	445114	11/12/18 16:12	BMB	TAL BUF
Total/NA	Analysis	1010A		1	444623	11/09/18 09:33	MV	TAL BUF
Total/NA	Prep	7.3.3			444495	11/08/18 12:37	MJB	TAL BUF
Total/NA	Analysis	9012		1	444702	11/09/18 09:18	CAP	TAL BUF
Total/NA	Prep	7.3.4			444499	11/08/18 12:37	MJB	TAL BUF
Total/NA	Analysis	9034		1	444910	11/11/18 14:47	MJB	TAL BUF
Total/NA	Analysis	9045D		1	443966	11/06/18 12:34	AJS	TAL BUF
Total/NA	Analysis	Moisture		1	443439	11/03/18 09:46	KPK	TAL BUF

Lab Chronicle

Client: Bristol-Myers Squibb Company
Project/Site: Roll Off Characterization Sample

TestAmerica Job ID: 480-144681-1

Client Sample ID: Nat Grid Rolloff, 1HR+ 25015, 275023
Date Collected: 11/02/18 10:00
Date Received: 11/03/18 01:00

Lab Sample ID: 480-144681-3
Matrix: Solid
Percent Solids: 83.9

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			444198	11/07/18 14:27	SGD	TAL BUF
Total/NA	Analysis	8082A		1	444358	11/08/18 18:59	W1T	TAL BUF

Laboratory References:

TAL BUF = TestAmerica Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

Accreditation/Certification Summary

Client: Bristol-Myers Squibb Company
Project/Site: Roll Off Characterization Sample

TestAmerica Job ID: 480-144681-1

Laboratory: TestAmerica Buffalo

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	EPA Region	Identification Number	Expiration Date
New York	NELAP	2	10026	03-31-19

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
9012	7.3.3	Solid	Cyanide, Reactive
9034	7.3.4	Solid	Sulfide, Reactive
9045D		Solid	Temperature
Moisture		Solid	Percent Moisture
Moisture		Solid	Percent Solids

Method Summary

Client: Bristol-Myers Squibb Company
Project/Site: Roll Off Characterization Sample

TestAmerica Job ID: 480-144681-1

Method	Method Description	Protocol	Laboratory
8260C	TCLP Volatiles	SW846	TAL BUF
8270D	Semivolatile Organic Compounds (GC/MS)	SW846	TAL BUF
8082A	Polychlorinated Biphenyls (PCBs) by Gas Chromatography	SW846	TAL BUF
6010C	Metals (ICP)	SW846	TAL BUF
7470A	TCLP Mercury	SW846	TAL BUF
1010A	Ignitability, Pensky-Martens Closed-Cup Method	SW846	TAL BUF
9012	Cyanide, Reactive	SW846	TAL BUF
9034	Sulfide, Reactive	SW846	TAL BUF
9045D	pH	SW846	TAL BUF
Moisture	Percent Moisture	EPA	TAL BUF
1311	TCLP Extraction	SW846	TAL BUF
3010A	Preparation, Total Metals	SW846	TAL BUF
3510C	Liquid-Liquid Extraction (Separatory Funnel)	SW846	TAL BUF
3550C	Ultrasonic Extraction	SW846	TAL BUF
5030C	Purge and Trap	SW846	TAL BUF
7.3.3	Cyanide, Reactive	SW846	TAL BUF
7.3.4	Sulfide, Reactive	SW846	TAL BUF
7470A	Preparation, Mercury	SW846	TAL BUF

Protocol References:

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL BUF = TestAmerica Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

Sample Summary

Client: Bristol-Myers Squibb Company
Project/Site: Roll Off Characterization Sample

TestAmerica Job ID: 480-144681-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
480-144681-1	Rolloff 25622	Solid	11/02/18 10:00	11/03/18 01:00
480-144681-2	Rolloff 26220, 27275, 1796	Solid	11/02/18 10:00	11/03/18 01:00
480-144681-3	Nat Grid Rolloff, 1HR+ 25015, 275023	Solid	11/02/18 10:00	11/03/18 01:00

Bill To Bristol Myers per Anne Locke

Chain of Custody Record

Temperature on Receipt _____

Drinking Water? Yes ☐ No ☑

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TAL-4124 (1007)

Client	Project Manager	Date	Chain of Custody Number
Clean Harbors For Bristol Myers	Napoli / Locke	11-2-18	275130
Address	Telephone Number (Area Code)/Fax Number	Lab Number	Page 1 of 1
City / State / Zip Code	Site Contact: Napoli / Lock	Lab Contact: Bo J. Schove	
Project Name and Location (State)	Carrier/Waybill Number		
Contract/Purchase Order/Quote No.			

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil	Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	Analysis: TCLP Vol	1 = Metal	1 = Merc	1 = Semi	PCBS	RCRA Charac.
Rolloff 25622	11/2/18	1000				X	+						X	X	X	X	X	X
" 26220, 27275, 1796	11/2/18	1000				X	+						X	X	X	X	X	X
Nat grid Rolloff, CHRT 25015, 27503		1000																

RE 11-2-18

681

480-144681 COC

LOGIN ON LOCUS - NASHVILLE DOES IT NEED REACTIVITY.

Possible Hazard Identification
☑ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required
☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☒ 14 Days ~~☐ 21 Days~~ ☐ Other _____

QC Requirements (Specify)

	Date	Time		Date	Time
1. Relinquished By: Shane Conger	11-2-18	1000	1. Received By: R. English, Syr	11-2-18	10:00
2. Relinquished By: R. English	11-2-18	19:00	2. Received By: Karen Vellacone	11-3-18	0100
3. Relinquished By:			3. Received By:		

Comments: temp 2.4°C #3

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

485325 - Syracuse SC

11/16/2018

Login Sample Receipt Checklist

Client: Bristol-Myers Squibb Company

Job Number: 480-144681-1

Login Number: 144681
List Number: 1
Creator: Kinecki, Kenneth P

List Source: TestAmerica Buffalo

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time (Excluding tests with immediate HTs)..	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Sampling Company provided.	True	
Samples received within 48 hours of sampling.	True	
Samples requiring field filtration have been filtered in the field.	True	
Chlorine Residual checked.	True	