2017 PERIODIC REVIEW REPORT

South Hill Dump
Sommerville Road
Cortlandville, New York

New York State
Department of Environmental Conservation
Site Number: 712009

CHA Project Number: 34228

Prepared for:

Town of Cortlandville
Raymond G. Thorpe Municipal Building
3577 Terrace Road
Cortland, New York 13045

Prepared by:

One Park Place
300 South State Street, Suite 600
Syracuse, New York 13202
Phone: (315) 471-3920
Fax: (315) 471-3569

May 2018

V:\Projects\ANY\K4\34236\Reports\2017 PRR\Final\2017 PRR.report.hw.712009_South Hill_Dump_final.doc

This Page Left Blank Intentionally.

TABLE OF CONTENTS

LIST OF FIGURES

APPENDICES

LIST OF ACRONYMS & ABBREVIATIONS

CHA	CHA Consulting, Inc.
DCE	cis-1,2-Dichloroethylene
DOH	Department of Health
EC	Engineering Controls
FAR	Field Activities Report
FER	Final Engineering Report
IC	Institutional Controls
LTM	Long Term Monitoring
MACTEC	MACTEC Engineering and Consulting, P.C.
ng/L	Nanograms per Liter
NYSDEC	New York State Department of Environmental Conservation
PAH	Polyaromatic Hydrocarbons
PCB	Polychlorinated Biphenyls
PFAS	Per-and Polyfluoroalkyl Substances
PRR	Periodic Review Report
RI	Remedial Investigation
ROD	Record of Decision
SMP	Site Management Plan
SVOC	Semi-Volatile Organic Compound
TCE	Trichloroethene
TMP	Tax Map Parcel
TOGS	Technical & Operational Guidance Series
USEPA	Environmental Protection Agency
VOC	Volatile Organic Compound

1.0 SITE OVERVIEW

The South Hill Dump inactive hazardous waste disposal site (Site) was remediated in accordance with the Record of Decision (ROD) dated January 2008. A detailed description of the remedial actions is discussed in Section 1.3. On December 5th, 2016, the Town of Cortlandville (Town) entered an Order on Consent (Index No. R7-20150122-34) with the New York State Department of Environmental Conservation (NYSDEC) to implement the Site Management Plan (SMP), approved by NYSDEC in November 2015. This Periodic Review Report (PRR) is the third sampling event since the completion of the remedy, and is required as an element of the SMP developed for the Site, and documents the groundwater monitoring event and site-wide inspection completed in 2017.

The Site is a 10.4-acre parcel located on Sommerville Road, in the Town of Cortlandville, Cortland County, New York and is identified as Tax Map Parcel (TMP) No. 109.00-01-02.000 on the Cortland County Tax Map. The Site is bounded by South Hill Road to the north and surrounded by forested land to the west, south, and east. North of South Hill Road is primarily agricultural land. A vicinity location map of the Site is included as Figure 1. An aerial image showing the boundaries of the Site is provided as Figure 2.

1.1 SITE BACKGROUND

The Site was reportedly used as a local waste disposal location by residents as early at 1949 and officially operated as a solid waste disposal facility, controlled by the Town of Cortlandville, from approximately 1960 to 1972. Industrial and municipal wastes were accepted from the Town of Cortlandville, Town of Solon, and the Village of McGraw; however, access to the Site was reportedly unrestricted during this time. Site operations included pushing the waste over the working face of the landfill with cover material spread one or more times per week; however, prior to remedial action, various types of waste could be observed protruding from the surface of the landfill.

In 1990, the NYSDEC conducted a site-wide inspection and observed the presence of multiple drum carcasses as well as leachate seeps emanating from the landfill. During this inspection soil and leachate samples were collected, revealing the presence of chlorinated solvents and pesticides. In February 1991, the Site was assigned a Class 2 Hazardous Waste Site designation (sites considered to be a significant threat to the public health or environment - action required) based on the results of the 1990 site-wide inspection and laboratory analysis identified the presence of pesticides and chlorinated solvents. Based on findings from intermittent sampling events from 1991 through 1994, a Remedial Investigation (RI) was proposed. The RI was conducted by Parsons Engineering Science, Inc, under contract by the NYSDEC. RI field activities included:

- The excavation of test pits to determine the vertical extent of solid waste, collection of subsurface soil samples, and characterization of the shallow lithology;
- The collection of samples from leachate seeps and the intermittent stream on the southeastern most region of the Site; and
- The installation of soil borings and groundwater monitoring wells to facilitate the collection of subsurface soil samples (during the boring installation) and groundwater samples following the completion of the well installations.

A feasibility study and remedial action were recommended in the RI Report due to the shallow depth to fractured bedrock at the site, overall condition of the landfill at the time of the investigation, and analytical results confirming the presence of soil, surface water, and groundwater contamination. Following development of a feasibility study to evaluate remedial alternatives for the Site, MACTEC Engineering and Consulting, P.C. (MACTEC) conducted remedial actions at the Site in 2011 and 2012. A more detailed discussion of the Site remedial actions is provided in the SMP (MACTEC, 2015). After the remedial actions were performed, the Site was reclassified as a Class 4 Inactive Hazardous Waste Site (Site Code 712009) designation (a site properly closed, but requiring continued management) by the NYSDEC.

1.2 NATURE AND EXTENT OF CONTAMINATION

The following types of contaminants were identified on the Site during the RI and remedial actions:

- Volatile organic compounds (VOCs)
  - Trichloroethene
  - 1,2-dichloroethene
- Semi-volatile organic compounds (SVOCs)
  - Polyaromatic Hydrocarbons (PAHs)
- Polychlorinated biphenyls (PCBs)
- Heavy metals
  - Copper
  - Mercury
  - Nickel
  - Zinc
  - Cadmium

1.3 SUMMARY OF SITE REMEDY

The selected remedy for the Site included the following major components:

- Consolidation of waste from outside the proposed landfill boundary to within the landfill boundary;
- Installation of a sedimentation basin for additional erosion and sediment control;
- Grading of the landfill within the new boundary;
- Removal of bulk waste uncovered during grading and excavation of down-drain trenches;
- Installation of slope benches and down-drains;
- Installation of landfill cover system, gas vents, perimeter access road waterbars to convey water across the site roadways, and stormwater controls; and
- Seeding and mulching of vegetated areas.

In addition to the closure of the landfill, the Site remedy required that an Environmental Easement be placed on the property to (1) require compliance with the November 2015 SMP; (2) restrict the use of groundwater as a potable water source; (3) periodically certify the Institutional Controls/Engineering Controls (IC/ECs) are in place and unchanged, which is included in this PRR; and, (4) limit the use and development of the Site to closed and capped/covered landfill only. The Environmental Easement for the Site was executed by the NYSDEC on September 30, 2013, and recorded with the Cortland County Clerk on October 11, 2013, and included in Appendix C of the SMP. A Final Engineering Report (FER) was written and submitted to the NYSDEC by MACTEC in 2014.

1.4 SITE MANAGEMENT STATUS

This PRR was prepared by CHA Consulting, Inc. (CHA) to document the status of the controls, established by the SMP, during 2017. The SMP requirements include:

- An annual inspection of the ICs and ECs; and
- Long-term monitoring (LTM) of:
    - Groundwater;
    - Surface water; and
    - Sediment.

2.0 INSTITUTIONAL/ENGINEERING CONTROLS COMPLIANCE REPORT

ICs and ECs have been established to protect public health and the environment for future use of the Site. The IC/ECs are designed to:

- Prevent ingestion/direct contact with remaining contamination;
- Prevent inhalation of or exposure to contaminants volatilizing from remaining contamination;
- Prevent ingestion of groundwater with contaminant levels that exceed drinking water standards; and
- Prevent contact with or inhalation of volatiles from contaminated groundwater.

2.1 INSTITUTIONAL CONTROLS

ICs are required to implement, maintain and monitor the ECs, control disturbance of contamination to prevent future exposure, and limit the use of the Site to its current use as a capped/covered landfill. ICs must remain in place unless the Environmental Easement is amended or terminated. The ICs implemented under the SMP include:

- Compliance with the Environmental Easement;
- Operation and maintenance of the ECs as specified in Section 4.0 of the SMP;
- Inspection and certification of the ECs on a semi-annual basis (i.e. in the spring and the fall);
- Implementation of the long term environmental monitoring as defined in Section 3.0 of the SMP;
- Protection and replacement, as necessary, of on-site environmental monitoring devices; and
- Preparation of an annual report to regulatory agencies, as defined by the SMP.

2.2 ENGINGEERING CONTROLS

2.2.1 Landfill Cover System

The landfill cover prevents exposure to the remaining contamination at the Site. The cover consists of 18-inches of cover soil and 6-inches of vegetated topsoil for an overall cover thickness of 24-inches. In the event the landfill cover is penetrated, removed, or severely disturbed, an Excavation Plan included in Section 2.4 of the SMP, should be followed.

2.2.2 Site Access Controls

Site access is controlled by a chain-link fence along South Hill Road and a locked gate at the vehicle entrance. A stone road provides access around the perimeter of the landfill boundary.

2.2.3 Surface Water Drainage Conveyance Controls

The perimeter access roads include waterbars to adequately convey surface water and prevent erosion of the stone road. Stone drainage pathways on the landfill cover convey surface water to a riprap-lined drainage swale along the eastern side of the landfill and ultimately to the stormwater detention basin on the southern side of the landfill. The stormwater detention basin outlet creates an intermittent flow of water that discharges to an unnamed stream which then discharges to Hoxie Gorge Creek.

2.2.4 Landfill Gas Vents

Seven passive landfill gas vents were installed to collect potential landfill gas for direct venting to the atmosphere. These gas vents reduce the potential for accumulation and migration of landfill gas in the subsurface.

2.3 2017 IC/EC INSPECTION

A Site inspection was performed on July 5, 2017, by MACTEC. The Field Activities Report (FAR) associated with this inspection is included in Appendix A. The results of the inspection indicate the following:

- Landfill cover was in relatively good condition; there was no evidence of scour or erosion, however, the grass was overgrown and should be mowed;
- Landfill gas vents were in good condition;
- Monitoring wells were in good condition;
- The eastern drainage swale was in good condition; and
- No leachate seeps were observed, however what was believed to be surface water drainage was observed in the eastern drainage swale, in the vicinity of historically observed leachate seeps.

At the conclusion of the field activities, MACTEC recommended that the landfill be mowed in order to promote healthy vegetative growth, reduce mold, and discourage growth of undesirable vegetation. On August 17th and 18th, 2017, Aztech Environmental Technologies completed mowing of the landfill.

In addition to the landfill inspection, MACTEC performed an inspection of the monitoring well network. The results from this inspection indicate that the monitoring wells were in generally good condition, and repairs were not recommended.

2.4 IC/EC CERTIFICATION

The IC and EC Certification Forms are included in Appendix B. ECs, consisting of the soil cover system, site access controls, surface water conveyance system, and landfill gas vents were in place and functioning properly during the reporting period. These controls have been and continue to be effective in preventing exposure of the public to remaining contaminants in soil and groundwater at the Site. The SMP is being implemented and based on this review, the remedy continues to be protective of public health and/or the environment and compliant with the decision document. At this time, it is recommended that all controls for the Site remain in place.

3.0 MONITORING PLAN COMPLIANCE REPORT

3.1 COMPONENTS OF THE MONITORING PLAN

Components of the monitoring plan include:

- Synoptic water level measurements from the 11 groundwater monitoring wells on Site. Monitoring wells are set in clusters with screens in the shallow overburden and bedrock;
- Groundwater sampling;
- Surface water sampling;
- Seep sampling (if observed); and
- Sediment sampling.

Samples were collected and sent to Test America Laboratory for analysis of one or more of the parameters below, as detailed in the following sections:

- VOCs via United States Environmental Protection Agency (USEPA) Method 8260C;
- PCBs via USEPA method 8082; and/or
- Metals via USEPA method 6010C.

3.2 MONITORING COMPLETED DURING REPORTING PERIOD

Monitoring activities were performed July 5th and 6th, 2017 by MACTEC, and summarized in a FAR. The FAR (MACTEC, January 2018) including a detailed analysis of the laboratory data, is provided in Appendix A and summarized in the following sections.

3.2.1 Groundwater Sampling

Groundwater samples were collected in accordance with the SMP using "no purge" passive bags from the 11 monitoring wells located on the Site as shown on Figure 3. Groundwater results were compared to the Technical and Operational Guidance Series (TOGS) 1.1.1 New York State (NYS) Class GA Standards for VOCs and metals. In addition to the requirements in the SMP, the NYSDEC required the collection of per-and-polyfluoroalkyl substances (PFAS) using a modified USEPA Method 537, and 1,4-dioxane via USEPA Method 8260SIM, in 6 of the monitoring wells during this round of sampling.

The results from the groundwater sampling event are summarized as follows:

- Results for VOCs and metals are consistent with the 2016 sampling event.
- VOCs were not detected in the upgradient monitoring wells; MW-1S and MW-1B.
- Iron, manganese and sodium were detected in both of upgradient wells, however only iron xceeded TOGS 1.1.1.
- Trichloroethylene (TCE) was detected in four downgradient monitoring wells; MW-3SR, MW3SR2, MW3BR2, and MW-4B, and exceeded TOGS 1.1.1 in MW-3SR2 and MW-3BR2.
- Cis-1,2-dichloroethylene (DCE) was detected in two monitoring wells; MW-3SR2 and MW-3BR2. Only MW-3BR2 exceeded TOGS 1.1.1.
- 1,4-dioxane was not detected in the groundwater samples.
- PFAS were detected in the 6 wells that were sampled, however concentrations are below the USEPA advisory limit of 70 nanograms per liter (ng/L).
- Iron was detected above TOGS 1.1.1 in all eleven monitoring wells.
- Manganese was exceeded TOGS 1.1.1 in MW-2B, MW-3BR, and MW-3SR2.
- NYSDEC requires no additional sampling for 1,4-dioxane or PFAS per a phone conversation between NYSDEC and CHA in February 2018.

3.2.2 Surface Water Sampling

One surface water sample was collected from the stormwater detention basin outfall, located at the southern side of the Site (Figure 2). The surface water sample was collected for laboratory analysis of VOCs, PCBs, and metals and compared to NYSDEC Class C surface water criteria (NYSDEC, 2008b). Results from this sampling event are summarized as follows:

- VOCs and PCBs were not detected.
- Aluminum, and iron were the only metals detected at concentrations exceeding the NYSDEC Class C surface water criteria.

Results from this sampling event were determined to be consistent with historical sampling results.

3.2.3 Seep Sampling

Leachate seeps were observed on the surface of the landfill during the remedial action in 2012 and were addressed via excavating saturated soil and solid waste in the seep areas, and replacing the materials with borrow material and a geosynthetic geogrid. During the 2013 landfill inspection, minor groundwater seeps remained. Though the seeps were relatively minor in 2013, compared to 2012, a requirement to sample observed seeps, if any, was added to the SMP.

At the time of the 2017 fieldwork, there were no active seeps observed, however flowing water was observed in the outer drainage swale near the former seeps. MACTEC collected one sample for laboratory for the analysis of VOCs, metals, and PCBs, and compared to NYSDEC Class C surface water criteria (NYSDEC, 2008b). Results from the sampling event are summarized as follows:

- No VOCs or PCBs were detected.
- Several metals were detected in the sample; however, only aluminum exceeded the NYSDEC Class C surface water criteria.

Results from this sample were not consistent with historical leachate seeps, and therefore, the sample location was determined not to be a leachate seep.

3.2.4 Sediment Sampling

One sediment sample was collected from the storm water detention basin outfall, located at the southern side of the Site (Figure 2). The sediment sample was collected for laboratory analysis of VOCs, metals, and PCBs and compared to NYSDEC sediment criteria (NYSDEC, 1999). VOCs and PCBs were not detected in the sample, and although several metals were detected, only manganese exceeded the sediment criteria level.

4.0 OVERALL PRR CONCLUSIONS AND RECOMMENDATIONS

The Site was observed to be in overall good condition at the time of the July 2017 activities. Specific observations include:

- Landfill mowing had not yet been completed during the site inspection; however, these activities were performed in August 2017.
- Groundwater, sediment, and surface water results indicated consistent trends with the previous sampling events. In summary, only TCE and DCE were detected above applicable standards in the groundwater samples, while heavy metals were detected above standards in all media sampled.
- One potential leachate seep sample was collected; however, laboratory analytical showed that the sample was not consistent with historical leachate seeps, and therefore, was not considered to be a leachate seep.
- 1,4-Dioxane was not detected in the 6 monitoring wells sampled during this event.
- PFAS were detected in the 6 monitoring wells during this event; however, results did not exceed the EPA guidance criteria.
- The NYSDEC has indicated that laboratory analysis for 1,4-dioxane and PFAS is not required for future monitoring events.

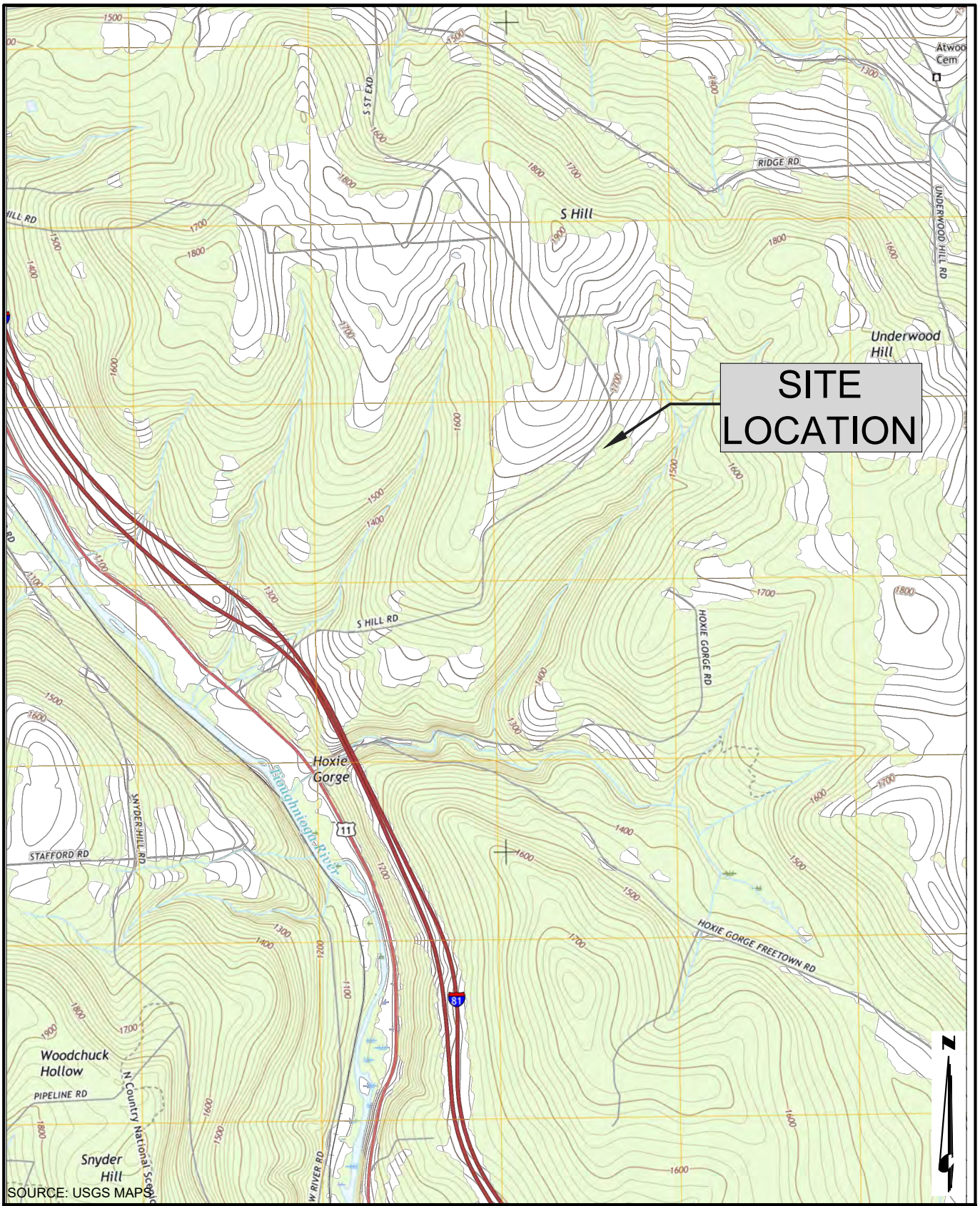
Evaluation of Remedy Performance, Effectiveness & Protectiveness

Provided that the ICs and ECs established for the Site remain in place, and are maintained, it is expected that the remedy will continue to be effective in protecting human health and the environment. The results of the sampling event summarized above and detailed in the FAR (MACTEC, January 2018), indicate that the remedy continues to be effective.

Recommendations

It is recommended that the current Site ICs and ECs remain in place, and the ECs continue to be inspected and monitored. The most recent round of monitoring did confirm some exceedances of standards in groundwater, sediment, and surface water. Therefore, it is recommended that the annual site monitoring program continue. No changes to the remedy, and/or monitoring or operation and maintenance plans are recommended at this time.

FIGURES



SOURCE: USGS MAPS

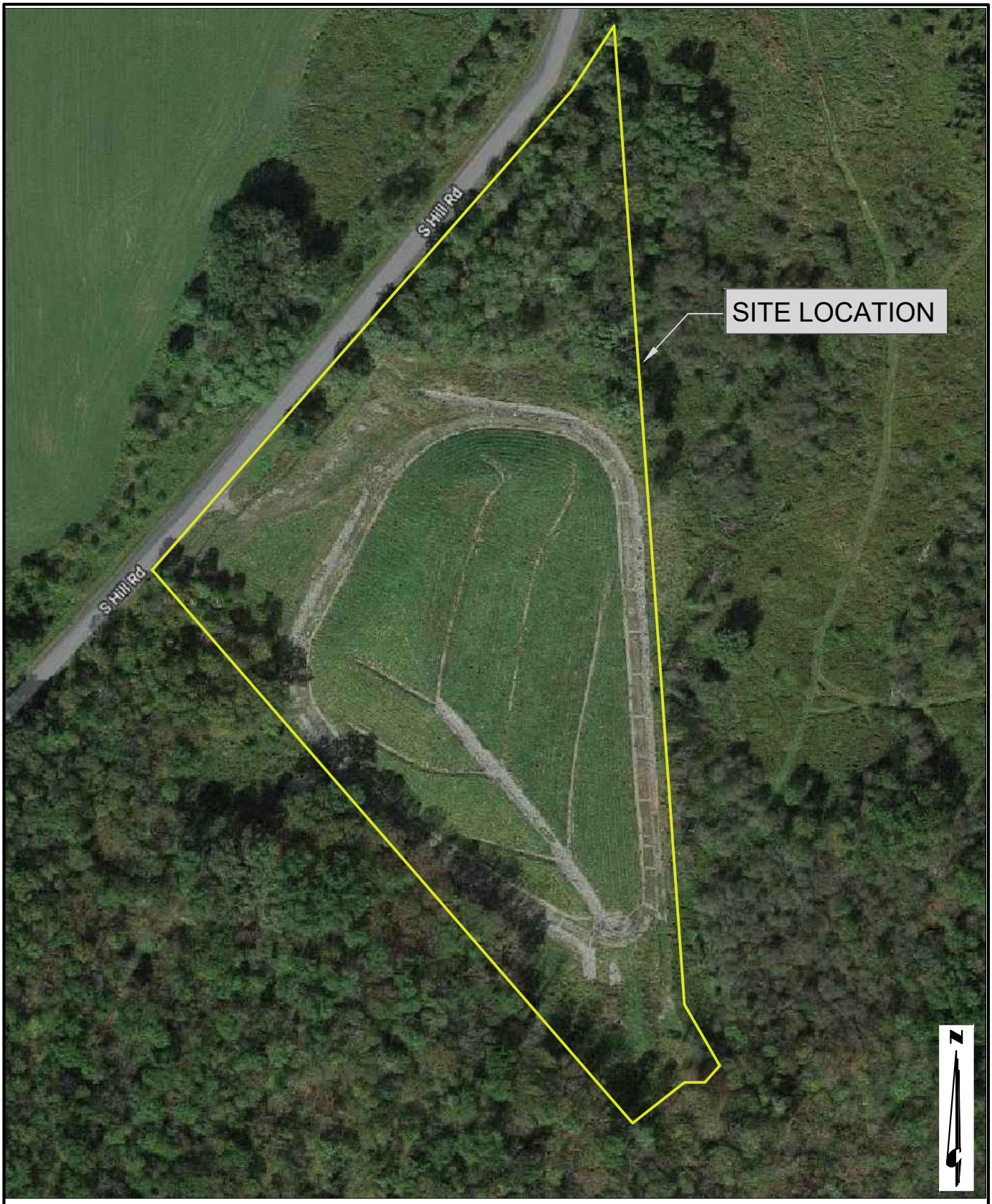
CHA
300 South State Street - Suite 600
Syracuse, NY 13202
315.471.3920 • www.chacompanies.com

SOUTH HILL DUMP
TOWN OF CORTLANDVILLE, NEW YORK
NYSDEC SITE NO. 712009
PERIODIC REVIEW REPORT
SITE LOCATION MAP

PROJECT NO. 34236

DATE: 05/2018

FIGURE 1



CHA
300 South State Street - Suite 600
Syracuse, NY 13202
315.471.3920 • www.chacompanies.com

SOUTH HILL DUMP
TOWN OF CORTLANDVILLE, NEW YORK
NYSDEC SITE NO. 712009
PERIODIC REVIEW REPORT
SITE AERIAL

PROJECT NO. 34236

DATE: 05/2018

FIGURE 2

CHA
300 South State Street - Suite 600
Syracuse, NY 13202
315.471.3920 • www.chacompanies.com

SOUTH HILL DUMP
TOWN OF CORTLANDVILLE, NEW YORK
NYSDEC SITE NO. 712009
PERIODIC REVIEW REPORT
MONITORING WELL LOCATION MAP

PROJECT NO. 34236

DATE: 05/2018

FIGURE 3

APPENDIX A

Field Activities Report (MACTEC, January 2018)

FIELD ACTIVITIES REPORT
SITE MANAGEMENT MEDIA SAMPLING AND LANDFILL INSPECTION
SOUTH HILL DUMP
SITE NO. 712009

WORK ASSIGNMENT NO. D007619-29

Prepared for:

New York State Department of Environmental Conservation

Division of Environmental Remediation
Remedial Bureau E
Albany, New York

Prepared by:

MACTEC Engineering and Consulting, P.C.
Portland, Maine

MACTEC: 3617137309

JANUARY 2018

FIELD ACTIVITIES REPORT
SITE MANAGEMENT MEDIA SAMPLING AND LANDFILL INSPECTION
SOUTH HILL DUMP
SITE NO. 712009

WORK ASSIGNMENT NO. D007619-29

Prepared for:

New York State Department of Environmental Conservation
Division of Environmental Remediation
Remedial Bureau E
Albany, New York

Prepared by:

MACTEC Engineering and Consulting, P.C.
Portland, Maine

MACTEC: 3617137309

JANUARY 2018

Prepared by:

Nate Vogan
Project Scientist

Approved by:

Mark J. Stelmack, P.E.
Project Manager

TABLE OF CONTENTS

LIST OF TABLES

Table

LIST OF FIGURES

Figures

GLOSSARY OF ACRONYMS AND ABBREVIATIONS

cis-1,2-DCE	cis-1,2-dichloroethene
EC	engineering control
FAP	Field Activities Plan
FDR	field data record
ft	foot (or feet)
IC	institutional control
MACTEC	MACTEC Engineering and Consulting, P.C.
mg/kg	milligrams per kilograms
mg/L	milligram(s) per liter
ng/L	nanograms per liter
NYSDEC	New York State Department of Environmental Conservation
PCB	polychlorinated biphenyl
PFAS	per- and polyfluoroalkyl substances
PFBS	perfluorobutanesulfonic
PFOA	perfluorooctanoic acid
PFOS	perfluorooctane sulfonic acid
RA	remedial action
Report	Field Activities Report
ROD	Record of Decision
RSL	Regional Screening Level
SIM	selective ion monitoring
Site	South Hill Dump Site
SM	Site Management
SMP	Site Management Plan
TCE	trichloroethene
µg/L	microgram(s) per liter
USEPA	United States Environmental Protection Agency
VOC	volatile organic compound

1.0 INTRODUCTION AND REQUIRED SITE CONTROLS

1.1 INTRODUCTION

MACTEC Engineering and Consulting, P.C. (MACTEC), under contract to the New York State Department of Environmental Conservation (NYSDEC), is submitting this Field Activities Report, Site Management (SM) Media Sampling (Report) for the South Hill Dump Site (Site) located in the Town of Cortlandville, Cortland County, New York (Figure 1.1). This Report summarizes the July 2017 sampling event performed at the Site. The Site is currently listed as a Class 4 Inactive hazardous waste site - Site No. 712009 - in the Registry of Hazardous Waste Sites in New York State. This Report is being submitted in accordance with Work Assignment No. D007619-29, and with the Superfund Standby Contract between MACTEC and the NYSDEC. The Site is under SM in accordance with the Record of Decision (ROD) dated January 2008 (NYSDEC, 2008a).

The Site is located in the Town of Cortlandville, Cortland County; approximately two miles south of the Village of McGraw, on the south side of South Hill Road (see Figure 1.1). Much of the property is steeply sloped. The area surrounding the Site includes wooded areas, orchards, and active and former farm fields. The topography in this area slopes to the south, toward an unnamed stream located approximately 1/4 mile south of the Site (MACTEC, 2006).

Two residential parcels border the Site and are located along the southern and eastern sides of South Hill Road; the closest residence is less than ¼ mile southwest of the Site. The area west and north of the Site consists primarily of active farm land. A former apple orchard is located farther west. A mix of meadow, farm land, apple orchards, and forest area is located northeast of the Site. The Tioughnioga River is located within two miles southwest of the Site. The unnamed stream located south and east of the Site discharges to the Tioughnioga River via Hoxie Gorge Creek.

The Site was operated as a municipal waste disposal facility by the Town of Cortlandville from the early 1960s until 1972, although it is reported that residents used the Site for trash disposal as early as 1949. During its years of operation, wastes were received from the Village of McGraw and the Towns of Cortlandville and Solon, as well as local industry. Access to the Site was reportedly unrestricted during this time. It has also been reported that waste was often permitted to burn during landfill operation, and that at one time a waste oil pit may have existed. Operations are reported to have involved pushing waste over the working face of the landfill with some spreading and compaction. Cover material was reportedly spread one or more times per week. Prior to the remedial action (RA) described in this report, waste observed protruding from the surface of the landfill across much of the Site included road construction debris, brush, stumps, tires, white metal, automobile parts, and miscellaneous industrial waste materials. Numerous decomposed drums were present across many areas of the landfill (MACTEC, 2006).

1.2 SUMMARY OF THE REMEDIAL ACTION

An RA was conducted at the Site in 2011 and 2012 in accordance with the ROD and as documented in the Final Engineering Report (MACTEC, 2013a).

The RA included the following activities:

- Installation of stabilized vehicle entrance
- Installation of perimeter erosion and sedimentation controls
- Clearing of trees and brush above the ground surface
- Grubbing of areas within the limit of grading, and disposal of grubbings on-site (beneath the new landfill cover)
- Excavation of on-site waste outside the new solid waste boundary and consolidation within the new solid waste boundary
- Decommissioning of two existing groundwater monitoring wells (MW-3S and MW-3B)
- Installation of additional erosion and sedimentation controls and measures, including a sedimentation basin, in preparation for landfill grading and soil cover installation
- Grading of the landfill within the new solid waste boundary to achieve subgrade
- Excavation for installation of landfill storm water controls (slope benches and downdrains) within the new solid waste boundary
- Removal of bulky waste items uncovered during the course of waste consolidation and landfill grading, with off-site disposal of removed bulky wastes
- Characterization and offsite disposal of uncovered buried waste drums, drum nests, and drum remnants
- Installation of 24 inch landfill cover system including associated landfill storm water controls
- Installation of landfill gas vents
- Installation of perimeter access road with water bars
- Installation of perimeter storm water controls including riprap drainage channels and culverts
- Conversion of the sedimentation basin to a storm water detention basin
- Installation of two new groundwater monitoring wells (MW-3SR and MW-3BR)
- Seeding and mulching of all disturbed areas within the limit of work.

RA activities for the Site were completed in December 2012.

Trichloroethene (TCE) concentrations reported during historic groundwater sampling at MW-3S and MW-3B consistently exceeded the groundwater standard. The concentration of TCE reported in the replacement overburden well MW-3SR (20 micrograms per liter [µg/L]) in 2013 was significantly less that the

concentration of TCE in MW-3S in 1997 (80 µg/L) and in 2001 (200 µg/L). TCE was not detected in the replacement bedrock well MW-3BR.

Two additional downgradient monitoring wells (MW-3SR2 and MW-3BR2) were installed in June 2014 to better replicate the groundwater flow path of MW-3S and MW-3B.

Concentrations of Site contaminants detected in groundwater samples collected during the previous sampling event (March 2016) were similar to historic sampling results. In general, TCE and cis-1,2-dichloroethene concentrations remained consistent with past sampling events, but at lower levels than those observed in 2011.

1.2.1 Remaining Contamination

Remaining contamination at the Site consists primarily of municipal and industrial wastes beneath the constructed landfill cover.

1.2.2 Engineering and Institutional Controls

Because contamination is still remaining at this Site, engineering controls (ECs) and institutional controls (ICs) have been implemented to protect public health and the environment for the applicable future use. The controlled property has the following ECs:

- a cover system placed over the landfilled waste
- site access controls
- surface water drainage conveyance
- landfill gas vents

A series of ICs are required to implement, maintain and monitor these ECs. The Environmental Easement requires compliance with these ICs, to ensure that:

- All ECs must be operated and maintained as specified in the SM Plan (SMP)
- All ECs on the Site must be inspected and certified at a frequency and in a manner defined in the SMP
- Environmental monitoring must be performed as defined in the SMP
- Data and information pertinent to SM for the controlled property must be reported at the frequency and in a manner defined in the SMP
- On-site environmental monitoring devices, including but not limited to groundwater monitoring wells, must be protected and replaced as necessary to ensure continued functioning in the manner specified in the SMP.

This Report describes SM field activities conducted in July 2017 in accordance with the SMP (MACTEC, 2013b) for the Site.

This Report is organized as follows:

- Section 2.0 describes the field activities conducted at the Site in accordance with the SMP
- Section 3.0 presents a summary of field activities and laboratory analytical results
- Section 4.0 provides a summary and conclusion of the field activities
- Section 5.0 includes the references discussed in this report.

2.0 FIELD ACTIVITIES

The objectives of the field activities and associated sampling is to document that the established controls required by the SMP are operational and effective, that the SMP is being implemented and conducted accordingly, and that the remedy remains protective of the environment and/or public health. This requirement includes that Site contaminants be monitored in groundwater, surface water, sediment, and leachate seep. The analytical results of these samples provide a measure of the groundwater quality when compared to the post-remedy baseline conditions obtained in 2013 and document changes to onsite groundwater quality. These results will help determine if additional RAs may be warranted.

As part of this round of sampling, at the NYSDEC's request, six of the wells were sampled for 1,4-dioxane using the 8260C selective ion monitoring (SIM) method because this compound is considered an emerging contaminant of concern. As of the time of sampling, NYSDEC standards or guidance values for groundwater have not been established for 1,4-dioxane, however the United States Environmental Protection Agency (USEPA) Regional Screening Levels (RSLs) from May 2016 indicate a residential tap water RSL of 0.46 µg/L.

Additionally, six wells were sampled and analyzed for per-and-polyfluoroalkyl substances (PFAS) using a modified Method 537 to obtain low detection limits. NYSDEC standards or guidance values for groundwater have not been established for PFAS compounds. In May 2016, the USEPA issued Drinking Water Health Advisories of 70 nanograms per liter (ng/L) for perfluorooctanoic acid (PFOA) and perfluorooctane sulfonic acid (PFOS). The USEPA Regional Screening Levels from May 2016 indicate a residential tap water RSL of 380 µg/L for perfluorobutanesulfonic (PFBS) acid. No other guidance values or regulatory standards are identified for the remaining PFAS compounds. Modified Method 537 achieves reporting limits for PFOA and PFOS of 2 ng/L (part per trillion).

The performance of this field work was governed by MACTEC's Field Activities Plan (FAP) (MACTEC, 2017) submitted to the NYSDEC in June 2017. The field work was conducted following the procedures described herein and as outlined in the Program Quality Assurance Program Plan (MACTEC, 2011a) and Program Health and Safety Plan (MACTEC, 2011b). The NYSDEC call-out contractor TestAmerica Laboratories, Inc. provided laboratory analytical services.

The 2017 field work conducted at the Site included completing the following tasks:

- Performing a monitoring well inspection to document the condition and integrity of the Site monitoring wells.
- Obtaining a synoptic round of water level measurements from the eleven Site monitoring wells.
- Collecting "no purge" groundwater samples for metals and VOCs from the eleven monitoring wells.
- Collecting "no purge" groundwater samples for 1,4-dioxane from six monitoring wells.
- Collecting PFAS grab samples from six monitoring wells.

- Collecting one surface water and one sediment sample from the storm water detention basin outfall located at the southern end of the Site.
- Collecting one seep sample from the seep located at the eastern side of the landfill.
- Completing an inspection of the landfill cover system, surface water drainage conveyance system, landfill gas vents, and chain link fence.

The remainder of Section 2.0 describes the field activities conducted in accordance with the SMP. Used disposable equipment and personal protective clothing generated while conducting the fieldwork was double-bagged in polyethylene trash bags, sealed, and disposed of as non-hazardous municipal solid waste.

2.1 MONITORING WELL INSPECTION

A groundwater monitoring well inventory was completed to document the condition and physical features of the Site monitoring wells. Refer to Subsection 3.1 of this report for results of the well inventory.

2.2 SYNOPTIC WATER LEVEL MEASUREMENTS

Prior to groundwater sampling, a synoptic round of water level measurements was collected from the eleven groundwater monitoring wells at the Site. Water level measurements were collected using a water-level indicator, and were measured to the surveyed top of riser (or to the top of casing for wells without riser pipes) and referenced to mean sea level. Water levels were recorded to the nearest 0.01 foot (ft).

2.3 GROUNDWATER SAMPLING

Groundwater sampling activities were conducted on July 5 and 6, 2017. Groundwater samples were collected from the eleven monitoring locations (upgradient wells MW-1S and MW-1B; on-Site/cross-gradient wells MW-3SR2, MW-3BR2, MW-2S, MW-2B, MW-2D, MW-3SR, and MW-3BR; and downgradient wells MW-4S, and MW-4B) to evaluate concentrations of Site contaminants in groundwater. For this sampling event additional samples were collected for 1,4-dioxane and PFAS at six of the monitoring wells (MW-1S, MW-1B, MW-3SR2, MW-3BR2, MW-4S and MW-4B). Sampling locations are shown on Figure 2.1.

The wells were sampled using HydraSleeve ‘no purge’ sampling techniques as described in the FAP (MACTEC, 2017). Table 2.1 presents the sample identification and analytical methods for samples collected at the Site. At the time of HydraSleeve collection and because a ‘no purge’ collection technique was used, turbidity was the only field parameter that was measured. These measurements and other data were documented on the Field Data Record (FDR) – HydraSleeve sampling form included in Appendix A. The HydraSleeves had been deployed during the last sampling round performed in March 2016.

Monitoring wells selected for PFAS samples were purged of water for one well volume using a peristaltic pump (MW-1S, MW-3SR2, MW-3BR2, and MW-4S) or bailer (MW-1B and MW-4B) where the water depth was too great for peristaltic pumping methods. The wells were allowed to recover overnight after purging and were then sampled. Consistent with the FAP, turbidity was the only field parameter that was measured. These measurements and other data were documented on a Field Data Record (FDR) – Low Flow Groundwater Sampling included in Appendix A.

After sample collection, new HydraSleeves were deployed in all the monitoring wells for the next round of sampling. For wells selected for PFAS sampling, new high density polyethylene HydraSleeves were deployed.

All groundwater samples were submitted to an off-Site laboratory (TestAmerica Laboratories, Inc., Buffalo, NY) for VOCs, metals, 1,4-dioxane and PFAS by USEPA methods 8260C, 6010C, 8260SIM, and 537, respectively, following the NYSDEC Analytical Services Protocols (NYSDEC, 2005).

2.4 SURFACE WATER AND SEDIMENT SAMPLING

Concurrent with groundwater sampling, one surface water and one sediment sample were collected from the storm water detention basin outfall located at the southern end of the Site (see Figure 2.1). The FDR for these samples is included in Appendix A. The samples were submitted for offsite laboratory analysis for VOCs (USEPA method 8260C), metals (6010C), and polychlorinated biphenyls (PCBs) (8082A).

2.5 SEEP SAMPLING

A groundwater seep, on the eastern side of the landfill, was encountered during the RA in 2012. The NYSDEC subsequently collected a sample of the seep. The analytical results of the seep sample indicated the presence of VOCs, semi-VOCs, and metals. Although the seep, as surface water, was not observed to be migrating offsite during the RA (nor in March 2016), the NYSDEC decided to eliminate the expression of the groundwater seep at the ground surface to the extent practical. Thus, the RA subcontractor excavated saturated soil and solid waste in seep areas and replaced those materials with a combination of compacted select borrow and a supporting geosynthetic material (i.e., geogrid) to augment placement of the subgrade and prevent surface expression of the seep.

Relatively smaller additional groundwater seeps were subsequently observed during the RA at the ground surface at a few locations downgradient from the original seep on the eastern side of the landfill. Saturated soil was excavated to fractured shale at those groundwater seep locations, and rip rap was backfilled in the excavation during the RA to provide a structural surface on which to backfill compacted select borrow.

During the landfill inspection on July 19, 2013, minor groundwater seepage was recorded at the surface near the MW-3 cluster, at the southeast corner of the Site. The observed seepage amount was a fraction of the original observed seepage. It was recommended in the November 2013 Field Activities Report

(MACTEC, 2013c) that a sample of the seep be collected during future monitoring events in addition to field parameters. Analytical results could then be compared to the historic seep analytical results (February 14, 2012, by NYSDEC) and to the results from nearby wells MW-3SR and MW-3BR.

At the time of the 2017 fieldwork presented in this report, there was no active seep observed on the eastern landfill surface in the southeast portion of the Site. However, flowing water was observed in the outer drainage swale in the approximate area in which the seep was previously observed. A surface water sample was collected from the drainage swale. The FDR for this sample is included in Appendix A. The sample was submitted for offsite laboratory analysis for VOCs (USEPA method 8260C), metals (6010C), and PCBs (8082A).

2.6 LANDFILL INSPECTION

On July 6, 2017, an environmental professional from MACTEC arrived on site to conduct a landfill inspection in accordance with the SMP. Landfill site features are shown on Figure 2.1. Inspected features include the landfill cover system, surface water drainage conveyance system, landfill gas vents, chain link fence, and groundwater monitoring wells. The 2017 landfill inspection form completed by MACTEC, with photographic documentation, is included in Appendix B.

3.0 FIELD ACTIVITIES RESULTS

3.1 MONITORING WELL INSPECTION

A Well Inspection Checklist documenting the condition and physical details of the wells is included in Appendix A. All wells were secure and clearly labeled. The groundwater monitoring wells were observed to be in generally good condition, and repairs are not recommended at this time.

3.2 SYNOPTIC WATER LEVEL MEASUREMENTS

The depth to water (from the top of riser or from the top of casing for wells without pipe risers) and groundwater elevation for each groundwater monitoring well are included in Table 3.1. The groundwater table elevation decreases more than 124 ft in the overburden wells and more than 131 ft in the bedrock wells from the MW-1 cluster (upgradient, offsite wells located northwest of South Hill Road) to the MW-4 cluster (downgradient wells located south of the detention basin). Groundwater flow is to the southeast, which is largely unchanged from prior measurements. See Figures 3.1 and 3.2 for groundwater potentiometric surfaces in the overburden and bedrock, respectively.

3.3 GROUNDWATER MONITORING RESULTS

Reported VOC concentrations in groundwater for the July 2017 monitoring event included TCE and cis-1,2-dichloroethene (cis-1,2-DCE).

TCE was detected in four wells, MW-3SR (1.9 micrograms per liter [µg/L]), MW-3SR2 (170 µg/L), MW3BR2 (6.5 µg/L), and MW-4B (0.56 µg/L). The class GA groundwater standard (NYSDEC, 2008b) for TCE (5 µg/L) was exceeded at MW-3SR2 and MW-3BR2.

Cis-1,2-DCE was detected in two wells, at MW-3SR2 (20 µg/L) and MW-3BR2 (3.1 µg/L) (only MW-3SR2 was observed above the GA groundwater standard of 5 µg/L).

VOCs were not detected in the upgradient wells MW-1S and MW-1B, the cross-gradient wells MW-2B, MW-2D, MW-2S, and MW-3BR, or at the downgradient well MW-4S. VOC concentrations reported for the July 2017 monitoring event are consistent with those observed in 2016. See Table 3.2 for comparisons of TCE and Table 3.3 for comparisons of cis-1,2-DCE concentrations in Site wells for the last six monitoring events.

For metals, detections of iron exceeded the GA groundwater standard of 0.3 milligrams per liter (mg/L]) at all of the eleven monitoring wells sampled in 2017. Iron was detected at an estimated concentration of 159 mg/L in MW-2B (Table 3.4). Detections of manganese also exceeded the GA groundwater standard (0.3 mg/L) at MW-2B, MW-3BR, and at MW-3SR2.

1,4-Dioxane was not detected in groundwater collected at the Site in July 2017. PFAS were detected, however concentrations are below the USEPA Advisory Limit of 70 nanograms per liter (ng/L) (Table 3.5).

Detected contaminants in groundwater for the July 2017 event are summarized in Table 3.6. Figure 3.3 presents groundwater detections for each well that has been sampled since completion of the RA in December 2012. Detections depicted on Figure 3.3 include four sampling events, the first being July/August 2013, the second being December 2014, the third being March 2016, and the fourth being July 2017. The Chemistry Review and complete analytical results for the July 2017 sampling event are included in Appendix C.

3.4 SURFACE WATER AND SEDIMENT RESULTS

Surface water analytical results for SW-1 and SEEP-1 are compared to Class C surface water criteria (NYSDEC, 2008b). Analytical results for the surface water sample are summarized in Table 3.7. There were no VOCs detected in the surface water samples collected in the July 2017 monitoring event. Several metals were detected, but only aluminum (SEEP-1 [0.13 mg/L] and SW-1 [0.5 mg/L]) and iron (SW-1 [0.61 mg/L) exceeded the criteria of 0.1 mg/L and 0.3 mg/L, respectively. PCBs were not detected in the surface water samples. The detections observed in the SW-1 and SEEP-1 samples were chemically similar between samples, indicating that the water observed at SEEP-1 is more characteristic of surface water runoff than leachate. Because of the location of sample collection (i.e., drainage swale), SEEP-1 was named incorrectly. SEEP-1 actually represents a sample of surface water runoff, not leachate.

Sediment analytical results were compared to NYSDEC sediment criteria (NYSDEC, 1999). No VOCs were detected in the sediment sample SED-1. Several metals were detected, but only manganese (1,890 milligrams per kilogram [mg/kg]) exceeded its criteria of 1,100 mg/kg. PCBs were not detected in the sediment sample. Analytical results for the sediment sample are summarized in Table 3.8.

3.5 LANDFILL INSPECTION RESULTS

Overall, the landfill was found to be in good condition. Repairs were conducted to the gravel perimeter access road and eastern drainage swale in November 2014 are holding up well. With exceptions noted below, the condition of the landfill cover system observed in July 2017 is generally unchanged from that noted in the previous inspection conducted in August 2016.

The following are notable findings:

- Landfill cover grass was observed to be overly tall and collapsing upon itself in some areas.
- The eastern drainage swale was noted to be in good condition. Repairs to the riprap in the swale were conducted in November 2014.

- No leachate seeps were observed on the landfill cover. However possible surface water drainage was observed in the eastern drainage swale in the vicinity of the historically observed seep areas.

Photographic documentation of the landfill cover system conditions observed during the July 2017 inspection are included in Appendix B.

Based on observations noted during the July 2017 landfill inspection, it was recommended that mowing of the landfill cover grass be conducted soon. Overly long vegetation can stifle healthy growth, promote mold, and encourage the emergence and growth of undesirable vegetation. Note that Aztech Environmental Technologies completed mowing and trimming of the landfill on August 17 and August 18, 2017. The site services report is included in Appendix D.

4.0 SUMMARY AND CONCLUSIONS

4.1 SUMMARY

The field activities described in this report were conducted as part of routine sampling and inspection as outlined in the SMP to provide comparison to the post-remedy baseline conditions to evaluate RA effectiveness and to document changes to onsite groundwater quality. Groundwater monitoring has been completed at the Site for the fourth time since completion of the RA in 2012.

Two relatively new monitoring wells, MW-3SR2 and MW-3BR2 installed in June of 2014, were sampled for the third time, and both show similar concentrations of TCE and cis-1,2-DCE in these three events. These wells were located to be in a cross-gradient-to-downgradient location of the Site and were placed in a successful attempt to more closely replicate the groundwater flow path position (i.e., locations) of MW-3S/3B, which were decommissioned in 2011. Wells MW-3SR and MW-3BR were installed as earlier replacements for MW-3S/B, but water quality results from these wells showed them to be not comparable to MW-3S/3B. Two of the eleven Site wells (MW-3SR2 is an overburden well while MW-3BR2 is a bedrock well) show TCE detections above the groundwater standard with concentrations similar to the 2014 and 2016 sampling events. One well (MW-3SR2) had a cis-1,2-DCE detection above the groundwater standard, and iron and manganese were detected at above the groundwater standards in 11 and in three wells, respectively.

Detected contaminants have not been historically detected in the off-Site upgradient wells MW-1S and MW-1B. Iron, however, was detected in both these wells at concentrations above the groundwater standard for the second time in two consecutive rounds of sampling.

PFAS were detected in five of the six monitoring wells selected including the off-Site upgradient well locations; however, none of the detections were above the USEPA Advisory Limit of 70 ng/L.

1,4-Dioxane was not detected in the 5 monitoring wells selected for testing.

Comparing the chemistry of SW-1 and SEEP-1 indicates very little difference between the two samples, suggesting that the drainage swale sample (labeled as a SEEP-1), is more representative of surface runoff than leachate. No leachate seeps were observed during landfill inspection.

Several metals were detected in the sediment sample, however only manganese was detected above the sediment standard.

4.2 CONCLUSIONS

For the third consecutive sampling event, environmental sampling shows consistent results. The groundwater, surface water, and sediment sample results provide a reliable comparison to the post-remedy baseline for contaminant distribution at the landfill. Concentrations of site contaminants detected in groundwater samples collected in July 2017 are similar to historic sampling results. In general, TCE and cis-1,2-DCE concentrations remain consistent with past sampling events, but at lower levels than those observed in 2001 prior to the RA. The newer shallow overburden and bedrock well pair MW-3SR2 and MW-3BR2 show concentrations for TCE and cis-1,2-DCE at consistent levels relative to the decommissioned MW-3S/3B well pair. PFAs are present at the site, including upgradient well locations, at concentrations below the USEPA Advisory limit.

4.3 RECOMMENDATIONS

As a result of data collected during this round of sampling, as well as landfill inspection results, below are recommended actions:

- Environmental monitoring and reporting continue at the frequency and in a manner as defined in the SMP.
- Sample collection at the eleven monitoring wells, one surface water and sediment location, and one seep location should continue during future events of the environmental monitoring program.
- 1,4-dioxane was not detected and therefore should not be included in the analysis for future sampling rounds.
- PFAS were either not detected or detected below the USEPA Health Advisory and should not be included in future sampling events.
- The sample location associated with SEEP-1 should not be sampled again because it was not representative of leachate.
- No repairs to the landfill cover system are necessary at this time.

5.0 REFERENCES

MACTEC Engineering and Consulting, P.C. (MACTEC), 2017. Field Activities Plan – July 2017 Media Sampling, South Hill Dump Site, (Site No. 712009). June 28, 2017.

MACTEC Engineering and Consulting, P.C. (MACTEC), 2016. Field Activities Plan – March 2016 Media Sampling, South Hill Dump Site, (Site No. 712009). February 3, 2016.

MACTEC, 2013a. Final Engineering Report, South Hill Dump Remedial Action, Site No. 712009. Prepared for the New York State Department of Environmental Conservation, Albany, New York. November 2013.

MACTEC, 2013b. Site Management Plan, South Hill Dump Site, Site # 712009. Prepared for the New York State Department of Environmental Conservation, Albany, New York. April 2013.

MACTEC, 2013c. Field Activities Report, Post-Remedial Action Media Sampling and Landfill Inspection, South Hill Dump, Site No. 712009. Prepared for the New York State Department of Environmental Conservation, Albany, New York. November 2013.

MACTEC, 2011a. Field Activities Plan & Quality Assurance Program Plan. Prepared for the New York State Department of Environmental Conservation, Albany, New York. June 2011a.

MACTEC, 2011b. Program Health and Safety Plan. Prepared for the New York State Department of Environmental Conservation, Albany, New York. June 2011b.

MACTEC, 2006. Feasibility Study Report: South Hill Dump, NYSDEC Site No. 712009. December 2006.

New York State Department of Environmental Conservation (NYSDEC), 2008a. Record of Decision – South Hill Dump Site, Town of Cortlandville, Cortland County, New York: Site Number 712009. January 2008.

REFERENCES (CONTINUED)

NYSDEC, 2008b. New York Codes, Rules, and Regulations, Chapter X, Part 703: Surface Water and Groundwater Quality Standards and Groundwater Effluent Limitations (http://www.dec.ny.gov/regs/4590.html), Effective February 16, 2008.

NYSDEC, 2005. "Analytical Services Protocols"; 7/05 Edition; July 2005.

NYSDEC, 1999. Division of Fish, Wildlife, and Marine Resources. *Technical Guidance for Screening Contaminated Sediments*. January 25, 1999.

TABLES

Table 2.1: Sample IDs and Analytical Methods

		Analytical Method					
Well ID	**Sample Locations**	**Metals (6010B)**	**PCBs (8082)**	**VOC (8260B)**	**1,4-dioxane (8260SIM)**	**PFAS (537)**	**Sample Method**
	Monitoring Wells						
MW-1S	MW-1S	X		X	X	X	Hydrasleeve/Grab
MW-1B	MW-1B	X		X	X	X	Hydrasleeve/Grab
MW-2S	MW-2S	X		X			Hydrasleeve
MW-2D	MW-2D	X		X			Hydrasleeve
MW-2B	MW-2B	X		X			Hydrasleeve
MW-3SR	MW-3SR	X		X			Hydrasleeve
MW-3BR	MW-3BR	X		X			Hydrasleeve
MW-3SR2	MW-3SR2	X		X	X	X	Hydrasleeve/Grab
MW-3BR2	MW-3BR2	X		X	X	X	Hydrasleeve/Grab
MW-4S	MW-4S	X		X		X	Hydrasleeve/Grab
MW-4B	MW-4B	X		X	X	X	Hydrasleeve/Grab
MW-4B	MW-4BDUP	X		X	X		Hydrasleeve
MW-4B	MW-4BMS/MSD	X		X	X		Hydrasleeve
	Surface Water						
SW-1	SW-1	X	X	X			Grab
	Sediment						
SED-1	SED-1	X	X	X			Grab
	SEEP-1						
SEEP-1	SEEP-1	X	X	X			Grab
SEEP-1	SEEP-1DUP		X				
SEEP-1	SEEP-1MS		X				
SEEP-1	SEEP-1MSD		X				

Notes:
Sampling activities were conducted on July 5 and 6, 2017
An 'X' marked in a column indicates the analysis to be performed for that sample location.
VOCs = Volatile Organic Compounds
PFAS = per- and polyfluoroalkyl substances

Table 3.1: Groundwater Elevation Survey, July 2017

Well ID	Casing Elevation (ft)	Riser Elevation (ft)	Ground Elevation (ft)	Total Depth of Well (ft, below measuring point)	Comments	Screen (ft, bgs)	Depth to Water (ft, below measuring point)	Groundwater Elevation (ft)
MW-1S	1670.85	1670.95	1668.10	17.9	2-inch Overburden	10-ft Screen (5'-15')	11.61	1659.34
MW-1B	1671.65	1671.35	1668.50	37.9	2-inch Bedrock	10-ft Screen (25'-35')	22.95	1648.40
MW-2B	1574.85	No Riser	1573.40	44.0	3-inch Open Hole Bedrock	Open from 31.5'-41.5'	9.67	1565.18
MW-2D	1576.30	1575.00	1572.00	27.0	2-inch Overburden	10-ft Screen (14'-24')	8.36	1566.64
MW-2S	1575.40	1575.45	1572.60	12.9	2-inchOverburden	5-ft Screen (5'-10')	7.62	1567.83
*MW-3BR	1562.61	No Riser	1559.83	43.9	3-inch Open Hole Bedrock	Open from 31'-41'	8.92	1553.69
*MW-3SR	1563.68	1563.04	1561.35	25.3	2-inch Overburden	5-ft Screen (19'-24')	4.33	1558.71
**MW-3BR2	1565.25	No Riser	1565.61	24.49	4-inch Open Hole Bedrock	Open from 14' - 26'	0.54	1564.71
**MW-3SR2	Flush-to-Ground	1565.76	1566.02	11.04	2-inch Overburden	5-ft Screen (6'-11')	1.29	1564.47
MW-4B	1545.45	No Riser	1541.90	48.4	3-inch Open Hole Bedrock	Open from 36.6'-46.6'	28.08	1517.37
MW-4S	1545.45	1545.40	1542.60	18.8	2-inch Overburden	10-ft Screen (6'-16')	9.75	1535.65

All Data taken from "Bedrock Monitoring Well Construction Log 1997", March/April 1997, SJB Services, Inc., Except where noted*/**
*Monitoring Wells Installed October 2012 - Data taken from Boring/Well Development Logs, October 2012, SJB Services, Inc.
** Monitoring Wells Installed June 2014 - Data Determined by MACTEC
ft = Feet
bgs = below ground surface
Depth to Water measured on July 5, 2017

Table 3.2: Historic Concentrations of TCE in Site Monitoring Wells

	MW-1S	MW-1B	MW-2B	MW-2D	MW-2S	MW-3S	MW-3SR	MW-3B	MW-3BR	MW-3SR2	MW-3BR2	MW-4S	MW-4B
	Upgradient Wells		On-Site/Cross-Gradient Wells									Downgradient Wells	
1997	ND	ND	4	ND	ND	**80**	-	**540**	-	-	-	ND	4
2001	ND	ND	ND	ND	ND	**200**	-	**360**	-	-	-	ND	**7**
2013	ND	ND	2.4	ND	ND	*	**20**	*	ND	-	-	ND	**14**
2014	ND	ND	ND	ND	ND	*	3.6	*	ND	**200**	**86**	ND	2.1J/**5.1J**
2016	ND	ND	ND	ND	ND	*	3.1	*	ND	**200**	**110**	ND	**5.6/6.5**
2017	ND	ND	ND	ND	ND	*	1.9	*	ND	**170**	**6.5**	ND	0.56/ND

Concentrations in ug/L
Class GA Groundwater Standard for TCE is 5 ug/L
ND = non-detect
- = well not yet installed
*MW-3S replaced by MW-3SR, and MW-3B replaced by MW-3BR
J = estimated value
shaded and bold results indicate exceedance of standard
2.1J/5.1J = shows sample and duplicate sample results

Table 3.3: Historic Concentrations of cis-1,2-DCE in Site Monitoring Wells

	MW-1S	MW-1B	MW-2B	MW-2D	MW-2S	MW-3S	MW-3SR	MW-3B	MW-3BR	MW-3SR2	MW-3BR2	MW-4S	MW-4B
	Upgradient Wells		On-Site/Cross-Gradient Wells									Downgradient Wells	
1997	ND	ND	ND	ND	ND	**18**	-	**56**	-	-	-	ND	4
2001	ND	ND	ND	ND	ND	**264**	-	**97**	-	-	-	ND	ND
2013	ND	ND	ND	ND	ND	*	ND	*	ND	-	-	ND	2.4
2014	ND	ND	ND	ND	ND	*	ND	*	ND	**22**	**7.1**	ND	0.83J/1.5J
2016	ND	ND	ND	ND	ND	*	ND	*	ND	**21**	**12**	ND	0.85J/1
2017	ND	ND	ND	ND	ND	*	ND	*	ND	**20**	3.1	ND	ND

Concentrations in ug/L
Class GA Groundwater Standard for cis-1,2-DCE is 5 ug/L
ND = non-detect
- = well not yet installed
*MW-3S replaced by MW-3SR, and MW-3B replaced by MW-3BR
J = estimated value
shaded and bold results indicate exceedance of standard
0.83J/1.5J = shows sample and duplicate sample results

Table 3.4: Historic Concentrations of Iron in Site Monitoring Wells

	MW-1S	MW-1B	MW-2B	MW-2D	MW-2S	MW-3S	MW-3SR	MW-3B	MW-3BR	MW-3SR2	MW-3BR2	MW-4S	MW-4B
	Upgradient Wells		On-Site/Cross-Gradient Wells									Downgradient Wells	
1997	ND	ND	**47.6**	**8.6**	NR	**2.0**	-	**3.9**	-	-	-	**0.8**	**3.2**
2013	ND	ND	**4.1**	**0.38**	ND	*	ND	*	**8.3**	-	-	ND	**1.1**
2014	0.17J	0.056J	**28.4J**	**1.8J**	**14.3J**	*	**0.39J**	*	**8.8J**	0.1J	**17.8J**	0.27J	**21.7J/28.2J**
2016	**3.8J**	**1.7J**	**17.4J**	**0.96J**	**7.3J**	*	**5.8J**	*	**529J**	**27.9J**	**109J**	**0.62J**	**12.4J/45.6J**
2017	**3.9J**	**0.32J**	**159J**	**0.68J**	**2.4J**	*	**1.6J**	*	**124J**	**13J**	**27.3J**	**0.44J**	**11.7J/22.9J**

Concentrations in ug/L
Class GA Groundwater Standard for iron is 0.3 mg/L
ND = non-detect
NR = not reported or sampled
- = well not yet installed
*MW-3S replaced by MW-3SR, and MW-3B replaced by MW-3BR
J = estimated value
shaded and bold results indicate exceedance of standard
21.7J/28.2J = shows sample and duplicate sample results

Table 3.5: Per- and Poly Fluoroalkyl Substances and 1,4-Dioxane, July 2017

		Location	MW-1B	MW-1S	MW-3BR2	MW-3SR2	MW-4B	MW-4S
		Sample Date	7/6/2017	7/6/2017	7/6/2017	7/6/2017	7/6/2017	7/6/2017
		Sample ID	MW-1B	MW-1S	MW-3BR2	MW-3SR2	MW-4B/4B DUP	MW-4S
		Qc Code	FS	FS	FS	FS	FS/FD	FS
Parameter	**Criteria**	**Units**						
Perfluorobutanoic acid (PFBA)	NA	ng/l	**6.3 B**	2.1 U	**9.4 B**	**11 B**	3.1 U	1.9 U
Perfluoroheptanoic acid (PFHpA)	NA	ng/l	**1.8 J**	**2.3**	**1.8 J**	**2.7**	2 U	1.9 U
Perfluorohexanesulfonic acid (PFHxS)	NA	ng/l	2 U	1.9 U	1.9 U	**1.1 J**	2 U	1.9 U
Perfluorohexanoic acid (PFHxA)	NA	ng/l	**5.6 J**	**16**	**5.7 J**	**6.3 J**	2.2 U	1.9 U
Perfluorooctanesulfonic acid (PFOS)[1]	70	ng/l	**2.5**	1.9 U	**2.2**	**5.1**	**1.4 J**	1.9 U
Perfluorooctanoic acid (PFOA)[1]	70	ng/l	**5**	**2.8**	**5.6**	**7.7**	**1.8 J**	1.9 U
Perfluoropentanoic acid (PFPeA)	NA	ng/l	**2.7**	**5.8**	**3.9**	**4.9**	**0.99 J**	1.9 U
Total PFOA and PFOS[1]	70	ng/l	**7.5**	**2.8**	**7.8**	**13**	**3.2**	1.9 U
1,4-Dioxane[2]	460	ug/l	0.4 U	0.4 U	0.4 U	0.4 U	0.4/0.4 U/U	0.4 U

Notes:
Samples analyzed for per-and poly-flouroalkyl compounds by USEPA Modified Method 537 and for 1,4-Dioxane by USEPA Method 8260 with selective ion monitoring.
Bold indicates compound detected
B = compound also detected in the associated method blank
U = not detected at the reporting limit
J = estimated concentration
ng/l = nanograms per liter
ug/l = micrograms per liter
[1]Criteria = Environmental Protection Agency Health Advisory Limit
[2]USEPA Regional Screening Levels

Table 3.6: Detected Contaminants in Groundwater, July 2017

			Location	MW-1B		MW-1S		MW-2B		MW-2D		MW-2S		MW-3BR		MW-3BR2	
			Sample Date	7/5/2017		7/5/2017		7/6/2017		7/6/2017		7/6/2017		7/5/2017		7/5/2017	
			Sample ID	MW-1B		MW-1S		MW-2B		MW-2D		MW-2S		MW-3B		MW-3BR2	
			Qc Code	FS		FS		FS		FS		FS		FS		FS	
Class	**Parameter**	**GA GW**	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
VOCs	Cis-1,2-Dichloroethene	5	µg/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	**3.1**	
VOCs	Trichloroethene	5	µg/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	**6.5**	
Metals	Aluminum	NL	mg/L	**0.3**		**4.4**		0.2	U	**0.6**		**2.6**		0.2	U	**0.081**	J
Metals	Antimony	0.003	mg/L	0.02	U	0.02	U	**0.013**	J	0.02	U	0.02	U	**0.011**	J	0.02	U
Metals	Arsenic	0.025	mg/L	0.015	U	0.015	U	0.015	U	0.015	U	0.015	U	0.015	U	0.015	U
Metals	Barium	1	mg/L	**0.017**		**0.05**		**0.12**		**0.032**		**0.042**		**0.074**		**0.12**	
Metals	Beryllium	0.003	mg/L	0.002	U	0.002	U	0.002	U	0.002	U	0.002	U	0.002	U	0.002	U
Metals	Calcium	NL	mg/L	**17.6**		**16.1**		**32.3**		**52.6**		**73.8**		**10**		**29.6**	
Metals	Chromium	0.05	mg/L	0.004	U	**0.0044**		0.004	U	**0.0018**	J	**0.0046**		0.004	U	0.004	U
Metals	Cobalt	NL	mg/L	0.004	U	**0.0015**	J	0.004	U	0.004	U	**0.00069**	J	**0.0013**	J	0.004	U
Metals	Copper	0.2	mg/L	0.01	U	**0.0031**	J	**0.002**	J	0.01	U	**0.0027**	J	**0.002**	J	0.01	U
Metals	Iron	0.3	mg/L	**0.32**	J	**3.9**	J	**159**	J	**0.68**	J	**2.4**	J	**124**	J	**27.3**	J
Metals	Lead	0.025	mg/L	0.01	U	**0.0041**	J	**0.0034**	J	0.01	U	**0.0035**	J	0.01	U	0.01	U
Metals	Magnesium	35	mg/L	**4**		**4.4**		**7**		**13.2**		**14.2**		**3.1**		**12.5**	
Metals	Manganese	0.3	mg/L	**0.013**	J	**0.07**	J	**1**	J	**0.03**	J	**0.15**	J	**1.5**	J	**0.29**	J
Metals	Nickel	0.1	mg/L	0.01	U	**0.0038**	J	**0.0065**	J	0.01	U	**0.0027**	J	**0.015**		**0.0015**	J
Metals	Potassium	NL	mg/L	**0.71**		**1.7**		**0.84**		**1**		**1.6**		**2.3**		**0.96**	
Metals	Sodium	20	mg/L	**6.8**		**6.1**		**4.2**		**3.6**		**24.1**		**14.9**		**12**	
Metals	Vanadium	NL	mg/L	0.005	U	**0.0042**	J	**0.0022**	J	0.005	U	**0.0029**	J	0.005	U	0.005	U
Metals	Zinc	2	mg/L	0.01	U	**0.011**		**0.0015**	J	**0.005**	J	**0.02**		**0.0043**	J	0.01	U

Notes
NL = Not Listed
Qualifiers:
U = not detected at the reporting limit
J = estimated concentration
QC Codes:
FS = normal field sample
FD = field duplicate sample
1.7 shaded and bold result indicates exceedance of GA groundwater standard
4.7 bold indicates compound detected
mg/L = milligram per liter
µg/L = microgram per liter

Table 3.6: Detected Contaminants in Groundwater, July 2017

			Location	MW-3SR		MW-3SR2		MW-4B		MW-4B		MW-4S	
			Sample Date	7/5/2017		7/5/2017		7/5/2017		7/5/2017		7/5/2017	
			Sample ID	MW-3S		MW-3SR2		MW-4B		MW-4B DUP		MW-4S	
			Qc Code	FS		FS		FS		FD		FS	
Class	**Parameter**	**GA GW**	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
VOCs	Cis-1,2-Dichloroethene	5	µg/L	1.0	U	**20**		1.0	U	1.0	U	1.0	U
VOCs	Trichloroethene	5	µg/L	**1.9**		**170**		**0.56**	J	1.0	U	1.0	U
Metals	Aluminum	NL	mg/L	**1.4**		**9.9**		**0.066**	J	0.2	U	**0.36**	
Metals	Antimony	0.003	mg/L	0.02	U	0.02	U	0.02	U	0.02	U	0.02	U
Metals	Arsenic	0.025	mg/L	0.015	U	**0.0058**	J	0.015	U	0.015	U	0.015	U
Metals	Barium	1	mg/L	**0.072**		**0.22**		**0.041**		**0.047**		**0.028**	
Metals	Beryllium	0.003	mg/L	0.002	U	**0.0005**	J	**0.00078**	J	0.002	U	0.002	U
Metals	Calcium	NL	mg/L	**69.8**		**102**		**27.6**		**28.1**		**58.3**	
Metals	Chromium	0.05	mg/L	**0.0016**	J	**0.012**		0.004	U	0.004	U	0.004	U
Metals	Cobalt	NL	mg/L	0.004	U	**0.0051**		0.004	U	0.004	U	0.004	U
Metals	Copper	0.2	mg/L	**0.0021**	J	**0.0095**	J	0.01	U	**0.0018**	J	**0.0021**	J
Metals	Iron	0.3	mg/L	**1.6**	J	**13**	J	**11.7**	J	**22.9**	J	**0.44**	J
Metals	Lead	0.025	mg/L	**0.003**	J	**0.0079**	J	0.01	U	0.01	U	0.01	U
Metals	Magnesium	35	mg/L	**15.2**		**21.4**		**6.9**		**6.9**		**8.7**	
Metals	Manganese	0.3	mg/L	**0.18**	J	**0.35**	J	**0.11**	J	**0.14**	J	**0.017**	J
Metals	Nickel	0.1	mg/L	**0.0019**	J	**0.013**		**0.0014**	J	**0.0031**	J	0.01	U
Metals	Potassium	NL	mg/L	**3.5**		**3.9**		**0.52**		**0.49**	J	**0.61**	
Metals	Sodium	20	mg/L	**6.2**		**18.2**		**3.2**		**3.2**		**2**	
Metals	Vanadium	NL	mg/L	**0.0018**	J	**0.014**		0.005	U	0.005	U	0.005	U
Metals	Zinc	2	mg/L	**0.0061**	J	**0.034**		**0.0017**	J	**0.0015**	J	**0.0019**	J

Notes
NL = Not Listed
Qualifiers:
U = not detected at the reporting limit
J = estimated concentration
QC Codes:
FS = normal field sample
FD = field duplicate sample
1.7 shaded and bold result indicates exceedance of GA groundwater standard
4.7 bold indicates compound detected
mg/L = milligram per liter
µg/L = microgram per liter

Table 3.7: Detected Contaminants in Surface Water, July 2017

			Location	SEEP-1		SEEP-1 DUP		SW-1	
			Sample Date	7/6/2017		7/6/2017		7/6/2017	
			Sample ID	SEEP-1		SEEP-1 DUP		SW-1	
			Qc Code	FS		FS		FS	
Class	**Parameter**	**Class C SW Standard**	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier
VOCs	Target Compounds	NA	µg/L	ND		NA		ND	
PCBs	Target Compounds	NA	µg/L	ND		ND		ND	
Metals	Aluminum	0.1	mg/L	**0.13**	**J**	NA		**0.5**	
Metals	Barium	NL	mg/L	**0.026**		NA		**0.048**	
Metals	Calcium	NL	mg/L	**30.2**		NA		**61.8**	
Metals	Copper	0.018	mg/L	**0.0016**	J	NA		**0.0022**	J
Metals	Iron	0.3	mg/L	**0.14**		NA		**0.61**	
Metals	Magnesium	NL	mg/L	**4.7**		NA		**8.3**	
Metals	Manganese	NL	mg/L	**0.0049**		NA		**0.3**	
Metals	Nickel	0.108	mg/L	0.01	U	NA		**0.0018**	J
Metals	Potassium	NL	mg/L	**0.39**	J	NA		**4.2**	
Metals	Sodium	NL	mg/L	**21.5**		NA		**25.5**	
Metals	Vanadium	0.014	mg/L	0.005	U	NA		**0.0019**	J
Metals	Zinc	0.014	mg/L	0.01	U	NA		**0.0058**	J

Notes

NL = Not Listed
NA = Not Applicable
ND = Not Detected
Qualifiers:
J = estimated concentration
QC Codes:
FS = normal field sample
mg/L = milligram per liter
µg/L = microgram per liter

0.13 shaded and bold result indicates exceedance of Class C standard

0.048 bold indicates compound detected

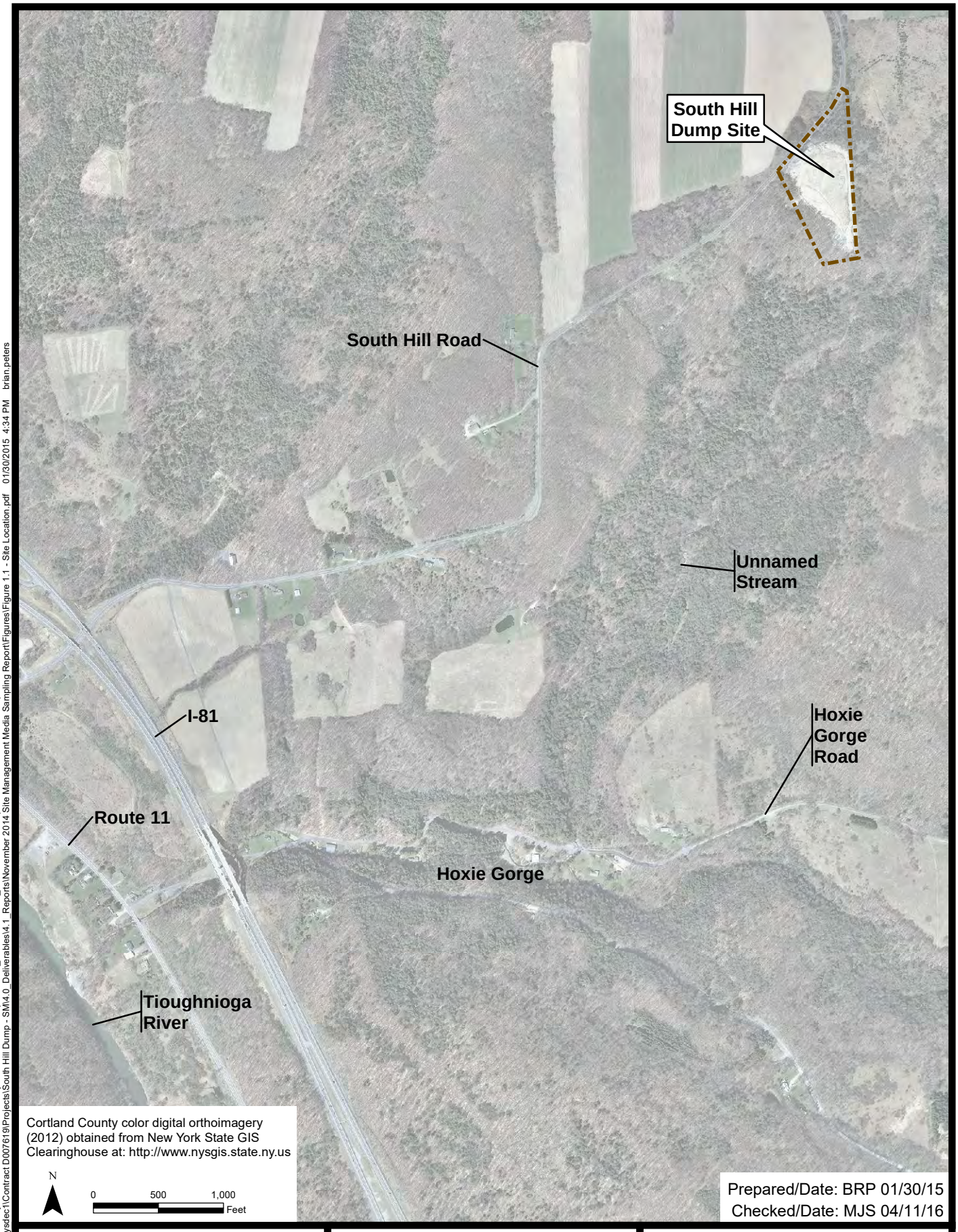
Prepared by: NWV 8/11/17
Checked by: TG 10/06/2017

Table 3.8: Detected Contaminants in Sediment, July 2017

			Location	SED-1	
			Sample Date	3/2/2016	
		NYSDEC	Sample ID	SED-1	
		Sediment	Qc Code	FS	
Class	Parameter	Criteria	Units	Result	Qualifier
VOCs	Target Compounds	NA	ug/kg	ND	
PCBs	Target Compounds	NA	mg/kg	ND	
Metals	Aluminum	NL	mg/kg	22,600	
Metals	Antimony	NL	mg/kg	2.4	J
Metals	Arsenic	33	mg/kg	9.7	
Metals	Barium	NL	mg/kg	166	
Metals	Beryllium	NL	mg/kg	0.91	
Metals	Cadmium	9	mg/kg	0.33	J
Metals	Calcium	NL	mg/kg	4,480	
Metals	Chromium	110	mg/kg	26.5	
Metals	Cobalt	NL	mg/kg	16.2	
Metals	Copper	110	mg/kg	18.2	
Metals	Iron	40000	mg/kg	35,300	
Metals	Lead	110	mg/kg	17.8	
Metals	Magnesium	NL	mg/kg	5,240	
Metals	Manganese	1100	mg/kg	**1890**	
Metals	Nickel	50	mg/kg	34.3	
Metals	Potassium	NL	mg/kg	2,190	
Metals	Sodium	NL	mg/kg	112	J
Metals	Vanadium	NL	mg/kg	37.5	
Metals	Zinc	270	mg/kg	89.2	
Solids	Percent Moisture	NL	Percent	37.4	
Solids	Percent Solids	NL	Percent	62.6	

Notes
NL = Not Listed
NA = Not Applicable
ND = Not Detected
Qualifiers:
J = estimated concentration
QC Codes:
FS = normal field sample
mg/kg = milligram per kilogram
µg/kg = microgram per kilogram
1890 =shaded and bold result indicates exceedance of sediment criteria

FIGURES



Cortland County color digital orthoimagery (2012) obtained from New York State GIS Clearinghouse at: http://www.nysgis.state.ny.us

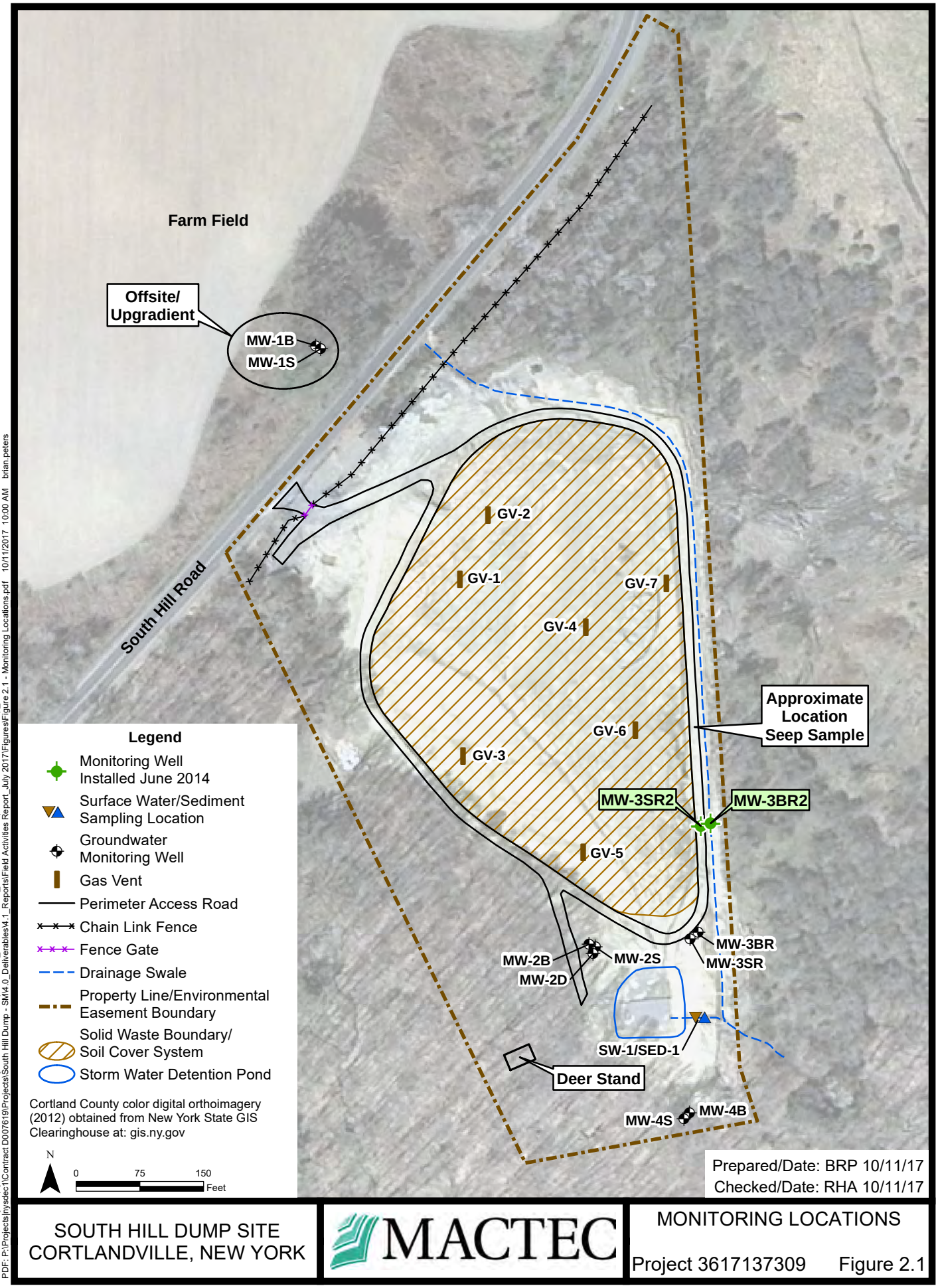
Prepared/Date: BRP 01/30/15
Checked/Date: MJS 04/11/16

SOUTH HILL DUMP SITE
CORTLANDVILLE, NEW YORK

MACTEC

SITE LOCATION

Project 3617137309 Figure 1.1

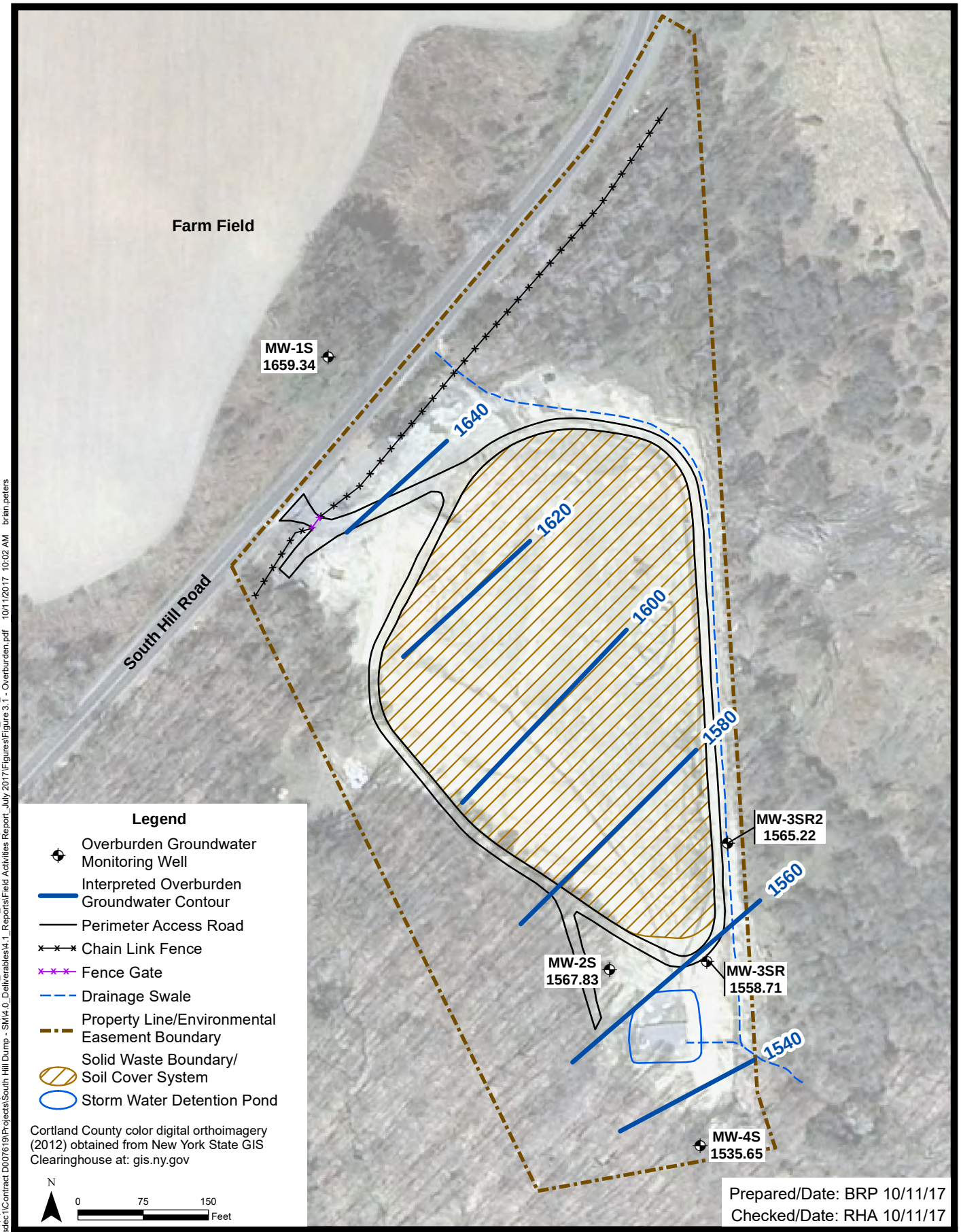


SOUTH HILL DUMP SITE
CORTLANDVILLE, NEW YORK

MACTEC

MONITORING LOCATIONS

Project 3617137309 Figure 2.1

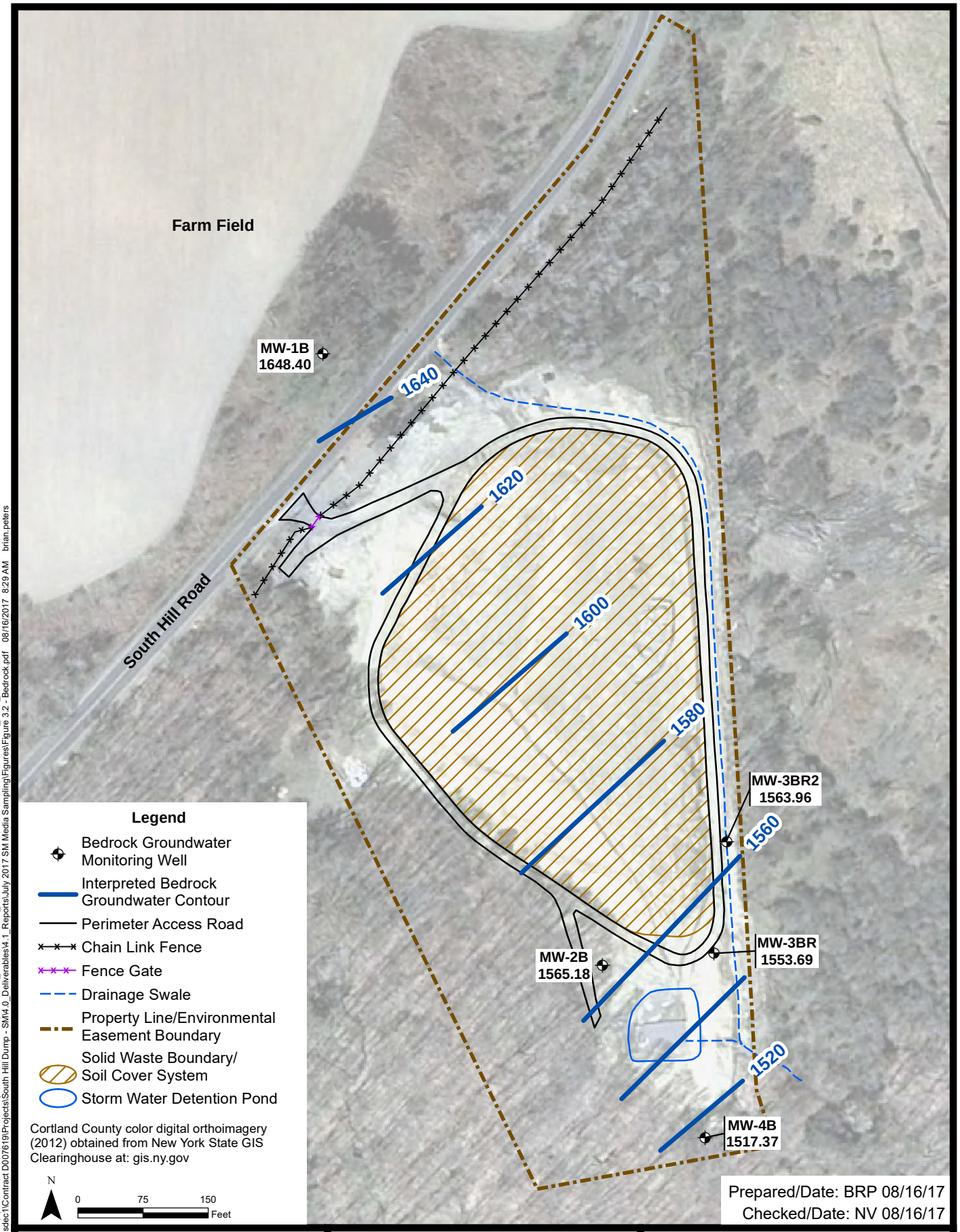


Prepared/Date: BRP 10/11/17
Checked/Date: RHA 10/11/17

SOUTH HILL DUMP SITE
CORTLANDVILLE, NEW YORK

MACTEC

2017 OVERBURDEN POTENTIOMETRIC SURFACE
Project 3617137309 Figure 3.1



SOUTH HILL DUMP SITE
CORTLANDVILLE, NEW YORK

MACTEC

2017 BEDROCK POTENTIOMETRIC SURFACE
Project 3617137309 Figure 3.2

Farm Field

South Hill Road

MW-1B

Date	7/18/2013		12/1/2014		3/2/2016		7/5/2017	
Cis-1,2-DCE	1	U	1	U	1	U	1	U
TCE	1	U	1	U	1	U	1	U
Iron	0.05	U	0.056	J	**1.7**	**J**	**0.32**	**J**
Manganese	0.003	U	0.007		0.023	J	0.013	J
Sodium	10.2	B	8.4		7.7		6.8	

MW-1S

Date	7/18/2013		12/1/2014		3/2/2016		7/5/2017	
Cis-1,2-DCE	1/1	U	1	U	1	U	1	U
TCE	1/1	U	1	U	1	U	1	U
Iron	0.05/0.051	U	0.17	J	**3.8**	**J**	**3.9**	**J**
Manganese	0.003/0.003	U	0.0041		0.061	J	0.070	J
Sodium	10.1/9.5	B	8.2		6.8		6.1	

MW-3SR2

Date	12/2/2014		3/2/2016		7/5/2017	
Cis-1,2-DCE	**22**		**21**		**20**	
TCE	**200**		**200**		**170**	
Iron	0.1	J	**27.9**	**J**	**13.0**	**J**
Manganese	0.15		**0.72**	**J**	**0.35**	**J**
Sodium	15		18.2		18.2	

MW-3BR2

Date	12/2/2014		3/1/2016		7/5/2017	
Cis-1,2-DCE	**7.1**		**12**		3.1	
TCE	**86**		**110**		**6.5**	
Iron	**17.8**	**J**	**109**	**J**	**27.3**	**J**
Manganese	**0.41**		**0.66**	**J**	0.29	J
Sodium	12.8		15.5		12.0	

MW-3BR

Date	8/6/2013		12/2/2014		3/1/2016		7/5/2017	
Cis-1,2-DCE	1	U	1	U	1	U	1	U
TCE	1	U	1	U	1	U	1	U
Iron	**8.3**	**B**	**8.8**	**J**	**529**	**J**	**124**	**J**
Manganese	0.24	B	0.17		**7**	**J**	**1.5**	**J**
Sodium	**25.1**		18.1		18.5		14.9	

MW-2B

Date	7/17/2013		12/2/2014		3/2/2016		7/5/2017	
Cis-1,2-DCE	1	U	1	U	1	U	1	U
TCE	2.4		1	U	1	U	1	U
Iron	**4.1**		**28.4**	**J**	**17.4**	**J**	**159**	**J**
Manganese	0.089		**0.34**		0.25	J	**1.0**	**J**
Sodium	4.8	B	4.3		4.4		4.2	

MW-3SR

Date	7/17/2013		12/2/2014		3/1/2016		7/5/2017	
Cis-1,2-DCE	1	U	1	U	1	U	1	U
TCE	**20**		3.6		3.1		1.9	
Iron	0.086	U	**0.39**	**J**	**5.8**	**J**	**1.6**	**J**
Manganese	0.23		0.16		0.29	J	0.18	J
Sodium	6.2	B	11.3		8.3		6.2	

MW-2S

Date	8/6/2013		12/2/2014		3/2/2016		7/5/2017	
Cis-1,2-DCE	1	U	1	U	1	U	1	U
TCE	1	U	1	U	1	U	1	U
Iron	0.05	U	**14.3**	**J**	**7.3**	**J**	**2.4**	**J**
Manganese	0.0075	B	**0.3**		0.15	J	0.15	J
Sodium	15.4		11.5		14.1		**24.1**	

MW-4B

Date	8/5/2013		12/2/2014		3/1/2016		7/5/2017	
Cis-1,2-DCE	2.4		0.83/1.5	J	0.85/1		1/1	U
TCE	**14**		2.1/5.1	J	**5.6/6.5**		0.56/1	J/U
Iron	**1.1**	**B**	**21.7/28.2**	**J**	**12.4/45.6**	**J**	**11.7/22.9**	**J/J**
Manganese	0.014		0.26/0.29		0.1/0.25	J	0.11/0.14	J/J
Sodium	4.3		3.7/3.6		4.3/3.6		3.2/3.2	

MW-2D

Date	8/6/2013		12/2/2014		3/2/2016		7/5/2017	
Cis-1,2-DCE	1	U	1	U	1	U	1	U
TCE	1	U	1	U	1	U	1	U
Iron	**0.38**	**B**	**1.8**	**J**	**0.96**	**J**	**0.68**	**J**
Manganese	0.015		0.058		0.037	J	0.030	J
Sodium	4.2		4.4		4.3		3.6	

MW-4S

Date	8/6/2013		12/2/2014		3/1/2016		7/5/2017	
Cis-1,2-DCE	1	U	1	U	1	U	1	U
TCE	1	U	1	U	1	U	1	U
Iron	0.11	U	0.27	J	**0.62**	**J**	**0.44**	**J**
Manganese	0.0025	J	0.014		0.019	J	0.017	J
Sodium	1.9	U	2.1		2.2		2.0	

MW-1B
MW-1S
MW-3SR2
MW-3BR2
MW-3BR
MW-2B
MW-2S
MW-2D
MW-3SR
MW-4B
MW-4S

Notes:
Cis-1,2-DCE = Cis-1,2-Dichloroethene
TCE = Trichloroethene
Cis-1,2-DCE and TCE are in ug/L
Iron, Manganese, and Sodium are in mg/L
U = not detected at the reporting limit
J = estimated concentration
B = result was detected in associated method blank
Shaded and bold results indicate exceedance of standard

Legend

- Monitoring Well Installed June 2014
- Groundwater Monitoring Well
- Perimeter Access Road
- Chain Link Fence
- Fence Gate
- Drainage Swale
- Property Line/Environmental Easement Boundary
- Solid Waste Boundary/ Soil Cover System

N

0 75 150 Feet

Cortland County color digital orthoimagery (2012) obtained from New York State GIS Clearinghouse at: gis.ny.gov

Prepared/Date: BRP 09/20/17
Checked/Date: NV 09/20/17

SOUTH HILL DUMP SITE
CORTLANDVILLE, NEW YORK

MACTEC

SELECTED GROUNDWATER CONCENTRATIONS IN WELLS SINCE DECEMBER 2012
Project 3617137309 Figure 3.3

APPENDIX A

FIELD DATA RECORDS

Attachment 1
Daily PFAS Protocol Checklist

amec foster wheeler

Date: 7/5/17 Installation Name: South Hill Dump LTM

Weather (*temp./precipitation*): 70°, Sunny Investigation Area: NA

Field Clothing and PPE:

☒ Field crew in compliance with Tables 1 and 2 in SOP

☒ Field crew has not used fabric softener on clothing

☒ Field crew has not used cosmetics, moisturizers, hand cream, or other related products on exposed body parts this morning

☒ Field crew has not applied unacceptable sunscreen or insect repellant

Field Equipment:

☒ No Teflon® containing materials on-site

☒ All sample materials made from stainless steel, HDPE, acetate, silicon, or polypropylene

☒ No waterproof field books on-site other than Rite in the Rain products

☒ No plastic clipboards, binders, or spiral hard cover notebooks on-site

☒ No adhesives (Post-It Notes) on-site

☒ Coolers filled with regular ice only. No chemical (blue) ice packs in possession

Sample Containers:

☒ All sample containers made of HDPE or polypropylene. Samples are not stored in containers made of LDPE

☒ Caps are lined or unlined and made of HDPE or polypropylene

Wet Weather (as applicable):

☒ For personnel in direct contact with samples and/or sampling equipment, wet weather gear made of vinyl, polyurethane, PVC, wax or rubber- coated materials only

Equipment Decontamination:

☒ "PFAS-free" water on-site for decontamination of sample equipment

☒ Alconox and Liquinox to be used as decontamination materials (Do not use Liquinox if also sampling for 1,4-dioxane).

Food Considerations:

☒ No food or drink on-site with exception of bottled water and/or hydration drinks (e.g., Gatorade and Powerade) that is available for consumption only in the staging area

If any applicable boxes cannot be checked, the Field Manager shall describe the noncompliance issues below and work with field personnel to address noncompliance issues prior to commencement of that day's work. Corrective action shall include removal of noncompliance items from the investigation area or removal of worker offsite until in compliance. Repeated failure to comply with PFAS sample protocols will result in the permanent removal of worker(s) from the investigation area.

Describe the noncompliance issues (include personnel not in compliance) and action/outcome of noncompliance:

None

Field Lead Name: Nate Vogan

Field Lead Signature: [signature] Time: 0815

TG, 10/6/2017

Attachment 1
Daily PFAS Protocol Checklist

amec foster wheeler

Date: 7/6/17 Installation Name: South Hill Dump LTM

Weather (*temp./precipitation*): 75°, overcast Investigation Area: NA

Field Clothing and PPE:

- ☒ Field crew in compliance with Tables 1 and 2 in SOP
- ☒ Field crew has not used fabric softener on clothing
- ☒ Field crew has not used cosmetics, moisturizers, hand cream, or other related products on exposed body parts this morning
- ☒ Field crew has not applied unacceptable sunscreen or insect repellant

Field Equipment:

- ☒ No Teflon® containing materials on-site
- ☒ All sample materials made from stainless steel, HDPE, acetate, silicon, or polypropylene
- ☒ No waterproof field books on-site other than Rite in the Rain products
- ☒ No plastic clipboards, binders, or spiral hard cover notebooks on-site
- ☒ No adhesives (Post-It Notes) on-site
- ☒ Coolers filled with regular ice only. No chemical (blue) ice packs in possession

Sample Containers:

- ☒ All sample containers made of HDPE or polypropylene. Samples are not stored in containers made of LDPE
- ☒ Caps are lined or unlined and made of HDPE or polypropylene

Wet Weather (as applicable):

- ☒ For personnel in direct contact with samples and/or sampling equipment, wet weather gear made of vinyl, polyurethane, PVC, wax or rubber- coated materials only

Equipment Decontamination:

- ☒ "PFAS-free" water on-site for decontamination of sample equipment
- ☒ Alconox and Liquinox to be used as decontamination materials (Do not use Liquinox if also sampling for 1,4-dioxane).

Food Considerations:

- ☒ No food or drink on-site with exception of bottled water and/or hydration drinks (e.g., Gatorade and Powerade) that is available for consumption only in the staging area

If any applicable boxes cannot be checked, the Field Manager shall describe the noncompliance issues below and work with field personnel to address noncompliance issues prior to commencement of that day's work. Corrective action shall include removal of noncompliance items from the investigation area or removal of worker offsite until in compliance. Repeated failure to comply with PFAS sample protocols will result in the permanent removal of worker(s) from the investigation area.

Describe the noncompliance issues (include personnel not in compliance) and action/outcome of noncompliance:

None

Field Lead Name: Nate Vogan

Field Lead Signature: [signature] Time: 0805

TG, 10/6/2017

Groundwater Elevation Survey Field Data Record

South Hill Dump

Field Activity Plan - July 2017

Well ID	Casing Elevation (ft)	Riser Elevation (ft)	Ground Elevation (ft)	Total Depth of Well (ft. below measuring point)	Comments	Screen (ft. bgs)	Depth to Water (ft. below measuring point)	Groundwater Elevation (ft)
MW-1S	1670.85	1670.95	1668.10	17.9	2-inch Overburden	10-ft Screen (5'-15')	11.61	1659.34
MW-1B	1671.65	1671.35	1668.50	37.9	2-inch Bedrock	10-ft Screen (25'-35')	22.95	1648.40
MW-2B	1574.85	No Riser	1573.40	44.0	3-inch Open Hole Bedrock	Open from 31.5'-41.5'	9.67	1565.09
MW-2D	1576.30	1575.00	1572.00	27.0	2-inch Overburden	10-ft Screen (14'-24')	8.36	1566.64
MW-2S	1575.40	1575.45	1572.60	12.9	2-inchOverburden	5-ft Screen (5'-10')	7.62	1567.83
*MW-3BR	1562.61	No Riser	1559.83	43.9	3-inch Open Hole Bedrock	Open from 31'-41'	8.92	1553.69
*MW-3SR	1563.68	1563.04	1561.35	25.3	2-inch Overburden	5-ft Screen (19'-24')	4.33	1558.71
**MW-3SR2	Flush-to-Ground	1565.76	1566.02	11.0	2-inch Overburden	5-ft Screen (6'-11')	1.29	1564.47
**MW-3BR2	1565.25	No Riser	1565.61	~~24.49~~ 26.0	4-inch Open Hole Bedrock	Open from 14'-26'	0.54	1564.71
MW-4B	1545.45	No Riser	1541.90	48.4	3-inch Open Hole Bedrock	Open from 36.6'-46.6'	28.08	1517.37
MW-4S	1545.45	1545.40	1542.60	18.8	2-inch Overburden	10-ft Screen (6'-16')	9.75	1535.65

All Data taken from "Bedrock Monitoring Well Construction Log 1997" Except where noted (* and **)
March/April 1997, SJB Services, Inc
*Monitoring Wells Installed October 2012 - Data taken from Boring/Well Development Logs
October 2012, SJB Services, Inc
** Monitoring Wells Installed June 2014 - Data taken from Well Construction Diagrams
June 2014, MACTEC Engineering and Consulting, P.C.
ft = Feet
bgs = below ground surface

Prepared by: BPW 1/21/2016
Checked by: HA1/22/2016
TG 10/6/17

Field Data Record - HydraSleeve Sampling
South Hill Dump
Field Activity Plan - July 2017

Sampler Name: Nate Vogan / Alex Klein
Date HydraSleeves Deployed: 3/1/16 - 3/2/16
Date HydraSleeves Retrieved: 7/5/17 - 7/6/17

PFAS

	Sample Location	Sample I.D.	Sample Time	Water Level (Ft BTOR)	Turbidity (ntu)	Sample collected: VOC (8260B)	Metals (6010B)	1,4-Dioxane (8260SIM)	PFC Other	Comments/Observations
*	MW-1S	MW-1S	715 1710	11.61	69.8	X	X	X	X	175 mL Metals
*	MW-1B	MW-1B	715 1706	22.95	31.3	X	X	X	X	190 mL Metals, 2 VOA for Dioxan
	MW-2S	MW-2S	716 1115	9.67	105	X	X			200 mL Metals
	MW-2B	MW-2B	716 1120	8.36	>1000	X	X			200 mL Metals
	MW-2D	MW-2D	716 1130	7.62	26.5	X	X			200 mL Metals
	MW-3SR	MW-3SR	715 1515	8.92	111	X	X			200 mL Metals
	MW-3BR	MW-3BR	715 1520	4.33	>1000	X	X			very turbid, black, 200mL Metals
*	MW-3SR2	MW-3SR2	715 1338	1.29	314	X	X	X	X	150 mL Metals
*	MW-3BR2	MW-3BR2	715 1348	0.54	3194 (3)	X	X	X	X	2VOA for Dioxan / 150mL Metals
*	MW-4S	MW-4S	715 1158	28.08	8.1	X	X		X	250 mL Metals
*	MW-4B	MW-4B	715 1149	9.75	199	X	X	X	X	MS/MSD

Notes:
Ft BTOR - feet below top of riser
ntu - nephlometric turbidity unit

2 VOAs for each Sample, FD, MS, 1 VOA each MSD

* wells purged 1 well volume post hydrasleeve sampling for PFC sampling

MW-4B Metals 200 mL
MW-4B Dup Metals 175 mL
MW-4B MS/MSD Metals 225 mL (1 bottle for both)

Temp Blank (1) 1130 7/5/17

Prepared by: RMB 5/11/17
Checked by: TG, 10/6/17

Well Inspection Checklist Field Data Record
South Hill Dump
Filed Activity Plan - July 2017

Inspected by: Nate Vagan / Alex Klein

Date: 7/5/17

Well ID	Measuring Point Elevation	Protective Casing Stickup (ft. AGS)	Protective Casing Stickup/Well Difference (ft.)	Depth to Water (ft. TOR)	Depth to BOW (ft. TOR)	Well ID Clearly Labeled (Y/N)	Well Lock/Cap (G/F/P)	Protective Casing (G/F/P)	Water in Annular Space (Y/N)	Concrete Pad (G/F/P)	Well Riser/Cap (G/F/P)	Well Obstruction (Y/N)	Comments
MW-1S	TOR	2.70	+0.11	11.61	17.9	Y	G	G	N	G	F	N	
MW-1B	TOR	3.08	-0.24	22.95	37.9	Y	G	G	N	G	G	N	
MW-2S	TOR	2.76	+0.08	9.67	12.9	Y	G	G	N	G	G	N	
MW-2D	TOR	2.70	+0.13	8.36	27.0	Y	G	G	N	G	G	N	
MW-2B	TOC	2.69	N/A	7.62	44.0	Y	G	G	NA	G	G	N	
MW-3SR	TOR	2.50	-0.63	8.92	25.3	Y	None	G	N	G	F	N	well lock missing / lost, small crack in PVC top
MW-3BR	TOC	2.76	N/A	4.33	43.9	Y	G	G	NA	G	G	N	
MW-3SR2	TOR	Flush	-0.21	1.29	10.72	Y	G	G	N	G	G	N	
MW-3BR2	TOR	Flush	-0.40	0.54	25.48	Y	G	G	N	G	G	N	
MW-4S	TOR	2.86	0.08	28.08	18.8	Y	G	G	N	G	G	N	
MW-4B	TOC	3.30	N/A	9.75	48.4	Y	G	G	NA	G	G	N	

Notes:

G = Good	N = No	ft. = feet	AGS = Above ground surface
F = Fair	Y = Yes	in. = inches	TOR = Top of Riser
P = Poor	N/A = Not Applicable	BOW = bottom of well	TOC = Top of Casing

FIELD DATA RECORD - LOW FLOW GROUNDWATER SAMPLING

JOB NUMBER: 3617137309

PROJECT: NYSDEC South Hill Dump | FIELD SAMPLE NUMBER: MW-15

SITE ID: ## 7112009 | SITE TYPE: WELL | DATE: 7/5/17

ACTIVITY: START 1720 END 1735 | SAMPLE TIME: 15 min | 7/6/17

WATER LEVEL / PUMP SETTINGS

MEASUREMENT POINT: [X] TOP OF WELL RISER [ ] TOP OF PROTECTIVE CASING

INITIAL DEPTH TO WATER	11.61 FT	WELL DEPTH (TOR)	17.9 FT	PROTECTIVE CASING STICKUP (FROM GROUND)	2.7 (NM) FT
FINAL DEPTH TO WATER	12.30 FT	SCREEN LENGTH	10 FT	PID AMBIENT AIR	NA PPM
DRAWDOWN VOLUME (initial - final x 0.16 (2-inch) or x 0.65 (4-inch))	0.11 GAL	RATIO OF DRAWDOWN VOLUME TO TOTAL VOLUME PURGED	0.06	PID WELL MOUTH	NA PPM
TOTAL VOL. PURGED (purge volume (milliliters per minute) x time duration (minutes) x 0.00026 gal/milliliter)	1.95 GAL			PRESSURE TO PUMP	NA PSI
				REFILL SETTING	NA

CASING / WELL DIFFER.: 0.11 FT

WELL DIAM.: 2 IN

WELL INTERGRITY:

	YES	NO	N/A
CAP	X		
CASING	X		
LOCKED	X		
COLLAR	X		

DISCHARGE SETTING: NA

PURGE DATA

TIME	DEPTH TO WATER (ft)	PURGE RATE (ml/m)	TEMP. (deg. c) +/- 1.0	SPECIFIC CONDUCTANCE (mS/cm) +/- 3%	pH (units) +/- 0.1	DISS. O2 (mg/L) 10%	TURBIDITY (ntu)+/-10% <10	ORP (mv) +/- 10	COMMENTS
1720	11.61	500					—		Over Turb measurement
1725	12.30	500					91.9		
1730	12.30	500					30.2		
1735	12.30	500					15.9		
800	12.24	500					29.3		Samples taken pre sample
805	12.51	500					42.7		post Sample

7/6/17

EQUIPMENT DOCUMENTATION

TYPE OF PUMP	TYPE OF TUBING	TYPE OF PUMP MATERIAL	TYPE OF BLADDER MATERIAL
[X] GEOPUMP (peristaltic)	[ ] LOW DENSITY POLYETHYLENE	[ ] STAINLESS STEEL	[ ] TEFLON
[ ] QED BLADDER	[X] OTHER HDPE	[ ] OTHER	[ ] OTHER

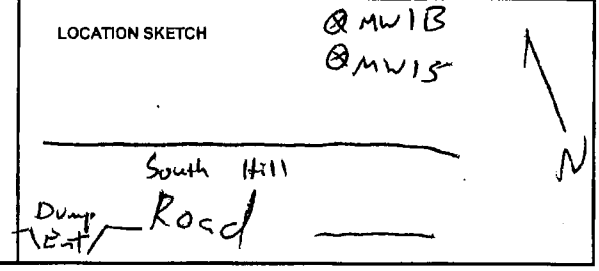
ANALYTICAL PARAMETERS

	METHOD NUMBER	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED
[X] VOCs	USEPA - 8260B	HCl to pH <2	2 X 40 ml vial	[X] + 1,4 Dioxane Hydrasleeve
[ ] SVOCs	USEPA - 8270C	4 DEG. C	2 X 1L AG	[ ]
[ ] Specific Metals	USEPA 6010B/7470A/7141A	HNO3 to pH <2	500 ml poly	[X] Hydrasleeve
[X] Specific Metals (Dissolved)	USEPA 6010B/7470A/7141A	HNO3 to pH <2	500 ml poly	[ ] Field Filtered
[ ] Fluoride/Sulfate/Nitrate	USEPA -300	4 DEG. C	250 ml poly	[ ]
[ ] Hex Chrome (Cr+6)	7199	4 DEG. C	125 ml poly	[ ]
[ ] TPH	USEPA -8015	4 DEG. C	250 ml poly	[ ]
[ ] PCBs (low level)and/or Pesticides	USEPA - 8082/8081	4 DEG. C	2 X 1L AG	[ ]
[ ] Ammonia	350.1	H2SO4	250 ml poly	[ ]
[X] Other - PFAS	USEPA - 537	4 DEG. C	250 ml HDPE	[X]

NOTES: 1.03 gallons / 1 WV

Specific Metals:
Arsenic, Barium, Cadmium, Chromium, Copper, Lead, Mercury, Manganese, Molybdenum, Nickel, Selenium

LOCATION SKETCH



SIGNATURE:

GW Lowflow FDR.xlsx/LF AL Tech

5/12/2017

Purge 1 well volume, recharge overnight for PFC Sample

checked by: D.Lerner 8/7/17

FIELD DATA RECORD - LOW FLOW GROUNDWATER SAMPLING

JOB NUMBER: 3617137309

PROJECT: NYSDEC South Hill Dump
FIELD SAMPLE NUMBER: MW - 113
SITE ID: ## 712009
SITE TYPE: WELL
DATE: 7/5/17 - 7/6/17
ACTIVITY: START 1720 END 1740
SAMPLE TIME: 7/6/17 0810

WATER LEVEL / PUMP SETTINGS

MEASUREMENT POINT: [X] TOP OF WELL RISER [ ] TOP OF PROTECTIVE CASING

INITIAL DEPTH TO WATER	22.95 FT	WELL DEPTH (TOR)	37.9 FT	PROTECTIVE CASING STICKUP (FROM GROUND)	3.08 FT
FINAL DEPTH TO WATER	27.01 FT	SCREEN LENGTH	10 FT	PID AMBIENT AIR	NA PPM
DRAWDOWN VOLUME (initial - final x 0.16 (2-inch) or x 0.65 (4-inch))	0.7 GAL	RATIO OF DRAWDOWN VOLUME TO TOTAL VOLUME PURGED	0.3	PID WELL MOUTH	NA PPM
TOTAL VOL. PURGED (purge volume (milliliters per minute) x time duration (minutes) x 0.00026 gal/milliliter)	2.4 GAL			PRESSURE TO PUMP	NA PSI
				REFILL SETTING	NA

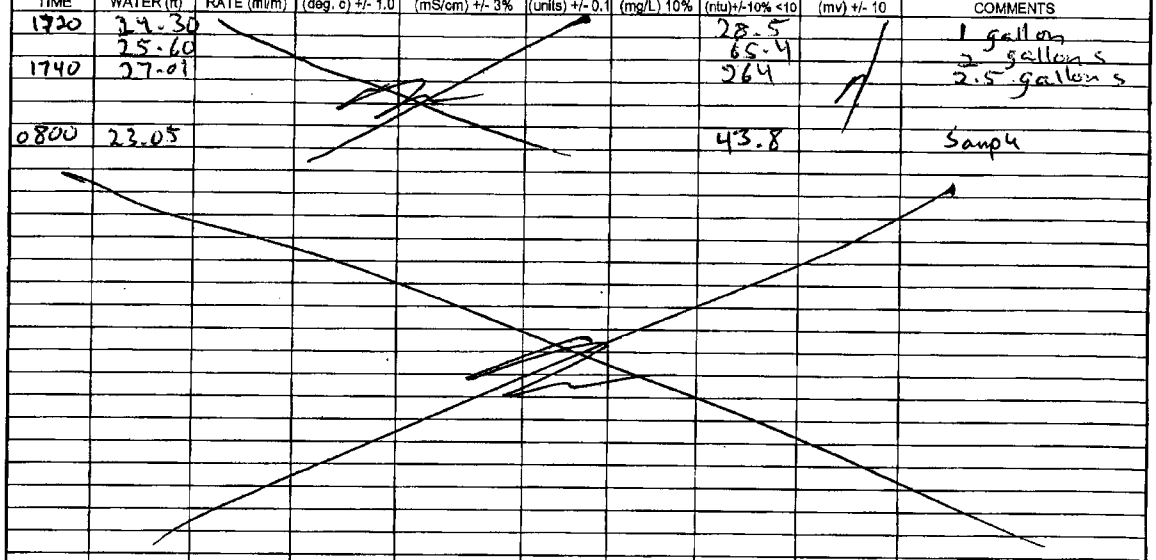
CASING / WELL DIFFER.: 0.24 FT
WELL DIAM.: 2 IN
DISCHARGE SETTING: NA

WELL INTERGRITY:

	YES	NO	N/A
CAP	X		
CASING	X		
LOCKED	X		
COLLAR	X		

PURGE DATA

TIME	DEPTH TO WATER (ft)	PURGE RATE (ml/m)	TEMP. (deg. c) +/- 1.0	SPECIFIC CONDUCTANCE (mS/cm) +/- 3%	pH (units) +/- 0.1	DISS. O2 (mg/L) 10%	TURBIDITY (ntu)+/-10% <10	ORP (mv) +/- 10	COMMENTS
1720	24.30						28.5		1 gallon
	25.60						65.4		2 gallons
1740	27.01						264		2.5 gallons
0800	23.05						43.8		Samp4



EQUIPMENT DOCUMENTATION

TYPE OF PUMP	TYPE OF TUBING	TYPE OF PUMP MATERIAL	TYPE OF BLADDER MATERIAL
[ ] GEOPUMP (peristaltic)	[ ] LOW DENSITY POLYETHYLENE	[ ] STAINLESS STEEL	[ ] TEFLON
[ ] QED BLADDER	[ ] OTHER	[X] OTHER SS Bailer	[ ] OTHER

ANALYTICAL PARAMETERS

	METHOD NUMBER	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED	
[X] VOCs	USEPA - 8260B	HCl to pH <2	2 X 40 ml vial	[X]	1,4 Dioxane Hydrasleeve
[ ] SVOCs	USEPA - 8270C	4 DEG. C	2 X 1L AG	[ ]	
[X] Specific Metals	USEPA 6010B/7470A/7141A	HNO3 to pH <2	500 ml poly	[X]	hydrasleeve
[ ] Specific Metals (Dissolved)	USEPA 6010B/7470A/7141A	HNO3 to pH <2	500 ml poly	[ ]	Field Filtered
[ ] Fluoride/Sulfate/Nitrate	USEPA -300	4 DEG. C	250 ml poly	[ ]	
[ ] Hex Chrome (Cr+6)	7199	4 DEG. C	125 ml poly	[ ]	
[ ] TPH	USEPA -8015	4 DEG. C	250 ml poly	[ ]	
[ ] PCBs (low level)and/or Pesticides	USEPA - 8082/8081	4 DEG. C	2 X 1L AG	[ ]	
[ ] Ammonia	350.1	H2SO4	250 ml poly	[ ]	
[X] Other - PFAS	USEPA - 537	4 DEG. C	250 ml HDPE	[X]	

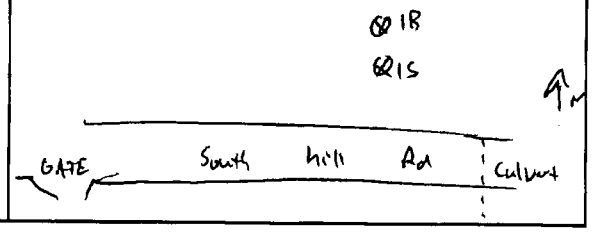
NOTES: 2.4 gallons 1 / well volume

Specific Metals:
Arsenic, Barium, Cadmium, Chromium, Copper, Lead, Mercury, Manganese, Molybdenum, Nickel, Selenium

Purge 1 well volume, allow to recover overnight for PFC Samp4

SIGNATURE:

LOCATION SKETCH



Bailer #: 540034

5/12/2017

checked by: D.Lerner 8/7/17

FIELD DATA RECORD - LOW FLOW GROUNDWATER SAMPLING

JOB NUMBER: 3617137309

PROJECT: NYSDEC South Hill Dump | FIELD SAMPLE NUMBER: MW-3BR2

SITE ID: ## 712009 | SITE TYPE: WELL | DATE: 7/5/17

ACTIVITY: START 1430 END 1630 | SAMPLE TIME: ~~1430~~ 1640 0920 | 7/6/17 | 7/6/17

WATER LEVEL / PUMP SETTINGS

MEASUREMENT POINT: [ ] TOP OF WELL RISER [X] TOP OF PROTECTIVE CASING

INITIAL DEPTH TO WATER	0.54 FT	WELL DEPTH (TOR)	26 FT	PROTECTIVE CASING STICKUP (FROM GROUND)	Flush FT
FINAL DEPTH TO WATER	4.11 FT	PID AMBIENT AIR	NA PPM	CASING / WELL DIFFER.	0.4 FT
DRAWDOWN VOLUME (initial - final x 0.16 (2-inch) or x 0.65 (4-inch))	2.32 GAL	SCREEN LENGTH	12 FT	PID WELL MOUTH	NA PPM
TOTAL VOL. PURGED (purge volume (milliliters per minute) x time duration (minutes) x 0.00026 gal/milliliter)	16.90 GAL	RATIO OF DRAWDOWN VOLUME TO TOTAL VOLUME PURGED	0.14	PRESSURE TO PUMP	NA PSI
				REFILL SETTING	NA
				WELL DIAM.	4 IN
				DISCHARGE SETTING	NA

WELL INTERGRITY:

	YES	NO	N/A
CAP	X		
CASING	X		
LOCKED	X		
COLLAR	X		

PURGE DATA

TIME	DEPTH TO WATER (ft)	PURGE RATE (ml/m)	TEMP. (deg. c) +/- 1.0	SPECIFIC CONDUCTANCE (mS/cm) +/- 3%	pH (units) +/- 0.1	DISS. O2 (mg/L) 10%	TURBIDITY (ntu)+/-10% <10	ORP (mv) +/- 10	COMMENTS
1430	0.54	500					166		
1435	1.72						122		
1440	2.26						113		
1445	2.79						101		
1450	3.02						89.3		
1455	3.23						88.3		
1500	3.4						NA		
1505	3.55						73.2		
1510	NA						NA		
1515	NA						NA		
1520	NA						NA		
1525	3.92						49.7		
1530	NA						NA		
1535	NA						NA		
1540	4.02						59.3		
1545	NA						NA		
1550	NA						NA		
1555	NA						NA		
1600	4.11						40.0		
1605	4.11						29.9		
1610	4.11						21.3		
1615	4.11						28.0		
1620	NA						NA		
1625	4.11						20.3		
1630	4.11						20.4		END Purge

EQUIPMENT DOCUMENTATION

TYPE OF PUMP	TYPE OF TUBING	TYPE OF PUMP MATERIAL	TYPE OF BLADDER MATERIAL
[X] GEOPUMP (peristaltic)	[ ] LOW DENSITY POLYETHYLENE	[ ] STAINLESS STEEL	[ ] TEFLON
[ ] QED BLADDER	[X] OTHER HDPE	[ ] OTHER	[ ] OTHER

ANALYTICAL PARAMETERS

	METHOD NUMBER	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED	
[X] VOCs	USEPA - 8260B	HCl to pH <2	2 X 40 ml vial	[X]	1,4 Dioxane Hydrasleeve
[ ] SVOCs	USEPA - 8270C	4 DEG. C	2 X 1L AG	[ ]	
[X] Specific Metals	USEPA 6010B/7470A/7141A	HNO3 to pH <2	500 ml poly	[X]	hydrasleeve
[ ] Specific Metals (Dissolved)	USEPA 6010B/7470A/7141A	HNO3 to pH <2	500 ml poly	[ ]	Field Filtered
[ ] Fluoride/Sulfate/Nitrate	USEPA -300	4 DEG. C	250 ml poly	[ ]	
[ ] Hex Chrome (Cr+6)	7199	4 DEG. C	125 ml poly	[ ]	
[ ] TPH	USEPA -8015	4 DEG. C	250 ml poly	[ ]	
[ ] PCBs (low level)and/or Pesticides	USEPA - 8082/8081	4 DEG. C	2 X 1L AG	[ ]	
[ ] Ammonia	350.1	H2SO4	250 ml poly	[ ]	
[X] Other - PFAS	USEPA - 537	4 DEG. C	250 ml HDPE	[X]	

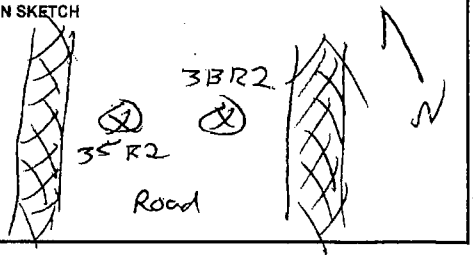
NOTES: 16.55 gallons = 1 vv

Specific Metals:
Arsenic, Barium, Cadmium, Chromium, Copper, Lead, Mercury, Manganese, Molybdenum, Nickel, Selenium

Time	DTW	Turb
1635	4.11	17.9
1640	4.11	14.5

SIGNATURE:

LOCATION SKETCH



checked by: D.Lerner 8/7/17

GW Lowflow FDR.xlsx/LF AL Tech 5/12/2017

	Time	Rate	DTW	Turb	
7/6/17	920	250	0.6	89.7	Pre sample
	925	250	1.47	70.6	Post sample

Sample taken PFC Sample only from purge

FIELD DATA RECORD - LOW FLOW GROUNDWATER SAMPLING

JOB NUMBER: 3617137309

PROJECT: NYSDEC South Hill Dump | FIELD SAMPLE NUMBER: MW-35R2

SITE ID: ## 712009 | SITE TYPE: WELL | DATE: 7/5/17

ACTIVITY: START 1400 END 1420 | SAMPLE TIME: 20 min 0915 7/6/17 | 7/6/17

WATER LEVEL / PUMP SETTINGS

INITIAL DEPTH TO WATER	1.29 FT	MEASUREMENT POINT: [X] TOP OF WELL RISER [ ] TOP OF PROTECTIVE CASING	PROTECTIVE CASING STICKUP (FROM GROUND)	N FT	CASING / WELL DIFFER. 0.21 FT
FINAL DEPTH TO WATER	2.60 FT	WELL DEPTH (TOR) 11.0 FT	PID AMBIENT AIR	NA PPM	WELL DIAM. 2 IN
DRAWDOWN VOLUME	2.39 0.2 GAL	SCREEN LENGTH 10 FT	PID WELL MOUTH	NA PPM	WELL INTERGRITY: YES / NO / N/A
(initial - final x 0.16 (2-inch) or x 0.65 (4-inch))		RATIO OF DRAWDOWN VOLUME TO TOTAL VOLUME PURGED	PRESSURE TO PUMP	NA PSI	CAP X / — / — ; CASING X / — / — ; LOCKED X / — / — ; COLLAR X / — / —
TOTAL VOL. PURGED	2.60 GAL	0.08	REFILL SETTING	NA	DISCHARGE SETTING NA
(purge volume (milliliters per minute) x time duration (minutes) x 0.00026 gal/milliliter)					

PURGE DATA

TIME	DEPTH TO WATER (ft)	PURGE RATE (ml/m)	TEMP. (deg. c) +/- 1.0	SPECIFIC CONDUCTANCE (mS/cm) +/- 3%	pH (units) +/- 0.1	DISS. O2 (mg/L) 10%	TURBIDITY (ntu)+/-10% <10	ORP (mv) +/- 10	COMMENTS
1400	1.29	500					350		0.25 - 500 mL/min
1405	2.43	500					248		
1410	2.57	500					106		
1415	2.57	500					63.4		
1420	2.60	500					42.8		
—	—	—					—		
—	—	—					—		
915	1.46	250					14.4		Sample taken at pre Sample
920	2.26	250					5.90		post Sample

7/6/17

EQUIPMENT DOCUMENTATION

TYPE OF PUMP	TYPE OF TUBING	TYPE OF PUMP MATERIAL	TYPE OF BLADDER MATERIAL
[X] GEOPUMP (peristaltic)	[ ] LOW DENSITY POLYETHYLENE	[ ] STAINLESS STEEL	[ ] TEFLON
[ ] QED BLADDER	[X] OTHER HDPE	[ ] OTHER	[ ] OTHER

ANALYTICAL PARAMETERS

	METHOD NUMBER	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED
[X] VOCs	USEPA - 8260B	HCl to pH <2	2 X 40 ml vial	[X] + 1,4 Dioxane Hydrazine
[ ] SVOCs	USEPA - 8270C	4 DEG. C	2 X 1L AG	[ ]
[X] Specific Metals	USEPA 6010B/7470A/7141A	HNO3 to pH <2	500 ml poly	[X] hydrazine
[ ] Specific Metals (Dissolved)	USEPA 6010B/7470A/7141A	HNO3 to pH <2	500 ml poly	[ ] Field Filtered
[ ] Fluoride/Sulfate/Nitrate	USEPA -300	4 DEG. C	250 ml poly	[ ]
[ ] Hex Chrome (Cr+6)	7199	4 DEG. C	125 ml poly	[ ]
[ ] TPH	USEPA -8015	4 DEG. C	250 ml poly	[ ]
[ ] PCBs (low level)and/or Pesticides	USEPA - 8082/8081	4 DEG. C	2 X 1L AG	[ ]
[ ] Ammonia	350.1	H2SO4	250 ml poly	[ ]
[X] Other - PFAS	USEPA - 537	4 DEG. C	250 ml HDPE	[✓]

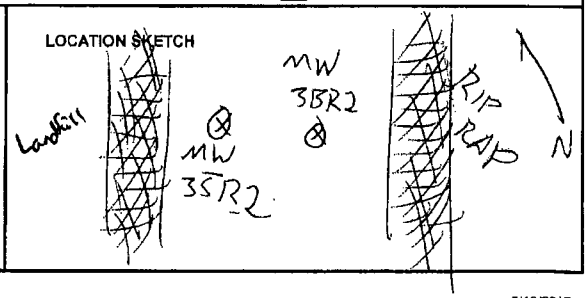
NOTES: 1.6 gallons = 1 vol

Specific Metals:
Arsenic, Barium, Cadmium, Chromium, Copper, Lead, Mercury, Manganese, Molybdenum, Nickel, Selenium

6154 mL

SIGNATURE:

LOCATION SKETCH



GW Lowflow FDR.xlsx/LF AL Tech

Purge 1 well volume, recover overnight for PFE Sample

5/12/2017

checked by: D.Lerner 8/7/17

FIELD DATA RECORD - LOW FLOW GROUNDWATER SAMPLING

JOB NUMBER: 3617137309

PROJECT: NYSDEC South Hill Dump | FIELD SAMPLE NUMBER: MW-45

SITE ID: ## 712009 | SITE TYPE: WELL | DATE: 7/5/17 - 7/6/17

ACTIVITY: START 1214 END 1225 | SAMPLE TIME: 0945 (7/6/17)

WATER LEVEL / PUMP SETTINGS

MEASUREMENT POINT: [X] TOP OF WELL RISER [ ] TOP OF PROTECTIVE CASING

INITIAL DEPTH TO WATER	9.75 FT	WELL DEPTH (TOR)	18.8 FT	PROTECTIVE CASING STICKUP (FROM GROUND)	2.84 FT
FINAL DEPTH TO WATER	12.00 FT	SCREEN LENGTH	10 FT	CASING / WELL DIFFER.	0.08 FT
DRAWDOWN VOLUME (initial - final x 0.16 (2-inch) or x 0.65 (4-inch))	0.36 GAL	RATIO OF DRAWDOWN VOLUME TO TOTAL VOLUME PURGED	0.24	PID AMBIENT AIR	NA PPM
TOTAL VOL. PURGED (purge volume (milliliters per minute) x time duration (minutes) x 0.00026 gal/milliliter)	1.521 ~~1.9~~ (W) GAL			PID WELL MOUTH	NA PPM
				PRESSURE TO PUMP	NA PSI
				REFILL SETTING	NA
				WELL DIAM.	2 IN
				DISCHARGE SETTING	NA

WELL INTERGRITY:

	YES	NO	N/A
CAP	X		
CASING	X		
LOCKED	X		
COLLAR	X		

PURGE DATA

TIME	DEPTH TO WATER (ft)	PURGE RATE (ml/m)	TEMP. (deg. c) +/- 1.0	SPECIFIC CONDUCTANCE (mS/cm) +/- 3%	pH (units) +/- 0.1	DISS. O2 (mg/L) 10%	TURBIDITY (ntu)+/-10% <10	ORP (mv) +/- 10	COMMENTS
1215	9.96	~~500~~ 550	NA	NA	NA	NA	20.0	NA	550 / 1 min
1220	11.11	500	NA	NA	NA	NA	12.3	NA	
1225	12.00	500	NA	NA	NA	NA	7.58	NA	
7/6/17 945	10.69	250	NA	NA	NA	NA	30.0	NA	Pre sample
950	11.55	250	NA	NA	NA	NA	14.0	NA	Post Sample

EQUIPMENT DOCUMENTATION

TYPE OF PUMP	TYPE OF TUBING	TYPE OF PUMP MATERIAL	TYPE OF BLADDER MATERIAL
[X] GEOPUMP (peristaltic)	[ ] LOW DENSITY POLYETHYLENE	[ ] STAINLESS STEEL	[ ] TEFLON
[ ] QED BLADDER	[X] OTHER HDPE	[ ] OTHER	[ ] OTHER

ANALYTICAL PARAMETERS

	METHOD NUMBER	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED	
[X] VOCs	USEPA - 8260B	HCl to pH <2	2 X 40 ml vial	[X]	Hydrasleeve
[ ] SVOCs	USEPA - 8270C	4 DEG. C	2 X 1L AG	[ ]	
[X] Specific Metals	USEPA 6010B/7470A/7141A	HNO3 to pH <2	500 ml poly	[X]	Hydrasleeve
[ ] Specific Metals (Dissolved)	USEPA 6010B/7470A/7141A	HNO3 to pH <2	500 ml poly	[ ]	Field Filtered
[ ] Fluoride/Sulfate/Nitrate	USEPA -300	4 DEG. C	250 ml poly	[ ]	
[ ] Hex Chrome (Cr+6)	7199	4 DEG. C	125 ml poly	[ ]	
[ ] TPH	USEPA -8015	4 DEG. C	250 ml poly	[ ]	
[ ] PCBs (low level)and/or Pesticides	USEPA - 8082/8081	4 DEG. C	2 X 1L AG	[ ]	
[ ] Ammonia	350.1	H2SO4	250 ml poly	[ ]	
[X] Other - PFAS	USEPA - 537	4 DEG. C	250 ml HDPE	[X]	

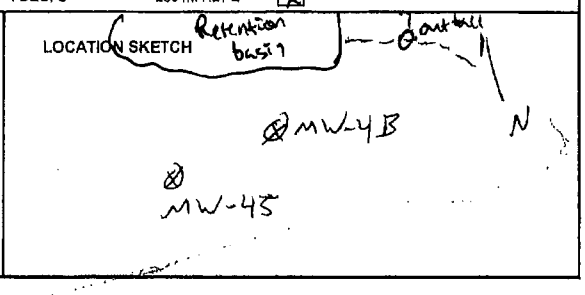
NOTES: 1.48 gallons / 1 vol ~~338 mL~~ 592

Specific Metals:
Arsenic, Barium, Cadmium, Chromium, Copper, Lead, Mercury, Manganese, Molybdenum, Nickel, Selenium

PFC Sample only, Purge 1 vol and allow to recover overnight

SIGNATURE:

LOCATION SKETCH



GW Lowflow FDR.xlsx/LF AL Tech

5/12/2017

Checked by: D. Lerner 8/7/17

FIELD DATA RECORD - LOW FLOW GROUNDWATER SAMPLING

JOB NUMBER: 3617137309

PROJECT: NYSDEC South Hill Dump | FIELD SAMPLE NUMBER: MW-4B

SITE ID: ## 712009 | SITE TYPE: WELL | DATE: 7/5/17 - 7/6/17

ACTIVITY: START 1220 END 1320 | SAMPLE TIME: 0950 (7/6/17)

WATER LEVEL / PUMP SETTINGS

MEASUREMENT POINT: [X] TOP OF WELL RISER [ ] TOP OF PROTECTIVE CASING

INITIAL DEPTH TO WATER	28.08 FT	WELL DEPTH (TOR)	48.4 FT	PROTECTIVE CASING STICKUP (FROM GROUND)	3.30 FT
FINAL DEPTH TO WATER	28.23 FT	SCREEN LENGTH	10 FT	PID AMBIENT AIR	NA PPM
DRAWDOWN VOLUME (initial - final x 0.16 (2-inch) or x 0.65 (4-inch))	0.06 GAL (0.37)	RATIO OF DRAWDOWN VOLUME TO TOTAL VOLUME PURGED	0.008	PID WELL MOUTH	NA PPM
TOTAL VOL. PURGED (purge volume (milliliters per minute) x time duration (minutes) x 0.00026 gal/milliliter)	7.5 GAL			PRESSURE TO PUMP	NA PSI
				REFILL SETTING	NA

CASING / WELL DIFFER.: NA FT

WELL DIAM.: 3 IN

WELL INTERGRITY:

	YES	NO	N/A
CAP	X		
CASING	X		
LOCKED	X		
COLLAR	X		

DISCHARGE SETTING: NA

PURGE DATA

TIME	DEPTH TO WATER (ft)	PURGE RATE (ml/m)	TEMP. (deg. c) +/- 1.0	SPECIFIC CONDUCTANCE (mS/cm) +/- 3%	pH (units) +/- 0.1	DISS. O2 (mg/L) 10%	TURBIDITY (ntu)+/-10% <10	ORP (mv) +/- 10	COMMENTS
1216	28.03						117		0 gallons
	28.14						167		2 gallons
	28.14						198		4 gallons
	28.16						193		6 gallons
1308	28.23						199		7.5 gallons
7/6/17									
0950	28.12						56.3		Sample

EQUIPMENT DOCUMENTATION

TYPE OF PUMP	TYPE OF TUBING	TYPE OF PUMP MATERIAL	TYPE OF BLADDER MATERIAL
[ ] GEOPUMP (peristaltic)	[ ] LOW DENSITY POLYETHYLENE	[ ] STAINLESS STEEL	[ ] TEFLON
[ ] QED BLADDER	[ ] OTHER	[X] OTHER PVC Bailer	[ ] OTHER

ANALYTICAL PARAMETERS

	METHOD NUMBER	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED	
[X] VOCs	USEPA - 6260B	HCl to pH <2	2 X 40 ml vial	[X]	+ 1,4 Dioxane
[ ] SVOCs	USEPA - 8270C	4 DEG. C	2 X 1L AG	[ ]	
[X] Specific Metals	USEPA 6010B/7470A/7141A	HNO3 to pH <2	500 ml poly	[X]	
[ ] Specific Metals (Dissolved)	USEPA 6010B/7470A/7141A	HNO3 to pH <2	500 ml poly	[ ]	Field Filtered
[ ] Fluoride/Sulfate/Nitrate	USEPA -300	4 DEG. C	250 ml poly	[ ]	
[ ] Hex Chrome (Cr+6)	7199	4 DEG. C	125 ml poly	[ ]	
[ ] TPH	USEPA -8015	4 DEG. C	250 ml poly	[ ]	
[ ] PCBs (low level)and/or Pesticides	USEPA - 8082/8081	4 DEG. C	2 X 1L AG	[ ]	
[ ] Ammonia	350.1	H2SO4	250 ml poly	[ ]	
[X] Other - PFAS	USEPA - 537	4 DEG. C	250 ml HDPE	[X]	

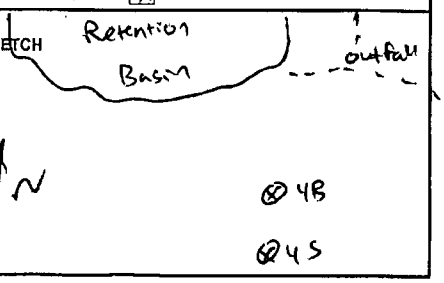
NOTES: 7.5 gal = 1 well volume

Specific Metals:
Arsenic, Barium, Cadmium, Chromium, Copper, Lead, Mercury, Manganese, Molybdenum, Nickel, Selenium

Purge 1 well volume, allow to recover overnight

SIGNATURE: [signature]

LOCATION SKETCH



Bailer #: S40018

checked by: D. Lerner 8/7/17

SURFACE WATER AND SEDIMENT SAMPLING RECORD

MACTEC
511 Congress Street, Portland Maine 04101

PROJECT NAME: South Hill Dump	SAMPLE LOCATION:
PROJECT NUMBER: 3617137309	DATE: 7/6/17
SAMPLE ID: SW-1	START TIME: 1025
SAMPLE TIME: ~~1025~~ 1030	END TIME: 1040
SITE NAME/NUMBER: 712009	PAGE: 1 OF 1

SURFACE WATER DATA

WATER DEPTH AT SAMPLE LOCATION: 0.5 FT. | DEPTH OF SAMPLE BELOW WATER SURFACE: 0.4 FT. | FLOW RATE: 250 ML/MIN

WATER QUALITY PARAMETERS:

TEMPERATURE		°C
SPEC. COND.		mS/cm
PH		pH Units
ORP		mV
TURBIDITY	13.2/44.1	NTUs
DO		mg/L

[ ] WINKLER METHOD
[ ] DO PROBE

EQUIPMENT USED:

[ ] BEAKER
[ ] BOTTLE
[ ] PACS BOMB
[X] PUMP
[ ] FILTER
No. ____ Type: ____

[X] FIELD DUPLICATE COLLECTED (Primary)
DUP. ID ~~SW-1~~ DUP

TYPE OF SURFACE WATER:

[X] STREAM
[ ] RIVER
[ ] LAKE
[ ] POND
[ ] SEEP
[ ] ____

DECON FLUIDS USED

[ ] ALL USED
[ ] LIQUINOX/DI H_2O SOLUTION
[X] DEIONIZED WATER
[ ] POTABLE WATER
[ ] NITRIC ACID
[ ] HEXANE
[ ] 25% METHANOL/75% ASTM TYPE II H_2O
[ ] ETHYL ALCOHOL
[ ] ____

[X] FIELD SKETCH SHOWN/ATTACHED
[X] YES [ ] NO

SAMPLING EQUIPMENT

WATER QUALITY METER MODEL NO.: NA UNIT ID NO.: NA
TURBIDITY METER MODEL NO.: Hach 2100Q UNIT ID NO.: M024-29

SEDIMENT AMPLE INFORMATION 1040

TYPE OF SAMPLE: SED-1

[X] DISCRETE
[ ] COMPOSITE

SAMPLE INTERVAL: TOP 0.0 BOTTOM 0.2

QC SAMPLES

[ ] DUPLICATE NA
[ ] EQ BLK NA

MS/MSD:
[ ] YES
[X] NO

TYPE OF MATERIAL:

[ ] ORGANIC
[ ] SAND
[X] GRAVEL
[ ] CLAY
[ ] FILL
[X] OTHER SILT

COLLECTION EQUIPMENT

[ ] HAND AUGER/CORER
[ ] S.S. SPLIT BARREL
[ ] ALUMINIUM PAN
[X] S.S. SHOVEL
[ ] HAND SPOON/SPATULA
[ ] S.S. BUCKET
[ ] OTHER ____

SAMPLE OBSERVATIONS

ODOR: none
COLOR: med brown
OTHER: Saturated
PID: NA

DECON FLUIDS USED

[ ] ALL USED
[ ] LIQUINOX/DI H_2O SOLUTION
[X] DEIONIZED WATER
[ ] POTABLE WATER
[ ] NITRIC ACID
[ ] HEXANE
[ ] 25% METHANOL/75% ASTM TYPE II H_2O
[ ] ETHYL ALCOHOL

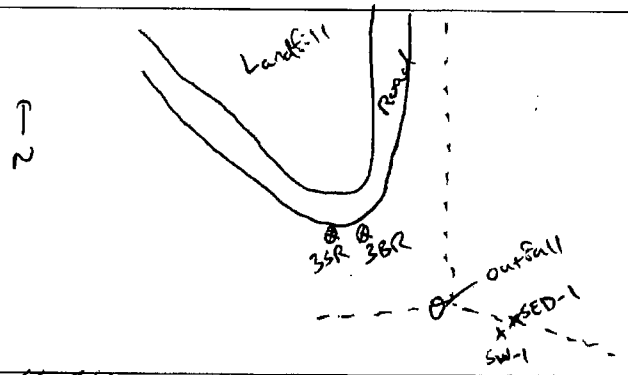
FIELD SKETCH SHOWN/ATTACHED

[X] YES
[ ] NO

ANALYTICAL PARAMETERS

		PARAMETER	METHOD NUMBER	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED	QC COLLECTED	SAMPLE BOTTLE ID NUMBERS
SW-1	[X]	VOC	8260B	HCl	~~3x40mL~~	Y	N	SW-1
	[X]	Metals	6010B	HNO_3	1 x 250mL	Y	N	SW-1
	[X]	PCBs	8082	4°C	2 x 250mL Amb	Y	N	SW-1
	[ ]							
SED-1	[X]	VOC	8260C	Methanol - DI	Terracore	Y	N	SED-1
	[X]	Metals	6010C	4°C	4oz	Y	N	"
	[X]	PCBs	8082	4°C	4oz	Y	N	"
	[X]	% moisture	NA	4°C	2oz	Y	N	"
	[ ]					Y	N	"

NOTES/SKETCH



SW-1 and SED-1 co-located appx. 50ft down swale from outfall

Sampler Signature: [signature] Print Name: Alex Klein

Checked By: D.Lerner Date: ~~7/6/17~~ 8/7/17

FIGURE 4.14
SURFACE WATER AND SEDIMENT SAMPLING RECORD
NYSDEC QUALITY ASSURANCE PROJECT PLAN

SURFACE WATER AND SEDIMENT SAMPLING RECORD

MACTEC
511 Congress Street, Portland Maine 04101

PROJECT NAME: South Hill Dump LTM	SAMPLE LOCATION: Seep - 1
PROJECT NUMBER: 3617 137309	DATE: 7/6/17
SAMPLE ID: SEEP - 1	SAMPLE TIME: 0820
START TIME: 0800	END TIME: 0825
SITE NAME/NUMBER: 712009	PAGE: 1 OF 1

SURFACE WATER DATA

WATER DEPTH AT SAMPLE LOCATION: 0.08 FT. | DEPTH OF SAMPLE BELOW WATER SURFACE: 0.08 FT. | FLOW RATE: 250 ML/MIN

WATER QUALITY PARAMETERS:

TEMPERATURE		°C
SPEC. COND.	NA	mS/cm
PH		pH Units
ORP		mV
TURBIDITY	12.5 / 5.1	NTUs
DO	NA	mg/L

- [ ] WINKLER METHOD
- [ ] DO PROBE

EQUIPMENT USED:

- [ ] BEAKER
- [ ] BOTTLE
- [ ] PACS BOMB
- [X] PUMP
- [ ] FILTER — No. ____ Type: ____
- [X] FIELD DUPLICATE COLLECTED (PCBs only) — DUP. ID: SEP-1 Dup

TYPE OF SURFACE WATER:

- [ ] STREAM
- [ ] RIVER
- [ ] LAKE
- [ ] POND
- [X] SEEP
- [ ] ____

FIELD SKETCH SHOWN/ATTACHED

- [X] YES
- [ ] NO

DECON FLUIDS USED

- [ ] ALL USED
- [ ] LIQUINOX/DI H_2O SOLUTION
- [X] DEIONIZED WATER
- [ ] POTABLE WATER
- [ ] NITRIC ACID
- [ ] HEXANE
- [ ] 25% METHANOL/75% ASTM TYPE II H_2O
- [ ] ETHYL ALCOHOL
- [ ] ____

SAMPLING EQUIPMENT

WATER QUALITY METER	MODEL NO.	NA	UNIT ID NO.	NA
TURBIDITY METER	MODEL NO.	Hach 2100Q	UNIT ID NO.	MD24-29

SEDIMENT AMPLE INFORMATION

TYPE OF SAMPLE

- [X] DISCRETE
- [ ] COMPOSITE

SAMPLE INTERVAL: TOP ____ BOTTOM ____

COLLECTION EQUIPMENT

- [ ] HAND AUGER/CORER
- [ ] S.S. SPLIT BARREL
- [ ] ALUMINIUM PAN
- [ ] S.S. SHOVEL
- [ ] HAND SPOON/SPATULA
- [ ] S.S. BUCKET
- [ ] OTHER ____

DECON FLUIDS USED

- [ ] ALL USED
- [ ] LIQUINOX/DI H_2O SOLUTION
- [ ] DEIONIZED WATER
- [ ] POTABLE WATER
- [ ] NITRIC ACID
- [ ] HEXANE
- [ ] 25% METHANOL/75% ASTM TYPE II H_2O
- [ ] ETHYL ALCOHOL

QC SAMPLES

- [ ] DUPLICATE ____
- [ ] EQ BLK ____

TYPE OF MATERIAL:

- [ ] ORGANIC
- [ ] SAND
- [ ] GRAVEL
- [ ] CLAY
- [ ] FILL
- [ ] OTHER ____

MS/MSD:

- [ ] YES
- [ ] NO

SAMPLE OBSERVATIONS

ODOR ____ COLOR ____ OTHER ____ PID ____

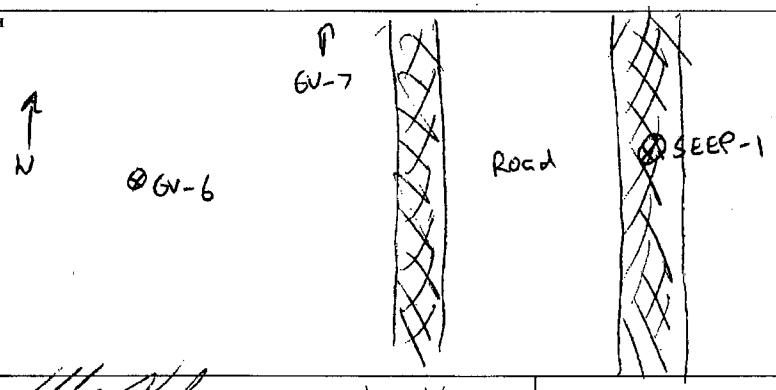
FIELD SKETCH SHOWN/ATTACHED

- [ ] YES
- [ ] NO

ANALYTICAL PARAMETERS

	PARAMETER	METHOD NUMBER	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED	QC COLLECTED	SAMPLE BOTTLE ID NUMBERS
X	VOC	8260B	HCl	3x 40mL VOA	Y	Y	SEEP-1 / Dup / Ms / MSD
X	Metals	6010B	HNO_3	1x 250mL	Y	Y	(1)
X	PCBs	8082	4°C	2x 250mL	Y	Y	(1)

NOTES/SKETCH



Sampler Signature: [signature] Print Name: Alex Klein

Checked By: D. Lerner Date: 8/7/17

FIGURE 4.14
SURFACE WATER AND SEDIMENT SAMPLING RECORD
NYSDEC QUALITY ASSURANCE PROJECT PLAN

FIELD INSTRUMENTATION CALIBRATION RECORD

PROJECT NAME: South Hill Dup LTM
PROJECT NUMBER: 36171137309
PROJECT LOCATION: Cortlandville, NY
WEATHER CONDITIONS (AM): 75°, Sunny
WEATHER CONDITIONS (PM): 82°, Overcast
TASK NO: .09 DATE: 7/5/17
MACTEC CREW: Nate Vegen / Alex Kelly
SAMPLER NAME: Nate Vegen
SAMPLER SIGNATURE:
CHECKED BY: D. Lerner DATE: 8/7/17

MULTI-PARAMETER WATER QUALITY METER

METER TYPE
MODEL NO.
UNIT ID NO.

	Units	AM CALIBRATION Standard Value	AM CALIBRATION Meter Value	AM CALIBRATION *Acceptance Criteria (AM)	POST CALIBRATION CHECK Standard Value	POST CALIBRATION CHECK Meter Value	POST CALIBRATION CHECK *Acceptance Criteria (PM)
		Start Time ____ /End Time ____			Start Time ____ /End Time ____		
pH (4)	SU	4.0		+/- 0.1 pH Units			
pH (7)	SU	7.0		+/- 0.1 pH Units	7.0		+/- 0.3 pH Units
pH (10)	SU	10.0		+/- 0.1 pH Units			
Redox	+/- mV	240		+/- 10 mV	240		+/- 10 mV
Conductivity	mS/cm	1.413		+/- 0.5 % of standard	1.413		+/- 5% of standard
DO (saturated)	%	100		+/- 2% of standard			
DO (saturated)	mg/L [1] (see Chart 1)			+/- 0.2 mg/L			+/- 0.5 mg/L of standard
DO (<0.1)	mg/L	<0.1		< 0.5 mg/L			
Temperature	°C						
Baro. Press.	mmHg						

TURBIDITY METER

METER TYPE Hach
MODEL NO. 2100Q
UNIT ID NO. M024-3

	Units	Standard Value	Meter Value	Standard Value	Meter Value	*Acceptance Criteria (PM)
~~0.1~~ 10 Standard	NTU	~~0.1~~ 10	10.1	<0.1	9.75	+/- 0.3 NTU of stan.
20 Standard	NTU	20	20.7	20	20.1	+/- 5% of standard
100 Standard	NTU	100	101	100	98.6	+/- 5% of standard
800 Standard	NTU	800	799	800	778	+/- 5% of standard

PHOTOIONIZATION DETECTOR

METER TYPE
MODEL NO.
UNIT ID NO.

Background	ppmv	<0.1		<0.1		within 5 ppmv of BG
Span Gas	ppmv	100		100		+/- 10% of standard

O_2-LEL 4 GAS METER

METER TYPE
MODEL NO.
UNIT ID NO.

Methane	%	50		50	+/- 10% of standard
O_2	%	20.9		20.9	+/- 10% of standard
H_2S	ppmv	25		25	+/- 10% of standard
CO	ppmv	50		50	+/- 10% of standard

OTHER METER

METER TYPE
MODEL NO.
UNIT ID NO.

See Notes Below for Additional Information

☒ Equipment calibrated within the Acceptance Criteria specified for each of the parameters listed above.
☐ Equipment (not) calibrated within the Acceptance Criteria specified for each of the parameters listed above**.

MATERIALS RECORD

Deionized Water Source: Portland FOS
Lot#/Date Produced:
Trip Blank Source:
Sample Preservatives Source:
Disposable Filter Type: 0.45µm cellulose
Calibration Fluids / Standard Source:
- DO Calibration Fluid (<0.1 mg/L) Portland FOS
- Other
- Other
- Other

	Cal. Standard Lot Number	Exp. Date
pH (4)		
pH (7)		
pH (10)		
ORP		
Conductivity		
<0.1 Turb. Stan.	A6207	10/17
20 Turb. Stan.	A6211	11/17
100 Turb. Stan.	A6208	10/17
800 Turb. Stan.	A6218	11/17
PID Span Gas		
O_2-LEL Span Gas		
Other		

NOTES:

* = Unless otherwise noted, calibration procedures and acceptance criteria are in general accordance with USEPA Region 1 SOPs for Field Instrument Calibration (EQASOP-FieldCalibrat) and Low Stress Purging and Sampling (EQASOP-GW001), each dated 1/19/2010. Additional acceptance criteria obtained from instrument specific manufacturer recommendations.
** = If meter reading is not within acceptance criteria, clean/replace probe and re-calibrate, or use calibrated back-up meter if available. If project requirements necessitate use of the instrument, clearly document any deviations from acceptance criteria on all data sheets and log book entries.
1 = DO Saturated standard value is calculated based on Oxygen Solubility at Indicated Pressure Chart from the USEPA Region 1 SOP for Field Instrument Calibration (EQASOP-FieldCalibrat), dated 1/19/2010.

MACTEC
511 Congress Street, Portland Maine 04101

FIGURE 6.1
FIELD INSTRUMENT CALIBRATION RECORD
NYSDEC QUALITY ASSURANCE PROJECT PLAN

FIELD INSTRUMENTATION CALIBRATION RECORD

PROJECT NAME: South Hill Dump LTM
PROJECT NUMBER: 3617137809
PROJECT LOCATION: Cortland ville, NY
WEATHER CONDITIONS (AM): 75° ; Sunny
WEATHER CONDITIONS (PM): 82°, overcast
TASK NO: .04 DATE: 7/5/17
MACTEC CREW: Mark Vogen / Alex Kelly
SAMPLER NAME: Mark Vogen
SAMPLER SIGNATURE:
CHECKED BY: D.Lerner DATE: 8/7/17

MULTI-PARAMETER WATER QUALITY METER

METER TYPE
MODEL NO.
UNIT ID NO.

	Units	AM CALIBRATION Standard Value	AM CALIBRATION Meter Value	AM CALIBRATION *Acceptance Criteria (AM)	POST CALIBRATION CHECK Standard Value	POST CALIBRATION CHECK Meter Value	POST CALIBRATION CHECK *Acceptance Criteria (PM)
Start Time ____ /End Time ____							
pH (4)	SU	4.0		+/- 0.1 pH Units			
pH (7)	SU	7.0		+/- 0.1 pH Units	7.0		+/- 0.3 pH Units
pH (10)	SU	10.0		+/- 0.1 pH Units			
Redox	+/- mV	240		+/- 10 mV	240		+/- 10 mV
Conductivity	mS/cm	1.413		+/- 0.5 % of standard	1.413		+/- 5% of standard
DO (saturated)	%	100		+/- 2% of standard			
DO (saturated)	mg/L ! (see Chart 1)			+/- 0.2 mg/L			+/- 0.5 mg/L of standard
DO (<0.1)	mg/L	<0.1		< 0.5 mg/L			
Temperature	°C						
Baro. Press.	mmHg						

TURBIDITY METER

METER TYPE Hach
MODEL NO. 2100Q
UNIT ID NO. M024-29

	Units	Standard Value	Meter Value	Standard Value	Meter Value	*Acceptance Criteria (PM)
10 <0.1 Standard	NTU	10 <0.1	10.1	10 <0.1	9.88	+/- 0.3 NTU of stan.
20 Standard	NTU	20	20.0	20	19.3	+/- 5% of standard
100 Standard	NTU	100	99.8	100	92.2	+/- 5% of standard
800 Standard	NTU	800	792	800	767	+/- 5% of standard

PHOTOIONIZATION DETECTOR

METER TYPE
MODEL NO.
UNIT ID NO.

Background	ppmv	<0.1		<0.1		within 5 ppmv of BG
Span Gas	ppmv	100		100		+/- 10% of standard

O_2-LEL 4 GAS METER

METER TYPE
MODEL NO.
UNIT ID NO.

Methane	%	50		50		+/- 10% of standard
O_2	%	20.9		20.9		+/- 10% of standard
H_2S	ppmv	25		25		+/- 10% of standard
CO	ppmv	50		50		+/- 10% of standard

OTHER METER

METER TYPE
MODEL NO.
UNIT ID NO.

See Notes Below for Additional Information

☒ Equipment calibrated within the Acceptance Criteria specified for each of the parameters listed above.
☐ Equipment (not) calibrated within the Acceptance Criteria specified for each of the parameters listed above**.

MATERIALS RECORD

Deionized Water Source: Portland FOS
Lot#/Date Produced:
Trip Blank Source:
Sample Preservatives Source:
Disposable Filter Type: 0.45µm cellulose
Calibration Fluids / Standard Source:
- DO Calibration Fluid (<0.1 mg/L) Portland FOS
- Other
- Other
- Other

	Cal. Standard Lot Number	Exp. Date
pH (4)		
pH (7)		
pH (10)		
ORP		
Conductivity		
<0.1 Turb. Stan.	A6246	12/17
20 Turb. Stan.	A6251	12/17
100 Turb. Stan.	A6245	12/17
800 Turb. Stan.	A6245	12/17
PID Span Gas		
O_2-LEL Span Gas		
Other		

NOTES:

* = Unless otherwise noted, calibration procedures and acceptance criteria are in general accordance with USEPA Region 1 SOPs for Field Instrument Calibration (EQASOP-FieldCalibrat) and Low Stress Purging and Sampling (EQASOP-GW001), each dated 1/19/2010. Additional acceptance criteria obtained from instrument specific manufacturer recommendations.
** = If meter reading is not within acceptance criteria, clean/replace probe and re-calibrate, or use calibrated back-up meter if available. If project requirements necessitate use of the instrument, clearly document any deviations from acceptance criteria on all data sheets and log book entries.
! = DO Saturated standard value is calculated based on Oxygen Solubility at Indicated Pressure Chart from the USEPA Region 1 SOP for Field Instrument Calibration (EQASOP-FieldCalibrat), dated 1/19/2010.

MACTEC
511 Congress Street, Portland Maine 04101

FIGURE 6.1
FIELD INSTRUMENT CALIBRATION RECORD
NYSDEC QUALITY ASSURANCE PROJECT PLAN

APPENDIX B

LANDFILL INSPECTION FORM

APPENDIX I-1

New York Department of Environmental Conservation
Inactive Hazardous Waste Site
Inspection Form-Landfills

Site Name: South Hill Bump	NYSDEC Site Number: 712009	NYSDEC PM: Dave Chuisano
Site Location:	Site Classification # (circle): 1 2 2a 3 (4)	Primary Site Contact: D. Chuisano

Site Inspection Date: 7/5/17	Purpose of Inspection: Annual Inspection		
Name of Inspector: Nate Vogan	Title: Tech. Prof 3	Agency/Company: MacTec	Address: 511 Congress St Portland, ME 04101
Phone Number: 207-828-3562			

Landfill Cover System				
Cover System Onsite?	(Yes)	No (Proceed to next Section)		Cover System Observations: Site cover overgrown, yet to be mowed this year. Seep drainage in swale at historic locations
Vegetative Cover Condition	(Good)	Poor	NA	
Evidence of Vegetative Stress	Yes	(No)	NA	
Mowing Required	(Yes)	No	NA	
Presence of Debris	Yes	(No)	NA	
Evidence of Ponded Water	Yes	(No)	NA	
Exposed Geotextile	Yes	(No)	NA	
Evidence of Erosion Settlement	Yes	(No)	NA	
Engineered Drainage Swale Condition	(Good)	Poor	NA	
Evidence of Leachate Seepage	(Yes)	No	NA	
Evidence of Erosion	Yes	(No)	NA	
Presence of Woody Growth	Yes	(No)	NA	
Animal Burrows	Yes	(No)	NA	

Stormwater Collection and Drainage				
Drainage Channel Condition	(Good)	Poor	NA	Collection System Observations: Some small veg. growth in rip rap areas. no large woody plants
Sedimentation	Yes	(No)	NA	
Debris	Yes	(No)	NA	
Erosion/Slope Loss	Yes	(No)	NA	
Evidence of Leachate Seepage	(Yes)	No	NA	
Rip-Rap Condition	(Good)	Poor	NA	
Condition of Synthetic Liner	Good	Poor	(NA)	
Culvert Condition	(Good)	Poor	NA	
Other Drainage Structures/Pipes	(Good)	Poor	NA	
Condition of Drainage Grates	(Good)	Poor	NA	
Retention Ponds	(Good)	Poor	NA	

Building Structures				
Are there any building structures at the site?	Yes	(No) (Proceed to next section)		Building Condition Observations:
Overall Exterior Condition	Good	Poor	NA	
Overall Interior Condition	Good	Poor	NA	
Interior Floor	Good	Poor	NA	
Vaulted Areas	Good	Poor	NA	

Leachate Collection System				
Is there a leachate collection system at the site?	Yes	(No) (Proceed to next section)		Collection System Observations:
Collection Trench Condition	Good	Poor	NA	
Transfer Flow Pipes	Good	Poor	NA	
Condition of Valves	Good	Poor	NA	
Leachate Pump Condition	Good	Poor	NA	
Holding Tank(s) Condition	Good	Poor	NA	
Leachate Transfer/Loading Area	Good	Poor	NA	
List other applicable components and their overall condition				

Environmental Monitoring Locations				
Is there a monitoring network at the site?	(Yes)	No (Proceed to next section)		Monitoring Network Observations:
Monitoring Wells/Piezometers	(Good)	Poor	NA	
Soil Gas Monitoring Probes	Good	Poor	(NA)	
Landfill Gas Vents	(Good)	Poor	NA	
List other applicable location types and their overall condition				

APPENDIX I-1

New York Department of Environmental Conservation
Inactive Hazardous Waste Site
Inspection Form-Landfills

Interviews/Additional Contacts			
Name/Title	Phone:	Company/Entity	Contact Information

Additional Observation Notes:

- landfill is overgrown making evidence of erosion + animal burrows difficult to see

Photograph Log:
Photograph 1
Photograph 2
Photograph 3
Photograph 4
Photograph 5
Photograph 6
Photograph 7
Photograph 8
Photograph 9
Photograph 10

Performance Monitoring

Were check samples collected during this visit? (Yes) No

Sample type collected *(circle or write in other)* : (Groundwater) ~~Sediment~~ Soil (Leachate) Air (Surface Water)

List Parameters/Methods Collected Per Media:

groundwater: VOCs, metals, 1,4 Dioxane, PFCs
sediment: VOCs, metals, PCBs
leachate/surface water: VOCs, metals, PCBs

Analytical Laboratory/Location: Test America Buffalo, NY

Sample Observations:

JULY 2017 LANDFILL INSPECTION
SOUTH HILL DUMP SITE, SITE NO 712009
SOUTH HILL ROAD, CORTLANDVILLE, NY

ATTACHMENT B

PHOTOGRAPHIC DOCUMENTATION

Photo 1 Description: Monitoring wells MW-1S and MW-1B Orientation: Southeast Source: MACTEC, July 2017 Landfill Inspection	
Photo 2 Description: East landfill cover from SEEP-1 Location Orientation: West Source: MACTEC, July 2017 Landfill Inspection	

Photo 3 Description: Flowing water in east drainage swale, SEEP-1 location Orientation: NA Source: MACTEC, July 2017 Landfill Inspection	
Photo 4 Description: Perimeter fence Orientation: Northeast Source: MACTEC, July 2017 Landfill Inspection	

Photo 5 Description: Upper west drainage swale and perimeter access road Orientation: North Source: MACTEC, July 2017 Landfill Inspection	
Photo 6 Description: Lower west drainage swale and perimeter access road Orientation: North Source: MACTEC, July 2017 Landfill Inspection	

Photo 7 Description: Upper landfill cover drainage swale Orientation: Northwest Source: MACTEC, July 2017 Landfill Inspection	
Photo 8 Description: Slope Bench 5 Orientation: Northwest Source: MACTEC, July 2017 Landfill Inspection	

Photo 9 Description: Eastern landfill cover Orientation: Northwest Source: MACTEC, July 2017 Landfill Inspection	
Photo 10 Description: Landfill cover east slope (Slope Bench 6) Orientation: North Source: MACTEC, July 2017 Landfill Inspection	

Photo 11 Description: Landfill cover west slope (Slope Bench 6) Orientation: Northwest Source: MACTEC, July 2017 Landfill Inspection	
Photo 12 Description: Lower east drainage swale Orientation: South Source: MACTEC, July 2017 Landfill Inspection	

Photo 13 Description: Monitoring wells MW-3SR2 and MW-3BR2 Orientation: Southeast Source: MACTEC, July 2017 Landfill Inspection	
Photo 14 Description: Lower east drainage swale Orientation: North Source: MACTEC, July 2017 Landfill Inspection	

Photo 15 Description: Detention pond Orientation: South Source: MACTEC, July 2017 Landfill Inspection	
Photo 16 Description: Lower landfill cover drainage swale Orientation: Northwest Source: MACTEC, July 2017 Landfill Inspection	

Photo 17 Description: Cover drainage swale culvert to detention pond Orientation: South Source: MACTEC, July 2017 Landfill Inspection	
Photo 18 Description: Monitoring wells MW-4S and MW-4B Orientation: South Source: MACTEC, July 2017 Landfill Inspection	

Photo 19 Description: Culvert outlet from detention pond Orientation: Northwest Source: MACTEC, July 2017 Landfill Inspection	

APPENDIX C

LABORATORY REPORTS AND CHEMISTRY REVIEW

DATA USABILITY SUMMARY REPORT
JULY 2017 MEDIA SAMPLING
SOUTH HILL DUMP SITE
CORTLANDVILLE, NEW YORK

1.0 INTRODUCTION

Groundwater, surface water, seep, and sediment samples were collected at the South Hill Dump Site in Cortlandville, New York, in July 2017 and submitted for off-site laboratory analysis. Samples were analyzed by TestAmerica, Inc., located in Amherst, New York; Edison, New Jersey; and Sacramento, California. Samples were analyzed by one or more of the following methods:

- Volatile organic compounds (VOCs) by USEPA Method 8260C
- 1,4-Dioxane by USEPA Method 8260C-Selected Ion Monitoring (SIM)
- Per- and Polyfluorinated Alkyl Substances (PFAS) by Modified EPA Method 537
- Polychlorinated biphenyls (PCBs) by USEPA Method 8082A
- Metals by USEPA Method 6010C

Results were reported in the following sample delivery groups (SDGs):

- 480-120641-1
- 480-120783-1

Data quality objectives are identified in the Field Activities Plan – July 2017 Media Sampling; South Hill Dump Site (FAP) dated June 28, 2017 (MACTEC, 2017). A Data Usability Summary Report (DUSR) review was completed for 1,4-dioxane and PFAS analytical methods based on the New York State Department of Environmental Conservation (NYSDEC) Division of Environmental Remediation guidance (NYSDEC, 2010). A chemist review was performed for VOCs, PCBs, and metals. Sample event information included in this DUSR/chemist review is presented in the following tables:

- Table 1 – Summary of Samples and Analytical Methods
- Table 2 – Summary of Analytical Results
- Table 3 – Summary of Qualification Actions

Laboratory deliverables included:

- Category B deliverables as defined in the NYSDEC Analytical Services Protocols (NYSDEC, 2005).

The DUSR review included the following evaluations:

- Lab Report Narrative Review
- Data Package Completeness and COC records (Table 1 verification)
- Sample Preservation and Holding Times
- Instrument Calibration (report narrative/lab-qualifier evaluation)
- QC Blanks

- Laboratory Control Samples (LCS)
- Matrix Spike/Matrix Spike Duplicates (MS/MSD)
- Surrogate Spikes
- Field Duplicates
- Target Analyte Identification and Quantitation
- Raw Data (chromatograms), Calculation Checks and Transcription Verifications
- Reporting Limits
- Electronic Data Qualification and Verification

The chemist review included the following evaluations.

- Lab Report Narrative Review
- Data Package Completeness and COC records (Table 1 verification)
- Sample Preservation and Holding Times
- Instrument Calibration (report narrative/lab-qualifier evaluation)
- QC Blanks
- Laboratory Control Samples (LCS)
- Matrix Spike/Matrix Spike Duplicates (MS/MSD)
- Surrogate Spikes
- Field Duplicates
- Reporting Limits
- Electronic Data Qualification and Verification

A table of project control limits is presented in Attachment A. DUSR and chemist review checklists and applicable laboratory QC summary forms are included in Attachment B to document checks and QC outliers associated with qualification actions.

Data qualification actions are applied when necessary based on general procedures in USEPA validation guidelines (USEPA, 2014) and the judgment of the project chemist. The following laboratory or data review qualifiers are used in the final data presentation:

J = concentration is estimated
U = target analyte is not detected above the reported detection limit
UJ = the target compound was not detected and the reporting limit is considered to be estimated

Results are interpreted to be usable as reported by the laboratory or as qualified in the following sections.

2.0 POTENTIAL DATA LIMITATIONS

Based on the DUSR review the majority of data meet the data quality objectives; however, the following potential limitations were identified:

VOCs

The reporting limit for chloromethane in sample SED-1 was qualified estimated (UJ) based on an LCS recovery that was less than the control limits.

PFAS

Low concentration detections of PFAS target analyte perfluorobutanoic acid (PFBA) and perfluorotetradecanoic acid (PFTeA) were qualified non-detect (U) based on contamination in the associated laboratory method blank and field reagent blank.

Low concentration detections of PFAS target analyte perfluorohexanoic acid (PFHxA) were qualified non-detect (U) or estimated (J) based on contamination in the associated field reagent blank. Results near or below the blank concentration were qualified non-detect (U) and based on professional judgment results greater than two times the blank concentration were qualified estimated (J).

The reporting limit for PFAS target analyte perfluoroundecanoic acid (PFUnA) in sample MW-1B was qualified estimated (UJ) based on a high recovery of the associated internal standard.

Reporting limits for the following PFAS target analytes in sample MW-4B were qualified estimated (UJ) based on high recoveries of the associated internal standards:

Perfluorodecanesulfonic acid (PFDS)
Perfluorodecanoic acid (PFDA)
Perfluorododecanoic acid (PFDoA)
Perfluoroundecanoic acid (PFUnA)

Metals

Positive detections of iron and manganese in all groundwater samples were qualified estimated (J) based on high recoveries in the MS/MSD.

Results for iron in sample MW-4B and associated field duplicate MW-4B DUP were qualified estimated (J) based on field duplicate precision.

3.0 ADDITIONAL QC EXCEEDANCES AND OBSERVATIONS

There were no additional observations or quality control exceedances not specifically addressed above (Section 2.0) or included in Table 3. Unless presented in Table 3, sample results are interpreted to be usable as reported by the laboratory.

Reference:

MACTEC Engineering and Consulting (MACTEC), 2017. "Field Activities Plan – July 2017 Media Sampling; South Hill Dump Site"; June 28, 2017.

New York State Department of Environmental Conservation (NYSDEC), 2005. "Analytical Services Protocols"; July 2005.

New York State Department of Environmental Conservation (NYSDEC), 2010. "Technical Guidance for Site Investigation and Remediation-Appendix 2B"; DER-10; Division of Environmental Remediation; May 2010.

U.S. Environmental Protection Agency (USEPA), 2006a. "Validation of Metals for the Contract Laboratory Program (CLP) based on SOW ILM05.3 (SOP Revision 13)"; SOP # HW-2, Revision 3, Hazardous Waste Support Branch; September 2006.

U.S. Environmental Protection Agency (USEPA), 2006b. "Validating PCB Compounds PCBS by Gas Chromatography SW-846 Method 8082A"; USEPA Region II Hazardous Waste Support Branch; HW-45; Revision 1.0; October 2006.

U.S. Environmental Protection Agency (USEPA), 2014. "Validating Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry SW-846 Method 8260B"; USEPA Region II; HW-24; Revision 4; September 2014.

Data Validator: Julie Ricardi September 9, 2017

Julie Ricardi

Reviewed by: Chris Ricardi, QA Officer NRCC-EAC October 2, 2017

Chris Ricardi

TABLE 1 - SUMMARY OF SAMPLES AND ANALYTICAL METHODS
DATA USABILITY SUMMARY REPORT
JULY 2017 MEDIA SAMPLING
SOUTH HILL DUMP SITE
CORTLANDVILLE, NEW YORK

					Method Class	VOCs	1,4-Dioxane	PCBs	PFAS	Metals
					Analysis Method	SW8260C	SW8260C-SIM	SW8082A	Modified 537	SW6010C
					Fraction	N	N	N	N	T
SDG	Location	Sample ID	Sample Date	Media	Qc Code	Param_Count	Param_Count	Param_Count	Param_Count	Param_Count
480-120641-1	MW-1B	MW-1B	7/5/2017	GW	FS	51	1			22
480-120641-1	MW-1S	MW-1S	7/5/2017	GW	FS	51	1			22
480-120641-1	MW-2B	MW-2B	7/6/2017	GW	FS	51				22
480-120641-1	MW-2D	MW-2D	7/6/2017	GW	FS	51				22
480-120641-1	MW-2S	MW-2S	7/6/2017	GW	FS	51				22
480-120641-1	MW-3BR	MW-3BR	7/5/2017	GW	FS	51				22
480-120641-1	MW-3BR2	MW-3BR2	7/5/2017	GW	FS	51	1			22
480-120641-1	MW-3SR	MW-3SR	7/5/2017	GW	FS	51				22
480-120641-1	MW-3SR2	MW-3SR2	7/5/2017	GW	FS	51	1			22
480-120641-1	MW-4B	MW-4B	7/5/2017	GW	FS	51	1			22
480-120641-1	MW-4B	MW-4B DUP	7/5/2017	GW	FD	51	1			22
480-120641-1	MW-4S	MW-4S	7/5/2017	GW	FS	51				22
480-120641-1	QC	TRIP BLANK	7/5/2017	BW	TB	51				
480-120641-1	SED-1	SED-1	7/6/2017	SED	FS	51		9		22
480-120641-1	SEEP	SEEP-1	7/6/2017	NA-L	FS	51		9		22
480-120641-1	SEEP	SEEP-1 DUP	7/6/2017	NA-L	FD			9		
480-120641-1	SW-1	SW-1	7/6/2017	SW	FS	51		9		22
480-120783-1	MW-1B	MW-1B	7/6/2017	GW	FS				17	
480-120783-1	MW-1S	MW-1S	7/6/2017	GW	FS				17	
480-120783-1	MW-3BR2	MW-3BR2	7/6/2017	GW	FS				17	
480-120783-1	MW-3SR2	MW-3SR2	7/6/2017	GW	FS				17	
480-120783-1	MW-4B	MW-4B	7/6/2017	GW	FS				17	
480-120783-1	MW-4S	MW-4S	7/6/2017	GW	FS				17	
480-120783-1	QC	REAGENT BLANK	7/6/2017	BW	FB				17	

GW = groundwater, SW = surface water, BW = blank water
SED = sediment, NA-L = aqueous
FS = field sample, FD = field duplicate
TB = trip blank, FB = field reagent blank
Param_Count = number of target analytes reported

VOCs = volatile organic compounds
PCBs = polychlorinated biphenyls
PFAS = perfluoroalkyl substances

Prepared by: BJS 9/8/17
Checked by: JAR 9/9/17

TABLE 2 - SUMMARY OF ANALYTICAL RESULTS
DATA USABILITY SUMMARY REPORT
JULY 2017 MEDIA SAMPLING
SOUTH HILL DUMP SITE
CORTLANDVILLE, NEW YORK

		SDG	480-120641-1	
		Location	SED-1	
		Sample Date	7/6/2017	
		Sample ID	SED-1	
		Qc Code	FS	
Class	Parameter	Units	Result	Qualifier
VOCs	1,1,1-Trichloroethane	ug/kg	6.2	U
VOCs	1,1,2,2-Tetrachloroethane	ug/kg	6.2	U
VOCs	1,1,2-Trichloro-1,2,2-Trifluoroethane	ug/kg	6.2	U
VOCs	1,1,2-Trichloroethane	ug/kg	6.2	U
VOCs	1,1-Dichloroethane	ug/kg	6.2	U
VOCs	1,1-Dichloroethene	ug/kg	6.2	U
VOCs	1,2,3-Trichlorobenzene	ug/kg	6.2	U
VOCs	1,2,4-Trichlorobenzene	ug/kg	6.2	U
VOCs	1,2-Dibromo-3-chloropropane	ug/kg	6.2	U
VOCs	1,2-Dibromoethane	ug/kg	6.2	U
VOCs	1,2-Dichlorobenzene	ug/kg	6.2	U
VOCs	1,2-Dichloroethane	ug/kg	6.2	U
VOCs	1,2-Dichloropropane	ug/kg	6.2	U
VOCs	1,3-Dichlorobenzene	ug/kg	6.2	U
VOCs	1,4-Dichlorobenzene	ug/kg	6.2	U
VOCs	1,4-Dioxane	ug/kg	120	U
VOCs	2-Butanone	ug/kg	31	U
VOCs	2-Hexanone	ug/kg	31	U
VOCs	4-Methyl-2-pentanone	ug/kg	31	U
VOCs	Acetic acid, methyl ester	ug/kg	31	U
VOCs	Acetone	ug/kg	31	U
VOCs	Benzene	ug/kg	6.2	U
VOCs	Bromochloromethane	ug/kg	6.2	U
VOCs	Bromodichloromethane	ug/kg	6.2	U
VOCs	Bromoform	ug/kg	6.2	U
VOCs	Bromomethane	ug/kg	6.2	U
VOCs	Carbon disulfide	ug/kg	6.2	U
VOCs	Carbon tetrachloride	ug/kg	6.2	U
VOCs	Chlorobenzene	ug/kg	6.2	U
VOCs	Chloroethane	ug/kg	6.2	U
VOCs	Chloroform	ug/kg	6.2	U
VOCs	Chloromethane	ug/kg	6.2	UJ
VOCs	Cis-1,2-Dichloroethene	ug/kg	6.2	U
VOCs	Cis-1,3-Dichloropropene	ug/kg	6.2	U
VOCs	Cyclohexane	ug/kg	6.2	U
VOCs	Dibromochloromethane	ug/kg	6.2	U
VOCs	Dichlorodifluoromethane	ug/kg	6.2	U

TABLE 2 - SUMMARY OF ANALYTICAL RESULTS
DATA USABILITY SUMMARY REPORT
JULY 2017 MEDIA SAMPLING
SOUTH HILL DUMP SITE
CORTLANDVILLE, NEW YORK

		SDG	480-120641-1	
		Location	SED-1	
		Sample Date	7/6/2017	
		Sample ID	SED-1	
		Qc Code	FS	
Class	Parameter	Units	Result	Qualifier
VOCs	Ethylbenzene	ug/kg	6.2	U
VOCs	Isopropylbenzene	ug/kg	6.2	U
VOCs	Methyl cyclohexane	ug/kg	6.2	U
VOCs	Methyl Tertbutyl Ether	ug/kg	6.2	U
VOCs	Methylene chloride	ug/kg	6.2	U
VOCs	Styrene	ug/kg	6.2	U
VOCs	Tetrachloroethene	ug/kg	6.2	U
VOCs	Toluene	ug/kg	6.2	U
VOCs	trans-1,2-Dichloroethene	ug/kg	6.2	U
VOCs	trans-1,3-Dichloropropene	ug/kg	6.2	U
VOCs	Trichloroethene	ug/kg	6.2	U
VOCs	Trichlorofluoromethane	ug/kg	6.2	U
VOCs	Vinyl chloride	ug/kg	6.2	U
VOCs	Xylenes, Total	ug/kg	12	U
Metals	Aluminum	mg/kg	22,600	
Metals	Antimony	mg/kg	2.4	J
Metals	Arsenic	mg/kg	9.7	
Metals	Barium	mg/kg	166	
Metals	Beryllium	mg/kg	0.91	
Metals	Cadmium	mg/kg	0.33	J
Metals	Calcium	mg/kg	4,480	
Metals	Chromium	mg/kg	26.5	
Metals	Cobalt	mg/kg	16.2	
Metals	Copper	mg/kg	18.2	
Metals	Iron	mg/kg	35,300	
Metals	Lead	mg/kg	17.8	
Metals	Magnesium	mg/kg	5,240	
Metals	Manganese	mg/kg	1,890	
Metals	Nickel	mg/kg	34.3	
Metals	Potassium	mg/kg	2,190	
Metals	Selenium	mg/kg	6.9	U
Metals	Silver	mg/kg	1	U
Metals	Sodium	mg/kg	112	J
Metals	Thallium	mg/kg	10.3	U
Metals	Vanadium	mg/kg	37.5	
Metals	Zinc	mg/kg	89.2	
PCBs	Aroclor-1016	mg/kg	0.39	U

TABLE 2 - SUMMARY OF ANALYTICAL RESULTS
DATA USABILITY SUMMARY REPORT
JULY 2017 MEDIA SAMPLING
SOUTH HILL DUMP SITE
CORTLANDVILLE, NEW YORK

		SDG	480-120641-1	
		Location	SED-1	
		Sample Date	7/6/2017	
		Sample ID	SED-1	
		Qc Code	FS	
Class	**Parameter**	**Units**	Result	Qualifier
PCBs	Aroclor-1221	mg/kg	0.39	U
PCBs	Aroclor-1232	mg/kg	0.39	U
PCBs	Aroclor-1242	mg/kg	0.39	U
PCBs	Aroclor-1248	mg/kg	0.39	U
PCBs	Aroclor-1254	mg/kg	0.39	U
PCBs	Aroclor-1260	mg/kg	0.39	U
PCBs	Aroclor-1262	mg/kg	0.39	U
PCBs	Aroclor-1268	mg/kg	0.39	U
Solids	Percent Moisture	Percent	37.4	
Solids	Percent Solids	Percent	62.6	

U = not detected
J = estimated value
ug/kg = microgram per kilogram
mg/kg = millgram per kilogram

TABLE 2 - SUMMARY OF ANALYTICAL RESULTS
DATA USABILITY SUMMARY REPORT
JULY 2017 MEDIA SAMPLING
SOUTH HILL DUMP SITE
CORTLANDVILLE, NEW YORK

		SDG	480-120641-1		480-120641-1		480-120641-1		480-120641-1	
		Location	MW-1B		MW-1S		MW-2B		MW-2D	
		Sample Date	7/5/2017		7/5/2017		7/6/2017		7/6/2017	
		Sample ID	MW-1B		MW-1S		MW-2B		MW-2D	
		Qc Code	FS		FS		FS		FS	
Class	Parameter	Units	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
VOCs	1,1,1-Trichloroethane	ug/l	1	U	1	U	1	U	1	U
VOCs	1,1,2,2-Tetrachloroethane	ug/l	1	U	1	U	1	U	1	U
VOCs	1,1,2-Trichloro-1,2,2-Trifluoroethane	ug/l	1	U	1	U	1	U	1	U
VOCs	1,1,2-Trichloroethane	ug/l	1	U	1	U	1	U	1	U
VOCs	1,1-Dichloroethane	ug/l	1	U	1	U	1	U	1	U
VOCs	1,1-Dichloroethene	ug/l	1	U	1	U	1	U	1	U
VOCs	1,2,3-Trichlorobenzene	ug/l	1	U	1	U	1	U	1	U
VOCs	1,2,4-Trichlorobenzene	ug/l	1	U	1	U	1	U	1	U
VOCs	1,2-Dibromo-3-chloropropane	ug/l	1	U	1	U	1	U	1	U
VOCs	1,2-Dibromoethane	ug/l	1	U	1	U	1	U	1	U
VOCs	1,2-Dichlorobenzene	ug/l	1	U	1	U	1	U	1	U
VOCs	1,2-Dichloroethane	ug/l	1	U	1	U	1	U	1	U
VOCs	1,2-Dichloropropane	ug/l	1	U	1	U	1	U	1	U
VOCs	1,3-Dichlorobenzene	ug/l	1	U	1	U	1	U	1	U
VOCs	1,4-Dichlorobenzene	ug/l	1	U	1	U	1	U	1	U
VOCs	1,4-Dioxane	ug/l	40	U	40	U	40	U	40	U
VOCs	2-Butanone	ug/l	10	U	10	U	10	U	10	U
VOCs	2-Hexanone	ug/l	5	U	5	U	5	U	5	U
VOCs	4-Methyl-2-pentanone	ug/l	5	U	5	U	5	U	5	U
VOCs	Acetic acid, methyl ester	ug/l	2.5	U	2.5	U	2.5	U	2.5	U
VOCs	Acetone	ug/l	10	U	10	U	10	U	10	U
VOCs	Benzene	ug/l	1	U	1	U	1	U	1	U
VOCs	Bromochloromethane	ug/l	1	U	1	U	1	U	1	U
VOCs	Bromodichloromethane	ug/l	1	U	1	U	1	U	1	U

TABLE 2 - SUMMARY OF ANALYTICAL RESULTS
DATA USABILITY SUMMARY REPORT
JULY 2017 MEDIA SAMPLING
SOUTH HILL DUMP SITE
CORTLANDVILLE, NEW YORK

		SDG	480-120641-1		480-120641-1		480-120641-1		480-120641-1	
		Location	MW-1B		MW-1S		MW-2B		MW-2D	
		Sample Date	7/5/2017		7/5/2017		7/6/2017		7/6/2017	
		Sample ID	MW-1B		MW-1S		MW-2B		MW-2D	
		Qc Code	FS		FS		FS		FS	
Class	Parameter	Units	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
VOCs	Bromoform	ug/l	1	U	1	U	1	U	1	U
VOCs	Bromomethane	ug/l	1	U	1	U	1	U	1	U
VOCs	Carbon disulfide	ug/l	1	U	1	U	1	U	1	U
VOCs	Carbon tetrachloride	ug/l	1	U	1	U	1	U	1	U
VOCs	Chlorobenzene	ug/l	1	U	1	U	1	U	1	U
VOCs	Chloroethane	ug/l	1	U	1	U	1	U	1	U
VOCs	Chloroform	ug/l	1	U	1	U	1	U	1	U
VOCs	Chloromethane	ug/l	1	U	1	U	1	U	1	U
VOCs	Cis-1,2-Dichloroethene	ug/l	1	U	1	U	1	U	1	U
VOCs	Cis-1,3-Dichloropropene	ug/l	1	U	1	U	1	U	1	U
VOCs	Cyclohexane	ug/l	1	U	1	U	1	U	1	U
VOCs	Dibromochloromethane	ug/l	1	U	1	U	1	U	1	U
VOCs	Dichlorodifluoromethane	ug/l	1	U	1	U	1	U	1	U
VOCs	Ethylbenzene	ug/l	1	U	1	U	1	U	1	U
VOCs	Isopropylbenzene	ug/l	1	U	1	U	1	U	1	U
VOCs	Methyl cyclohexane	ug/l	1	U	1	U	1	U	1	U
VOCs	Methyl Tertbutyl Ether	ug/l	1	U	1	U	1	U	1	U
VOCs	Methylene chloride	ug/l	1	U	1	U	1	U	1	U
VOCs	Styrene	ug/l	1	U	1	U	1	U	1	U
VOCs	Tetrachloroethene	ug/l	1	U	1	U	1	U	1	U
VOCs	Toluene	ug/l	1	U	1	U	1	U	1	U
VOCs	trans-1,2-Dichloroethene	ug/l	1	U	1	U	1	U	1	U
VOCs	trans-1,3-Dichloropropene	ug/l	1	U	1	U	1	U	1	U
VOCs	Trichloroethene	ug/l	1	U	1	U	1	U	1	U

TABLE 2 - SUMMARY OF ANALYTICAL RESULTS
DATA USABILITY SUMMARY REPORT
JULY 2017 MEDIA SAMPLING
SOUTH HILL DUMP SITE
CORTLANDVILLE, NEW YORK

		SDG	480-120641-1		480-120641-1		480-120641-1		480-120641-1	
		Location	MW-1B		MW-1S		MW-2B		MW-2D	
		Sample Date	7/5/2017		7/5/2017		7/6/2017		7/6/2017	
		Sample ID	MW-1B		MW-1S		MW-2B		MW-2D	
		Qc Code	FS		FS		FS		FS	
Class	Parameter	Units	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
VOCs	Trichlorofluoromethane	ug/l	1	U	1	U	1	U	1	U
VOCs	Vinyl chloride	ug/l	1	U	1	U	1	U	1	U
VOCs	Xylenes, Total	ug/l	2	U	2	U	2	U	2	U
Metals	Aluminum	mg/l	0		4		0	U	1	
Metals	Antimony	mg/l	0.02	U	0.02	U	0.013	J	0.02	U
Metals	Arsenic	mg/l	0.015	U	0.015	U	0.015	U	0.015	U
Metals	Barium	mg/l	0.017		0.05		0.12		0.032	
Metals	Beryllium	mg/l	0.002	U	0.002	U	0.002	U	0.002	U
Metals	Cadmium	mg/l	0.002	U	0.002	U	0.002	U	0.002	U
Metals	Calcium	mg/l	18		16		32		53	
Metals	Chromium	mg/l	0.004	U	0.0044		0.004	U	0.0018	J
Metals	Cobalt	mg/l	0.004	U	0.0015	J	0.004	U	0.004	U
Metals	Copper	mg/l	0.01	U	0.0031	J	0.002	J	0.01	U
Metals	Iron	mg/l	0	J	4	J	159	J	1	J
Metals	Lead	mg/l	0.01	U	0.0041	J	0.0034	J	0.01	U
Metals	Magnesium	mg/l	4		4		7		13	
Metals	Manganese	mg/l	0	J	0	J	1	J	0	J
Metals	Nickel	mg/l	0.01	U	0.0038	J	0.0065	J	0.01	U
Metals	Potassium	mg/l	1		2		1		1	
Metals	Selenium	mg/l	0.025	U	0.025	U	0.025	U	0.025	U
Metals	Silver	mg/l	0.006	U	0.006	U	0.006	U	0.006	U
Metals	Sodium	mg/l	6.8		6.1		4.2		3.6	
Metals	Thallium	mg/l	0.02	U	0.02	U	0.02	U	0.02	U
Metals	Vanadium	mg/l	0.005	U	0.0042	J	0.0022	J	0.005	U

TABLE 2 - SUMMARY OF ANALYTICAL RESULTS
DATA USABILITY SUMMARY REPORT
JULY 2017 MEDIA SAMPLING
SOUTH HILL DUMP SITE
CORTLANDVILLE, NEW YORK

		SDG	480-120641-1		480-120641-1		480-120641-1		480-120641-1	
		Location	MW-1B		MW-1S		MW-2B		MW-2D	
		Sample Date	7/5/2017		7/5/2017		7/6/2017		7/6/2017	
		Sample ID	MW-1B		MW-1S		MW-2B		MW-2D	
		Qc Code	FS		FS		FS		FS	
Class	**Parameter**	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Metals	Zinc	mg/l	0.01	U	0.011		0.0015	J	0.005	J
1,4-Diox	1,4-Dioxane	ug/l	0.4	U	0.4	U				
PCBs	Aroclor-1016	ug/l								
PCBs	Aroclor-1221	ug/l								
PCBs	Aroclor-1232	ug/l								
PCBs	Aroclor-1242	ug/l								
PCBs	Aroclor-1248	ug/l								
PCBs	Aroclor-1254	ug/l								
PCBs	Aroclor-1260	ug/l								
PCBs	Aroclor-1262	ug/l								
PCBs	Aroclor-1268	ug/l								

U = not detected
J = estimated value
ug/l = microgram per liter
mg/l = milligram per liter

TABLE 2 - SUMMARY OF ANALYTICAL RESULTS
DATA USABILITY SUMMARY REPORT
JULY 2017 MEDIA SAMPLING
SOUTH HILL DUMP SITE
CORTLANDVILLE, NEW YORK

		SDG	480-120641-1		480-120641-1		480-120641-1		480-120641-1	
		Location	MW-2S		MW-3BR		MW-3BR2		MW-3SR	
		Sample Date	7/6/2017		7/5/2017		7/5/2017		7/5/2017	
		Sample ID	MW-2S		MW-3BR		MW-3BR2		MW-3SR	
		Qc Code	FS		FS		FS		FS	
Class	Parameter	Units	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
VOCs	1,1,1-Trichloroethane	ug/l	1	U	1	U	1	U	1	U
VOCs	1,1,2,2-Tetrachloroethane	ug/l	1	U	1	U	1	U	1	U
VOCs	1,1,2-Trichloro-1,2,2-Trifluoroethane	ug/l	1	U	1	U	1	U	1	U
VOCs	1,1,2-Trichloroethane	ug/l	1	U	1	U	1	U	1	U
VOCs	1,1-Dichloroethane	ug/l	1	U	1	U	1	U	1	U
VOCs	1,1-Dichloroethene	ug/l	1	U	1	U	1	U	1	U
VOCs	1,2,3-Trichlorobenzene	ug/l	1	U	1	U	1	U	1	U
VOCs	1,2,4-Trichlorobenzene	ug/l	1	U	1	U	1	U	1	U
VOCs	1,2-Dibromo-3-chloropropane	ug/l	1	U	1	U	1	U	1	U
VOCs	1,2-Dibromoethane	ug/l	1	U	1	U	1	U	1	U
VOCs	1,2-Dichlorobenzene	ug/l	1	U	1	U	1	U	1	U
VOCs	1,2-Dichloroethane	ug/l	1	U	1	U	1	U	1	U
VOCs	1,2-Dichloropropane	ug/l	1	U	1	U	1	U	1	U
VOCs	1,3-Dichlorobenzene	ug/l	1	U	1	U	1	U	1	U
VOCs	1,4-Dichlorobenzene	ug/l	1	U	1	U	1	U	1	U
VOCs	1,4-Dioxane	ug/l	40	U	40	U	40	U	40	U
VOCs	2-Butanone	ug/l	10	U	10	U	10	U	10	U
VOCs	2-Hexanone	ug/l	5	U	5	U	5	U	5	U
VOCs	4-Methyl-2-pentanone	ug/l	5	U	5	U	5	U	5	U
VOCs	Acetic acid, methyl ester	ug/l	2.5	U	2.5	U	2.5	U	2.5	U
VOCs	Acetone	ug/l	10	U	10	U	10	U	10	U
VOCs	Benzene	ug/l	1	U	1	U	1	U	1	U
VOCs	Bromochloromethane	ug/l	1	U	1	U	1	U	1	U
VOCs	Bromodichloromethane	ug/l	1	U	1	U	1	U	1	U

TABLE 2 - SUMMARY OF ANALYTICAL RESULTS
DATA USABILITY SUMMARY REPORT
JULY 2017 MEDIA SAMPLING
SOUTH HILL DUMP SITE
CORTLANDVILLE, NEW YORK

		SDG	480-120641-1		480-120641-1		480-120641-1		480-120641-1	
		Location	MW-2S		MW-3BR		MW-3BR2		MW-3SR	
		Sample Date	7/6/2017		7/5/2017		7/5/2017		7/5/2017	
		Sample ID	MW-2S		MW-3BR		MW-3BR2		MW-3SR	
		Qc Code	FS		FS		FS		FS	
Class	Parameter	Units	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
VOCs	Bromoform	ug/l	1	U	1	U	1	U	1	U
VOCs	Bromomethane	ug/l	1	U	1	U	1	U	1	U
VOCs	Carbon disulfide	ug/l	1	U	1	U	1	U	1	U
VOCs	Carbon tetrachloride	ug/l	1	U	1	U	1	U	1	U
VOCs	Chlorobenzene	ug/l	1	U	1	U	1	U	1	U
VOCs	Chloroethane	ug/l	1	U	1	U	1	U	1	U
VOCs	Chloroform	ug/l	1	U	1	U	1	U	1	U
VOCs	Chloromethane	ug/l	1	U	1	U	1	U	1	U
VOCs	Cis-1,2-Dichloroethene	ug/l	1	U	1	U	3.1		1	U
VOCs	Cis-1,3-Dichloropropene	ug/l	1	U	1	U	1	U	1	U
VOCs	Cyclohexane	ug/l	1	U	1	U	1	U	1	U
VOCs	Dibromochloromethane	ug/l	1	U	1	U	1	U	1	U
VOCs	Dichlorodifluoromethane	ug/l	1	U	1	U	1	U	1	U
VOCs	Ethylbenzene	ug/l	1	U	1	U	1	U	1	U
VOCs	Isopropylbenzene	ug/l	1	U	1	U	1	U	1	U
VOCs	Methyl cyclohexane	ug/l	1	U	1	U	1	U	1	U
VOCs	Methyl Tertbutyl Ether	ug/l	1	U	1	U	1	U	1	U
VOCs	Methylene chloride	ug/l	1	U	1	U	1	U	1	U
VOCs	Styrene	ug/l	1	U	1	U	1	U	1	U
VOCs	Tetrachloroethene	ug/l	1	U	1	U	1	U	1	U
VOCs	Toluene	ug/l	1	U	1	U	1	U	1	U
VOCs	trans-1,2-Dichloroethene	ug/l	1	U	1	U	1	U	1	U
VOCs	trans-1,3-Dichloropropene	ug/l	1	U	1	U	1	U	1	U
VOCs	Trichloroethene	ug/l	1	U	1	U	6.5		1.9	

TABLE 2 - SUMMARY OF ANALYTICAL RESULTS
DATA USABILITY SUMMARY REPORT
JULY 2017 MEDIA SAMPLING
SOUTH HILL DUMP SITE
CORTLANDVILLE, NEW YORK

		SDG	480-120641-1		480-120641-1		480-120641-1		480-120641-1	
		Location	MW-2S		MW-3BR		MW-3BR2		MW-3SR	
		Sample Date	7/6/2017		7/5/2017		7/5/2017		7/5/2017	
		Sample ID	MW-2S		MW-3BR		MW-3BR2		MW-3SR	
		Qc Code	FS		FS		FS		FS	
Class	Parameter	Units	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
VOCs	Trichlorofluoromethane	ug/l	1	U	1	U	1	U	1	U
VOCs	Vinyl chloride	ug/l	1	U	1	U	1	U	1	U
VOCs	Xylenes, Total	ug/l	2	U	2	U	2	U	2	U
Metals	Aluminum	mg/l	3		0	U	0	J	1	
Metals	Antimony	mg/l	0.02	U	0.011	J	0.02	U	0.02	U
Metals	Arsenic	mg/l	0.015	U	0.015	U	0.015	U	0.015	U
Metals	Barium	mg/l	0.042		0.074		0.12		0.072	
Metals	Beryllium	mg/l	0.002	U	0.002	U	0.002	U	0.002	U
Metals	Cadmium	mg/l	0.002	U	0.002	U	0.002	U	0.002	U
Metals	Calcium	mg/l	74		10		30		70	
Metals	Chromium	mg/l	0.0046		0.004	U	0.004	U	0.0016	J
Metals	Cobalt	mg/l	0.0007	J	0.0013	J	0.004	U	0.004	U
Metals	Copper	mg/l	0.0027	J	0.002	J	0.01	U	0.0021	J
Metals	Iron	mg/l	2	J	124	J	27	J	2	J
Metals	Lead	mg/l	0.003S	J	0.01	U	0.01	U	0.003	J
Metals	Magnesium	mg/l	14		3		13		15	
Metals	Manganese	mg/l	0	J	2	J	0	J	0	J
Metals	Nickel	mg/l	0.0027	J	0.015		0.0015	J	0.0019	J
Metals	Potassium	mg/l	2		2		1		4	
Metals	Selenium	mg/l	0.025	U	0.025	U	0.025	U	0.025	U
Metals	Silver	mg/l	0.006	U	0.006	U	0.006	U	0.006	U
Metals	Sodium	mg/l	24.1		14.9		12		6.2	
Metals	Thallium	mg/l	0.02	U	0.02	U	0.02	U	0.02	U
Metals	Vanadium	mg/l	0.0029	J	0.005	U	0.005	U	0.0018	J

TABLE 2 - SUMMARY OF ANALYTICAL RESULTS
DATA USABILITY SUMMARY REPORT
JULY 2017 MEDIA SAMPLING
SOUTH HILL DUMP SITE
CORTLANDVILLE, NEW YORK

		SDG	480-120641-1		480-120641-1		480-120641-1		480-120641-1	
		Location	MW-2S		MW-3BR		MW-3BR2		MW-3SR	
		Sample Date	7/6/2017		7/5/2017		7/5/2017		7/5/2017	
		Sample ID	MW-2S		MW-3BR		MW-3BR2		MW-3SR	
		Qc Code	FS		FS		FS		FS	
Class	**Parameter**	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Metals	Zinc	mg/l	0.02		0.0043	J	0.01	U	0.0061	J
1,4-Diox	1,4-Dioxane	ug/l					0.4	U		
PCBs	Aroclor-1016	ug/l								
PCBs	Aroclor-1221	ug/l								
PCBs	Aroclor-1232	ug/l								
PCBs	Aroclor-1242	ug/l								
PCBs	Aroclor-1248	ug/l								
PCBs	Aroclor-1254	ug/l								
PCBs	Aroclor-1260	ug/l								
PCBs	Aroclor-1262	ug/l								
PCBs	Aroclor-1268	ug/l								

U = not detected
J = estimated value
ug/l = microgram per liter
mg/l = milligram per liter

TABLE 2 - SUMMARY OF ANALYTICAL RESULTS
DATA USABILITY SUMMARY REPORT
JULY 2017 MEDIA SAMPLING
SOUTH HILL DUMP SITE
CORTLANDVILLE, NEW YORK

		SDG	480-120641-1		480-120641-1		480-120641-1		480-120641-1	
		Location	MW-3SR2		MW-4B		MW-4B		MW-4S	
		Sample Date	7/5/2017		7/5/2017		7/5/2017		7/5/2017	
		Sample ID	MW-3SR2		MW-4B		MW-4B DUP		MW-4S	
		Qc Code	FS		FS		FD		FS	
Class	Parameter	Units	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
VOCs	1,1,1-Trichloroethane	ug/l	4	U	1	U	1	U	1	U
VOCs	1,1,2,2-Tetrachloroethane	ug/l	4	U	1	U	1	U	1	U
VOCs	1,1,2-Trichloro-1,2,2-Trifluoroethane	ug/l	4	U	1	U	1	U	1	U
VOCs	1,1,2-Trichloroethane	ug/l	4	U	1	U	1	U	1	U
VOCs	1,1-Dichloroethane	ug/l	4	U	1	U	1	U	1	U
VOCs	1,1-Dichloroethene	ug/l	4	U	1	U	1	U	1	U
VOCs	1,2,3-Trichlorobenzene	ug/l	4	U	1	U	1	U	1	U
VOCs	1,2,4-Trichlorobenzene	ug/l	4	U	1	U	1	U	1	U
VOCs	1,2-Dibromo-3-chloropropane	ug/l	4	U	1	U	1	U	1	U
VOCs	1,2-Dibromoethane	ug/l	4	U	1	U	1	U	1	U
VOCs	1,2-Dichlorobenzene	ug/l	4	U	1	U	1	U	1	U
VOCs	1,2-Dichloroethane	ug/l	4	U	1	U	1	U	1	U
VOCs	1,2-Dichloropropane	ug/l	4	U	1	U	1	U	1	U
VOCs	1,3-Dichlorobenzene	ug/l	4	U	1	U	1	U	1	U
VOCs	1,4-Dichlorobenzene	ug/l	4	U	1	U	1	U	1	U
VOCs	1,4-Dioxane	ug/l	160	U	40	U	40	U	40	U
VOCs	2-Butanone	ug/l	40	U	10	U	10	U	10	U
VOCs	2-Hexanone	ug/l	20	U	5	U	5	U	5	U
VOCs	4-Methyl-2-pentanone	ug/l	20	U	5	U	5	U	5	U
VOCs	Acetic acid, methyl ester	ug/l	10	U	2.5	U	2.5	U	2.5	U
VOCs	Acetone	ug/l	40	U	10	U	10	U	10	U
VOCs	Benzene	ug/l	4	U	1	U	1	U	1	U
VOCs	Bromochloromethane	ug/l	4	U	1	U	1	U	1	U
VOCs	Bromodichloromethane	ug/l	4	U	1	U	1	U	1	U

TABLE 2 - SUMMARY OF ANALYTICAL RESULTS
DATA U5ABILITY SUMMARY REPORT
JULY 2017 MEDIA SAMPLING
SOUTH HILL DUMP SITE
CORTLANDVILLE, NEW YORK

		SDG	480-120641-1		480-120641-1		480-120641-1		480-120641-1	
		Location	MW-3SR2		MW-4B		MW-4B		MW-4S	
		Sample Date	7/5/2017		7/5/2017		7/5/2017		7/5/2017	
		Sample ID	MW-3SR2		MW-4B		MW-4B DUP		MW-4S	
		Qc Code	FS		FS		FD		FS	
Class	Parameter	Units	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
VOCs	Bromoform	ug/l	4	U	1	U	1	U	1	U
VOCs	Bromomethane	ug/l	4	U	1	U	1	U	1	U
VOCs	Carbon disulfide	ug/l	4	U	1	U	1	U	1	U
VOCs	Carbon tetrachloride	ug/l	4	U	1	U	1	U	1	U
VOCs	Chlorobenzene	ug/l	4	U	1	U	1	U	1	U
VOCs	Chloroethane	ug/l	4	U	1	U	1	U	1	U
VOCs	Chloroform	ug/l	4	U	1	U	1	U	1	U
VOCs	Chloromethane	ug/l	4	U	1	U	1	U	1	U
VOCs	Cis-1,2-Dichloroethene	ug/l	20		1	U	1	U	1	U
VOCs	Cis-1,3-Dichloropropene	ug/l	4	U	1	U	1	U	1	U
VOCs	Cyclohexane	ug/l	4	U	1	U	1	U	1	U
VOCs	Dibromochloromethane	ug/l	4	U	1	U	1	U	1	U
VOCs	Dichlorodifluoromethane	ug/l	4	U	1	U	1	U	1	U
VOCs	Ethylbenzene	ug/l	4	U	1	U	1	U	1	U
VOCs	Isopropylbenzene	ug/l	4	U	1	U	1	U	1	U
VOCs	Methyl cyclohexane	ug/l	4	U	1	U	1	U	1	U
VOCs	Methyl Tertbutyl Ether	ug/l	4	U	1	U	1	U	1	U
VOCs	Methylene chloride	ug/l	4	U	1	U	1	U	1	U
VOCs	Styrene	ug/l	4	U	1	U	1	U	1	U
VOCs	Tetrachloroethene	ug/l	4	U	1	U	1	U	1	U
VOCs	Toluene	ug/l	4	U	1	U	1	U	1	U
VOCs	trans-1,2-Dichloroethene	ug/l	4	U	1	U	1	U	1	U
VOCs	trans-1,3-Dichloropropene	ug/l	4	U	1	U	1	U	1	U
VOCs	Trichloroethene	ug/l	170		0.56	J	1	U	1	U

TABLE 2 - SUMMARY OF ANALYTICAL RESULTS
DATA USABILITY SUMMARY REPORT
JULY 2017 MEDIA SAMPLING
SOUTH HILL DUMP SITE
CORTLANDVILLE, NEW YORK

		SDG	480-120641-1		480-120641-1		480-120641-1		480-120641-1	
		Location	MW-35R2		MW-4B		MW-4B		MW-4S	
		Sample Date	7/5/2017		7/5/2017		7/5/2017		7/5/2017	
		Sample ID	MW-3SR2		MW-4B		MW-4B DUP		MW-4S	
		Qc Code	FS		FS		FD		FS	
Class	Parameter	Units	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
VOCs	Trichlorofluoromethane	ug/l	4	U	1	U	1	U	1	U
VOCs	Vinyl chloride	ug/l	4	U	1	U	1	U	1	U
VOCs	Xylenes, Total	ug/l	8	U	2	U	2	U	2	U
Metals	Aluminum	mg/l	10		0	J	0	U	0	
Metals	Antimony	mg/l	0.02	U	0.02	U	0.02	U	0.02	U
Metals	Arsenic	mg/l	0.0058	J	0.015	U	0.015	U	0.015	U
Metals	Barium	mg/l	0.22		0.041		0.047		0.028	
Metals	Beryllium	mg/l	0.0005	J	0.0008	J	0.002	U	0.002	U
Metals	Cadmium	mg/l	0.002	U	0.002	U	0.002	U	0.002	U
Metals	Calcium	mg/l	102		28		28		S8	
Metals	Chromium	mg/l	0.012		0.004	U	0.004	U	0.004	U
Metals	Cobalt	mg/l	0.0051		0.004	U	0.004	U	0.004	U
Metals	Copper	mg/l	0.0095	J	0.01	U	0.0018	J	0.0021	J
Metals	Iron	mg/l	13	J	12	J	23	J	0	J
Metals	Lead	mg/l	0.0079	J	0.01	U	0.01	U	0.01	U
Metals	Magnesium	mg/l	21		7		7		9	
Metals	Manganese	mg/l	0	J	0	J	0	J	0	J
Metals	Nickel	mg/l	0.013		0.0014	J	0.0031	J	0.01	U
Metals	Potassium	mg/l	4		1		0	J	1	
Metals	Selenium	mg/l	0.025	U	0.025	U	0.025	U	0.025	U
Metals	Silver	mg/l	0.006	U	0.006	U	0.006	U	0.006	U
Metals	Sodium	mg/l	18.2		3.2		3.2		2	
Metals	Thallium	mg/l	0.02	U	0.02	U	0.02	U	0.02	U
Metals	Vanadium	mg/l	0.014		0.005	U	0.005	U	0.005	U

TABLE 2 - SUMMARY OF ANALYTICAL RESULTS
DATA USABILITY SUMMARY REPORT
JULY 2017 MEDIA SAMPLING
SOUTH HILL DUMP SITE
CORTLANDVILLE, NEW YORK

		SDG	480-120641-1		480-120641-1		480-120641-1		480-120641-1	
		Location	MW-3SR2		MW-4B		MW-4B		MW-4S	
		Sample Date	7/5/2017		7/5/2017		7/5/2017		7/5/2017	
		Sample ID	MW-3SR2		MW-4B		MW-4B DUP		MW-4S	
		Qc Code	FS		FS		FD		FS	
Class	**Parameter**	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Metals	Zinc	mg/l	0.034		0.0017	J	0.0015	J	0.0019	J
1,4-Diox	1,4-Dioxane	ug/l	0.4	U	0.4	U	0.4	U		
PCBs	Aroclor-1016	ug/l								
PCBs	Aroclor-1221	ug/l								
PCBs	Aroclor-1232	ug/l								
PCBs	Aroclor-1242	ug/l								
PCBs	Aroclor-1248	ug/l								
PCBs	Aroclor-1254	ug/l								
PCBs	Aroclor-1260	ug/l								
PCBs	Aroclor-1262	ug/l								
PCBs	Aroclor-1268	ug/l								

U = not detected
J = estimated value
ug/l = microgram per liter
mg/l = milligram per liter

TABLE 2 - SUMMARY OF ANALYTICAL RESULTS
DATA USABILITY SUMMARY REPORT
JULY 2017 MEDIA SAMPLING
SOUTH HILL DUMP SITE
CORTLANDVILLE, NEW YORK

		SDG	480-120641-1		480-120641-1		480-120641-1		480-120641-1	
		Location	QC		SEEP		SEEP		SW-1	
		Sample Date	7/5/2017		7/6/2017		7/6/2017		7/6/2017	
		Sample ID	TRIP BLANK		SEEP-1		SEEP-1 DUP		SW-1	
		Qc Code	TB		FS		FD		FS	
Class	Parameter	Units	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
VOCs	1,1,1-Trichloroethane	ug/l	1	U	1	U			1	U
VOCs	1,1,2,2-Tetrachloroethane	ug/l	1	U	1	U			1	U
VOCs	1,1,2-Trichloro-1,2,2-Trifluoroethane	ug/l	1	U	1	U			1	U
VOCs	1,1,2-Trichloroethane	ug/l	1	U	1	U			1	U
VOCs	1,1-Dichloroethane	ug/l	1	U	1	U			1	U
VOCs	1,1-Dichloroethene	ug/l	1	U	1	U			1	U
VOCs	1,2,3-Trichlorobenzene	ug/l	1	U	1	U			1	U
VOCs	1,2,4-Trichlorobenzene	ug/l	1	U	1	U			1	U
VOCs	1,2-Dibromo-3-chloropropane	ug/l	1	U	1	U			1	U
VOCs	1,2-Dibromoethane	ug/l	1	U	1	U			1	U
VOCs	1,2-Dichlorobenzene	ug/l	1	U	1	U			1	U
VOCs	1,2-Dichloroethane	ug/l	1	U	1	U			1	U
VOCs	1,2-Dichloropropane	ug/l	1	U	1	U			1	U
VOCs	1,3-Dichlorobenzene	ug/l	1	U	1	U			1	U
VOCs	1,4-Dichlorobenzene	ug/l	1	U	1	U			1	U
VOCs	1,4-Dioxane	ug/l	40	U	40	U			40	U
VOCs	2-Butanone	ug/l	10	U	10	U			10	U
VOCs	2-Hexanone	ug/l	5	U	5	U			5	U
VOCs	4-Methyl-2-pentanone	ug/l	5	U	5	U			5	U
VOCs	Acetic acid, methyl ester	ug/l	2.5	U	2.5	U			2.5	U
VOCs	Acetone	ug/l	10	U	10	U			10	U
VOCs	Benzene	ug/l	1	U	1	U			1	U
VOCs	Bromochloromethane	ug/l	1	U	1	U			1	U
VOCs	Bromodichloromethane	ug/l	1	U	1	U			1	U

TABLE 2 - SUMMARY OF ANALYTICAL RESULTS
DATA USABILITY SUMMARY REPORT
JULY 2017 MEDIA SAMPLING
SOUTH HILL DUMP SITE
CORTLANDVILLE, NEW YORK

		SDG	480-120641-1		480-120641-1		480-120641-1		480-120641-1	
		Location	QC		SEEP		SEEP		SW-1	
		Sample Date	7/5/2017		7/6/2017		7/6/2017		7/6/2017	
		Sample ID	TRIP BLANK		SEEP-1		SEEP-1 DUP		SW-1	
		Qc Code	TB		FS		FD		FS	
Class	Parameter	Units	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
VOCs	Bromoform	ug/l	1	U	1	U			1	U
VOCs	Bromomethane	ug/l	1	U	1	U			1	U
VOCs	Carbon disulfide	ug/l	1	U	1	U			1	U
VOCs	Carbon tetrachloride	ug/l	1	U	1	U			1	U
VOCs	Chlorobenzene	ug/l	1	U	1	U			1	U
VOCs	Chloroethane	ug/l	1	U	1	U			1	U
VOCs	Chloroform	ug/l	1	U	1	U			1	U
VOCs	Chloromethane	ug/l	1	U	1	U			1	U
VOCs	Cis-1,2-Dichloroethene	ug/l	1	U	1	U			1	U
VOCs	Cis-1,3-Dichloropropene	ug/l	1	U	1	U			1	U
VOCs	Cyclohexane	ug/l	1	U	1	U			1	U
VOCs	Dibromochloromethane	ug/l	1	U	1	U			1	U
VOCs	Dichlorodifluoromethane	ug/l	1	U	1	U			1	U
VOCs	Ethylbenzene	ug/l	1	U	1	U			1	U
VOCs	Isopropylbenzene	ug/l	1	U	1	U			1	U
VOCs	Methyl cyclohexane	ug/l	1	U	1	U			1	U
VOCs	Methyl Tertbutyl Ether	ug/l	1	U	1	U			1	U
VOCs	Methylene chloride	ug/l	1	U	1	U			1	U
VOCs	Styrene	ug/l	1	U	1	U			1	U
VOCs	Tetrachloroethene	ug/l	1	U	1	U			1	U
VOCs	Toluene	ug/l	1	U	1	U			1	U
VOCs	trans-1,2-Dichloroethene	ug/l	1	U	1	U			1	U
VOCs	trans-1,3-Dichloropropene	ug/l	1	U	1	U			1	U
VOCs	Trichloroethene	ug/l	1	U	1	U			1	U

TABLE 2 - SUMMARY OF ANALYTICAL RESULTS
DATA USABILITY SUMMARY REPORT
JULY 2017 MEDIA SAMPLING
SOUTH HILL DUMP SITE
CORTLANDVILLE, NEW YORK

		SDG	480-120641-1		480-120641-1		480-120641-1		480-120641-1	
		Location	QC		SEEP		SEEP		SW-1	
		Sample Date	7/5/2017		7/6/2017		7/6/2017		7/6/2017	
		Sample ID	TRIP BLANK		SEEP-1		SEEP-1 DUP		SW-1	
		Qc Code	TB		FS		FD		FS	
Class	Parameter	Units	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
VOCs	Trichlorofluoromethane	ug/l	1	U	1	U			1	U
VOCs	Vinyl chloride	ug/l	1	U	1	U			1	U
VOCs	Xylenes, Total	ug/l	2	U	2	U			2	U
Metals	Aluminum	mg/l			0	J			1	
Metals	Antimony	mg/l			0.02	U			0.02	U
Metals	Arsenic	mg/l			0.015	U			0.015	U
Metals	Barium	mg/l			0.026				0.048	
Metals	Beryllium	mg/l			0.002	U			0.002	U
Metals	Cadmium	mg/l			0.002	U			0.002	U
Metals	Calcium	mg/l			30				62	
Metals	Chromium	mg/l			0.004	U			0.004	U
Metals	Cobalt	mg/l			0.004	U			0.004	U
Metals	Copper	mg/l			0.0016	J			0.0022	J
Metals	Iron	mg/l			0				1	
Metals	Lead	mg/l			0.01	U			0.01	U
Metals	Magnesium	mg/l			5				8	
Metals	Manganese	mg/l			0				0	
Metals	Nickel	mg/l			0.01	U			0.0018	J
Metals	Potassium	mg/l			0	J			4	
Metals	Selenium	mg/l			0.025	U			0.025	U
Metals	Silver	mg/l			0.006	U			0.006	U
Metals	Sodium	mg/l			21.5				25.5	
Metals	Thallium	mg/l			0.02	U			0.02	U
Metals	Vanadium	mg/l			0.005	U			0.0019	J

TABLE 2 - SUMMARY OF ANALYTICAL RESULTS
DATA USABILITY SUMMARY REPORT
JULY 2017 MEDIA SAMPLING
SOUTH HILL DUMP SITE
CORTLANDVILLE, NEW YORK

		SDG	480-120641-1		480-120641-1		480-120641-1		480-120641-1	
		Location	QC		5EEP		SEEP		SW-1	
		Sample Date	7/5/2017		7/6/2017		7/6/2017		7/6/2017	
		Sample ID	TRIP BLANK		SEEP-1		SEEP-1 DUP		SW-1	
		Qc Code	TB		FS		FD		FS	
Class	**Parameter**	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Metals	Zinc	mg/l			0.01	U			0.0058	J
1,4-Diox	1,4-Dioxane	ug/l								
PCBs	Aroclor-1016	ug/l			0.5	U	0.5	U	0.5	U
PCBs	Aroclor-1221	ug/l			0.5	U	0.5	U	0.5	U
PCBs	Aroclor-1232	ug/l			0.5	U	0.5	U	0.5	U
PCBs	Aroclor-1242	ug/l			0.5	U	0.5	U	0.5	U
PCBs	Aroclor-1248	ug/l			0.5	U	0.5	U	0.5	U
PCBs	Aroclor-1254	ug/l			0.5	U	0.5	U	0.5	U
PCBs	Aroclor-1260	ug/l			0.5	U	0.5	U	0.5	U
PCBs	Aroclor-1262	ug/l			0.5	U	0.5	U	0.5	U
PCBs	Aroclor-1268	ug/l			0.5	U	0.5	U	0.5	U

U = not detected
J = estimated value
ug/l = microgram per liter
mg/l = milligram per liter

TABLE 2 - SUMMARY OF ANALYTICAL RESULTS
DATA USABILITY SUMMARY REPORT
JULY 2017 MEDIA SAMPLING
SOUTH HILL DUMP SITE
CORTLANDVILLE, NEW YORK

		SDG	480-120783-1		480-120783-1		480-120783-1		480-120783-1	
		Location	MW-1B		MW-1S		MW-3BR2		MW-3SR2	
		Sample Date	7/6/2017		7/6/2017		7/6/2017		7/6/2017	
		Sample ID	MW-1B		MW-1S		MW-3BR2		MW-3SR2	
		Qc Code	FS		FS		FS		FS	
Class	Parameter	Units	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
PFAS	Perfluorobutanesulfonic acid	ng/l	2	U	1.9	U	1.9	U	1.9	U
PFAS	Perfluorobutanoic acid	ng/l	6.3		2.1	U	9.4		11	
PFAS	Perfluorodecanesulfonic acid	ng/l	2	U	1.9	U	1.9	U	1.9	U
PFAS	Perfluorodecanoic acid	ng/l	2	U	1.9	U	1.9	U	1.9	U
PFAS	Perfluorododecanoic acid	ng/l	2	U	1.9	U	1.9	U	1.9	U
PFAS	Perfluoroheptanesulfonic acid	ng/l	2	U	1.9	U	1.9	U	1.9	U
PFAS	Perfluoroheptanoic acid	ng/l	1.8	J	2.3		1.8	J	2.7	
PFAS	Perfluorohexane sulfonic acid	ng/l	2	U	1.9	U	1.9	U	1.1	J
PFAS	Perfluorohexanoic acid	ng/l	5.6	J	16		5.7	J	6.3	J
PFAS	Perfluorononanoic acid	ng/l	2	U	1.9	U	1.9	U	1.9	U
PFAS	Perfluorooctanesulfonic acid	ng/l	2.5		1.9	U	2.2		5.1	
PFAS	Perfluorooctanoic acid	ng/l	5		2.8		5.6		7.7	
PFAS	Perfluoropentanoic acid	ng/l	2.7		5.8		3.9		4.9	
PFAS	Perfluorotetradecanoic acid	ng/l	2	U	1.9	U	1.9	U	1.9	U
PFAS	Perfluorotridecanoic acid	ng/l	2	U	1.9	U	1.9	U	1.9	U
PFAS	Perfluoroundecanoic acid	ng/l	2	UJ	1.9	U	1.9	U	1.9	U
PFAS	Sum PFOA and PFOS	ng/l	7.5		2.8		7.8		13	

U = not detected
J = estimated
ng/l = nanogram per liter

TABLE 2 - SUMMARY OF ANALYTICAL RESULTS
DATA USABILITY SUMMARY REPORT
JULY 2017 MEDIA SAMPLING
SOUTH HILL DUMP SITE
CORTLANDVILLE, NEW YORK

		SDG	480-120783-1		480-120783-1		480-120783-1	
		Location	MW-4B		MW-4S		QC	
		Sample Date	7/6/2017		7/6/2017		7/6/2017	
		Sample ID	MW-4B		MW-4S		REAGENT BLANK	
		Qc Code	FS		FS		FB	
Class	Parameter	Units	Result	Qualifier	Result	Qualifier	Result	Qualifier
PFAS	Perfluorobutanesulfonic acid	ng/l	2	U	1.9	U	2	U
PFAS	Perfluorobutanoic acid	ng/l	3.1	U	1.9	U	0.93	JB
PFAS	Perfluorodecanesulfonic acid	ng/l	2	UJ	1.9	U	2	U
PFAS	Perfluorodecanoic acid	ng/l	2	UJ	1.9	U	2	U
PFAS	Perfluorododecanoic acid	ng/l	2	UJ	1.9	U	2	U
PFAS	Perfluoroheptanesulfonic acid	ng/l	2	U	1.9	U	2	U
PFAS	Perfluoroheptanoic acid	ng/l	2	U	1.9	U	2	U
PFAS	Perfluorohexane sulfonic acid	ng/l	2	U	1.9	U	2	U
PFAS	Perfluorohexanoic acid	ng/l	2.2	U	1.9	U	2.1	
PFAS	Perfluorononanoic acid	ng/l	2	U	1.9	U	2	U
PFAS	Perfluorooctanesulfonic acid	ng/l	1.4	J	1.9	U	2	U
PFAS	Perfluorooctanoic acid	ng/l	1.8	J	1.9	U	2	U
PFAS	Perfluoropentanoic acid	ng/l	0.99	J	1.9	U	2	U
PFAS	Perfluorotetradecanoic acid	ng/l	2	U	1.9	U	1	JB
PFAS	Perfluorotridecanoic acid	ng/l	2	U	1.9	U	2	U
PFAS	Perfluoroundecanoic acid	ng/l	2	UJ	1.9	U	2	U
PFAS	Sum PFOA and PFOS	ng/l	3.2		1.9	U	2	U

U = not detected
J = estimated
ng/l = nanogram per liter

TABLE 3 - SUMMARY OF QUALIFICATION ACTIONS
DATA USABILITY SUMMARY REPORT
JULY 2017 MEDIA SAMPLING
SOUTH HILL DUMP SITE
CORTLANDVILLE, NEW YORK

SDG	Analysis Method	Lab Sample Id	Field Sample ID	Parameter Name	Lab Result	Lab Qualifier	Validated Result	Validation Qualifier	Val Reason Code	Result Units
480-120641-1	SW6010C	480-120641-10	MW-1S	Iron	3.9		3.9	J	MS-H	mg/l
480-120641-1	SW6010C	480-120641-10	MW-1S	Manganese	0.07		0.07	J	MS-H	mg/l
480-120641-1	SW6010C	480-120641-15	MW-2S	Iron	2.4		2.4	J	MS-H	mg/l
480-120641-1	SW6010C	480-120641-15	MW-2S	Manganese	0.15		0.15	J	MS-H	mg/l
480-120641-1	SW6010C	480-120641-16	MW-2B	Iron	159		159	J	MS-H	mg/l
480-120641-1	SW6010C	480-120641-16	MW-2B	Manganese	1		1	J	MS-H	mg/l
480-120641-1	SW6010C	480-120641-17	MW-2D	Iron	0.68		0.68	J	MS-H	mg/l
480-120641-1	SW6010C	480-120641-17	MW-2D	Manganese	0.03		0.03	J	MS-H	mg/l
480-120641-1	SW6010C	480-120641-2	MW-4B	Iron	11.7	F1	11.7	J	MS-H, FD	mg/l
480-120641-1	SW6010C	480-120641-2	MW-4B	Manganese	0.11	F1	0.11	J	MS-H	mg/l
480-120641-1	SW6010C	480-120641-3	MW-4B DUP	Iron	22.9		22.9	J	MS-H, FD	mg/l
480-120641-1	SW6010C	480-120641-3	MW-4B DUP	Manganese	0.14		0.14	J	MS-H	mg/l
480-120641-1	SW6010C	480-120641-4	MW-4S	Iron	0.44		0.44	J	MS-H	mg/l
480-120641-1	SW6010C	480-120641-4	MW-4S	Manganese	0.017		0.017	J	MS-H	mg/l
480-120641-1	SW6010C	480-120641-5	MW-3SR2	Iron	13		13	J	MS-H	mg/l
480-120641-1	SW6010C	480-120641-5	MW-3SR2	Manganese	0.35		0.35	J	MS-H	mg/l
480-120641-1	SW6010C	480-120641-6	MW-3BR2	Iron	27.3		27.3	J	MS-H	mg/l
480-120641-1	SW6010C	480-120641-6	MW-3BR2	Manganese	0.29		0.29	J	MS-H	mg/l
480-120641-1	SW6010C	480-120641-7	MW-3SR	Iron	1.6		1.6	J	MS-H	mg/l
480-120641-1	SW6010C	480-120641-7	MW-3SR	Manganese	0.18		0.18	J	MS-H	mg/l
480-120641-1	SW6010C	480-120641-8	MW-3BR	Iron	124		124	J	MS-H	mg/l
480-120641-1	SW6010C	480-120641-8	MW-3BR	Manganese	1.5		1.5	J	MS-H	mg/l
480-120641-1	SW6010C	480-120641-9	MW-1B	Iron	0.32		0.32	J	MS-H	mg/l
480-120641-1	SW6010C	480-120641-9	MW-1B	Manganese	0.013		0.013	J	MS-H	mg/l
480-120641-1	SW8260C	480-120641-14	SED-1	Chloromethane	6.2	U	6.2	UJ	LCS-L	ug/kg
480-120783-1	Modified 537	480-120783-1	MW-1S	Perfluorobutanoic acid	2.1	B	2.1	U	BL1, BL2	ng/l
480-120783-1	Modified 537	480-120783-1	MW-1S	Perfluorotetradecanoic acid	0.74	J B *	1.9	U	BL1, BL2	ng/l
480-120783-1	Modified 537	480-120783-2	MW-1B	Perfluorohexanoic acid	5.6		5.6	J	BL2	ng/l
480-120783-1	Modified 537	480-120783-2	MW-1B	Perfluorotetradecanoic acid	0.75	J B *	2	U	BL1, BL2	ng/l

Prepared by: BJS 9/8/17
Checked by: JAR 9/9/17

TABLE 3 - SUMMARY OF QUALIFICATION ACTIONS
DATA USABILITY SUMMARY REPORT
JULY 2017 MEDIA SAMPLING
SOUTH HILL DUMP SITE
CORTLANDVILLE, NEW YORK

SDG	Analysis Method	Lab Sample Id	Field Sample ID	Parameter Name	Lab Result	Lab Qualifier	Validated Result	Validation Qualifier	Val Reason Code	Result Units
480-120783-1	Modified 537	480-120783-2	MW-1B	Perfluoroundecanoic acid	2	U	2	UJ	IS-H	ng/l
480-120783-1	Modified 537	480-120783-3	MW-3SR2	Perfluorohexanoic acid	6.3		6.3	J	BL2	ng/l
480-120783-1	Modified 537	480-120783-3	MW-3SR2	Perfluorotetradecanoic acid	1.6	J B *	1.9	U	BL1, BL2	ng/l
480-120783-1	Modified 537	480-120783-4	MW-3BR2	Perfluorohexanoic acid	5.7		5.7	J	BL2	ng/l
480-120783-1	Modified 537	480-120783-4	MW-3BR2	Perfluorotetradecanoic acid	1.3	J B *	1.9	U	BL1, BL2	ng/l
480-120783-1	Modified 537	480-120783-5	MW-4S	Perfluorobutanoic acid	0.81	J B	1.9	U	BL1, BL2	ng/l
480-120783-1	Modified 537	480-120783-5	MW-4S	Perfluorohexanoic acid	1.8	J	1.9	U	BL2	ng/l
480-120783-1	Modified 537	480-120783-5	MW-4S	Perfluorotetradecanoic acid	0.98	J B *	1.9	U	BL1, BL2	ng/l
480-120783-1	Modified 537	480-120783-6	MW-4B	Perfluorobutanoic acid	3.1	B	3.1	U	BL1, BL2	ng/l
480-120783-1	Modified 537	480-120783-6	MW-4B	Perfluorodecanesulfonic acid	2	U	2	UJ	IS-H	ng/l
480-120783-1	Modified 537	480-120783-6	MW-4B	Perfluorodecanoic acid	2	U	2	UJ	IS-H	ng/l
480-120783-1	Modified 537	480-120783-6	MW-4B	Perfluorododecanoic acid	2	U	2	UJ	IS-H	ng/l
480-120783-1	Modified 537	480-120783-6	MW-4B	Perfluorohexanoic acid	2.2		2.2	U	BL2	ng/l
480-120783-1	Modified 537	480-120783-6	MW-4B	Perfluorotetradecanoic acid	0.5	J B *	2	U	BL1, BL2	ng/l
480-120783-1	Modified 537	480-120783-6	MW-4B	Perfluoroundecanoic acid	2	U	2	UJ	IS-H	ng/l

BL1 = method blank contamination
BL2 = field or trip blank contamination
LCS-L = LCS/LCSD recovery less than control limits
MS-H = MS/MSD recovery greater than control limits
FD = field duplicate precision goal not met
IS-H = internal standard recovery greater than control limit

ATTACHMENT A
SUMMARY OF VALIDATION QC LIMITS FOR SURROGATES, SPIKES, AND DUPLICATES
BASED ON THE REGION 2 VALIDATION GUIDELINES

PARAMETER	QC TEST	ANALYTE	Soil (%R)	Soil (RPD)
Volatiles	Surrogate	All Surrogate Compounds	70 - 130	
	LCS	All Target Compounds	70 - 130	
	MS/MSD	All Target Compounds	70 - 130	35
	Field Duplicate	All Target Compounds		100
1,4-Dioxane	Surrogate	All Surrogate Compounds	Lab Limits	
	LCS	All Target Compounds	Lab Limits	
	MS/MSD	All Target Compounds	Lab Limits	Lab Limits
	Field Duplicate	All Target Compounds		50
Per- and Polyfluorinated Alkyl Substances (PFAS)	Surrogate	All Surrogate Compounds	Lab Limits	
	LCS	All Target Compounds	Lab Limits	
	MS/MSD	All Target Compounds	Lab Limits	Lab Limits
	Field Duplicate	All Target Compounds		50
PCBs	Surrogate	All Surrogate Compounds	30 - 150	
	LCS	All Target Analytes	50 - 150	
	MS/MSD[1]	All Target Analytes	29 - 135	20
	Field Duplicate	All Target Analytes		100
Inorganics-Metals	LCS	All Target Analytes	80 - 120	
	MS/MSD	All Target Analytes	75 -125	35
	Lab Duplicate[2]	All Target Analytes		35
	Field Duplicate[2]	All Target Analytes		35

Notes:
LCS - Laboratory Control Sample
MS/MSD - Matrix spike/ Matrix Spike Duplicate
RPD = Relative percent difference
%R = percent recovery
QC Limits are based on USEPA Region II Data Validation Guidelines and Project QA/QC Objectives

DATA USABILITY SUMMARY REPORT
JULY 2017 MEDIA SAMPLING
SOUTH HILL DUMP SITE
CORTLANDVILLE, NEW YORK

ATTACHMENT B

1,4-Dioxane
~~VOCs~~

No Quals
8/28/17

NYSDEC DUSR PROJECT CHEMIST REVIEW RECORD
Project: South Hill Dump 712009
Method: 8260 SIM
Laboratory: TAL Edison, NJ **SDG(s):** 480-120641-1
Date: 8/26/17
Reviewer: Julie Ricardi

Review Level [X] NYSDEC DUSR USEPA Region II Guideline

1. [✓] **Case Narrative Review and COC/Data Package Completeness** COMMENTS
Were problems noted? No
Are Field Sample IDs and Locations assigned correctly? (YES) NO (circle one)
Were all the samples on the COC analyzed for the requested analyses? (YES) NO (circle one)

2. [✓] **Holding time and Sample Collection**
All samples were analyzed within the 14 day holding time. (YES) NO (circle one)

3. [✓] **QC Blanks**
Are method blanks free of contamination? (YES) NO (circle one)

Are Trip blanks free of contamination? (YES) NO (circle one)

Are Rinse blanks free of contamination? YES NO (NA) (circle one)

4. [✓] **Instrument Tuning – Data Package Narrative Review**
Did the laboratory narrative identify any results that were not within method criteria? YES (NO) (circle one)
If yes, use professional judgment to evaluate data and qualify results if needed

5. [✓] **Instrument Calibration – Data Package Narrative Review**
Did the laboratory narrative identify compounds that were not within criteria in the initial and/or continuing calibration standards? YES (NO) (circle one)

Initial Calibration %RSD = 20% **(30% for 1,1-DCE, chloroform, 1,2-DCP, toluene, ethylbenzene, VC)**
Initial Avg RRF and Continuing RRF should be ≥ 0.05 and 0.10 for Chloromethane, 1,1-Dichloroethane, Bromoform and 0.30 for Chlorobenzene and 1,1,2,2-Tetrachloroethane

Continuing Calibration %D = 20%

Did the laboratory qualify results based on initial or continuing calibration exceedances? YES (NO)
If yes to above, use professional judgment to evaluate data and qualify results if needed

6. [✓] **Internal Standards – Data Package Narrative Review**
(Area Limits = -50% to +100%, RTs within 30 seconds of daily CCAL standard (or ICAL mid-point if samples follow ICAL)
Did the laboratory narrative identify any sample internal standards that were not within criteria?
YES (NO) (circle one)

Did the laboratory qualify results based on internal standard exceedances? YES (NO)
If yes to above, use professional judgment to evaluate data and qualify results if needed

7. [✓] **Surrogate Recovery** - Region II limits (water lab limits 80-120%, soil 70-130%)

Were all results within Region II limits? (YES) NO (circle one)

8. [✓] **Matrix Spike** - Region II limits (water and soil 70-130%, water RPD 20, soil RPD 35)

Were MS/MSDs submitted/analyzed? (YES) NO

Were all results within the Region II limits? (YES) NO NA (circle one)

9. ☑ **Duplicates** - Region II Limits (water RPD 50, soil RPD 100)

MW-4B / MW-4B DUP; 01C

Were Field Duplicates submitted/analyzed? (YES) NO

Were all results within Region II limits? (soil RPD<100, water RPD<50) (YES) NO NA

10. ☑ **Laboratory Control Sample Results** - Region II (Water and soil 70-130%)

Were all results were within Region II control limits? (YES) NO (circle one)

11. ☑ **Raw Data Review and Calculation Checks**

See attached

12. ☑ **Electronic Data Review and Edits**

Does the EDD match the Form Is? (YES) NO (circle one)

13. ☑ **Tables and TIC Review**

Table 1 (Samples and Analytical Methods)
Table 2 (Analytical Results)
Table 3 (Qualification Actions)
Were all tables produced and reviewed? (YES) NO (circle one)

Table 4 (TICs) Did lab report TICs? YES (NO) (circle one)

1,4-Dioxane Sample calc

Report Date: 12-Jul-2017 07:42:52 Chrom Revision: 2.2 20-Jun-2017 07:42:38

TestAmerica Edison
Target Compound Quantitation Report

Data File:	\\ChromNA\Edison\ChromData\CVOAMS4\20170711-57594.b\D38774.D				
Lims ID:	480-120641-E-2				
Client ID:	MW-4B				
Sample Type:	Client				
Inject. Date:	12-Jul-2017 01:13:30	ALS Bottle#:	15	Worklist Smp#:	16
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Sample Info:	480-120641-E-2				
Misc. Info.:	460-0057594-016				
Operator ID:		Instrument ID:	CVOAMS4		
Method:	\\ChromNA\Edison\ChromData\CVOAMS4\20170711-57594.b\8260SIM_4.m				
Limit Group:	VOA - 8260C Water and Solid				
Last Update:	12-Jul-2017 07:42:52	Calib Date:	25-May-2017 01:25:30		
Integrator:	RTE	ID Type:	RT Order ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Edison\ChromData\CVOAMS4\20170524-55566.b\D37012.D				
Column 1 :	Rtx-624 (0.25 mm)		Det: MS SCAN		
Process Host:	XAWRK033				

First Level Reviewer: sarmientod Date: 12-Jul-2017 07:42:52

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	6.221	6.221	0.000	100	28914	0.5000	
* 2 1,4-Dioxane-d8	64	7.057	7.057	0.000	93	629	10.0	
* 3 Chlorobenzene-d5	82	9.283	9.274	0.009	95	9858	0.5000	
$ 4 1,2-Dichloroethane-d4 (Sur	65	5.878	5.878	0.000	100	8022	0.4980	
$ 5 4-Bromofluorobenzene	95	10.205	10.205	0.000	79	8826	0.4963	✓

Reagents:

SimissurNEW_00007 Amount Added: 2.00 Units: uL Run Reagent

$$\text{Conc}_{BFB} = \frac{8826}{9858} \times \frac{0.5}{.9019} = 0.4963 \text{ OK}$$

JM
9/24/17

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Edison Job No.: 480-120641-1 Analy Batch No.: 439131

SDG No.:

Instrument ID: CVOAMS4 GC Column: Rtx-624 ID: 0.25(mm) Heated Purge: (Y/N) Y

Calibration Start Date: 05/24/2017 21:03 Calibration End Date: 05/25/2017 01:25 Calibration ID: 62542

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD04 460-439131/14	D37012.D
Level 2	STD1 460-439131/3	D37001.D
Level 3	STD5 460-439131/4	D37002.D
Level 4	STD10 460-439131/5	D37003.D
Level 5	STD20 460-439131/6	D37004.D
Level 6	STD30 460-439131/7	D37005.D
Level 7	STD40 460-439131/8	D37006.D
Level 8	STD50 460-439131/9	D37007.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5		B	M1	M2								
1,4-Dioxane	2.1186 1.7194	2.0976 1.7291	1.7961 1.7785	1.6977	1.8195	Ave		1.8446				9.1		20.0			
Ethylene Dibromide	0.5769 0.4752	0.5416 0.4701	0.5470 0.4589	0.5394	0.5193	Ave		0.5161			0.1000	8.3		20.0			
1,2,3-Trichloropropane	0.5551 0.4491	0.5433 0.4407	0.5253 0.4263	0.5106	0.4996	Ave		0.4937				9.9		20.0			
1,2-Dibromo-3-Chloropropane	0.1792 0.1244	0.1644 0.1213	0.1642 0.1140	0.1436	0.1355	Ave		0.1433			0.0500	16.5		20.0			
1,2-Dichloroethane-d4 (Surr)	0.2809 0.2793	0.2759 0.2808	0.2770 0.2812	0.2767	0.2765	Ave		0.2785				0.8		20.0			
4-Bromofluorobenzene	0.8965 0.8934	0.9303 0.8859	0.9125 0.8824	0.9097	0.9050	Ave		0.9019				1.7		20.0			

$\%RSD = \frac{0.16777}{1.84456} = 9.095$ OK

JR 9/29/17

1,4-Dioxane RAR calc

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

1,4 Dioxane IDA Calc

Report Date: 25-May-2017 19:28:25 Chrom Revision: 2.2 25-Apr-2017 13:27:22

TestAmerica Edison
Target Compound Quantitation Report

Data File:	\\ChromNA\Edison\ChromData\CVOAMS4\20170524-55566.b\D37002.D				
Lims ID:	STD5				
Client ID:					
Sample Type:	ICIS	Calib Level:	3		
Inject. Date:	24-May-2017 21:26:30	ALS Bottle#:	3	Worklist Smp#:	4
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Sample Info:	STD5				
Misc. Info.:	460-0055566-004				
Operator ID:		Instrument ID:	CVOAMS4		
Sublist:	chrom-8260SIM_4*sub1				
Method:	\\ChromNA\Edison\ChromData\CVOAMS4\20170524-55566.b\8260SIM_4.m				
Limit Group:	VOA - 8260C Water and Solid				
Last Update:	25-May-2017 19:28:25	Calib Date:	25-May-2017 01:25:30		
Integrator:	RTE	ID Type:	RT Order ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Edison\ChromData\CVOAMS4\20170524-55566.b\D37012.D				
Column 1 :	Rtx-624 (0.25 mm)		Det: MS SCAN		
Process Host:	XAWRK034				

First Level Reviewer: sarmientod Date: 24-May-2017 22:57:24

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	6.211	6.211	0.000	100	22158	0.5000	0.5000	
* 2 1,4-Dioxane-d8	64	7.049	7.049	0.000	100	412	10.0	10.0	
* 3 Chlorobenzene-d5	82	9.275	9.275	0.000	100	7367	0.5000	0.5000	
$ 4 1,2-Dichloroethane-d4 (Sur	65	5.868	5.868	0.000	100	6142	0.5003	0.4976	
$ 5 4-Bromofluorobenzene	95	10.205	10.205	0.000	100	6725	0.5002	0.5060	
7 1,4-Dioxane	88	7.110	7.110	0.000	100	370	5.00	4.87	
8 Ethylene Dibromide	107	8.917	8.917	0.000	100	403	0.0500	0.0530	
9 1,2,3-Trichloropropane	75	10.372	10.372	0.000	100	387	0.0500	0.0532	
10 1,2-Dibromo-3-Chloropropan	157	11.945	11.945	0.000	100	121	0.0500	0.0573	

Reagents:

VMMIX1SIM_00098	Amount Added: 1.00	Units: uL	
SIMDIOX50_00009	Amount Added: 20.00	Units: uL	
SimissurNEW_00006	Amount Added: 2.00	Units: uL	Run Reagent

$RRF_{1,4-D} = \frac{370}{412} \times \frac{10}{5} = 1.7961$

OK

9/29/17

Report Date: 12-Jul-2017 07:41:07 Chrom Revision: 2.2 20-Jun-2017 07:42:38

TestAmerica Edison

Data File: \\ChromNA\Edison\ChromData\CVOAMS4\20170711-57594.b\D38765.D

Injection Date: 11-Jul-2017 21:41:30 Instrument ID: CVOAMS4 Operator ID:

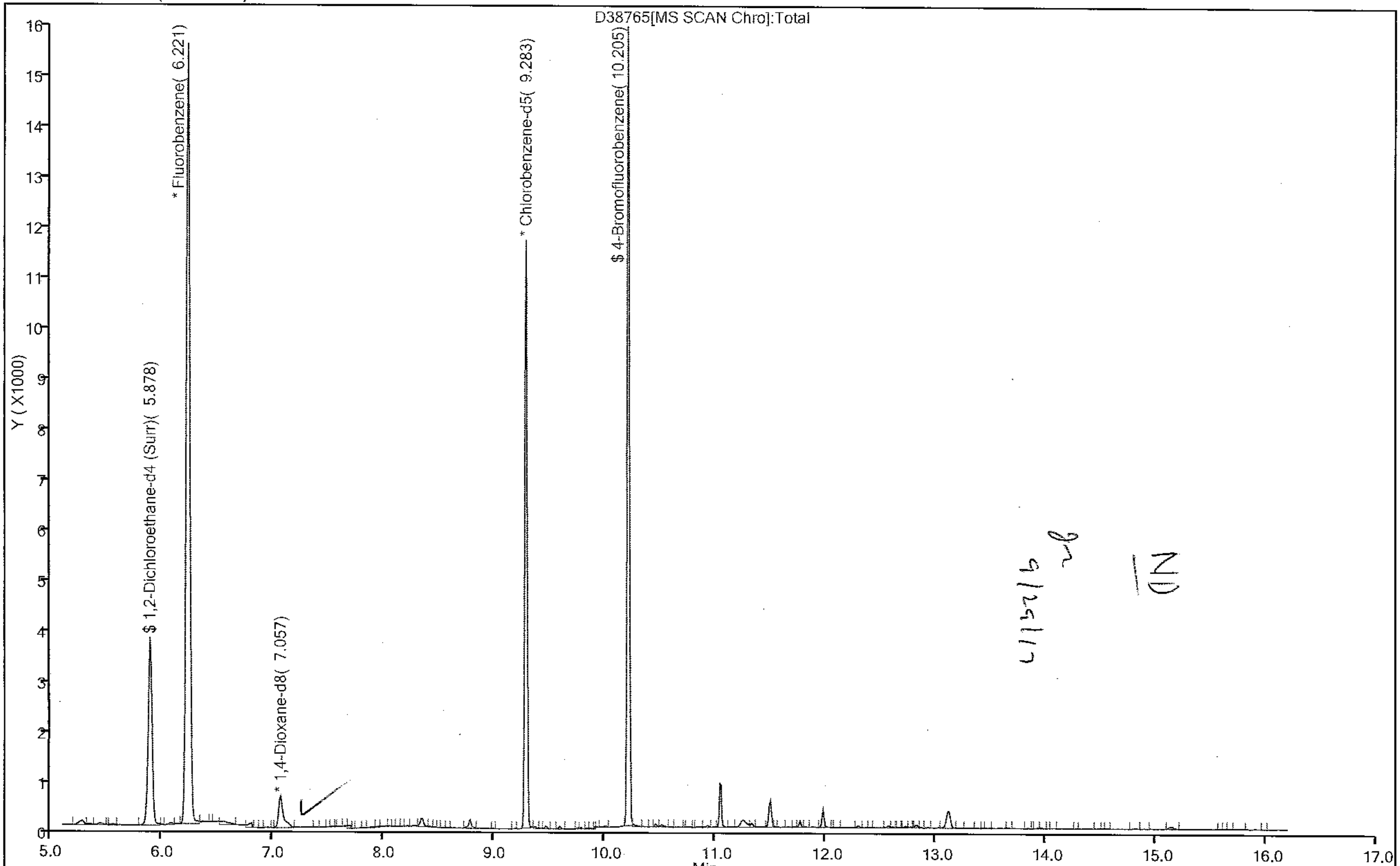
Lims ID: MB Worklist Smp#: 7

Client ID:

Purge Vol: 5.000 mL Dil. Factor: 1.0000 ALS Bottle#: 6

Method: 8260SIM_4 Limit Group: VOA - 8260C Water and Solid

Column: Rtx-624 (0.25 mm)



1,4-Dioxane MB

1,4-Dioxane LCS

Report Date: 13-Jul-2017 12:44:41 Chrom Revision: 2.2 20-Jun-2017 07:42:38

TestAmerica Edison
Target Compound Quantitation Report

Data File: \\ChromNA\Edison\ChromData\CVOAMS4\20170711-57594.b\D38761.D
Lims ID: LCS
Client ID:
Sample Type: LCS
Inject. Date: 11-Jul-2017 20:06:30 ALS Bottle#: 2 Worklist Smp#: 3
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: LCS
Misc. Info.: 460-0057594-003
Operator ID: Instrument ID: CVOAMS4

Method: \\ChromNA\Edison\ChromData\CVOAMS4\20170711-57594.b\8260SIM_4.m
Limit Group: VOA - 8260C Water and Solid
Last Update: 13-Jul-2017 12:44:41 Calib Date: 25-May-2017 01:25:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Edison\ChromData\CVOAMS4\20170524-55566.b\D37012.D

Column 1 : Rtx-624 (0.25 mm) Det: MS SCAN
Process Host: XAWRK006

First Level Reviewer: sarmientod Date: 12-Jul-2017 07:40:47

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	6.221	6.221	0.000	100	30432	0.5000	0.5000	
* 2 1,4-Dioxane-d8	64	7.057	7.057	0.000	97	646	10.0	10.0	
* 3 Chlorobenzene-d5	82	9.274	9.274	0.000	92	10601	0.5000	0.5000	
$ 4 1,2-Dichloroethane-d4 (Sur	65	5.878	5.878	0.000	100	8183	0.5003	0.4827	
$ 5 4-Bromofluorobenzene	95	10.205	10.205	0.000	90	9347	0.5002	0.4888	
7 1,4-Dioxane	88	7.118	7.118	0.000	95	565	5.00	4.74	
8 Ethylene Dibromide	107	8.917	8.917	0.000	93	560	0.0500	0.0512	
9 1,2,3-Trichloropropane	75	10.372	10.372	0.000	95	569	0.0500	0.0544	
10 1,2-Dibromo-3-Chloropropan	157	11.945	11.945	0.000	83	156	0.0500	0.0513	

Reagents:

VMMIX1SIM_00099 Amount Added: 1.00 Units: uL
SIMDIOX50_00010 Amount Added: 20.00 Units: uL
SimissurNEW_00007 Amount Added: 2.00 Units: uL Run Reagent

$$\text{Conc} = \frac{565}{646} \times \frac{10}{1.8446} = 4.74$$

1,4-Dioxane

OK

JR
9/25/17

VOCs

PROJECT CATEGORY A REVIEW RECORD
Project: South Hill Dump
Method : SW-846 8260B/C
Laboratory: TAL
SDG(s): 480-120641-1
Date: 8/26/11
Reviewer: Julie Ricardi
Review Level [X] CATEGORY A

1. ☑ **Case Narrative Review and COC/Data Package Completeness** COMMENTS
   Were problems noted? QC problems noted; see attached and below
   Were all the samples on the COC analyzed for the requested analyses? (YES) NO (circle one)
   Are Field Sample IDs and Locations assigned correctly? (YES) NO (circle one)

2. ☑ **Holding time and Sample Collection**
   All samples were analyzed within the 14 day holding time. (YES) NO (circle one)

3. ☑ **QC Blanks**
   Are method blanks free of contamination? (YES) NO (circle one)
   Are Trip blanks free of contamination? (YES) NO (circle one)
   Are Rinse blanks free of contamination? YES NO (NA) (circle one)

4. ☑ **Matrix Spike** - Region II limits (water and soil 70-130%, water RPD 20, soil RPD 35)
   Were MS/MSDs submitted/analyzed? (YES) NO
   Were all results were within the Region II limits? YES (NO) NA (circle one)
   No quals needed (high biases for ND analytes)

5. ☑ **Field Duplicates** - Region II Limits (water RPD 50, soil RPD 100)
   Were Field Duplicates submitted/analyzed? (YES) NO
   MW-4B/MW-4B DUP: OK
   Were all results were within Region II Limits? (YES) NO NA (circle one)

6. ☑ **Reporting Limits:** Were samples analyzed at a dilution? (YES) NO (circle one)
   MW-35R2: 4X ; else OK

7. ☑ **Electronic Data Review and Edits**
   Does the EDD match the Form Is? (YES) NO (circle one)

8. ☑ **Table Review**
   Table 1 (Samples and Analytical Methods)
   Table 2 (Analytical Results)
   Table 3 (Qualification Actions)
   Were all tables produced and reviewed? (YES) NO (circle one)
   Table 4 (TICs) Did lab report TICs? YES (NO) (circle one)

Narrative review —
1. Surrogates: OK
2. LCS: Noted in narrative; see attached.
3. CCV: Subset of analytes noted outside control limits, but no impact on sample results; no quals, prof. judgment

Sample Summary

Client: New York State D.E.C.
Project/Site: South Hill Dump #712009

TestAmerica Job ID: 480-120641-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
480-120641-1	TRIP BLANK	Water	07/05/17 11:30	07/07/17 01:15
480-120641-2	MW-4B	Water	07/05/17 11:49	07/07/17 01:15
480-120641-3	MW-4B DUP] field dup	Water	07/05/17 11:49	07/07/17 01:15
480-120641-4	MW-4S	Water	07/05/17 11:58	07/07/17 01:15
480-120641-5	MW-3SR2	Water	07/05/17 13:38	07/07/17 01:15
480-120641-6	MW-3BR2	Water	07/05/17 13:48	07/07/17 01:15
480-120641-7	MW-3SR	Water	07/05/17 15:15	07/07/17 01:15
480-120641-8	MW-3BR	Water	07/05/17 15:20	07/07/17 01:15
480-120641-9	MW-1B	Water	07/05/17 17:00	07/07/17 01:15
480-120641-10	MW-1S	Water	07/05/17 17:10	07/07/17 01:15
480-120641-11	SEEP-1	Water	07/06/17 08:20	07/07/17 01:15
480-120641-12	SEEP-1 DUP] field dup (PCBs only)	Water	07/06/17 08:20	07/07/17 01:15
480-120641-13	SW-1	Water	07/06/17 10:30	07/07/17 01:15
480-120641-14	SED-1	Solid	07/06/17 10:40	07/07/17 01:15
480-120641-15	MW-2S	Water	07/06/17 11:15	07/07/17 01:15
480-120641-16	MW-2B	Water	07/06/17 11:20	07/07/17 01:15
480-120641-17	MW-2D	Water	07/06/17 11:30	07/07/17 01:15

Job ID: 480-120641-1

Laboratory: TestAmerica Buffalo

Narrative

Job Narrative
480-120641-1

Receipt
The samples were received on 7/7/2017 1:15 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 1.4° C and 1.5° C.

Receipt Exceptions
The following sample was activated for 8082 PCB analysis by the client on 7/13/17: SED-1 (480-120641-14). This analysis was not originally requested on the chain-of-custody (COC).

GC/MS VOA
Method(s) 8260C: The continuing calibration verification (CCV) associated with batch 480-366471 recovered outside acceptance criteria, low biased, for 2-Butanone (MEK), Chloromethane and Vinyl chloride. A reporting limit (RL) standard was analyzed, and the target analytes were detected. Since the associated sample was non-detect for these analytes, the data have been reported. The following sample is impacted: SED-1 (480-120641-14). ✓

Method(s) 8260C: The continuing calibration verification (CCV) associated with batch 480-366876 recovered above the upper control limit for 1,1,1-Trichloroethane. The samples associated with this CCV were non-detects for the affected analyte; therefore, the data have been reported. The following samples are impacted: TRIP BLANK (480-120641-1), MW-4B (480-120641-2), MW-4B DUP (480-120641-3), MW-4S (480-120641-4), MW-3SR2 (480-120641-5), MW-3SR (480-120641-7), MW-3BR (480-120641-8), MW-1B (480-120641-9), MW-1S (480-120641-10), SEEP-1 (480-120641-11), SW-1 (480-120641-13), MW-2S (480-120641-15), MW-2B (480-120641-16) and MW-2D (480-120641-17). ✓

Method(s) 8260C: The following sample was diluted to bring the concentration of target analytes within the calibration range: MW-3SR2 (480-120641-5). Elevated reporting limits (RLs) are provided. Elevated RLs

Method(s) 8260C: The continuing calibration verification (CCV) associated with batch 480-367101 recovered outside acceptance criteria, low biased, for 1,1-Dichloroethene. A reporting limit (RL) standard was analyzed, and the target analyte was detected. Since the associated samples were non-detect for this analyte, the data have been reported. ✓

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

GC Semi VOA
Method(s) 8082A: The following samples are associated with a continuing calibration verification (CCV 480-366370/7) that had low recoveries for PCB-1254: SEEP-1 (480-120641-11), SEEP-1 DUP (480-120641-12) and SW-1 (480-120641-13). There were no detections for this aroclor via pattern recognition. Therefore, the data have been reported. ✓

Method(s) 8082A: Surrogate recovery for the following samples was outside the upper control limit: SEEP-1 (480-120641-11) and SW-1 (480-120641-13). This sample did not contain any target analytes; therefore, re-extraction and/or re-analysis was not performed. OK

Method(s) 8082A: The continuing calibration verification (CCV 480-367055/6) associated with batch 480-367055 recovered above the upper control limit for PCB-1232. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The following sample is impacted: SED-1 (480-120641-14). ✓

Method(s) 8082A: The percent difference in a multi-component continuing calibration verification is assessed on the basis of the total amount; individual peak calculations are only listed for completeness. OK

Method(s) 8082A: All primary data for analytical batch 366370 are reported from the ZB-5 column, while all primary data for analytical batch 367055 are reported from the ZB-35 column. OK

Method(s) 8082A: The Tetrachloro-m-xylene surrogate recovery for the following sample is slightly outside acceptance limits (high biased) due to matrix interference: SEEP-1 (480-120641-11[MS]). The recovery is within acceptance limits for the surrogate DCB Decachlorobiphenyl, indicating that the extraction process was in control. MS; OK

8/26/17

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

Lab Sample ID: MB 480-366513/2-A
Matrix: Solid
Analysis Batch: 366471

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 366513

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichlorofluoromethane	ND		5.0	0.47	ug/Kg		07/12/17 09:23	07/12/17 11:51	1
Vinyl chloride	ND		5.0	0.61	ug/Kg		07/12/17 09:23	07/12/17 11:51	1
Xylenes, Total	ND		10	0.84	ug/Kg		07/12/17 09:23	07/12/17 11:51	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*94*		*64 - 126*	*07/12/17 09:23*	*07/12/17 11:51*	*1*
4-Bromofluorobenzene (Surr)	*115*		*72 - 126*	*07/12/17 09:23*	*07/12/17 11:51*	*1*
Toluene-d8 (Surr)	*101*		*71 - 125*	*07/12/17 09:23*	*07/12/17 11:51*	*1*
Dibromofluoromethane (Surr)	*106*		*60 - 140*	*07/12/17 09:23*	*07/12/17 11:51*	*1*

Lab Sample ID: LCS 480-366513/1-A
Matrix: Solid
Analysis Batch: 366471

Applies to SED-1

70-130

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 366513

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	50.0	43.7		ug/Kg		87	77 - 121
1,1,2,2-Tetrachloroethane	50.0	41.2		ug/Kg		82	80 - 120
1,1,2-Trichloro-1,2,2-trifluoroethane	50.0	47.5		ug/Kg		95	60 - 140
1,1,2-Trichloroethane	50.0	44.5		ug/Kg		89	78 - 122
1,1-Dichloroethane	50.0	41.0		ug/Kg		82	73 - 126
1,1-Dichloroethene	50.0	46.1		ug/Kg		92	59 - 125
1,2,3-Trichlorobenzene	50.0	50.0		ug/Kg		100	60 - 120
1,2,4-Trichlorobenzene	50.0	51.3		ug/Kg		103	64 - 120
1,2-Dibromo-3-Chloropropane	50.0	47.0		ug/Kg		94	63 - 124
1,2-Dibromoethane	50.0	45.6		ug/Kg		91	78 - 120
1,2-Dichlorobenzene	50.0	42.7		ug/Kg		85	75 - 120
1,2-Dichloroethane	50.0	38.5		ug/Kg		77	77 - 122
1,2-Dichloropropane	50.0	42.1		ug/Kg		84	75 - 124
1,3-Dichlorobenzene	50.0	40.4		ug/Kg		81	74 - 120
1,4-Dichlorobenzene	50.0	40.8		ug/Kg		82	73 - 120
1,4-Dioxane	1000	971		ug/Kg		97	64 - 124
2-Butanone (MEK)	250	200		ug/Kg		80	70 - 134
2-Hexanone	250	208		ug/Kg		83	59 - 130
4-Methyl-2-pentanone (MIBK)	250	212		ug/Kg		85	65 - 133
Acetone	250	204		ug/Kg		81	61 - 137
Benzene	50.0	43.0		ug/Kg		86	79 - 127
Bromochloromethane	50.0	48.9		ug/Kg		98	75 - 134
Bromodichloromethane	50.0	42.9		ug/Kg		86	80 - 122
Bromoform	50.0	52.9		ug/Kg		106	68 - 126
Bromomethane	50.0	43.3		ug/Kg		87	37 - 149
Carbon disulfide	50.0	45.7		ug/Kg		91	64 - 131
Carbon tetrachloride	50.0	47.4		ug/Kg		95	75 - 135
Chlorobenzene	50.0	45.5		ug/Kg		91	76 - 124
Chloroethane	50.0	38.0		ug/Kg		76	69 - 135
Chloroform	50.0	41.1		ug/Kg		82	80 - 120
Chloromethane J1 (UJ)	50.0	33.2		ug/Kg		66	63 - 127
cis-1,2-Dichloroethene	50.0	45.8		ug/Kg		92	81 - 120

8/29/17

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

Lab Sample ID: MB 480-367101/6
Matrix: Water
Analysis Batch: 367101

Client Sample ID: Method Blank
Prep Type: Total/NA

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	103		77 - 120		07/14/17 22:15	1
4-Bromofluorobenzene (Surr)	90		73 - 120		07/14/17 22:15	1
Toluene-d8 (Surr)	90		80 - 120		07/14/17 22:15	1
Dibromofluoromethane (Surr)	96		75 - 123		07/14/17 22:15	1

Lab Sample ID: LCS 480-367101/4
Matrix: Water
Analysis Batch: 367101

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

70-130

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	25.0	29.9		ug/L		120	73 - 126
1,1,2,2-Tetrachloroethane	25.0	25.2		ug/L		101	76 - 120
1,1,2-Trichloro-1,2,2-trifluoroethane	25.0	23.8		ug/L		95	61 - 148
1,1,2-Trichloroethane	25.0	24.0		ug/L		96	76 - 122
1,1-Dichloroethane	25.0	25.1		ug/L		101	77 - 120
1,1-Dichloroethene	25.0	20.2		ug/L		81	66 - 127
1,2,3-Trichlorobenzene	25.0	26.9		ug/L		108	75 - 123
1,2,4-Trichlorobenzene	25.0	28.0		ug/L		112	79 - 122
1,2-Dibromo-3-Chloropropane	25.0	25.7		ug/L		103	56 - 134
1,2-Dibromoethane	25.0	25.8		ug/L		103	77 - 120
1,2-Dichlorobenzene	25.0	25.5		ug/L		102	80 - 124
1,2-Dichloroethane	25.0	23.6		ug/L		94	75 - 120
1,2-Dichloropropane	25.0	24.3		ug/L		97	76 - 120
1,3-Dichlorobenzene	25.0	24.6		ug/L		99	77 - 120
1,4-Dichlorobenzene	25.0	25.2		ug/L		101	80 - 120
1,4-Dioxane	500	636		ug/L		127	50 - 150
2-Butanone (MEK)	125	152		ug/L		122	57 - 140
2-Hexanone	125	131		ug/L		105	65 - 127
4-Methyl-2-pentanone (MIBK)	125	134		ug/L		107	71 - 125
Acetone J+ (ND)	125	168		ug/L		135	56 - 142
Benzene	25.0	23.3		ug/L		93	71 - 124
Bromochloromethane	25.0	24.4		ug/L		97	72 - 130
Bromodichloromethane	25.0	25.1		ug/L		100	80 - 122
Bromoform	25.0	23.1		ug/L		92	61 - 132
Bromomethane	25.0	31.7		ug/L		127	55 - 144
Carbon disulfide	25.0	24.6		ug/L		99	59 - 134
Carbon tetrachloride	25.0	23.3		ug/L		93	72 - 134
Chlorobenzene	25.0	24.1		ug/L		96	80 - 120
Chloroethane	25.0	32.2		ug/L		129	69 - 136
Chloroform	25.0	24.9		ug/L		100	73 - 127
Chloromethane	25.0	25.5		ug/L		102	68 - 124
cis-1,2-Dichloroethene	25.0	23.8		ug/L		95	74 - 124
cis-1,3-Dichloropropene	25.0	25.1		ug/L		101	74 - 124
Cyclohexane	25.0	22.9		ug/L		92	59 - 135
Dibromochloromethane	25.0	24.5		ug/L		98	75 - 125
Dichlorodifluoromethane	25.0	24.7		ug/L		99	59 - 135
Ethylbenzene	25.0	24.3		ug/L		97	77 - 123

JR 8/26/17

All else OK JR 8/26/17

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

Lab Sample ID: LCS 480-366876/4
Matrix: Water
Analysis Batch: 366876

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Vinyl chloride	25.0	26.5		ug/L		106	65 - 133

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*103*		*77 - 120*
4-Bromofluorobenzene (Surr)	*96*		*73 - 120*
Toluene-d8 (Surr)	*103*		*80 - 120*
Dibromofluoromethane (Surr)	*96*		*75 - 123*

Lab Sample ID: 480-120641-2 MS
Matrix: Water
Analysis Batch: 366876

70 - 130

Client Sample ID: MW-4B
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	ND	F1	25.0	31.8	F1	ug/L		127	73 - 126
1,1,2,2-Tetrachloroethane	ND		25.0	24.0		ug/L		96	76 - 120
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		25.0	24.4		ug/L		98	61 - 148
1,1,2-Trichloroethane	ND		25.0	24.0		ug/L		96	76 - 122
1,1-Dichloroethane	ND		25.0	24.2		ug/L		97	77 - 120
1,1-Dichloroethene	ND		25.0	20.7		ug/L		83	66 - 127
1,2,3-Trichlorobenzene	ND		25.0	24.2		ug/L		97	75 - 123
1,2,4-Trichlorobenzene	ND		25.0	24.8		ug/L		99	79 - 122
1,2-Dibromo-3-Chloropropane	ND		25.0	26.7		ug/L		107	56 - 134
1,2-Dibromoethane	ND		25.0	21.8		ug/L		87	77 - 120
1,2-Dichlorobenzene	ND		25.0	24.8		ug/L		99	80 - 124
1,2-Dichloroethane	ND		25.0	24.6		ug/L		99	75 - 120
1,2-Dichloropropane	ND		25.0	22.5		ug/L		90	76 - 120
1,3-Dichlorobenzene	ND		25.0	24.2		ug/L		97	77 - 120
1,4-Dichlorobenzene	ND		25.0	23.8		ug/L		95	78 - 124
1,4-Dioxane	ND		500	471		ug/L		94	50 - 150
2-Butanone (MEK)	ND		125	124		ug/L		99	57 - 140
2-Hexanone	ND		125	119		ug/L		95	65 - 127
4-Methyl-2-pentanone (MIBK)	ND		125	126		ug/L		101	71 - 125
Acetone	ND		125	104		ug/L		83	56 - 142
Benzene	ND		25.0	23.6		ug/L		95	71 - 124
Bromochloromethane	ND		25.0	22.4		ug/L		89	72 - 130
Bromodichloromethane	ND		25.0	22.6		ug/L		91	80 - 122
Bromoform	ND		25.0	24.2		ug/L		97	61 - 132
Bromomethane J+; (ND)	ND		25.0	33.4		ug/L		(134)	55 - 144
Carbon disulfide	ND		25.0	23.8		ug/L		95	59 - 134
Carbon tetrachloride	ND		25.0	26.0		ug/L		104	72 - 134
Chlorobenzene	ND		25.0	22.9		ug/L		91	80 - 120
Chloroethane J+; (ND)	ND		25.0	33.5		ug/L		(134)	69 - 136
Chloroform	ND		25.0	23.7		ug/L		95	73 - 127
Chloromethane	ND		25.0	30.3		ug/L		121	68 - 124
cis-1,2-Dichloroethene	ND		25.0	22.9		ug/L		91	74 - 124
cis-1,3-Dichloropropene	ND		25.0	22.2		ug/L		89	74 - 124
Cyclohexane	ND		25.0	24.8		ug/L		99	59 - 135

JF 8/26/17

JF 8/26/17

All else OK

No quals
8/24/17

PCBs

NYSDEC PROJECT CATEGORY A REVIEW RECORD
Project: South Hill Dump
Method : 8082A
Laboratory and SDG(s): TAL 480-120641-1
Date: 8/26/17
Reviewer: Julie Ricardi
Review Level [X] Category A Review

1. ☑ **Case Narrative Review and Data Package Completeness**
See narrative comments below
Were all the samples on the COC analyzed for the requested analyses? (YES) NO (circle one)

Are Field Sample IDs and Locations assigned correctly? (YES) NO (circle one)

2. ☑ **Holding time and Sample Collection**
There is no holding time requirement in Method 8082 (Chapter 4, Table 4-1 of SW-846)

Were samples properly preserved? (YES) NO (circle one)

3. ☑ **QC Blanks**
Are method blanks free of contamination? (YES) NO (circle one)

Are Rinse blanks free of contamination? YES NO (NA) (circle one)

6. ☑ **Matrix Spike** (soil and water limits: 29-135% and RPD of 20, RPD is 15 for Aroclor 1016)

Were MS/MSDs submitted/analyzed? (YES) NO (circle one)
SEEP-1 MS/MSD; OK
Were all results were within limits? (YES) NO NA (circle one)

7. ☑ **Field Duplicates** (RPD limits for soil=100, water = 50)
Were Field Duplicates submitted/analyzed? (YES) NO
SEP-1/SEEP-1 DUP; OK
Were RPDs within the limits? (YES) NO NA (circle one)

9. ☑ **Reporting Limits:** Were samples analyzed at a dilution? YES (NO) (circle one)

10. ☑ **Electronic Data Review and Edits**

Does the EDD match the Form I's? (YES) NO (circle one)

11. ☑ **Table Review** **Table 1** (sample Listing), **Table 2** (results summary), **Table 3** (Reason Codes).
Table 1 (Samples and Analytical Methods)
Table 2 (Analytical Results)
Table 3 (Qualification Actions)

Were all tables produced and reviewed? (YES) NO (circle one)

Narrative Review:
1. CCV: Subset of analytes outside control limits but no impact on sample results; no quals, prof. judgment

2. Surrogates: High bias for subset; samples ND, no quals

Sample Summary

Client: New York State D.E.C.
Project/Site: South Hill Dump #712009

TestAmerica Job ID: 480-120641-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
480-120641-1	TRIP BLANK	Water	07/05/17 11:30	07/07/17 01:15
480-120641-2	MW-4B	Water	07/05/17 11:49	07/07/17 01:15
480-120641-3	MW-4B DUP J field dup	Water	07/05/17 11:49	07/07/17 01:15
480-120641-4	MW-4S	Water	07/05/17 11:58	07/07/17 01:15
480-120641-5	MW-3SR2	Water	07/05/17 13:38	07/07/17 01:15
480-120641-6	MW-3BR2	Water	07/05/17 13:48	07/07/17 01:15
480-120641-7	MW-3SR	Water	07/05/17 15:15	07/07/17 01:15
480-120641-8	MW-3BR	Water	07/05/17 15:20	07/07/17 01:15
480-120641-9	MW-1B	Water	07/05/17 17:00	07/07/17 01:15
480-120641-10	MW-1S	Water	07/05/17 17:10	07/07/17 01:15
480-120641-11	SEEP-1	Water	07/06/17 08:20	07/07/17 01:15
480-120641-12	SEEP-1 DUP J field dup (PCBs only)	Water	07/06/17 08:20	07/07/17 01:15
480-120641-13	SW-1	Water	07/06/17 10:30	07/07/17 01:15
480-120641-14	SED-1	Solid	07/06/17 10:40	07/07/17 01:15
480-120641-15	MW-2S	Water	07/06/17 11:15	07/07/17 01:15
480-120641-16	MW-2B	Water	07/06/17 11:20	07/07/17 01:15
480-120641-17	MW-2D	Water	07/06/17 11:30	07/07/17 01:15

Job ID: 480-120641-1

Laboratory: TestAmerica Buffalo

Narrative

Job Narrative
480-120641-1

Receipt
The samples were received on 7/7/2017 1:15 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 1.4° C and 1.5° C.

Receipt Exceptions
The following sample was activated for 8082 PCB analysis by the client on 7/13/17: SED-1 (480-120641-14). This analysis was not originally requested on the chain-of-custody (COC).

GC/MS VOA
Method(s) 8260C: The continuing calibration verification (CCV) associated with batch 480-366471 recovered outside acceptance criteria, low biased, for 2-Butanone (MEK), Chloromethane and Vinyl chloride. A reporting limit (RL) standard was analyzed, and the target analytes were detected. Since the associated sample was non-detect for these analytes, the data have been reported. The following sample is impacted: SED-1 (480-120641-14). ✓

Method(s) 8260C: The continuing calibration verification (CCV) associated with batch 480-366876 recovered above the upper control limit for 1,1,1-Trichloroethane. The samples associated with this CCV were non-detects for the affected analyte; therefore, the data have been reported. The following samples are impacted: TRIP BLANK (480-120641-1), MW-4B (480-120641-2), MW-4B DUP (480-120641-3), MW-4S (480-120641-4), MW-3SR2 (480-120641-5), MW-3SR (480-120641-7), MW-3BR (480-120641-8), MW-1B (480-120641-9), MW-1S (480-120641-10), SEEP-1 (480-120641-11), SW-1 (480-120641-13), MW-2S (480-120641-15), MW-2B (480-120641-16) and MW-2D (480-120641-17). ✓

Method(s) 8260C: The following sample was diluted to bring the concentration of target analytes within the calibration range: MW-3SR2 (480-120641-5). Elevated reporting limits (RLs) are provided. Elevated RLs

Method(s) 8260C: The continuing calibration verification (CCV) associated with batch 480-367101 recovered outside acceptance criteria, low biased, for 1,1-Dichloroethene. A reporting limit (RL) standard was analyzed, and the target analyte was detected. Since the associated samples were non-detect for this analyte, the data have been reported. ✓

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

GC Semi VOA
Method(s) 8082A: The following samples are associated with a continuing calibration verification (CCV 480-366370/7) that had low recoveries for PCB-1254: SEEP-1 (480-120641-11), SEEP-1 DUP (480-120641-12) and SW-1 (480-120641-13). There were no detections for this aroclor via pattern recognition. Therefore, the data have been reported. ✓

Method(s) 8082A: Surrogate recovery for the following samples was outside the upper control limit: SEEP-1 (480-120641-11) and SW-1 (480-120641-13). This sample did not contain any target analytes; therefore, re-extraction and/or re-analysis was not performed. OK

Method(s) 8082A: The continuing calibration verification (CCV 480-367055/6) associated with batch 480-367055 recovered above the upper control limit for PCB-1232. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The following sample is impacted: SED-1 (480-120641-14). ✓

Method(s) 8082A: The percent difference in a multi-component continuing calibration verification is assessed on the basis of the total amount; individual peak calculations are only listed for completeness. OK

Method(s) 8082A: All primary data for analytical batch 366370 are reported from the ZB-5 column, while all primary data for analytical batch 367055 are reported from the ZB-35 column. OK

Method(s) 8082A: The Tetrachloro-m-xylene surrogate recovery for the following sample is slightly outside acceptance limits (high biased) due to matrix interference: SEEP-1 (480-120641-11[MS]). The recovery is within acceptance limits for the surrogate DCB Decachlorobiphenyl, indicating that the extraction process was in control. MS; OK

8/26/17

Surrogate Summary

Client: New York State D.E.C.
Project/Site: South Hill Dump #712009

TestAmerica Job ID: 480-120641-1

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

Matrix: Water — **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)	
		12DCE	BFB
Lab Sample ID	Client Sample ID	(71-144)	(72-133)
480-120641-2	MW-4B	100	99
480-120641-2 MS	MW-4B	105	99
480-120641-2 MSD	MW-4B	105	98
480-120641-3	MW-4B DUP	100	97
480-120641-5	MW-3SR2	100	108
480-120641-6	MW-3BR2	101	100
480-120641-9	MW-1B	100	97
480-120641-10	MW-1S	101	96
LCS 460-448846/3	Lab Control Sample	96	98
LCSD 460-448846/4	Lab Control Sample Dup	99	97
MB 460-448846/7	Method Blank	98	98

Surrogate Legend

12DCE = 1,2-Dichloroethane-d4 (Surr)

BFB = 4-Bromofluorobenzene

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Matrix: Solid — **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)			
		TCX1	TCX2	DCB1	DCB2
Lab Sample ID	Client Sample ID	(60-154)	(60-154)	(65-174)	(65-174)
480-120641-14	SED-1	140	119	140	108
LCS 480-367001/2-A	Lab Control Sample	163 X	132	171	130
MB 480-367001/1-A	Method Blank	126	96	132	97

Surrogate Legend

TCX = Tetrachloro-m-xylene

DCB = DCB Decachlorobiphenyl

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Matrix: Water — **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)			
		DCB1	DCB2	TCX1	TCX2
Lab Sample ID	Client Sample ID	(19-120)	(19-120)	(39-121)	(39-121)
480-120641-11	SEEP-1	79	81	131 X	117
480-120641-11 MS	SEEP-1	69	72	124 X	119
480-120641-11 MSD	SEEP-1	67	74	111	109
480-120641-12	SEEP-1 DUP	72	80	110	110
480-120641-13	SW-1	69	72	137 X	118
LCS 480-366074/2-A	Lab Control Sample	58	64	113	113
MB 480-366074/1-A	Method Blank	56	66	116	123 X

Surrogate Legend

DCB = DCB Decachlorobiphenyl

TCX = Tetrachloro-m-xylene

Sample ND

Sample ND

no qual

JN 8/26/17

Quals done

PFAS

NYSDEC DUSR PROJECT CHEMIST REVIEW RECORD
Project: South Hill Dump
Method: 537 Modified
Laboratory: TAL Sacramento **SDG(s):** 480-120783-1
Date: 8/24/17
Reviewer: Julie Ricardi

Review Level [X] NYSDEC DUSR USEPA Region II Guideline

1. ☑ **Case Narrative Review and Data Package Completeness** COMMENTS
Were problems noted? QC problems noted as attached or below
Were all the samples on the COC analyzed for the requested analyses? (YES) NO (circle one)
Are Field Sample IDs and Locations assigned correctly? (YES) NO (circle one)

2. ☑ **Holding time and Sample Collection**
Water: 14 days from collection to extraction; 28 days from extraction to analysis
Hold time met for all samples? (YES) NO (circle one)

3. ☑ **QC Blanks**
Are method blanks free of contamination? YES (NO) (circle one) See attached summary for (Quals)
Are rinse blanks free of contamination? YES NO (NA) (circle one)
Are field reagent blanks free of contamination? YES (NO) NA (circle one)

4. ☑ **Instrument Tuning – Data Package Narrative Review** See attached summary for (Quals)
Did the laboratory narrative identify any results that were not within method criteria? YES (NO) (circle one)
If yes, use professional judgment to evaluate data and qualify results if needed

5. ☑ **Internal Standards – Data Package Narrative Review**
(Area Limits = -50% to +100%, RTs within 30 seconds of daily CCAL standard (or ICAL mid-point if samples follow ICAL))
Did the laboratory narrative identify any sample internal standards that were not within criteria? (YES) NO (circle one)

Did the laboratory qualify results based on internal standard exceedances? (YES) NO
If yes to above, use professional judgment to evaluate data and qualify results if needed See IDA summary for (Quals) IS-H

6. ☑ **Instrument Calibration – Data Package Narrative Review**
Did the laboratory narrative identify compounds that were not within criteria in the initial and/or continuing calibration standards? YES (NO) (circle one)

Initial Calibration %RSD = 15%, Continuing Calibration %D = 20%

Did the laboratory qualify results based on initial or continuing calibration exceedances? YES (NO)
If yes to above, use professional judgment to evaluate data and qualify results if needed

7. ☑ **Surrogate Recovery** (lab limits)
Were all results within limits? YES (NO) (circle one) See IDA summary for (Quals) IS-H as above
Were any recoveries < 10%? (use professional judgment)

8. ☑ **Matrix Spike** (lab limits)
Were MS/MSDs submitted/analyzed? YES (NO)

Were all results within limits? YES NO (NA) (circle one)

9. ☑ **Duplicates** (RPD limits = water 50)
Were Field Duplicates submitted/analyzed? YES (NO)

Were RPDs within criteria? YES NO (NA) (circle one)

10. ☑ **Laboratory Control Sample Results** (lab limits)
Were all results within limits? YES (NO) (circle one)
See attached summery ; no quals

11. ☑ **Raw Data Review and Calculation Checks**
See attached

12. ☑ **Electronic Data Review and Edits**
Does the EDD match the Form Is? (YES) NO (circle one)

13. ☑ **Tables**
Table 1 (Samples and Analytical Methods)
Table 2 (Analytical Results)
Table 3 (Qualification Actions)
Were all tables produced and reviewed? (YES) NO (circle one)

Sample Summary

Client: New York State D.E.C.
Project/Site: South Hill Dump #712009

TestAmerica Job ID: 480-120783-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
480-120783-1	MW-1S	Water	07/06/17 08:00	07/07/17 09:30
480-120783-2	MW-1B	Water	07/06/17 08:10	07/07/17 09:30
480-120783-3	MW-3SR2	Water	07/06/17 09:15	07/07/17 09:30
480-120783-4	MW-3BR2	Water	07/06/17 09:20	07/07/17 09:30
480-120783-5	MW-4S	Water	07/06/17 09:45	07/07/17 09:30
480-120783-6	MW-4B	Water	07/06/17 09:50	07/07/17 09:30
480-120783-7	REAGENT BLANK	Water	07/06/17 10:00	07/07/17 09:30

Case Narrative

Client: New York State D.E.C.
Project/Site: South Hill Dump #712009

TestAmerica Job ID: 480-120783-1

Job ID: 480-120783-1

Laboratory: TestAmerica Buffalo

Narrative

Job Narrative
480-120783-1

Receipt
The samples were received on 7/7/2017 9:30 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 3.3° C.

LCMS
Method(s) 537 (modified): The laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for preparation batch 320-175074 and analytical batch 320-175952 recovered outside control limits for the following analyte: Perfluorotetradecanoic acid (PFTeA). This analyte was biased high in the LCS/LCSD and was detected below the reporting limit in the associated samples; therefore, the data have been reported.

Method(s) 537 (modified): Isotope Dilution Analyte (IDA) recovery is above the method recommended limit for 13C4-PFHpA in the following sample: (MB 320-175074/1-A). Quantitation by isotope dilution generally precludes any adverse effect on data quality due to elevated IDA recoveries.

MB

Method(s) 537 (modified): Isotope Dilution Analyte (IDA) recovery is above the method recommended limit for 13C2 PFUnA in the following sample: MW-1B (480-120783-2). Quantitation by isotope dilution generally precludes any adverse effect on data quality due to elevated IDA recoveries.

See checklist

Method(s) 537 (modified): Isotope Dilution Analyte (IDA) recoveries are above the method recommended limit for several analytes in the following sample: MW-4B (480-120783-6). Quantitation by isotope dilution generally precludes any adverse effect on data quality due to elevated IDA recoveries.

See checklist

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

Organic Prep
Method(s) 3535: Approximately 250 mL of the aqueous portion of the following samples were decanted into a new polyethylene bottle prior to extraction due to the original sample bottle containing an excess amount of sediment which had the potential to clog the solid-phase column: MW-1B (480-120783-2), MW-3BR2 (480-120783-4) and MW-4B (480-120783-6)

Method(s) 3535: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 320-175074.

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

8/16/17

Method: 537 (modified) - Perfluorinated Hydrocarbons

Lab Sample ID: MB 320-175074/1-A
Matrix: Water
Analysis Batch: 175952

Method Blank

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 175074

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA) (4 subset)	1.06	J	2.0	0.46	ng/L		07/20/17 09:15	07/25/17 14:17	1
Perfluoropentanoic acid (PFPeA)	ND		2.0	0.99	ng/L		07/20/17 09:15	07/25/17 14:17	1
Perfluorohexanoic acid (PFHxA)	ND		2.0	0.79	ng/L		07/20/17 09:15	07/25/17 14:17	1
Perfluoroheptanoic acid (PFHpA)	ND		2.0	0.80	ng/L		07/20/17 09:15	07/25/17 14:17	1
Perfluorooctanoic acid (PFOA)	ND		2.0	0.75	ng/L		07/20/17 09:15	07/25/17 14:17	1
Perfluorononanoic acid (PFNA)	ND		2.0	0.65	ng/L		07/20/17 09:15	07/25/17 14:17	1
Perfluorodecanoic acid (PFDA)	ND		2.0	0.44	ng/L		07/20/17 09:15	07/25/17 14:17	1
Perfluoroundecanoic acid (PFUnA)	ND		2.0	0.75	ng/L		07/20/17 09:15	07/25/17 14:17	1
Perfluorododecanoic acid (PFDoA)	ND		2.0	0.58	ng/L		07/20/17 09:15	07/25/17 14:17	1
Perfluorotridecanoic Acid (PFTriA)	ND		2.0	0.55	ng/L		07/20/17 09:15	07/25/17 14:17	1
Perfluorotetradecanoic acid (PFTeA) (4 all)	0.807	J	2.0	0.20	ng/L		07/20/17 09:15	07/25/17 14:17	1
Perfluorobutanesulfonic acid (PFBS)	ND		2.0	0.92	ng/L		07/20/17 09:15	07/25/17 14:17	1
Perfluorohexanesulfonic acid (PFHxS)	ND		2.0	0.87	ng/L		07/20/17 09:15	07/25/17 14:17	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		2.0	0.71	ng/L		07/20/17 09:15	07/25/17 14:17	1
Perfluorooctanesulfonic acid (PFOS)	ND		2.0	1.3	ng/L		07/20/17 09:15	07/25/17 14:17	1
Perfluorodecanesulfonic acid (PFDS)	ND		2.0	1.2	ng/L		07/20/17 09:15	07/25/17 14:17	1
Total PFOA and PFOS	ND		2.0	0.75	ng/L		07/20/17 09:15	07/25/17 14:17	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*125*		*25 - 150*	*07/20/17 09:15*	*07/25/17 14:17*	*1*
13C2 PFHxA	*130*		*25 - 150*	*07/20/17 09:15*	*07/25/17 14:17*	*1*
13C4 PFOA	*147*		*25 - 150*	*07/20/17 09:15*	*07/25/17 14:17*	*1*
13C5 PFNA	*133*		*25 - 150*	*07/20/17 09:15*	*07/25/17 14:17*	*1*
13C2 PFDA	*147*		*25 - 150*	*07/20/17 09:15*	*07/25/17 14:17*	*1*
13C2 PFUnA	*147*		*25 - 150*	*07/20/17 09:15*	*07/25/17 14:17*	*1*
13C2 PFDoA	*116*		*25 - 150*	*07/20/17 09:15*	*07/25/17 14:17*	*1*
18O2 PFHxS	*129*		*25 - 150*	*07/20/17 09:15*	*07/25/17 14:17*	*1*
13C4 PFOS	*121*		*25 - 150*	*07/20/17 09:15*	*07/25/17 14:17*	*1*
13C4-PFHpA	*154*	*	*25 - 150*	*07/20/17 09:15*	*07/25/17 14:17*	*1*
13C5 PFPeA	*130*		*25 - 150*	*07/20/17 09:15*	*07/25/17 14:17*	*1*

JM 8/26/17

Lab Sample ID: LCS 320-175074/2-A
Matrix: Water
Analysis Batch: 175952

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 175074

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Perfluorobutanoic acid (PFBA)	40.0	46.2		ng/L		115	74 - 138
Perfluoropentanoic acid (PFPeA)	40.0	42.0		ng/L		105	69 - 134
Perfluorohexanoic acid (PFHxA)	40.0	43.2		ng/L		108	70 - 136
Perfluoroheptanoic acid (PFHpA)	40.0	42.6		ng/L		107	63 - 135
Perfluorooctanoic acid (PFOA)	40.0	41.4		ng/L		104	63 - 141
Perfluorononanoic acid (PFNA)	40.0	42.0		ng/L		105	71 - 140
Perfluorodecanoic acid (PFDA)	40.0	44.6		ng/L		112	66 - 141
Perfluoroundecanoic acid (PFUnA)	40.0	43.0		ng/L		107	68 - 139
Perfluorododecanoic acid (PFDoA)	40.0	46.2		ng/L		116	71 - 139

Client Sample ID: REAGENT BLANK
Date Collected: 07/06/17 10:00
Date Received: 07/07/17 09:30

JR 8/26/17

Lab Sample ID: 480-120783-7
Matrix: Water

Method: 537 (modified) - Perfluorinated Hydrocarbons

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	0.93	J B	2.0	0.45	ng/L		07/20/17 09:15	07/25/17 16:28	1
Perfluoropentanoic acid (PFPeA)	ND		2.0	0.97	ng/L		07/20/17 09:15	07/25/17 16:28	1
Perfluorohexanoic acid (PFHxA)	2.1		2.0	0.77	ng/L		07/20/17 09:15	07/25/17 16:28	1
Perfluoroheptanoic acid (PFHpA)	ND		2.0	0.79	ng/L		07/20/17 09:15	07/25/17 16:28	1
Perfluorooctanoic acid (PFOA)	ND		2.0	0.74	ng/L		07/20/17 09:15	07/25/17 16:28	1
Perfluorononanoic acid (PFNA)	ND		2.0	0.64	ng/L		07/20/17 09:15	07/25/17 16:28	1
Perfluorodecanoic acid (PFDA)	ND		2.0	0.43	ng/L		07/20/17 09:15	07/25/17 16:28	1
Perfluoroundecanoic acid (PFUnA)	ND		2.0	0.74	ng/L		07/20/17 09:15	07/25/17 16:28	1
Perfluorododecanoic acid (PFDoA)	ND		2.0	0.57	ng/L		07/20/17 09:15	07/25/17 16:28	1
Perfluorotridecanoic Acid (PFTriA)	ND		2.0	0.54	ng/L		07/20/17 09:15	07/25/17 16:28	1
Perfluorotetradecanoic acid (PFTeA)	1.0	J B	2.0	0.20	ng/L		07/20/17 09:15	07/25/17 16:28	1
Perfluorobutanesulfonic acid (PFBS)	ND		2.0	0.90	ng/L		07/20/17 09:15	07/25/17 16:28	1
Perfluorohexanesulfonic acid (PFHxS)	ND		2.0	0.86	ng/L		07/20/17 09:15	07/25/17 16:28	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		2.0	0.70	ng/L		07/20/17 09:15	07/25/17 16:28	1
Perfluorooctanesulfonic acid (PFOS)	ND		2.0	1.3	ng/L		07/20/17 09:15	07/25/17 16:28	1
Perfluorodecanesulfonic acid (PFDS)	ND		2.0	1.2	ng/L		07/20/17 09:15	07/25/17 16:28	1
Total PFOA and PFOS	ND		2.0	0.74	ng/L		07/20/17 09:15	07/25/17 16:28	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*105*		*25 - 150*	*07/20/17 09:15*	*07/25/17 16:28*	*1*
13C2 PFHxA	*104*		*25 - 150*	*07/20/17 09:15*	*07/25/17 16:28*	*1*
13C4 PFOA	*109*		*25 - 150*	*07/20/17 09:15*	*07/25/17 16:28*	*1*
13C5 PFNA	*98*		*25 - 150*	*07/20/17 09:15*	*07/25/17 16:28*	*1*
13C2 PFDA	*106*		*25 - 150*	*07/20/17 09:15*	*07/25/17 16:28*	*1*
13C2 PFUnA	*104*		*25 - 150*	*07/20/17 09:15*	*07/25/17 16:28*	*1*
13C2 PFDoA	*81*		*25 - 150*	*07/20/17 09:15*	*07/25/17 16:28*	*1*
18O2 PFHxS	*100*		*25 - 150*	*07/20/17 09:15*	*07/25/17 16:28*	*1*
13C4 PFOS	*86*		*25 - 150*	*07/20/17 09:15*	*07/25/17 16:28*	*1*
13C4-PFHpA	*116*		*25 - 150*	*07/20/17 09:15*	*07/25/17 16:28*	*1*
13C5 PFPeA	*101*		*25 - 150*	*07/20/17 09:15*	*07/25/17 16:28*	*1*

Isotope Dilution Summary

Client: New York State D.E.C.
Project/Site: South Hill Dump #712009

TestAmerica Job ID: 480-120783-1

Method: 537 (modified) - Perfluorinated Hydrocarbons

Matrix: Water **Prep Type: Total/NA**

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	13C4 PFBA (25-150)	13C2 PFHxA (25-150)	13C4 PFOA (25-150)	13C5 PFNA (25-150)	13C2 PFDA (25-150)	13C2 PFUnA (25-150)	13C2 PFDoA (25-150)	18O2 PFHxS (25-150)
480-120783-1	MW-1S	56	81	108	101	121	127	104	133
480-120783-2	MW-1B	110	121	128	122	139	151 *	139	114
480-120783-3	MW-3SR2	65	90	102	92	87	73	59	111
480-120783-4	MW-3BR2	65	88	108	98	109	107	88	96
480-120783-5	MW-4S	76	96	113	100	115	110	93	118
480-120783-6	MW-4B	105	121	135	143	158 *	171 *	154 *	114
480-120783-7	REAGENT BLANK	105	104	109	98	106	104	81	100
LCS 320-175074/2-A	Lab Control Sample	115	117	129	112	123	124	105	115
LCSD 320-175074/3-A	Lab Control Sample Dup	111	117	125	112	129	124	106	114
MB 320-175074/1-A	Method Blank	125	130	147	133	147	147	116	129

		Percent Isotope Dilution Recovery (Acceptance Limits)		
Lab Sample ID	Client Sample ID	13C4 PFOS (25-150)	13C4-PFHpA (25-150)	13C5 PFPeA (25-150)
480-120783-1	MW-1S	122	109	70
480-120783-2	MW-1B	107	138	124
480-120783-3	MW-3SR2	103	114	82
480-120783-4	MW-3BR2	94	109	84
480-120783-5	MW-4S	103	113	90
480-120783-6	MW-4B	108	143	121
480-120783-7	REAGENT BLANK	86	116	101
LCS 320-175074/2-A	Lab Control Sample	106	136	115
LCSD 320-175074/3-A	Lab Control Sample Dup	99	134	111
MB 320-175074/1-A	Method Blank ✓	121	154 * ✓	130

JR 8/26/17

Surrogate Legend

13C4 PFBA = 13C4 PFBA
13C2 PFHxA = 13C2 PFHxA
13C4 PFOA = 13C4 PFOA
13C5 PFNA = 13C5 PFNA
13C2 PFDA = 13C2 PFDA = perfluorodecanoic acid * (UJ)
13C2 PFUnA = 13C2 PFUnA = perfluoroundecanoic acid (UJ)
13C2 PFDoA = 13C2 PFDoA = perfluorododecanoic acid (UJ)
18O2 PFHxS = 18O2 PFHxS
13C4 PFOS = 13C4 PFOS
13C4-PFHpA = 13C4-PFHpA
13C5 PFPeA = 13C5 PFPeA

IS - H ↓

(MW-1B MW-4B as above)

* and perfluorodecane sulfonic acid

Method: 537 (modified) - Perfluorinated Hydrocarbons (Continued)

Lab Sample ID: LCS 320-175074/2-A
Matrix: Water
Analysis Batch: 175952

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 175074

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Perfluorotridecanoic Acid (PFTriA)	40.0	47.3		ng/L		118	51 - 139
Perfluorotetradecanoic acid (PFTeA)	40.0	58.6	*	ng/L		146	47 - 130
Perfluorobutanesulfonic acid (PFBS)	35.4	41.2		ng/L		117	55 - 147
Perfluorohexanesulfonic acid (PFHxS)	36.4	36.0		ng/L		99	58 - 138
Perfluoroheptanesulfonic Acid (PFHpS)	38.1	45.8		ng/L		120	32 - 170
Perfluorooctanesulfonic acid (PFOS)	37.1	40.9		ng/L		110	47 - 162
Perfluorodecanesulfonic acid (PFDS)	38.6	41.1		ng/L		107	35 - 157

Jf → U for Blks; no quals

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
13C4 PFBA	*115*		*25 - 150*
13C2 PFHxA	*117*		*25 - 150*
13C4 PFOA	*129*		*25 - 150*
13C5 PFNA	*112*		*25 - 150*
13C2 PFDA	*123*		*25 - 150*
13C2 PFUnA	*124*		*25 - 150*
13C2 PFDoA	*105*		*25 - 150*
18O2 PFHxS	*115*		*25 - 150*
13C4 PFOS	*106*		*25 - 150*
13C4-PFHpA	*136*		*25 - 150*
13C5 PFPeA	*115*		*25 - 150*

Lab Sample ID: LCSD 320-175074/3-A
Matrix: Water
Analysis Batch: 175952

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 175074

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Perfluorobutanoic acid (PFBA)	40.0	48.7		ng/L		122	74 - 138	5	30
Perfluoropentanoic acid (PFPeA)	40.0	44.4		ng/L		111	69 - 134	6	30
Perfluorohexanoic acid (PFHxA)	40.0	43.2		ng/L		108	70 - 136	0	30
Perfluoroheptanoic acid (PFHpA)	40.0	43.7		ng/L		109	63 - 135	2	30
Perfluorooctanoic acid (PFOA)	40.0	42.7		ng/L		107	63 - 141	3	30
Perfluorononanoic acid (PFNA)	40.0	43.6		ng/L		109	71 - 140	4	30
Perfluorodecanoic acid (PFDA)	40.0	43.6		ng/L		109	66 - 141	2	30
Perfluoroundecanoic acid (PFUnA)	40.0	45.0		ng/L		112	68 - 139	5	30
Perfluorododecanoic acid (PFDoA)	40.0	45.7		ng/L		114	71 - 139	1	30
Perfluorotridecanoic Acid (PFTriA)	40.0	48.7		ng/L		122	51 - 139	3	30
Perfluorotetradecanoic acid (PFTeA)	40.0	64.6	*	ng/L		162	47 - 130	10	30
Perfluorobutanesulfonic acid (PFBS)	35.4	41.9		ng/L		119	55 - 147	2	30
Perfluorohexanesulfonic acid (PFHxS)	36.4	37.2		ng/L		102	58 - 138	3	30

Jf → U for Blanks; & no quals

All else OK for 8/26/17

PFAS Sample Calc

TestAmerica Sacramento
Target Compound Quantitation Report

Conc = $\frac{139634}{4440334} \times \frac{50}{1.0668} = 1.474 \frac{ng}{mL} \times \frac{1.5mL}{.2641L}$ PFOA

$= 2.79 \frac{ng}{L}$

OK

JR 9/29/17

Data File:	\\ChromNa\Sacramento\ChromData\A8_N\20170726-45877.b\2017.07.25B_015.d		
Lims ID:	480-120783-A-1-A		
Client ID:	MW-1S		
Sample Type:	Client		
Inject. Date:	25-Jul-2017 15:47:23	ALS Bottle#: 13	Worklist Smp#: 15
Injection Vol:	2.0 ul	Dil. Factor: 1.0000	
Sample Info:	480-120783-a-1-a		
Misc. Info.:	Plate: 1 Rack: 4		
Operator ID:	SACINSTLCMS01	Instrument ID: A8_N	
Method:	\\ChromNa\Sacramento\ChromData\A8_N\20170726-45877.b\A8_N.m		
Limit Group:	LC PFC ICAL		
Last Update:	26-Jul-2017 13:28:22	Calib Date: 23-Jul-2017 13:58:26	
Integrator:	Picker		
Quant Method:	Isotopic Dilution	Quant By: Initial Calibration	
Last ICal File:	\\ChromNA\Sacramento\ChromData\A8_N\20170723-45765.b\2017.07.23ICAL_010.d		
Column 1 :		Det: EXP1	
Process Host:	XAWRK028		

First Level Reviewer: chandrasenas Date: 26-Jul-2017 12:20:37

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 1 13C4 PFBA										
217.00 > 172.00	1.554	1.559	-0.005		4355946	27.9		55.8	14787	
2 Perfluorobutyric acid										
212.90 > 169.00	1.554	1.559	-0.005	1.000	83641	1.09			23.4	
D 3 13C5-PFPeA										
267.90 > 223.00	1.764	1.778	-0.014		3878177	35.1		70.2	23209	
4 Perfluoropentanoic acid										
262.90 > 219.00	1.764	1.778	-0.014	1.000	249003	3.08			68.3	
5 Perfluorobutanesulfonic acid										M
298.90 > 80.00	1.791	1.806	-0.015	1.000	30611	0.1126			15.7	M
298.90 > 99.00	1.791	1.806	-0.015	1.000	12218		2.51(0.00-0.00)		10.9	M
D 7 13C2 PFHxA										
315.00 > 270.00	2.040	2.058	-0.018		4094579	40.5		81.0	22135	
6 Perfluorohexanoic acid										
313.00 > 269.00	2.040	2.058	-0.018	1.000	647557	8.31			260	
D 9 13C4-PFHpA										
367.00 > 322.00	2.385	2.393	-0.008		4550461	54.3		109	24314	
10 Perfluoroheptanoic acid										
363.00 > 319.00	2.385	2.393	-0.008	1.000	114584	1.23			84.4	
D 11 18O2 PFHxS										
403.00 > 84.00	2.401	2.409	-0.008		8634322	62.8		133	39246	
8 Perfluorohexanesulfonic acid										
399.00 > 80.00	2.401	2.409	-0.008	1.000	45812	0.2320			35.6	
D 14 13C4 PFOA										
417.00 > 372.00	2.749	2.756	-0.007		4440334	54.1		108	21480	
* 62 13C2-PFOA										
415.00 > 370.00	2.742	2.756	-0.014		3991	50.0			123	

PFAS Sample Calc

Report Date: 26-Jul-2017 13:28:56 Chrom Revision: 2.2 26-Jun-2017 08:09:44
Data File: \\ChromNa\Sacramento\ChromData\A8_N\20170726-45877.b\2017.07.25B_015.d

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
15 Perfluorooctanoic acid										M
413.00 > 369.00	2.749	2.756	-0.007	1.000	139634	1.47			55.7	M
413.00 > 169.00	2.749	2.756	-0.007	1.000	82199		1.70(0.90-1.10)		277	M
16 Perfluoroheptanesulfonic Acid										
449.00 > 80.00	2.757	2.763	-0.007	1.000	3256	0.0221			22.2	
D 19 13C5 PFNA										
468.00 > 423.00	3.129	3.131	-0.003		3325657	50.6		101	20914	
D 18 13C4 PFOS										
503.00 > 80.00	3.129	3.131	-0.003		6290214	58.1		122	19458	
20 Perfluorononanoic acid										
463.00 > 419.00	3.129	3.140	-0.012	1.000	5765	0.0851			7.4	
D 23 13C2 PFDA										
515.00 > 470.00	3.489	3.497	-0.008		3387501	60.7		121	12649	
24 Perfluorodecanoic acid										
513.00 > 469.00	3.489	3.497	-0.008	1.000	3093	0.0466			11.1	
31 Perfluoroundecanoic acid										
563.00 > 519.00	3.816	3.822	-0.006	1.000	10180	0.0866			22.9	
D 30 13C2 PFUnA										
565.00 > 520.00	3.816	3.822	-0.006		2579557	63.3		127	9325	
D 36 13C2 PFDoA										
615.00 > 570.00	4.113	4.116	-0.003		2319107	51.9		104	6104	
42 Perfluorotetradecanoic acid										M
712.50 > 668.90	4.645	4.614	0.031	1.000	34837	0.3908			3.5	M
713.00 > 169.00	4.604	4.614	-0.010	0.991	3534		9.86(0.00-0.00)		75.8	

QC Flag Legend

Review Flags

M - Manually Integrated

PFAS method Blk

TestAmerica Sacramento
Target Compound Quantitation Report

Data File:	\\ChromNa\Sacramento\ChromData\A8_N\20170726-45877.b\2017.07.25B_002.d
Lims ID:	MB 320-175074/1-A
Client ID:	
Sample Type:	MB
Inject. Date:	25-Jul-2017 14:17:41 ALS Bottle#: 1 Worklist Smp#: 2
Injection Vol:	2.0 ul Dil. Factor: 1.0000
Sample Info:	mb 320-175074/1-a
Misc. Info.:	Plate: 1 Rack: 4
Operator ID:	SACINSTLCMS01 Instrument ID: A8_N
Method:	\\ChromNa\Sacramento\ChromData\A8_N\20170726-45877.b\A8_N.m
Limit Group:	LC PFC ICAL
Last Update:	26-Jul-2017 11:32:34 Calib Date: 23-Jul-2017 13:58:26
Integrator:	Picker
Quant Method:	Isotopic Dilution Quant By: Initial Calibration
Last ICal File:	\\ChromNA\Sacramento\ChromData\A8_N\20170723-45765.b\2017.07.23ICAL_010.d
Column 1 :	Det: EXP1
Process Host:	XAWRK028

Conc PFBA = 90439 / 9716633 x 50 / .8820 = 0.5276 ng/mL x .5mL / .25L = 1.055 ng/L

OK

9/24/17

First Level Reviewer: chandrasenas Date: 26-Jul-2017 11:05:21

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 1 13C4 PFBA										
217.00 > 172.00	1.547	1.559	-0.012		9716633	62.3		125	36891	
2 Perfluorobutyric acid										M
212.90 > 169.00	1.547	1.559	-0.012	1.000	90439	0.5276	✓		25.3	M
D 3 13C5-PFPeA										
267.90 > 223.00	1.756	1.778	-0.022		7196055	65.1		130	45321	
D 47 13C3-PFBS										
301.90 > 83.00	1.784	1.797	-0.013		178514	62.8		135	5247	
5 Perfluorobutanesulfonic acid										
298.90 > 80.00	1.784	1.806	-0.022	1.000	8728	0.0331			6.1	
298.90 > 99.00	1.784	1.806	-0.022	1.000	7257		1.20(0.00-0.00)		6.9	
61 Sodium 1H,1H,2H,2H-perfluorohexane										
327.00 > 307.00	1.986	2.013	-0.027	1.000	1445	NR			73.5	
D 7 13C2 PFHxA										
315.00 > 270.00	2.032	2.058	-0.026		6592866	65.2		130	30660	
6 Perfluorohexanoic acid										
313.00 > 269.00	2.032	2.058	-0.026	1.000	11738	0.0935			20.8	
D 9 13C4-PFHpA										
367.00 > 322.00	2.369	2.393	-0.024		6457020	77.0		154	31550	
10 Perfluoroheptanoic acid										M
363.00 > 319.00	2.369	2.393	-0.024	1.000	5926	0.0447			11.2	M
D 11 18O2 PFHxS										
403.00 > 84.00	2.377	2.409	-0.032		8369130	60.9		129	28295	
8 Perfluorohexanesulfonic acid										
399.00 > 80.00	2.385	2.409	-0.024	1.000	31687	0.1655			48.5	
D 12 M2-6:2FTS										
429.00 > 409.00	2.700	2.727	-0.027		6052	0.1273		0.0	321	
13 Sodium 1H,1H,2H,2H-perfluorooctane										
427.00 > 407.00	2.700	2.734	-0.034	1.000	45474	NR			2074	

PFAS LCS Calc

TestAmerica Sacramento
Target Compound Quantitation Report

Conc PFOA = 2334880 / 5282286 X 50 / 1.0668 X 1.5mL / 250L = 41.43 ng/L

Data File:	\\ChromNa\Sacramento\ChromData\A8_N\20170726-45877.b\2017.07.25B_003.d				
Lims ID:	LCS 320-175074/2-A				
Client ID:					
Sample Type:	LCS				
Inject. Date:	25-Jul-2017 14:24:35	ALS Bottle#:	2	Worklist Smp#:	3
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Sample Info:	lcs 320-175074/2-a				
Misc. Info.:	Plate: 1 Rack: 4				
Operator ID:	SACINSTLCMS01	Instrument ID:	A8_N		
Method:	\\ChromNa\Sacramento\ChromData\A8_N\20170726-45877.b\A8_N.m				
Limit Group:	LC PFC ICAL				
Last Update:	26-Jul-2017 11:32:34	Calib Date:	23-Jul-2017 13:58:26		
Integrator:	Picker				
Quant Method:	Isotopic Dilution	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Sacramento\ChromData\A8_N\20170723-45765.b\2017.07.23ICAL_010.d				
Column 1 :			Det: EXP1		
Process Host:	XAWRK028				

OK

9/29/17

First Level Reviewer: chandrasenas Date: 26-Jul-2017 11:06:14

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 1 13C4 PFBA										
217.00 > 172.00	1.553	1.559	-0.006		8976829	57.5		115	30546	
2 Perfluorobutyric acid										
212.90 > 169.00	1.553	1.559	-0.006	1.000	3654496	23.1		115	1309	
D 3 13C5-PFPeA										
267.90 > 223.00	1.763	1.778	-0.015		6369306	57.6		115	45128	
4 Perfluoropentanoic acid										
262.90 > 219.00	1.763	1.778	-0.015	1.000	2790368	21.0		105	1543	
D 47 13C3-PFBS										
301.90 > 83.00	1.782	1.797	-0.015		157457	55.4		119	4610	
5 Perfluorobutanesulfonic acid										
298.90 > 80.00	1.791	1.806	-0.015	1.000	4841054	20.6		117	2988	
298.90 > 99.00	1.791	1.806	-0.015	1.000	1934855		2.50(0.00-0.00)		2292	
D 7 13C2 PFHxA										
315.00 > 270.00	2.040	2.058	-0.018		5932593	58.6		117	31941	
6 Perfluorohexanoic acid										
313.00 > 269.00	2.040	2.058	-0.018	1.000	2441611	21.6		108	4720	
D 9 13C4-PFHpA										
367.00 > 322.00	2.371	2.393	-0.022		5686120	67.8		136	27251	
10 Perfluoroheptanoic acid										
363.00 > 319.00	2.371	2.393	-0.022	1.000	2486947	21.3		107	5241	
D 11 18O2 PFHxS										
403.00 > 84.00	2.387	2.409	-0.022		7463717	54.3		115	30987	
8 Perfluorohexanesulfonic acid										
399.00 > 80.00	2.387	2.409	-0.022	1.000	3073277	18.0		98.9	2426	
D 14 13C4 PFOA										
417.00 > 372.00	2.732	2.756	-0.024		5282286	64.3		129	29704	

PFAS LCS Calc

Report Date: 26-Jul-2017 11:32:44 Chrom Revision: 2.2 26-Jun-2017 08:09:44
Data File: \\ChromNa\Sacramento\ChromData\A8_N\20170726-45877.b\2017.07.25B_003.d

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
15 Perfluorooctanoic acid										
413.00 > 369.00	2.732	2.756	-0.024	1.000	2334880	20.7		104	552	
413.00 > 169.00	2.732	2.756	-0.024	1.000	1322738		1.77(0.90-1.10)		9118	
16 Perfluoroheptanesulfonic Acid										
449.00 > 80.00	2.739	2.763	-0.024	1.000	2924882	22.8		120	22669	
17 Perfluorooctane sulfonic acid										
499.00 > 80.00	3.108	3.131	-0.023	1.000	2476913	20.5		110	8966	
499.00 > 99.00	3.108	3.131	-0.023	1.000	557091		4.45(0.90-1.10)		3850	
D 19 13C5 PFNA										
468.00 > 423.00	3.108	3.131	-0.023		3682740	56.0		112	18714	
D 18 13C4 PFOS										
503.00 > 80.00	3.108	3.131	-0.023		5470295	50.6		106	18665	
20 Perfluorononanoic acid										
463.00 > 419.00	3.108	3.140	-0.032	1.000	1576377	21.0		105	4058	
D 21 13C8 FOSA										
506.00 > 78.00	3.465	3.487	-0.022		7317412	40.0		80.1	11787	
D 23 13C2 PFDA										
515.00 > 470.00	3.465	3.497	-0.032		3440640	61.6		123	13105	
22 Perfluorooctane Sulfonamide										
498.00 > 78.00	3.465	3.497	-0.032	1.000	2953986	22.4		112	12070	
24 Perfluorodecanoic acid										
513.00 > 469.00	3.465	3.497	-0.032	1.000	1504043	22.3		112	6620	
29 Perfluorodecane Sulfonic acid										
599.00 > 80.00	3.781	3.803	-0.022	1.000	1465104	20.6		107	10690	
31 Perfluoroundecanoic acid										
563.00 > 519.00	3.800	3.822	-0.022	1.000	1118308	21.5		107	1998	
D 30 13C2 PFUnA										
565.00 > 520.00	3.800	3.822	-0.022		2526116	62.0		124	8490	
37 Perfluorododecanoic acid										
613.00 > 569.00	4.097	4.116	-0.019	1.000	1006207	23.1		116	2865	
D 36 13C2 PFDoA										
615.00 > 570.00	4.097	4.116	-0.019		2343032	52.5		105	4250	
41 Perfluorotridecanoic acid										
663.00 > 619.00	4.360	4.380	-0.020	1.000	942983	23.6		118	359	
42 Perfluorotetradecanoic acid										
712.50 > 668.90	4.604	4.614	-0.010	1.000	2638055	29.3		146	193	
713.00 > 169.00	4.594	4.614	-0.020	0.998	319691		8.25(0.00-0.00)		4656	
D 43 13C2-PFTeDA										
715.00 > 670.00	4.604	4.614	-0.010		5981129	73.6		147	32916	
45 Perfluorohexadecanoic acid										
813.00 > 769.00	5.010	5.025	-0.015	1.000	887991	23.3		116	146	
D 44 13C2-PFHxDA										
815.00 > 770.00	5.010	5.025	-0.015		2255337	54.6		109	2999	
46 Perfluorooctadecanoic acid										
913.00 > 869.00	5.368	5.383	-0.015	1.000	802336	22.4		112	318	

FORM VI
LCMS BY ISOTOPIC DILUTION - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Sacramento Job No.: 480-120783-1 Analy Batch No.: 175477

SDG No.:

Instrument ID: A8_N GC Column: GeminiC18 3 ID: 3(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/23/2017 13:10 Calibration End Date: 07/23/2017 13:58 Calibration ID: 32679

ANALYTE	RRF LVL 1 / LVL 6	RRF LVL 2 / LVL 7	RRF LVL 3 / LVL 8	RRF LVL 4	RRF LVL 5	CURVE TYPE	COEFFICIENT B	COEFFICIENT M1	COEFFICIENT M2	#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
Perfluorobutanoic acid (PFBA)		0.9204	0.9010	0.9703	0.9219	AveID		0.8820				8.5		35.0			
	0.8832	0.8389	0.7384														
Perfluoropentanoic acid (PFPeA)		1.3238	1.0545	1.0382	0.9999	AveID		1.0421				12.9		35.0			
	0.9641	1.0162	0.8979														
Perfluorobutanesulfonic acid (PFBS)		1.6998	1.5456	1.6131	1.5877	AveID		1.4891				12.3		50.0			
	1.4777	1.3352	1.1643														
4:2 FTS		1.1772	0.9260	1.0386	0.9471	AveID		0.9713				11.0		50.0			
	0.9206	0.9459	0.8438														
Perfluorohexanoic acid (PFHxA)		1.0731	0.9512	0.9809	0.9481	AveID		0.9521				7.0		35.0			
	0.9357	0.9221	0.8534														
Perfluoroheptanoic acid (PFHpA)		1.2195	1.0699	1.0084	0.9973	AveID		1.0264				9.1		35.0			
	0.9656	0.9596	0.9644														
Perfluorohexanesulfonic acid (PFHxS)		1.3400	1.1571	1.0488	1.0267	AveID		1.0819				11.8		35.0			
	1.0066	1.0197	0.9743														
6:2FTS		0.9739	0.9659	0.9369	0.9112	AveID		0.8958				8.4		35.0			
	0.8685	0.8557	0.7586														
Perfluorooctanoic acid (PFOA)		1.1606	1.0051	1.0728	1.1094	AveID		1.0668 ✓				5.1 ✓		35.0			
	1.0181	1.0660	1.0353														
Perfluoroheptanesulfonic Acid (PFHpS)		1.1568	1.1294	1.1726	1.1912	AveID		1.1216				5.7		50.0			
	1.1318	1.0561	1.0130														
Perfluorooctanesulfonic acid (PFOS)		1.1299	1.0601	1.0888	1.0669	AveID		1.0572				4.3		35.0			
	1.0166	0.9935	1.0444														
Perfluorononanoic acid (PFNA)		1.1047	1.0187	1.0561	1.0408	AveID		1.0181				5.2		35.0			
	0.9796	0.9716	0.9554														
Perfluorooctane Sulfonamide (FOSA)		1.0272	0.8713	0.9579	0.9280	AveID		0.9018				9.5		35.0			
	0.8811	0.8960	0.7514														
8:2FTS		1.0464	0.9600	0.9720	0.8931	AveID		0.9107				9.6		35.0			
	0.8273	0.8769	0.7991														
Perfluorodecanoic acid (PFDA)		1.1112	0.9785	0.9721	0.9707	AveID		0.9799				6.7		35.0			
	0.9162	0.9934	0.9171														
N-methyl perfluorooctane sulfonamidoacetic acid (NMeFOSAA)		0.8705	0.9132	0.8919	0.9276	AveID		0.9100				2.5		35.0			
	0.9060	0.9391	0.9213														
Perfluorodecanesulfonic acid (PFDS)		0.6243	0.6109	0.6422	0.6351	AveID		0.6225				2.2		50.0			
	0.6238	0.6204	0.6007														
N-ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA)		0.8814	0.8379	0.8567	0.8398	AveID		0.8488				1.9		35.0			
	0.8435	0.8445	0.8378														
Perfluoroundecanoic acid (PFUnA)		1.2295	1.1533	1.0802	1.0299	L2ID	0.1085	1.0255							0.9990		0.9900
	1.0189	1.0508	0.9719														

PFAS ICAL calc

JA 9/29/17

Σ RSD = 1.0544987 / 1.066757 = 5.109 OK

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI 537 (modified)

METALS

NYSDEC CATEGORY A REVIEW RECORD
Project: South Hill Dump
Method : 6010C
Laboratory and SDG(s): TAL 480-120641-1
Date: 8/26/17
Reviewer: Julie Rickard

Review Level [X] CATEGORY A

1. ☑ **Case Narrative Review and Data Package Completeness** COMMENTS
Were all the samples on the COC analyzed for the requested analyses? (YES) NO (circle one)

Are Field Sample IDs and Locations assigned correctly? (YES) NO (circle one)

Narrative review: OK

2. ☑ **Holding time and Sample Collection**
Were all samples prepared and analyzed with the holding time (6 months)? (YES) NO

3. ☑ **QC Blanks**
Are method blanks free of contamination?. YES (NO) (circle one)
Aqueous: NP Solids: See attached
Are Rinse blanks free of contamination? YES NO (NA) (circle one)

4. ☑ **Matrix Spike**
Were MS/MSDs submitted/analyzed? (YES) NO
MW-4B/MW-4B DUP MS/MSD: OK
Were all results were within 75-125% limits? YES (NO) NA (circle one)
See attached for qual

5. ☑ **Field Duplicates**
Were Field Duplicates submitted/analyzed? (YES) NO
MW-4B/MW-4B DUP; Fe RPD = 65 (J) MW-4B; MW-4B DUP
Aqueous RPD within limit? (20) YES NO NA (circle one)
Soil RPD within limit? (35) YES NO (NA) (circle one) (professional judgment)

6. ☑ **Reporting Limits:** Were samples analyzed at a dilution? YES (NO) (circle one)

7. ☑ **Electronic Data Review and Edits:** Does the EDD match the Form Is? (YES) NO (circle one)

8. ☑ **Table Review:**
Table 1 (Samples and Analytical Methods)
Table 2 (Analytical Results)
Table 3 (Qualification Actions)
Were all tables produced and reviewed? (YES) NO (circle one)

Sample Summary

Client: New York State D.E.C.
Project/Site: South Hill Dump #712009

TestAmerica Job ID: 480-120641-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
480-120641-1	TRIP BLANK	Water	07/05/17 11:30	07/07/17 01:15
480-120641-2	MW-4B	Water	07/05/17 11:49	07/07/17 01:15
480-120641-3	MW-4B DUP] field dup	Water	07/05/17 11:49	07/07/17 01:15
480-120641-4	MW-4S	Water	07/05/17 11:58	07/07/17 01:15
480-120641-5	MW-3SR2	Water	07/05/17 13:38	07/07/17 01:15
480-120641-6	MW-3BR2	Water	07/05/17 13:48	07/07/17 01:15
480-120641-7	MW-3SR	Water	07/05/17 15:15	07/07/17 01:15
480-120641-8	MW-3BR	Water	07/05/17 15:20	07/07/17 01:15
480-120641-9	MW-1B	Water	07/05/17 17:00	07/07/17 01:15
480-120641-10	MW-1S	Water	07/05/17 17:10	07/07/17 01:15
480-120641-11	SEEP-1	Water	07/06/17 08:20	07/07/17 01:15
480-120641-12	SEEP-1 DUP] field dup (PCBs only)	Water	07/06/17 08:20	07/07/17 01:15
480-120641-13	SW-1	Water	07/06/17 10:30	07/07/17 01:15
480-120641-14	SED-1	Solid	07/06/17 10:40	07/07/17 01:15
480-120641-15	MW-2S	Water	07/06/17 11:15	07/07/17 01:15
480-120641-16	MW-2B	Water	07/06/17 11:20	07/07/17 01:15
480-120641-17	MW-2D	Water	07/06/17 11:30	07/07/17 01:15

Job ID: 480-120641-1 (Continued)

Laboratory: TestAmerica Buffalo (Continued)

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

Metals

Method(s) 6010C: The Low Level Continuing Calibration Verification (CCVL 480-366395/31) contained Total Iron outside the control limits. All reported samples (LCDSRM 480-366206/3-), (LCSSRM 480-366206/2-) and (MB 480-366206/1-A) associated with this CCVL were either below the laboratory's standard reporting limit for this analyte or contained this analyte at a concentration greater than 10X the value found in the CCVL; therefore, re-analysis of samples was not performed.

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

Organic Prep

Method(s) 3550C: Sample: SED-1 (480-120641-14) was decanted prior to preparation.

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

VOA Prep

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

Method: 6010C - Metals (ICP) (Continued)

Lab Sample ID: MB 480-366206/1-A
Matrix: Solid
Analysis Batch: 366395

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 366206

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	ND		9.2	4.0	mg/Kg		07/10/17 14:53	07/11/17 13:07	1
Antimony	ND		13.7	0.37	mg/Kg		07/10/17 14:53	07/11/17 13:07	1
Arsenic	ND		1.8	0.37	mg/Kg		07/10/17 14:53	07/11/17 13:07	1
Barium	ND		0.46	0.10	mg/Kg		07/10/17 14:53	07/11/17 13:07	1
Beryllium	ND		0.18	0.026	mg/Kg		07/10/17 14:53	07/11/17 13:07	1
Cadmium	ND		0.18	0.027	mg/Kg		07/10/17 14:53	07/11/17 13:07	1
Calcium	ND		45.8	3.0	mg/Kg		07/10/17 14:53	07/11/17 13:07	1
Chromium	ND		0.46	0.18	mg/Kg		07/10/17 14:53	07/11/17 13:07	1
Cobalt	ND		0.46	0.046	mg/Kg		07/10/17 14:53	07/11/17 13:07	1
Copper	ND		0.92	0.19	mg/Kg		07/10/17 14:53	07/11/17 13:07	1
Iron	4.03	J ^	9.2	3.2	mg/Kg		07/10/17 14:53	07/11/17 13:07	1
Lead	ND		0.92	0.22	mg/Kg		07/10/17 14:53	07/11/17 13:07	1
Magnesium	ND		18.3	0.85	mg/Kg		07/10/17 14:53	07/11/17 13:07	1
Manganese	ND		0.18	0.029	mg/Kg		07/10/17 14:53	07/11/17 13:07	1
Nickel	ND		4.6	0.21	mg/Kg		07/10/17 14:53	07/11/17 13:07	1
Potassium	ND		27.5	18.3	mg/Kg		07/10/17 14:53	07/11/17 13:07	1
Selenium	ND		3.7	0.37	mg/Kg		07/10/17 14:53	07/11/17 13:07	1
Silver	ND		0.55	0.18	mg/Kg		07/10/17 14:53	07/11/17 13:07	1
Sodium	ND		128	11.9	mg/Kg		07/10/17 14:53	07/11/17 13:07	1
Thallium	ND		5.5	0.27	mg/Kg		07/10/17 14:53	07/11/17 13:07	1
Vanadium	ND		0.46	0.10	mg/Kg		07/10/17 14:53	07/11/17 13:07	1
Zinc	ND		1.8	0.59	mg/Kg		07/10/17 14:53	07/11/17 13:07	1

> ; no quals

Lab Sample ID: LCDSRM 480-366206/3-A
Matrix: Solid
Analysis Batch: 366395

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 366206

Analyte	Spike Added	LCDSRM Result	LCDSRM Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Aluminum	8200	9403		mg/Kg		114.7	40.0 - 159.8	2	20
Antimony	105	68.31		mg/Kg		65.1	19.6 - 254.3	1	20
Arsenic	221	194.2		mg/Kg		87.9	71.0 - 133.5	0	20
Barium	428	376.1		mg/Kg		87.9	74.3 - 125.5	2	20
Beryllium	112	97.20		mg/Kg		86.8	75.0 - 125.0	0	20
Cadmium	126	111.6		mg/Kg		88.6	73.3 - 126.2	1	20
Calcium	6160	5427		mg/Kg		88.1	73.9 - 126.1	0	20
Chromium	74.7	67.10		mg/Kg		89.8	68.5 - 131.3	2	20
Cobalt	198	202.7		mg/Kg		102.4	74.7 - 125.8	0	20
Copper	83.3	75.30		mg/Kg		90.4	73.8 - 130.9	1	20
Iron	14600	14450	^	mg/Kg		99.0	36.1 - 163.7	1	20

Method: 6010C - Metals (ICP) (Continued)

Lab Sample ID: 480-120641-2 MS
Matrix: Water
Analysis Batch: 366450

Client Sample ID: MW-4B
Prep Type: Total/NA
Prep Batch: 365927

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Barium	0.041		0.200	0.260		mg/L		109	75 - 125
Beryllium	0.00078	J	0.200	0.202		mg/L		101	75 - 125
Cadmium	ND		0.200	0.209		mg/L		105	75 - 125
Calcium	27.6		10.0	38.06		mg/L		104	75 - 125
Chromium	ND		0.200	0.199		mg/L		100	75 - 125
Cobalt	ND		0.200	0.197		mg/L		98	75 - 125
Copper	ND		0.200	0.203		mg/L		102	75 - 125
Iron (J+) all MW sample	11.7	F1	10.0	43.10	F1	mg/L		314	75 - 125
Lead	ND		0.200	0.209		mg/L		104	75 - 125
Magnesium	6.9		10.0	17.21		mg/L		103	75 - 125
Manganese (J+) all MW sample	0.11	F1	0.200	0.375	F1	mg/L		132	75 - 125
Nickel	0.0014	J	0.200	0.202		mg/L		100	75 - 125
Potassium	0.52		10.0	10.48		mg/L		100	75 - 125
Selenium	ND		0.200	0.201		mg/L		100	75 - 125
Silver	ND		0.0500	0.0492		mg/L		98	75 - 125
Sodium	3.2		10.0	12.90		mg/L		96	75 - 125
Thallium	ND		0.200	0.203		mg/L		102	75 - 125
Vanadium	ND		0.200	0.199		mg/L		100	75 - 125
Zinc	0.0017	J	0.200	0.208		mg/L		103	75 - 125

gr 6/26/17

Lab Sample ID: 480-120641-2 MSD
Matrix: Water
Analysis Batch: 366450

Client Sample ID: MW-4B
Prep Type: Total/NA
Prep Batch: 365927

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Aluminum	0.066	J	10.0	10.20		mg/L		101	75 - 125	1	20
Antimony	ND		0.200	0.216		mg/L		108	75 - 125	1	20
Arsenic	ND		0.200	0.206		mg/L		103	75 - 125	0	20
Barium	0.041		0.200	0.260		mg/L		109	75 - 125	0	20
Beryllium	0.00078	J	0.200	0.203		mg/L		101	75 - 125	0	20
Cadmium	ND		0.200	0.212		mg/L		106	75 - 125	1	20
Calcium	27.6		10.0	37.61		mg/L		100	75 - 125	1	20
Chromium	ND		0.200	0.203		mg/L		102	75 - 125	2	20
Cobalt	ND		0.200	0.200		mg/L		100	75 - 125	2	20
Copper	ND		0.200	0.207		mg/L		104	75 - 125	2	20
Iron See above	11.7	F1	10.0	43.11	F1	mg/L		314	75 - 125	0	20
Lead	ND		0.200	0.213		mg/L		106	75 - 125	2	20
Magnesium ↓	6.9		10.0	17.35		mg/L		105	75 - 125	1	20
Manganese	0.11	F1	0.200	0.377	F1	mg/L		133	75 - 125	1	20
Nickel	0.0014	J	0.200	0.205		mg/L		102	75 - 125	1	20
Potassium	0.52		10.0	10.53		mg/L		100	75 - 125	0	20
Selenium	ND		0.200	0.198		mg/L		99	75 - 125	2	20
Silver	ND		0.0500	0.0501		mg/L		100	75 - 125	2	20
Sodium	3.2		10.0	12.81		mg/L		96	75 - 125	1	20
Thallium	ND		0.200	0.207		mg/L		104	75 - 125	2	20
Vanadium	ND		0.200	0.200		mg/L		100	75 - 125	1	20
Zinc	0.0017	J	0.200	0.211		mg/L		105	75 - 125	2	20

field_sample_i	qc_cc	lab_sample_id	analysis_m	param_name	final_result	final_	RPD	VAL	QUAL	Val_R	result_uom	detection_	SQL_text
MW-4B	FS	480-120641-2	SW6010C	Aluminum	0.066	J	100.8	OK			mg/l	0.060	0.20
MW-4B DUP	FD	480-120641-3	SW6010C	Aluminum	0.20	U					mg/l	0.060	0.20
MW-4B	FS	480-120641-2	SW6010C	Barium	0.041		13.6	OK			mg/l	0.00070	0.0020
MW-4B DUP	FD	480-120641-3	SW6010C	Barium	0.047						mg/l	0.00070	0.0020
MW-4B	FS	480-120641-2	SW6010C	Beryllium	0.00078	J	87.8	OK			mg/l	0.00030	0.0020
MW-4B DUP	FD	480-120641-3	SW6010C	Beryllium	0.0020	U					mg/l	0.00030	0.0020
MW-4B	FS	480-120641-2	SW6010C	Calcium	27.6		1.8	OK			mg/l	0.10	0.50
MW-4B DUP	FD	480-120641-3	SW6010C	Calcium	28.1						mg/l	0.10	0.50
MW-4B	FS	480-120641-2	SW6010C	Copper	0.010	U	139.0	OK			mg/l	0.0016	0.010
MW-4B DUP	FD	480-120641-3	SW6010C	Copper	0.0018	J					mg/l	0.0016	0.010
MW-4B	**FS**	**480-120641-2**	**SW6010C**	**Iron**	**11.7**	**F1**	**64.7**	**J**		**FD**	**mg/l**	**0.019**	**0.050**
MW-4B DUP	**FD**	**480-120641-3**	**SW6010C**	**Iron**	**22.9**						**mg/l**	**0.019**	**0.050**
MW-4B	FS	480-120641-2	SW6010C	Magnesium	6.9		0.0	OK			mg/l	0.043	0.20
MW-4B DUP	FD	480-120641-3	SW6010C	Magnesium	6.9						mg/l	0.043	0.20
MW-4B	FS	480-120641-2	SW6010C	Manganese	0.11	F1	24.0	OK			mg/l	0.00040	0.0030
MW-4B DUP	FD	480-120641-3	SW6010C	Manganese	0.14						mg/l	0.00040	0.0030
MW-4B	FS	480-120641-2	SW6010C	Nickel	0.0014	J	75.6	OK			mg/l	0.0013	0.010
MW-4B DUP	FD	480-120641-3	SW6010C	Nickel	0.0031	J					mg/l	0.0013	0.010
MW-4B	FS	480-120641-2	SW6010C	Potassium	0.52		5.9	OK			mg/l	0.10	0.50
MW-4B DUP	FD	480-120641-3	SW6010C	Potassium	0.49	J					mg/l	0.10	0.50
MW-4B	FS	480-120641-2	SW6010C	Sodium	3.2		0.0	OK			mg/l	0.32	1.0
MW-4B DUP	FD	480-120641-3	SW6010C	Sodium	3.2						mg/l	0.32	1.0
MW-4B	FS	480-120641-2	SW6010C	Zinc	0.0017	J	12.5	OK			mg/l	0.0015	0.010
MW-4B DUP	FD	480-120641-3	SW6010C	Zinc	0.0015	J					mg/l	0.0015	0.010
MW-4B	FS	480-120641-2	SW8260C	Trichloroethene	0.56	J	56.4	OK			ug/l	0.46	1.0
MW-4B DUP	FD	480-120641-3	SW8260C	Trichloroethene	1.0	U					ug/l	0.46	1.0

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

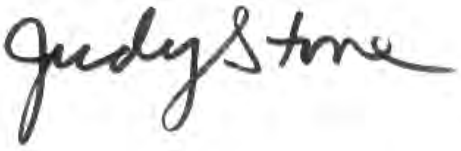
Job Number: 480-120641-1

Job Description: South Hill Dump #712009

Contract Number: C008010

For:
New York State D.E.C.
625 Broadway
12th Floor
Albany, NY 12233-7017

Attention: Mr. Dave Chiusano



Approved for release.
Judy L Stone
Senior Project Manager
7/21/2017 9:47 AM

Judy L Stone, Senior Project Manager
10 Hazelwood Drive, Amherst, NY, 14228-2298
(484)685-0868
judy.stone@testamericainc.com
07/21/2017

The test results in this report meet all NELAP requirements for analytes for which accreditation is required or available. Any exceptions to the NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory. All questions regarding this test report should be directed to the TestAmerica Project Manager who has signed this report. TestAmerica Buffalo NELAC Certifications: CADPH 01169CA, FLDOH E87672, ILEPA 200003, KSDOH E-10187, LADEQ 30708, MDH 036-999-337, NHELAP 2973, NJDEP NY455, NHDOH 10026, ORELAP NY200003, PADEP 68-00281, TXCEQ T-104704412-10-1

Table of Contents

Table of Contents

Table of Contents

Table of Contents

Job Narrative
480-120641-1

Receipt
The samples were received on 7/7/2017 1:15 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 1.4º C and 1.5º C.

Receipt Exceptions
The following sample was activated for 8082 PCB analysis by the client on 7/13/17: SED-1 (480-120641-14). This analysis was not originally requested on the chain-of-custody (COC).

GC/MS VOA
Method(s) 8260C: The continuing calibration verification (CCV) associated with batch 480-366471 recovered outside acceptance criteria, low biased, for 2-Butanone (MEK), Chloromethane and Vinyl chloride. A reporting limit (RL) standard was analyzed, and the target analytes were detected. Since the associated sample was non-detect for these analytes, the data have been reported. The following sample is impacted: SED-1 (480-120641-14).

Method(s) 8260C: The continuing calibration verification (CCV) associated with batch 480-366876 recovered above the upper control limit for 1,1,1-Trichloroethane. The samples associated with this CCV were non-detects for the affected analyte; therefore, the data have been reported. The following samples are impacted: TRIP BLANK (480-120641-1), MW-4B (480-120641-2), MW-4B DUP (480-120641-3), MW-4S (480-120641-4), MW-3SR2 (480-120641-5), MW-3SR (480-120641-7), MW-3BR (480-120641-8), MW-1B (480-120641-9), MW-1S (480-120641-10), SEEP-1 (480-120641-11), SW-1 (480-120641-13), MW-2S (480-120641-15), MW-2B (480-120641-16) and MW-2D (480-120641-17).

Method(s) 8260C: The following sample was diluted to bring the concentration of target analytes within the calibration range: MW-3SR2 (480-120641-5). Elevated reporting limits (RLs) are provided.

Method(s) 8260C: The continuing calibration verification (CCV) associated with batch 480-367101 recovered outside acceptance criteria, low biased, for 1,1-Dichloroethene. A reporting limit (RL) standard was analyzed, and the target analyte was detected. Since the associated samples were non-detect for this analyte, the data have been reported.

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

GC Semi VOA
Method(s) 8082A: The following samples are associated with a continuing calibration verification (CCV 480-366370/7) that had low recoveries for PCB-1254: SEEP-1 (480-120641-11), SEEP-1 DUP (480-120641-12) and SW-1 (480-120641-13). There were no detections for this aroclor via pattern recognition. Therefore, the data have been reported.

Method(s) 8082A: Surrogate recovery for the following samples was outside the upper control limit: SEEP-1 (480-120641-11) and SW-1 (480-120641-13). This sample did not contain any target analytes; therefore, re-extraction and/or re-analysis was not performed.

Method(s) 8082A: The continuing calibration verification (CCV 480-367055/6) associated with batch 480-367055 recovered above the upper control limit for PCB-1232. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The following sample is impacted: SED-1 (480-120641-14).

Method(s) 8082A: The percent difference in a multi-component continuing calibration verification is assessed on the basis of the total amount; individual peak calculations are only listed for completeness.

Method(s) 8082A: All primary data for analytical batch 366370 are reported from the ZB-5 column, while all primary data for analytical batch 367055 are reported from the ZB-35 column.

Method(s) 8082A: The Tetrachloro-m-xylene surrogate recovery for the following sample is slightly outside acceptance limits (high biased) due to matrix interference: SEEP-1 (480-120641-11[MS]). The recovery is within acceptance limits for the surrogate DCB Decachlorobiphenyl, indicating that the extraction process was in control.

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

Metals
Method(s) 6010C: The Low Level Continuing Calibration Verification (CCVL 480-366395/31) contained Total Iron outside the control limits. All reported samples (LCDSRM 480-366206/3-), (LCSSRM 480-366206/2-) and (MB 480-366206/1-A) associated with this CCVL were either below the laboratory's standard reporting limit for this analyte or contained this analyte at a concentration greater than 10X the value found in the CCVL; therefore, re-analysis of samples was not performed.

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

Organic Prep
Method(s) 3550C: Sample: SED-1 (480-120641-14) was decanted prior to preparation.

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

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

Sample Summary

Client: New York State D.E.C.
Project/Site: South Hill Dump #712009

TestAmerica Job ID: 480-120641-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
480-120641-1	TRIP BLANK	Water	07/05/17 11:30	07/07/17 01:15
480-120641-2	MW-4B	Water	07/05/17 11:49	07/07/17 01:15
480-120641-3	MW-4B DUP	Water	07/05/17 11:49	07/07/17 01:15
480-120641-4	MW-4S	Water	07/05/17 11:58	07/07/17 01:15
480-120641-5	MW-3SR2	Water	07/05/17 13:38	07/07/17 01:15
480-120641-6	MW-3BR2	Water	07/05/17 13:48	07/07/17 01:15
480-120641-7	MW-3SR	Water	07/05/17 15:15	07/07/17 01:15
480-120641-8	MW-3BR	Water	07/05/17 15:20	07/07/17 01:15
480-120641-9	MW-1B	Water	07/05/17 17:00	07/07/17 01:15
480-120641-10	MW-1S	Water	07/05/17 17:10	07/07/17 01:15
480-120641-11	SEEP-1	Water	07/06/17 08:20	07/07/17 01:15
480-120641-12	SEEP-1 DUP	Water	07/06/17 08:20	07/07/17 01:15
480-120641-13	SW-1	Water	07/06/17 10:30	07/07/17 01:15
480-120641-14	SED-1	Solid	07/06/17 10:40	07/07/17 01:15
480-120641-15	MW-2S	Water	07/06/17 11:15	07/07/17 01:15
480-120641-16	MW-2B	Water	07/06/17 11:20	07/07/17 01:15
480-120641-17	MW-2D	Water	07/06/17 11:30	07/07/17 01:15

Detection Summary

Client: New York State D.E.C.
Project/Site: South Hill Dump #712009

TestAmerica Job ID: 480-120641-1

Client Sample ID: TRIP BLANK — Lab Sample ID: 480-120641-1

No Detections.

Client Sample ID: MW-4B — Lab Sample ID: 480-120641-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Trichloroethene	0.56	J	1.0	0.46	ug/L	1		8260C	Total/NA
Aluminum	0.066	J	0.20	0.060	mg/L	1		6010C	Total/NA
Barium	0.041		0.0020	0.00070	mg/L	1		6010C	Total/NA
Beryllium	0.00078	J	0.0020	0.00030	mg/L	1		6010C	Total/NA
Calcium	27.6		0.50	0.10	mg/L	1		6010C	Total/NA
Iron	11.7	F1	0.050	0.019	mg/L	1		6010C	Total/NA
Magnesium	6.9		0.20	0.043	mg/L	1		6010C	Total/NA
Manganese	0.11	F1	0.0030	0.00040	mg/L	1		6010C	Total/NA
Nickel	0.0014	J	0.010	0.0013	mg/L	1		6010C	Total/NA
Potassium	0.52		0.50	0.10	mg/L	1		6010C	Total/NA
Sodium	3.2		1.0	0.32	mg/L	1		6010C	Total/NA
Zinc	0.0017	J	0.010	0.0015	mg/L	1		6010C	Total/NA

Client Sample ID: MW-4B DUP — Lab Sample ID: 480-120641-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.047		0.0020	0.00070	mg/L	1		6010C	Total/NA
Calcium	28.1		0.50	0.10	mg/L	1		6010C	Total/NA
Copper	0.0018	J	0.010	0.0016	mg/L	1		6010C	Total/NA
Iron	22.9		0.050	0.019	mg/L	1		6010C	Total/NA
Magnesium	6.9		0.20	0.043	mg/L	1		6010C	Total/NA
Manganese	0.14		0.0030	0.00040	mg/L	1		6010C	Total/NA
Nickel	0.0031	J	0.010	0.0013	mg/L	1		6010C	Total/NA
Potassium	0.49	J	0.50	0.10	mg/L	1		6010C	Total/NA
Sodium	3.2		1.0	0.32	mg/L	1		6010C	Total/NA
Zinc	0.0015	J	0.010	0.0015	mg/L	1		6010C	Total/NA

Client Sample ID: MW-4S — Lab Sample ID: 480-120641-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aluminum	0.36		0.20	0.060	mg/L	1		6010C	Total/NA
Barium	0.028		0.0020	0.00070	mg/L	1		6010C	Total/NA
Calcium	58.3		0.50	0.10	mg/L	1		6010C	Total/NA
Copper	0.0021	J	0.010	0.0016	mg/L	1		6010C	Total/NA
Iron	0.44		0.050	0.019	mg/L	1		6010C	Total/NA
Magnesium	8.7		0.20	0.043	mg/L	1		6010C	Total/NA
Manganese	0.017		0.0030	0.00040	mg/L	1		6010C	Total/NA
Potassium	0.61		0.50	0.10	mg/L	1		6010C	Total/NA
Sodium	2.0		1.0	0.32	mg/L	1		6010C	Total/NA
Zinc	0.0019	J	0.010	0.0015	mg/L	1		6010C	Total/NA

Client Sample ID: MW-3SR2 — Lab Sample ID: 480-120641-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	20		4.0	3.2	ug/L	4		8260C	Total/NA
Trichloroethene	170		4.0	1.8	ug/L	4		8260C	Total/NA
Aluminum	9.9		0.20	0.060	mg/L	1		6010C	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: MW-3SR2 (Continued) — Lab Sample ID: 480-120641-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.0058	J	0.015	0.0056	mg/L	1		6010C	Total/NA
Barium	0.22		0.0020	0.00070	mg/L	1		6010C	Total/NA
Beryllium	0.00050	J	0.0020	0.00030	mg/L	1		6010C	Total/NA
Calcium	102		0.50	0.10	mg/L	1		6010C	Total/NA
Chromium	0.012		0.0040	0.0010	mg/L	1		6010C	Total/NA
Cobalt	0.0051		0.0040	0.00063	mg/L	1		6010C	Total/NA
Copper	0.0095	J	0.010	0.0016	mg/L	1		6010C	Total/NA
Iron	13.0		0.050	0.019	mg/L	1		6010C	Total/NA
Lead	0.0079	J	0.010	0.0030	mg/L	1		6010C	Total/NA
Magnesium	21.4		0.20	0.043	mg/L	1		6010C	Total/NA
Manganese	0.35		0.0030	0.00040	mg/L	1		6010C	Total/NA
Nickel	0.013		0.010	0.0013	mg/L	1		6010C	Total/NA
Potassium	3.9		0.50	0.10	mg/L	1		6010C	Total/NA
Sodium	18.2		1.0	0.32	mg/L	1		6010C	Total/NA
Vanadium	0.014		0.0050	0.0015	mg/L	1		6010C	Total/NA
Zinc	0.034		0.010	0.0015	mg/L	1		6010C	Total/NA

Client Sample ID: MW-3BR2 — Lab Sample ID: 480-120641-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	3.1		1.0	0.81	ug/L	1		8260C	Total/NA
Trichloroethene	6.5		1.0	0.46	ug/L	1		8260C	Total/NA
Aluminum	0.081	J	0.20	0.060	mg/L	1		6010C	Total/NA
Barium	0.12		0.0020	0.00070	mg/L	1		6010C	Total/NA
Calcium	29.6		0.50	0.10	mg/L	1		6010C	Total/NA
Iron	27.3		0.050	0.019	mg/L	1		6010C	Total/NA
Magnesium	12.5		0.20	0.043	mg/L	1		6010C	Total/NA
Manganese	0.29		0.0030	0.00040	mg/L	1		6010C	Total/NA
Nickel	0.0015	J	0.010	0.0013	mg/L	1		6010C	Total/NA
Potassium	0.96		0.50	0.10	mg/L	1		6010C	Total/NA
Sodium	12.0		1.0	0.32	mg/L	1		6010C	Total/NA

Client Sample ID: MW-3SR — Lab Sample ID: 480-120641-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Trichloroethene	1.9		1.0	0.46	ug/L	1		8260C	Total/NA
Aluminum	1.4		0.20	0.060	mg/L	1		6010C	Total/NA
Barium	0.072		0.0020	0.00070	mg/L	1		6010C	Total/NA
Calcium	69.8		0.50	0.10	mg/L	1		6010C	Total/NA
Chromium	0.0016	J	0.0040	0.0010	mg/L	1		6010C	Total/NA
Copper	0.0021	J	0.010	0.0016	mg/L	1		6010C	Total/NA
Iron	1.6		0.050	0.019	mg/L	1		6010C	Total/NA
Lead	0.0030	J	0.010	0.0030	mg/L	1		6010C	Total/NA
Magnesium	15.2		0.20	0.043	mg/L	1		6010C	Total/NA
Manganese	0.18		0.0030	0.00040	mg/L	1		6010C	Total/NA
Nickel	0.0019	J	0.010	0.0013	mg/L	1		6010C	Total/NA
Potassium	3.5		0.50	0.10	mg/L	1		6010C	Total/NA
Sodium	6.2		1.0	0.32	mg/L	1		6010C	Total/NA
Vanadium	0.0018	J	0.0050	0.0015	mg/L	1		6010C	Total/NA
Zinc	0.0061	J	0.010	0.0015	mg/L	1		6010C	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: New York State D.E.C.
Project/Site: South Hill Dump #712009

TestAmerica Job ID: 480-120641-1

Client Sample ID: MW-3BR — Lab Sample ID: 480-120641-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Antimony	0.011	J	0.020	0.0068	mg/L	1		6010C	Total/NA
Barium	0.074		0.0020	0.00070	mg/L	1		6010C	Total/NA
Calcium	10		0.50	0.10	mg/L	1		6010C	Total/NA
Cobalt	0.0013	J	0.0040	0.00063	mg/L	1		6010C	Total/NA
Copper	0.0020	J	0.010	0.0016	mg/L	1		6010C	Total/NA
Iron	124		0.050	0.019	mg/L	1		6010C	Total/NA
Magnesium	3.1		0.20	0.043	mg/L	1		6010C	Total/NA
Manganese	1.5		0.0030	0.00040	mg/L	1		6010C	Total/NA
Nickel	0.015		0.010	0.0013	mg/L	1		6010C	Total/NA
Potassium	2.3		0.50	0.10	mg/L	1		6010C	Total/NA
Sodium	14.9		1.0	0.32	mg/L	1		6010C	Total/NA
Zinc	0.0043	J	0.010	0.0015	mg/L	1		6010C	Total/NA

Client Sample ID: MW-1B — Lab Sample ID: 480-120641-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aluminum	0.30		0.20	0.060	mg/L	1		6010C	Total/NA
Barium	0.017		0.0020	0.00070	mg/L	1		6010C	Total/NA
Calcium	17.6		0.50	0.10	mg/L	1		6010C	Total/NA
Iron	0.32		0.050	0.019	mg/L	1		6010C	Total/NA
Magnesium	4.0		0.20	0.043	mg/L	1		6010C	Total/NA
Manganese	0.013		0.0030	0.00040	mg/L	1		6010C	Total/NA
Potassium	0.71		0.50	0.10	mg/L	1		6010C	Total/NA
Sodium	6.8		1.0	0.32	mg/L	1		6010C	Total/NA

Client Sample ID: MW-1S — Lab Sample ID: 480-120641-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aluminum	4.4		0.20	0.060	mg/L	1		6010C	Total/NA
Barium	0.050		0.0020	0.00070	mg/L	1		6010C	Total/NA
Calcium	16.1		0.50	0.10	mg/L	1		6010C	Total/NA
Chromium	0.0044		0.0040	0.0010	mg/L	1		6010C	Total/NA
Cobalt	0.0015	J	0.0040	0.00063	mg/L	1		6010C	Total/NA
Copper	0.0031	J	0.010	0.0016	mg/L	1		6010C	Total/NA
Iron	3.9		0.050	0.019	mg/L	1		6010C	Total/NA
Lead	0.0041	J	0.010	0.0030	mg/L	1		6010C	Total/NA
Magnesium	4.4		0.20	0.043	mg/L	1		6010C	Total/NA
Manganese	0.070		0.0030	0.00040	mg/L	1		6010C	Total/NA
Nickel	0.0038	J	0.010	0.0013	mg/L	1		6010C	Total/NA
Potassium	1.7		0.50	0.10	mg/L	1		6010C	Total/NA
Sodium	6.1		1.0	0.32	mg/L	1		6010C	Total/NA
Vanadium	0.0042	J	0.0050	0.0015	mg/L	1		6010C	Total/NA
Zinc	0.011		0.010	0.0015	mg/L	1		6010C	Total/NA

Client Sample ID: SEEP-1 — Lab Sample ID: 480-120641-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aluminum	0.13	J	0.20	0.060	mg/L	1		6010C	Total/NA
Barium	0.026		0.0020	0.00070	mg/L	1		6010C	Total/NA
Calcium	30.2		0.50	0.10	mg/L	1		6010C	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: SEEP-1 (Continued) — Lab Sample ID: 480-120641-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Copper	0.0016	J	0.010	0.0016	mg/L	1		6010C	Total/NA
Iron	0.14		0.050	0.019	mg/L	1		6010C	Total/NA
Magnesium	4.7		0.20	0.043	mg/L	1		6010C	Total/NA
Manganese	0.0049		0.0030	0.00040	mg/L	1		6010C	Total/NA
Potassium	0.39	J	0.50	0.10	mg/L	1		6010C	Total/NA
Sodium	21.5		1.0	0.32	mg/L	1		6010C	Total/NA

Client Sample ID: SEEP-1 DUP — Lab Sample ID: 480-120641-12

No Detections.

Client Sample ID: SW-1 — Lab Sample ID: 480-120641-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aluminum	0.50		0.20	0.060	mg/L	1		6010C	Total/NA
Barium	0.048		0.0020	0.00070	mg/L	1		6010C	Total/NA
Calcium	61.8		0.50	0.10	mg/L	1		6010C	Total/NA
Copper	0.0022	J	0.010	0.0016	mg/L	1		6010C	Total/NA
Iron	0.61		0.050	0.019	mg/L	1		6010C	Total/NA
Magnesium	8.3		0.20	0.043	mg/L	1		6010C	Total/NA
Manganese	0.30		0.0030	0.00040	mg/L	1		6010C	Total/NA
Nickel	0.0018	J	0.010	0.0013	mg/L	1		6010C	Total/NA
Potassium	4.2		0.50	0.10	mg/L	1		6010C	Total/NA
Sodium	25.5		1.0	0.32	mg/L	1		6010C	Total/NA
Vanadium	0.0019	J	0.0050	0.0015	mg/L	1		6010C	Total/NA
Zinc	0.0058	J	0.010	0.0015	mg/L	1		6010C	Total/NA

Client Sample ID: SED-1 — Lab Sample ID: 480-120641-14

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aluminum	22600		17.2	7.6	mg/Kg	1	☼	6010C	Total/NA
Antimony	2.4	J	25.8	0.69	mg/Kg	1	☼	6010C	Total/NA
Arsenic	9.7		3.4	0.69	mg/Kg	1	☼	6010C	Total/NA
Barium	166		0.86	0.19	mg/Kg	1	☼	6010C	Total/NA
Beryllium	0.91		0.34	0.048	mg/Kg	1	☼	6010C	Total/NA
Cadmium	0.33	J	0.34	0.052	mg/Kg	1	☼	6010C	Total/NA
Calcium	4480		86.1	5.7	mg/Kg	1	☼	6010C	Total/NA
Chromium	26.5		0.86	0.34	mg/Kg	1	☼	6010C	Total/NA
Cobalt	16.2		0.86	0.086	mg/Kg	1	☼	6010C	Total/NA
Copper	18.2		1.7	0.36	mg/Kg	1	☼	6010C	Total/NA
Iron	35300	B	17.2	6.0	mg/Kg	1	☼	6010C	Total/NA
Lead	17.8		1.7	0.41	mg/Kg	1	☼	6010C	Total/NA
Magnesium	5240		34.4	1.6	mg/Kg	1	☼	6010C	Total/NA
Manganese	1890		0.34	0.055	mg/Kg	1	☼	6010C	Total/NA
Nickel	34.3		8.6	0.40	mg/Kg	1	☼	6010C	Total/NA
Potassium	2190		51.6	34.4	mg/Kg	1	☼	6010C	Total/NA
Sodium	112	J	241	22.4	mg/Kg	1	☼	6010C	Total/NA
Vanadium	37.5		0.86	0.19	mg/Kg	1	☼	6010C	Total/NA
Zinc	89.2		3.4	1.1	mg/Kg	1	☼	6010C	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: New York State D.E.C.
Project/Site: South Hill Dump #712009

TestAmerica Job ID: 480-120641-1

Client Sample ID: MW-2S — Lab Sample ID: 480-120641-15

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aluminum	2.6		0.20	0.060	mg/L	1		6010C	Total/NA
Barium	0.042		0.0020	0.00070	mg/L	1		6010C	Total/NA
Calcium	73.8		0.50	0.10	mg/L	1		6010C	Total/NA
Chromium	0.0046		0.0040	0.0010	mg/L	1		6010C	Total/NA
Cobalt	0.00069	J	0.0040	0.00063	mg/L	1		6010C	Total/NA
Copper	0.0027	J	0.010	0.0016	mg/L	1		6010C	Total/NA
Iron	2.4		0.050	0.019	mg/L	1		6010C	Total/NA
Lead	0.0035	J	0.010	0.0030	mg/L	1		6010C	Total/NA
Magnesium	14.2		0.20	0.043	mg/L	1		6010C	Total/NA
Manganese	0.15		0.0030	0.00040	mg/L	1		6010C	Total/NA
Nickel	0.0027	J	0.010	0.0013	mg/L	1		6010C	Total/NA
Potassium	1.6		0.50	0.10	mg/L	1		6010C	Total/NA
Sodium	24.1		1.0	0.32	mg/L	1		6010C	Total/NA
Vanadium	0.0029	J	0.0050	0.0015	mg/L	1		6010C	Total/NA
Zinc	0.020		0.010	0.0015	mg/L	1		6010C	Total/NA

Client Sample ID: MW-2B — Lab Sample ID: 480-120641-16

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Antimony	0.013	J	0.020	0.0068	mg/L	1		6010C	Total/NA
Barium	0.12		0.0020	0.00070	mg/L	1		6010C	Total/NA
Calcium	32.3		0.50	0.10	mg/L	1		6010C	Total/NA
Copper	0.0020	J	0.010	0.0016	mg/L	1		6010C	Total/NA
Iron	159		0.050	0.019	mg/L	1		6010C	Total/NA
Lead	0.0034	J	0.010	0.0030	mg/L	1		6010C	Total/NA
Magnesium	7.0		0.20	0.043	mg/L	1		6010C	Total/NA
Manganese	1.0		0.0030	0.00040	mg/L	1		6010C	Total/NA
Nickel	0.0065	J	0.010	0.0013	mg/L	1		6010C	Total/NA
Potassium	0.84		0.50	0.10	mg/L	1		6010C	Total/NA
Sodium	4.2		1.0	0.32	mg/L	1		6010C	Total/NA
Vanadium	0.0022	J	0.0050	0.0015	mg/L	1		6010C	Total/NA
Zinc	0.0015	J	0.010	0.0015	mg/L	1		6010C	Total/NA

Client Sample ID: MW-2D — Lab Sample ID: 480-120641-17

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aluminum	0.60		0.20	0.060	mg/L	1		6010C	Total/NA
Barium	0.032		0.0020	0.00070	mg/L	1		6010C	Total/NA
Calcium	52.6		0.50	0.10	mg/L	1		6010C	Total/NA
Chromium	0.0018	J	0.0040	0.0010	mg/L	1		6010C	Total/NA
Iron	0.68		0.050	0.019	mg/L	1		6010C	Total/NA
Magnesium	13.2		0.20	0.043	mg/L	1		6010C	Total/NA
Manganese	0.030		0.0030	0.00040	mg/L	1		6010C	Total/NA
Potassium	1.0		0.50	0.10	mg/L	1		6010C	Total/NA
Sodium	3.6		1.0	0.32	mg/L	1		6010C	Total/NA
Zinc	0.0050	J	0.010	0.0015	mg/L	1		6010C	Total/NA

This Detection Summary does not include radiochemical test results.

Method Summary

Client: New York State D.E.C.
Project/Site: South Hill Dump #712009

TestAmerica Job ID: 480-120641-1

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds by GC/MS	SW846	TAL BUF
8260C SIM	Volatile Organic Compounds (GC/MS)	SW846	TAL EDI
8082A	Polychlorinated Biphenyls (PCBs) by Gas Chromatography	SW846	TAL BUF
6010C	Metals (ICP)	SW846	TAL BUF
Moisture	Percent Moisture	EPA	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

TAL EDI = TestAmerica Edison, 777 New Durham Road, Edison, NJ 08817, TEL (732)549-3900

Client Sample ID: TRIP BLANK

Date Collected: 07/05/17 11:30
Date Received: 07/07/17 01:15

Lab Sample ID: 480-120641-1

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.82	ug/L			07/13/17 21:26	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			07/13/17 21:26	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0	0.31	ug/L			07/13/17 21:26	1
1,1,2-Trichloroethane	ND		1.0	0.23	ug/L			07/13/17 21:26	1
1,1-Dichloroethane	ND		1.0	0.38	ug/L			07/13/17 21:26	1
1,1-Dichloroethene	ND		1.0	0.29	ug/L			07/13/17 21:26	1
1,2,3-Trichlorobenzene	ND		1.0	0.41	ug/L			07/13/17 21:26	1
1,2,4-Trichlorobenzene	ND		1.0	0.41	ug/L			07/13/17 21:26	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.39	ug/L			07/13/17 21:26	1
1,2-Dibromoethane	ND		1.0	0.73	ug/L			07/13/17 21:26	1
1,2-Dichlorobenzene	ND		1.0	0.79	ug/L			07/13/17 21:26	1
1,2-Dichloroethane	ND		1.0	0.21	ug/L			07/13/17 21:26	1
1,2-Dichloropropane	ND		1.0	0.72	ug/L			07/13/17 21:26	1
1,3-Dichlorobenzene	ND		1.0	0.78	ug/L			07/13/17 21:26	1
1,4-Dichlorobenzene	ND		1.0	0.84	ug/L			07/13/17 21:26	1
1,4-Dioxane	ND		40	9.3	ug/L			07/13/17 21:26	1
2-Butanone (MEK)	ND		10	1.3	ug/L			07/13/17 21:26	1
2-Hexanone	ND		5.0	1.2	ug/L			07/13/17 21:26	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.1	ug/L			07/13/17 21:26	1
Acetone	ND		10	3.0	ug/L			07/13/17 21:26	1
Benzene	ND		1.0	0.41	ug/L			07/13/17 21:26	1
Bromochloromethane	ND		1.0	0.87	ug/L			07/13/17 21:26	1
Bromodichloromethane	ND		1.0	0.39	ug/L			07/13/17 21:26	1
Bromoform	ND		1.0	0.26	ug/L			07/13/17 21:26	1
Bromomethane	ND		1.0	0.69	ug/L			07/13/17 21:26	1
Carbon disulfide	ND		1.0	0.19	ug/L			07/13/17 21:26	1
Carbon tetrachloride	ND		1.0	0.27	ug/L			07/13/17 21:26	1
Chlorobenzene	ND		1.0	0.75	ug/L			07/13/17 21:26	1
Chloroethane	ND		1.0	0.32	ug/L			07/13/17 21:26	1
Chloroform	ND		1.0	0.34	ug/L			07/13/17 21:26	1
Chloromethane	ND		1.0	0.35	ug/L			07/13/17 21:26	1
cis-1,2-Dichloroethene	ND		1.0	0.81	ug/L			07/13/17 21:26	1
cis-1,3-Dichloropropene	ND		1.0	0.36	ug/L			07/13/17 21:26	1
Cyclohexane	ND		1.0	0.18	ug/L			07/13/17 21:26	1
Dibromochloromethane	ND		1.0	0.32	ug/L			07/13/17 21:26	1
Dichlorodifluoromethane	ND		1.0	0.68	ug/L			07/13/17 21:26	1
Ethylbenzene	ND		1.0	0.74	ug/L			07/13/17 21:26	1
Isopropylbenzene	ND		1.0	0.79	ug/L			07/13/17 21:26	1
Methyl acetate	ND		2.5	1.3	ug/L			07/13/17 21:26	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			07/13/17 21:26	1
Methylcyclohexane	ND		1.0	0.16	ug/L			07/13/17 21:26	1
Methylene Chloride	ND		1.0	0.44	ug/L			07/13/17 21:26	1
Styrene	ND		1.0	0.73	ug/L			07/13/17 21:26	1
Tetrachloroethene	ND		1.0	0.36	ug/L			07/13/17 21:26	1
Toluene	ND		1.0	0.51	ug/L			07/13/17 21:26	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			07/13/17 21:26	1
trans-1,3-Dichloropropene	ND		1.0	0.37	ug/L			07/13/17 21:26	1
Trichloroethene	ND		1.0	0.46	ug/L			07/13/17 21:26	1
Trichlorofluoromethane	ND		1.0	0.88	ug/L			07/13/17 21:26	1

Client Sample ID: TRIP BLANK

Lab Sample ID: 480-120641-1

Date Collected: 07/05/17 11:30

Matrix: Water

Date Received: 07/07/17 01:15

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	ND		1.0	0.90	ug/L			07/13/17 21:26	1
Xylenes, Total	ND		2.0	0.66	ug/L			07/13/17 21:26	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*100*		*77 - 120*		*07/13/17 21:26*	*1*
4-Bromofluorobenzene (Surr)	*88*		*73 - 120*		*07/13/17 21:26*	*1*
Toluene-d8 (Surr)	*99*		*80 - 120*		*07/13/17 21:26*	*1*
Dibromofluoromethane (Surr)	*103*		*75 - 123*		*07/13/17 21:26*	*1*

Client Sample ID: MW-4B

Lab Sample ID: 480-120641-2

Date Collected: 07/05/17 11:49

Matrix: Water

Date Received: 07/07/17 01:15

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		0.40	0.20	ug/L			07/12/17 01:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*100*		*71 - 144*		*07/12/17 01:13*	*1*
4-Bromofluorobenzene	*99*		*72 - 133*		*07/12/17 01:13*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND	F1	1.0	0.82	ug/L			07/13/17 21:50	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			07/13/17 21:50	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0	0.31	ug/L			07/13/17 21:50	1
1,1,2-Trichloroethane	ND		1.0	0.23	ug/L			07/13/17 21:50	1
1,1-Dichloroethane	ND		1.0	0.38	ug/L			07/13/17 21:50	1
1,1-Dichloroethene	ND		1.0	0.29	ug/L			07/13/17 21:50	1
1,2,3-Trichlorobenzene	ND		1.0	0.41	ug/L			07/13/17 21:50	1
1,2,4-Trichlorobenzene	ND		1.0	0.41	ug/L			07/13/17 21:50	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.39	ug/L			07/13/17 21:50	1
1,2-Dibromoethane	ND		1.0	0.73	ug/L			07/13/17 21:50	1
1,2-Dichlorobenzene	ND		1.0	0.79	ug/L			07/13/17 21:50	1
1,2-Dichloroethane	ND		1.0	0.21	ug/L			07/13/17 21:50	1
1,2-Dichloropropane	ND		1.0	0.72	ug/L			07/13/17 21:50	1
1,3-Dichlorobenzene	ND		1.0	0.78	ug/L			07/13/17 21:50	1
1,4-Dichlorobenzene	ND		1.0	0.84	ug/L			07/13/17 21:50	1
1,4-Dioxane	ND		40	9.3	ug/L			07/13/17 21:50	1
2-Butanone (MEK)	ND		10	1.3	ug/L			07/13/17 21:50	1
2-Hexanone	ND		5.0	1.2	ug/L			07/13/17 21:50	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.1	ug/L			07/13/17 21:50	1
Acetone	ND		10	3.0	ug/L			07/13/17 21:50	1
Benzene	ND		1.0	0.41	ug/L			07/13/17 21:50	1
Bromochloromethane	ND		1.0	0.87	ug/L			07/13/17 21:50	1
Bromodichloromethane	ND		1.0	0.39	ug/L			07/13/17 21:50	1
Bromoform	ND		1.0	0.26	ug/L			07/13/17 21:50	1
Bromomethane	ND		1.0	0.69	ug/L			07/13/17 21:50	1
Carbon disulfide	ND		1.0	0.19	ug/L			07/13/17 21:50	1
Carbon tetrachloride	ND		1.0	0.27	ug/L			07/13/17 21:50	1

Client Sample ID: MW-4B

Date Collected: 07/05/17 11:49
Date Received: 07/07/17 01:15

Lab Sample ID: 480-120641-2

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlorobenzene	ND		1.0	0.75	ug/L			07/13/17 21:50	1
Chloroethane	ND		1.0	0.32	ug/L			07/13/17 21:50	1
Chloroform	ND		1.0	0.34	ug/L			07/13/17 21:50	1
Chloromethane	ND		1.0	0.35	ug/L			07/13/17 21:50	1
cis-1,2-Dichloroethene	ND		1.0	0.81	ug/L			07/13/17 21:50	1
cis-1,3-Dichloropropene	ND		1.0	0.36	ug/L			07/13/17 21:50	1
Cyclohexane	ND		1.0	0.18	ug/L			07/13/17 21:50	1
Dibromochloromethane	ND		1.0	0.32	ug/L			07/13/17 21:50	1
Dichlorodifluoromethane	ND		1.0	0.68	ug/L			07/13/17 21:50	1
Ethylbenzene	ND		1.0	0.74	ug/L			07/13/17 21:50	1
Isopropylbenzene	ND		1.0	0.79	ug/L			07/13/17 21:50	1
Methyl acetate	ND		2.5	1.3	ug/L			07/13/17 21:50	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			07/13/17 21:50	1
Methylcyclohexane	ND		1.0	0.16	ug/L			07/13/17 21:50	1
Methylene Chloride	ND		1.0	0.44	ug/L			07/13/17 21:50	1
Styrene	ND		1.0	0.73	ug/L			07/13/17 21:50	1
Tetrachloroethene	ND		1.0	0.36	ug/L			07/13/17 21:50	1
Toluene	ND		1.0	0.51	ug/L			07/13/17 21:50	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			07/13/17 21:50	1
trans-1,3-Dichloropropene	ND		1.0	0.37	ug/L			07/13/17 21:50	1
Trichloroethene	**0.56**	**J**	1.0	0.46	ug/L			07/13/17 21:50	1
Trichlorofluoromethane	ND		1.0	0.88	ug/L			07/13/17 21:50	1
Vinyl chloride	ND		1.0	0.90	ug/L			07/13/17 21:50	1
Xylenes, Total	ND		2.0	0.66	ug/L			07/13/17 21:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*103*		*77 - 120*		*07/13/17 21:50*	*1*
4-Bromofluorobenzene (Surr)	*86*		*73 - 120*		*07/13/17 21:50*	*1*
Toluene-d8 (Surr)	*99*		*80 - 120*		*07/13/17 21:50*	*1*
Dibromofluoromethane (Surr)	*101*		*75 - 123*		*07/13/17 21:50*	*1*

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	**0.066**	**J**	0.20	0.060	mg/L		07/10/17 07:45	07/11/17 11:45	1
Antimony	ND		0.020	0.0068	mg/L		07/10/17 07:45	07/11/17 11:45	1
Arsenic	ND		0.015	0.0056	mg/L		07/10/17 07:45	07/11/17 11:45	1
Barium	**0.041**		0.0020	0.00070	mg/L		07/10/17 07:45	07/11/17 11:45	1
Beryllium	**0.00078**	**J**	0.0020	0.00030	mg/L		07/10/17 07:45	07/11/17 11:45	1
Cadmium	ND		0.0020	0.00050	mg/L		07/10/17 07:45	07/11/17 11:45	1
Calcium	**27.6**		0.50	0.10	mg/L		07/10/17 07:45	07/11/17 11:45	1
Chromium	ND		0.0040	0.0010	mg/L		07/10/17 07:45	07/11/17 11:45	1
Cobalt	ND		0.0040	0.00063	mg/L		07/10/17 07:45	07/11/17 11:45	1
Copper	ND		0.010	0.0016	mg/L		07/10/17 07:45	07/11/17 11:45	1
Iron	**11.7**	**F1**	0.050	0.019	mg/L		07/10/17 07:45	07/11/17 11:45	1
Lead	ND		0.010	0.0030	mg/L		07/10/17 07:45	07/11/17 11:45	1
Magnesium	**6.9**		0.20	0.043	mg/L		07/10/17 07:45	07/11/17 11:45	1
Manganese	**0.11**	**F1**	0.0030	0.00040	mg/L		07/10/17 07:45	07/11/17 11:45	1
Nickel	**0.0014**	**J**	0.010	0.0013	mg/L		07/10/17 07:45	07/11/17 11:45	1
Potassium	**0.52**		0.50	0.10	mg/L		07/10/17 07:45	07/11/17 11:45	1
Selenium	ND		0.025	0.0087	mg/L		07/10/17 07:45	07/11/17 11:45	1

Client Sample ID: MW-4B

Date Collected: 07/05/17 11:49
Date Received: 07/07/17 01:15

Lab Sample ID: 480-120641-2

Matrix: Water

Method: 6010C - Metals (ICP) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	ND		0.0060	0.0017	mg/L		07/10/17 07:45	07/11/17 11:45	1
Sodium	**3.2**		1.0	0.32	mg/L		07/10/17 07:45	07/11/17 11:45	1
Thallium	ND		0.020	0.010	mg/L		07/10/17 07:45	07/11/17 11:45	1
Vanadium	ND		0.0050	0.0015	mg/L		07/10/17 07:45	07/11/17 11:45	1
Zinc	**0.0017**	**J**	0.010	0.0015	mg/L		07/10/17 07:45	07/11/17 11:45	1

Client Sample ID: MW-4B DUP

Date Collected: 07/05/17 11:49
Date Received: 07/07/17 01:15

Lab Sample ID: 480-120641-3

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		0.40	0.20	ug/L			07/12/17 01:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*100*		*71 - 144*		*07/12/17 01:36*	*1*
4-Bromofluorobenzene	*97*		*72 - 133*		*07/12/17 01:36*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.82	ug/L			07/13/17 22:13	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			07/13/17 22:13	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0	0.31	ug/L			07/13/17 22:13	1
1,1,2-Trichloroethane	ND		1.0	0.23	ug/L			07/13/17 22:13	1
1,1-Dichloroethane	ND		1.0	0.38	ug/L			07/13/17 22:13	1
1,1-Dichloroethene	ND		1.0	0.29	ug/L			07/13/17 22:13	1
1,2,3-Trichlorobenzene	ND		1.0	0.41	ug/L			07/13/17 22:13	1
1,2,4-Trichlorobenzene	ND		1.0	0.41	ug/L			07/13/17 22:13	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.39	ug/L			07/13/17 22:13	1
1,2-Dibromoethane	ND		1.0	0.73	ug/L			07/13/17 22:13	1
1,2-Dichlorobenzene	ND		1.0	0.79	ug/L			07/13/17 22:13	1
1,2-Dichloroethane	ND		1.0	0.21	ug/L			07/13/17 22:13	1
1,2-Dichloropropane	ND		1.0	0.72	ug/L			07/13/17 22:13	1
1,3-Dichlorobenzene	ND		1.0	0.78	ug/L			07/13/17 22:13	1
1,4-Dichlorobenzene	ND		1.0	0.84	ug/L			07/13/17 22:13	1
1,4-Dioxane	ND		40	9.3	ug/L			07/13/17 22:13	1
2-Butanone (MEK)	ND		10	1.3	ug/L			07/13/17 22:13	1
2-Hexanone	ND		5.0	1.2	ug/L			07/13/17 22:13	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.1	ug/L			07/13/17 22:13	1
Acetone	ND		10	3.0	ug/L			07/13/17 22:13	1
Benzene	ND		1.0	0.41	ug/L			07/13/17 22:13	1
Bromochloromethane	ND		1.0	0.87	ug/L			07/13/17 22:13	1
Bromodichloromethane	ND		1.0	0.39	ug/L			07/13/17 22:13	1
Bromoform	ND		1.0	0.26	ug/L			07/13/17 22:13	1
Bromomethane	ND		1.0	0.69	ug/L			07/13/17 22:13	1
Carbon disulfide	ND		1.0	0.19	ug/L			07/13/17 22:13	1
Carbon tetrachloride	ND		1.0	0.27	ug/L			07/13/17 22:13	1
Chlorobenzene	ND		1.0	0.75	ug/L			07/13/17 22:13	1
Chloroethane	ND		1.0	0.32	ug/L			07/13/17 22:13	1
Chloroform	ND		1.0	0.34	ug/L			07/13/17 22:13	1

Client Sample ID: MW-4B DUP

Date Collected: 07/05/17 11:49
Date Received: 07/07/17 01:15

Lab Sample ID: 480-120641-3

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	ND		1.0	0.35	ug/L			07/13/17 22:13	1
cis-1,2-Dichloroethene	ND		1.0	0.81	ug/L			07/13/17 22:13	1
cis-1,3-Dichloropropene	ND		1.0	0.36	ug/L			07/13/17 22:13	1
Cyclohexane	ND		1.0	0.18	ug/L			07/13/17 22:13	1
Dibromochloromethane	ND		1.0	0.32	ug/L			07/13/17 22:13	1
Dichlorodifluoromethane	ND		1.0	0.68	ug/L			07/13/17 22:13	1
Ethylbenzene	ND		1.0	0.74	ug/L			07/13/17 22:13	1
Isopropylbenzene	ND		1.0	0.79	ug/L			07/13/17 22:13	1
Methyl acetate	ND		2.5	1.3	ug/L			07/13/17 22:13	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			07/13/17 22:13	1
Methylcyclohexane	ND		1.0	0.16	ug/L			07/13/17 22:13	1
Methylene Chloride	ND		1.0	0.44	ug/L			07/13/17 22:13	1
Styrene	ND		1.0	0.73	ug/L			07/13/17 22:13	1
Tetrachloroethene	ND		1.0	0.36	ug/L			07/13/17 22:13	1
Toluene	ND		1.0	0.51	ug/L			07/13/17 22:13	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			07/13/17 22:13	1
trans-1,3-Dichloropropene	ND		1.0	0.37	ug/L			07/13/17 22:13	1
Trichloroethene	ND		1.0	0.46	ug/L			07/13/17 22:13	1
Trichlorofluoromethane	ND		1.0	0.88	ug/L			07/13/17 22:13	1
Vinyl chloride	ND		1.0	0.90	ug/L			07/13/17 22:13	1
Xylenes, Total	ND		2.0	0.66	ug/L			07/13/17 22:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*101*		*77 - 120*		*07/13/17 22:13*	*1*
4-Bromofluorobenzene (Surr)	*83*		*73 - 120*		*07/13/17 22:13*	*1*
Toluene-d8 (Surr)	*95*		*80 - 120*		*07/13/17 22:13*	*1*
Dibromofluoromethane (Surr)	*96*		*75 - 123*		*07/13/17 22:13*	*1*

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	ND		0.20	0.060	mg/L		07/10/17 07:45	07/11/17 12:02	1
Antimony	ND		0.020	0.0068	mg/L		07/10/17 07:45	07/11/17 12:02	1
Arsenic	ND		0.015	0.0056	mg/L		07/10/17 07:45	07/11/17 12:02	1
Barium	**0.047**		0.0020	0.00070	mg/L		07/10/17 07:45	07/11/17 12:02	1
Beryllium	ND		0.0020	0.00030	mg/L		07/10/17 07:45	07/11/17 12:02	1
Cadmium	ND		0.0020	0.00050	mg/L		07/10/17 07:45	07/11/17 12:02	1
Calcium	**28.1**		0.50	0.10	mg/L		07/10/17 07:45	07/11/17 12:02	1
Chromium	ND		0.0040	0.0010	mg/L		07/10/17 07:45	07/11/17 12:02	1
Cobalt	ND		0.0040	0.00063	mg/L		07/10/17 07:45	07/11/17 12:02	1
Copper	**0.0018**	**J**	0.010	0.0016	mg/L		07/10/17 07:45	07/11/17 12:02	1
Iron	**22.9**		0.050	0.019	mg/L		07/10/17 07:45	07/11/17 12:02	1
Lead	ND		0.010	0.0030	mg/L		07/10/17 07:45	07/11/17 12:02	1
Magnesium	**6.9**		0.20	0.043	mg/L		07/10/17 07:45	07/11/17 12:02	1
Manganese	**0.14**		0.0030	0.00040	mg/L		07/10/17 07:45	07/11/17 12:02	1
Nickel	**0.0031**	**J**	0.010	0.0013	mg/L		07/10/17 07:45	07/11/17 12:02	1
Potassium	**0.49**	**J**	0.50	0.10	mg/L		07/10/17 07:45	07/11/17 12:02	1
Selenium	ND		0.025	0.0087	mg/L		07/10/17 07:45	07/11/17 12:02	1
Silver	ND		0.0060	0.0017	mg/L		07/10/17 07:45	07/11/17 12:02	1
Sodium	**3.2**		1.0	0.32	mg/L		07/10/17 07:45	07/11/17 12:02	1
Thallium	ND		0.020	0.010	mg/L		07/10/17 07:45	07/11/17 12:02	1

Client Sample ID: MW-4B DUP

Date Collected: 07/05/17 11:49
Date Received: 07/07/17 01:15

Lab Sample ID: 480-120641-3

Matrix: Water

Method: 6010C - Metals (ICP) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vanadium	ND		0.0050	0.0015	mg/L		07/10/17 07:45	07/11/17 12:02	1
Zinc	**0.0015**	**J**	0.010	0.0015	mg/L		07/10/17 07:45	07/11/17 12:02	1

Client Sample ID: MW-4S

Date Collected: 07/05/17 11:58
Date Received: 07/07/17 01:15

Lab Sample ID: 480-120641-4

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.82	ug/L			07/13/17 22:36	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			07/13/17 22:36	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0	0.31	ug/L			07/13/17 22:36	1
1,1,2-Trichloroethane	ND		1.0	0.23	ug/L			07/13/17 22:36	1
1,1-Dichloroethane	ND		1.0	0.38	ug/L			07/13/17 22:36	1
1,1-Dichloroethene	ND		1.0	0.29	ug/L			07/13/17 22:36	1
1,2,3-Trichlorobenzene	ND		1.0	0.41	ug/L			07/13/17 22:36	1
1,2,4-Trichlorobenzene	ND		1.0	0.41	ug/L			07/13/17 22:36	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.39	ug/L			07/13/17 22:36	1
1,2-Dibromoethane	ND		1.0	0.73	ug/L			07/13/17 22:36	1
1,2-Dichlorobenzene	ND		1.0	0.79	ug/L			07/13/17 22:36	1
1,2-Dichloroethane	ND		1.0	0.21	ug/L			07/13/17 22:36	1
1,2-Dichloropropane	ND		1.0	0.72	ug/L			07/13/17 22:36	1
1,3-Dichlorobenzene	ND		1.0	0.78	ug/L			07/13/17 22:36	1
1,4-Dichlorobenzene	ND		1.0	0.84	ug/L			07/13/17 22:36	1
1,4-Dioxane	ND		40	9.3	ug/L			07/13/17 22:36	1
2-Butanone (MEK)	ND		10	1.3	ug/L			07/13/17 22:36	1
2-Hexanone	ND		5.0	1.2	ug/L			07/13/17 22:36	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.1	ug/L			07/13/17 22:36	1
Acetone	ND		10	3.0	ug/L			07/13/17 22:36	1
Benzene	ND		1.0	0.41	ug/L			07/13/17 22:36	1
Bromochloromethane	ND		1.0	0.87	ug/L			07/13/17 22:36	1
Bromodichloromethane	ND		1.0	0.39	ug/L			07/13/17 22:36	1
Bromoform	ND		1.0	0.26	ug/L			07/13/17 22:36	1
Bromomethane	ND		1.0	0.69	ug/L			07/13/17 22:36	1
Carbon disulfide	ND		1.0	0.19	ug/L			07/13/17 22:36	1
Carbon tetrachloride	ND		1.0	0.27	ug/L			07/13/17 22:36	1
Chlorobenzene	ND		1.0	0.75	ug/L			07/13/17 22:36	1
Chloroethane	ND		1.0	0.32	ug/L			07/13/17 22:36	1
Chloroform	ND		1.0	0.34	ug/L			07/13/17 22:36	1
Chloromethane	ND		1.0	0.35	ug/L			07/13/17 22:36	1
cis-1,2-Dichloroethene	ND		1.0	0.81	ug/L			07/13/17 22:36	1
cis-1,3-Dichloropropene	ND		1.0	0.36	ug/L			07/13/17 22:36	1
Cyclohexane	ND		1.0	0.18	ug/L			07/13/17 22:36	1
Dibromochloromethane	ND		1.0	0.32	ug/L			07/13/17 22:36	1
Dichlorodifluoromethane	ND		1.0	0.68	ug/L			07/13/17 22:36	1
Ethylbenzene	ND		1.0	0.74	ug/L			07/13/17 22:36	1
Isopropylbenzene	ND		1.0	0.79	ug/L			07/13/17 22:36	1
Methyl acetate	ND		2.5	1.3	ug/L			07/13/17 22:36	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			07/13/17 22:36	1
Methylcyclohexane	ND		1.0	0.16	ug/L			07/13/17 22:36	1

Client Sample ID: MW-4S

Date Collected: 07/05/17 11:58
Date Received: 07/07/17 01:15

Lab Sample ID: 480-120641-4

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methylene Chloride	ND		1.0	0.44	ug/L			07/13/17 22:36	1
Styrene	ND		1.0	0.73	ug/L			07/13/17 22:36	1
Tetrachloroethene	ND		1.0	0.36	ug/L			07/13/17 22:36	1
Toluene	ND		1.0	0.51	ug/L			07/13/17 22:36	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			07/13/17 22:36	1
trans-1,3-Dichloropropene	ND		1.0	0.37	ug/L			07/13/17 22:36	1
Trichloroethene	ND		1.0	0.46	ug/L			07/13/17 22:36	1
Trichlorofluoromethane	ND		1.0	0.88	ug/L			07/13/17 22:36	1
Vinyl chloride	ND		1.0	0.90	ug/L			07/13/17 22:36	1
Xylenes, Total	ND		2.0	0.66	ug/L			07/13/17 22:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*106*		*77 - 120*		*07/13/17 22:36*	*1*
4-Bromofluorobenzene (Surr)	*87*		*73 - 120*		*07/13/17 22:36*	*1*
Toluene-d8 (Surr)	*100*		*80 - 120*		*07/13/17 22:36*	*1*
Dibromofluoromethane (Surr)	*101*		*75 - 123*		*07/13/17 22:36*	*1*

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	**0.36**		0.20	0.060	mg/L		07/10/17 07:45	07/11/17 12:05	1
Antimony	ND		0.020	0.0068	mg/L		07/10/17 07:45	07/11/17 12:05	1
Arsenic	ND		0.015	0.0056	mg/L		07/10/17 07:45	07/11/17 12:05	1
Barium	**0.028**		0.0020	0.00070	mg/L		07/10/17 07:45	07/11/17 12:05	1
Beryllium	ND		0.0020	0.00030	mg/L		07/10/17 07:45	07/11/17 12:05	1
Cadmium	ND		0.0020	0.00050	mg/L		07/10/17 07:45	07/11/17 12:05	1
Calcium	**58.3**		0.50	0.10	mg/L		07/10/17 07:45	07/11/17 12:05	1
Chromium	ND		0.0040	0.0010	mg/L		07/10/17 07:45	07/11/17 12:05	1
Cobalt	ND		0.0040	0.00063	mg/L		07/10/17 07:45	07/11/17 12:05	1
Copper	**0.0021**	**J**	0.010	0.0016	mg/L		07/10/17 07:45	07/11/17 12:05	1
Iron	**0.44**		0.050	0.019	mg/L		07/10/17 07:45	07/11/17 12:05	1
Lead	ND		0.010	0.0030	mg/L		07/10/17 07:45	07/11/17 12:05	1
Magnesium	**8.7**		0.20	0.043	mg/L		07/10/17 07:45	07/11/17 12:05	1
Manganese	**0.017**		0.0030	0.00040	mg/L		07/10/17 07:45	07/11/17 12:05	1
Nickel	ND		0.010	0.0013	mg/L		07/10/17 07:45	07/11/17 12:05	1
Potassium	**0.61**		0.50	0.10	mg/L		07/10/17 07:45	07/11/17 12:05	1
Selenium	ND		0.025	0.0087	mg/L		07/10/17 07:45	07/11/17 12:05	1
Silver	ND		0.0060	0.0017	mg/L		07/10/17 07:45	07/11/17 12:05	1
Sodium	**2.0**		1.0	0.32	mg/L		07/10/17 07:45	07/11/17 12:05	1
Thallium	ND		0.020	0.010	mg/L		07/10/17 07:45	07/11/17 12:05	1
Vanadium	ND		0.0050	0.0015	mg/L		07/10/17 07:45	07/11/17 12:05	1
Zinc	**0.0019**	**J**	0.010	0.0015	mg/L		07/10/17 07:45	07/11/17 12:05	1

Client Sample ID: MW-3SR2

Date Collected: 07/05/17 13:38
Date Received: 07/07/17 01:15

Lab Sample ID: 480-120641-5

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		0.40	0.20	ug/L			07/12/17 01:59	1

Client Sample ID: MW-3SR2

Date Collected: 07/05/17 13:38
Date Received: 07/07/17 01:15

Lab Sample ID: 480-120641-5

Matrix: Water

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*100*		*71 - 144*		*07/12/17 01:59*	*1*
4-Bromofluorobenzene	*108*		*72 - 133*		*07/12/17 01:59*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		4.0	3.3	ug/L			07/13/17 22:59	4
1,1,2,2-Tetrachloroethane	ND		4.0	0.84	ug/L			07/13/17 22:59	4
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		4.0	1.2	ug/L			07/13/17 22:59	4
1,1,2-Trichloroethane	ND		4.0	0.92	ug/L			07/13/17 22:59	4
1,1-Dichloroethane	ND		4.0	1.5	ug/L			07/13/17 22:59	4
1,1-Dichloroethene	ND		4.0	1.2	ug/L			07/13/17 22:59	4
1,2,3-Trichlorobenzene	ND		4.0	1.6	ug/L			07/13/17 22:59	4
1,2,4-Trichlorobenzene	ND		4.0	1.6	ug/L			07/13/17 22:59	4
1,2-Dibromo-3-Chloropropane	ND		4.0	1.6	ug/L			07/13/17 22:59	4
1,2-Dibromoethane	ND		4.0	2.9	ug/L			07/13/17 22:59	4
1,2-Dichlorobenzene	ND		4.0	3.2	ug/L			07/13/17 22:59	4
1,2-Dichloroethane	ND		4.0	0.84	ug/L			07/13/17 22:59	4
1,2-Dichloropropane	ND		4.0	2.9	ug/L			07/13/17 22:59	4
1,3-Dichlorobenzene	ND		4.0	3.1	ug/L			07/13/17 22:59	4
1,4-Dichlorobenzene	ND		4.0	3.4	ug/L			07/13/17 22:59	4
1,4-Dioxane	ND		160	37	ug/L			07/13/17 22:59	4
2-Butanone (MEK)	ND		40	5.3	ug/L			07/13/17 22:59	4
2-Hexanone	ND		20	5.0	ug/L			07/13/17 22:59	4
4-Methyl-2-pentanone (MIBK)	ND		20	8.4	ug/L			07/13/17 22:59	4
Acetone	ND		40	12	ug/L			07/13/17 22:59	4
Benzene	ND		4.0	1.6	ug/L			07/13/17 22:59	4
Bromochloromethane	ND		4.0	3.5	ug/L			07/13/17 22:59	4
Bromodichloromethane	ND		4.0	1.6	ug/L			07/13/17 22:59	4
Bromoform	ND		4.0	1.0	ug/L			07/13/17 22:59	4
Bromomethane	ND		4.0	2.8	ug/L			07/13/17 22:59	4
Carbon disulfide	ND		4.0	0.76	ug/L			07/13/17 22:59	4
Carbon tetrachloride	ND		4.0	1.1	ug/L			07/13/17 22:59	4
Chlorobenzene	ND		4.0	3.0	ug/L			07/13/17 22:59	4
Chloroethane	ND		4.0	1.3	ug/L			07/13/17 22:59	4
Chloroform	ND		4.0	1.4	ug/L			07/13/17 22:59	4
Chloromethane	ND		4.0	1.4	ug/L			07/13/17 22:59	4
cis-1,2-Dichloroethene	**20**		4.0	3.2	ug/L			07/13/17 22:59	4
cis-1,3-Dichloropropene	ND		4.0	1.4	ug/L			07/13/17 22:59	4
Cyclohexane	ND		4.0	0.72	ug/L			07/13/17 22:59	4
Dibromochloromethane	ND		4.0	1.3	ug/L			07/13/17 22:59	4
Dichlorodifluoromethane	ND		4.0	2.7	ug/L			07/13/17 22:59	4
Ethylbenzene	ND		4.0	3.0	ug/L			07/13/17 22:59	4
Isopropylbenzene	ND		4.0	3.2	ug/L			07/13/17 22:59	4
Methyl acetate	ND		10	5.2	ug/L			07/13/17 22:59	4
Methyl tert-butyl ether	ND		4.0	0.64	ug/L			07/13/17 22:59	4
Methylcyclohexane	ND		4.0	0.64	ug/L			07/13/17 22:59	4
Methylene Chloride	ND		4.0	1.8	ug/L			07/13/17 22:59	4
Styrene	ND		4.0	2.9	ug/L			07/13/17 22:59	4
Tetrachloroethene	ND		4.0	1.4	ug/L			07/13/17 22:59	4
Toluene	ND		4.0	2.0	ug/L			07/13/17 22:59	4

Client Sample ID: MW-3SR2

Lab Sample ID: 480-120641-5

Date Collected: 07/05/17 13:38

Matrix: Water

Date Received: 07/07/17 01:15

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,2-Dichloroethene	ND		4.0	3.6	ug/L			07/13/17 22:59	4
trans-1,3-Dichloropropene	ND		4.0	1.5	ug/L			07/13/17 22:59	4
Trichloroethene	**170**		4.0	1.8	ug/L			07/13/17 22:59	4
Trichlorofluoromethane	ND		4.0	3.5	ug/L			07/13/17 22:59	4
Vinyl chloride	ND		4.0	3.6	ug/L			07/13/17 22:59	4
Xylenes, Total	ND		8.0	2.6	ug/L			07/13/17 22:59	4

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*108*		*77 - 120*		*07/13/17 22:59*	*4*
4-Bromofluorobenzene (Surr)	*93*		*73 - 120*		*07/13/17 22:59*	*4*
Toluene-d8 (Surr)	*90*		*80 - 120*		*07/13/17 22:59*	*4*
Dibromofluoromethane (Surr)	*106*		*75 - 123*		*07/13/17 22:59*	*4*

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	**9.9**		0.20	0.060	mg/L		07/10/17 07:45	07/11/17 12:09	1
Antimony	ND		0.020	0.0068	mg/L		07/10/17 07:45	07/11/17 12:09	1
Arsenic	**0.0058**	**J**	0.015	0.0056	mg/L		07/10/17 07:45	07/11/17 12:09	1
Barium	**0.22**		0.0020	0.00070	mg/L		07/10/17 07:45	07/11/17 12:09	1
Beryllium	**0.00050**	**J**	0.0020	0.00030	mg/L		07/10/17 07:45	07/11/17 12:09	1
Cadmium	ND		0.0020	0.00050	mg/L		07/10/17 07:45	07/11/17 12:09	1
Calcium	**102**		0.50	0.10	mg/L		07/10/17 07:45	07/11/17 12:09	1
Chromium	**0.012**		0.0040	0.0010	mg/L		07/10/17 07:45	07/11/17 12:09	1
Cobalt	**0.0051**		0.0040	0.00063	mg/L		07/10/17 07:45	07/11/17 12:09	1
Copper	**0.0095**	**J**	0.010	0.0016	mg/L		07/10/17 07:45	07/11/17 12:09	1
Iron	**13.0**		0.050	0.019	mg/L		07/10/17 07:45	07/11/17 12:09	1
Lead	**0.0079**	**J**	0.010	0.0030	mg/L		07/10/17 07:45	07/11/17 12:09	1
Magnesium	**21.4**		0.20	0.043	mg/L		07/10/17 07:45	07/11/17 12:09	1
Manganese	**0.35**		0.0030	0.00040	mg/L		07/10/17 07:45	07/11/17 12:09	1
Nickel	**0.013**		0.010	0.0013	mg/L		07/10/17 07:45	07/11/17 12:09	1
Potassium	**3.9**		0.50	0.10	mg/L		07/10/17 07:45	07/11/17 12:09	1
Selenium	ND		0.025	0.0087	mg/L		07/10/17 07:45	07/11/17 12:09	1
Silver	ND		0.0060	0.0017	mg/L		07/10/17 07:45	07/11/17 12:09	1
Sodium	**18.2**		1.0	0.32	mg/L		07/10/17 07:45	07/11/17 12:09	1
Thallium	ND		0.020	0.010	mg/L		07/10/17 07:45	07/11/17 12:09	1
Vanadium	**0.014**		0.0050	0.0015	mg/L		07/10/17 07:45	07/11/17 12:09	1
Zinc	**0.034**		0.010	0.0015	mg/L		07/10/17 07:45	07/11/17 12:09	1

Client Sample ID: MW-3BR2

Lab Sample ID: 480-120641-6

Date Collected: 07/05/17 13:48

Matrix: Water

Date Received: 07/07/17 01:15

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		0.40	0.20	ug/L			07/12/17 02:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*101*		*71 - 144*		*07/12/17 02:23*	*1*
4-Bromofluorobenzene	*100*		*72 - 133*		*07/12/17 02:23*	*1*

Client Sample ID: MW-3BR2

Date Collected: 07/05/17 13:48
Date Received: 07/07/17 01:15

Lab Sample ID: 480-120641-6

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.82	ug/L			07/15/17 04:43	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			07/15/17 04:43	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0	0.31	ug/L			07/15/17 04:43	1
1,1,2-Trichloroethane	ND		1.0	0.23	ug/L			07/15/17 04:43	1
1,1-Dichloroethane	ND		1.0	0.38	ug/L			07/15/17 04:43	1
1,1-Dichloroethene	ND		1.0	0.29	ug/L			07/15/17 04:43	1
1,2,3-Trichlorobenzene	ND		1.0	0.41	ug/L			07/15/17 04:43	1
1,2,4-Trichlorobenzene	ND		1.0	0.41	ug/L			07/15/17 04:43	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.39	ug/L			07/15/17 04:43	1
1,2-Dibromoethane	ND		1.0	0.73	ug/L			07/15/17 04:43	1
1,2-Dichlorobenzene	ND		1.0	0.79	ug/L			07/15/17 04:43	1
1,2-Dichloroethane	ND		1.0	0.21	ug/L			07/15/17 04:43	1
1,2-Dichloropropane	ND		1.0	0.72	ug/L			07/15/17 04:43	1
1,3-Dichlorobenzene	ND		1.0	0.78	ug/L			07/15/17 04:43	1
1,4-Dichlorobenzene	ND		1.0	0.84	ug/L			07/15/17 04:43	1
1,4-Dioxane	ND		40	9.3	ug/L			07/15/17 04:43	1
2-Butanone (MEK)	ND		10	1.3	ug/L			07/15/17 04:43	1
2-Hexanone	ND		5.0	1.2	ug/L			07/15/17 04:43	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.1	ug/L			07/15/17 04:43	1
Acetone	ND		10	3.0	ug/L			07/15/17 04:43	1
Benzene	ND		1.0	0.41	ug/L			07/15/17 04:43	1
Bromochloromethane	ND		1.0	0.87	ug/L			07/15/17 04:43	1
Bromodichloromethane	ND		1.0	0.39	ug/L			07/15/17 04:43	1
Bromoform	ND		1.0	0.26	ug/L			07/15/17 04:43	1
Bromomethane	ND		1.0	0.69	ug/L			07/15/17 04:43	1
Carbon disulfide	ND		1.0	0.19	ug/L			07/15/17 04:43	1
Carbon tetrachloride	ND		1.0	0.27	ug/L			07/15/17 04:43	1
Chlorobenzene	ND		1.0	0.75	ug/L			07/15/17 04:43	1
Chloroethane	ND		1.0	0.32	ug/L			07/15/17 04:43	1
Chloroform	ND		1.0	0.34	ug/L			07/15/17 04:43	1
Chloromethane	ND		1.0	0.35	ug/L			07/15/17 04:43	1
cis-1,2-Dichloroethene	**3.1**		1.0	0.81	ug/L			07/15/17 04:43	1
cis-1,3-Dichloropropene	ND		1.0	0.36	ug/L			07/15/17 04:43	1
Cyclohexane	ND		1.0	0.18	ug/L			07/15/17 04:43	1
Dibromochloromethane	ND		1.0	0.32	ug/L			07/15/17 04:43	1
Dichlorodifluoromethane	ND		1.0	0.68	ug/L			07/15/17 04:43	1
Ethylbenzene	ND		1.0	0.74	ug/L			07/15/17 04:43	1
Isopropylbenzene	ND		1.0	0.79	ug/L			07/15/17 04:43	1
Methyl acetate	ND		2.5	1.3	ug/L			07/15/17 04:43	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			07/15/17 04:43	1
Methylcyclohexane	ND		1.0	0.16	ug/L			07/15/17 04:43	1
Methylene Chloride	ND		1.0	0.44	ug/L			07/15/17 04:43	1
Styrene	ND		1.0	0.73	ug/L			07/15/17 04:43	1
Tetrachloroethene	ND		1.0	0.36	ug/L			07/15/17 04:43	1
Toluene	ND		1.0	0.51	ug/L			07/15/17 04:43	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			07/15/17 04:43	1
trans-1,3-Dichloropropene	ND		1.0	0.37	ug/L			07/15/17 04:43	1
Trichloroethene	**6.5**		1.0	0.46	ug/L			07/15/17 04:43	1
Trichlorofluoromethane	ND		1.0	0.88	ug/L			07/15/17 04:43	1

Client Sample ID: MW-3BR2

Lab Sample ID: 480-120641-6

Date Collected: 07/05/17 13:48

Matrix: Water

Date Received: 07/07/17 01:15

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	ND		1.0	0.90	ug/L			07/15/17 04:43	1
Xylenes, Total	ND		2.0	0.66	ug/L			07/15/17 04:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*107*		*77 - 120*		*07/15/17 04:43*	*1*
4-Bromofluorobenzene (Surr)	*91*		*73 - 120*		*07/15/17 04:43*	*1*
Toluene-d8 (Surr)	*102*		*80 - 120*		*07/15/17 04:43*	*1*
Dibromofluoromethane (Surr)	*101*		*75 - 123*		*07/15/17 04:43*	*1*

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	**0.081**	**J**	0.20	0.060	mg/L		07/10/17 07:45	07/11/17 12:22	1
Antimony	ND		0.020	0.0068	mg/L		07/10/17 07:45	07/11/17 12:22	1
Arsenic	ND		0.015	0.0056	mg/L		07/10/17 07:45	07/11/17 12:22	1
Barium	**0.12**		0.0020	0.00070	mg/L		07/10/17 07:45	07/11/17 12:22	1
Beryllium	ND		0.0020	0.00030	mg/L		07/10/17 07:45	07/11/17 12:22	1
Cadmium	ND		0.0020	0.00050	mg/L		07/10/17 07:45	07/11/17 12:22	1
Calcium	**29.6**		0.50	0.10	mg/L		07/10/17 07:45	07/11/17 12:22	1
Chromium	ND		0.0040	0.0010	mg/L		07/10/17 07:45	07/11/17 12:22	1
Cobalt	ND		0.0040	0.00063	mg/L		07/10/17 07:45	07/11/17 12:22	1
Copper	ND		0.010	0.0016	mg/L		07/10/17 07:45	07/11/17 12:22	1
Iron	**27.3**		0.050	0.019	mg/L		07/10/17 07:45	07/11/17 12:22	1
Lead	ND		0.010	0.0030	mg/L		07/10/17 07:45	07/11/17 12:22	1
Magnesium	**12.5**		0.20	0.043	mg/L		07/10/17 07:45	07/11/17 12:22	1
Manganese	**0.29**		0.0030	0.00040	mg/L		07/10/17 07:45	07/11/17 12:22	1
Nickel	**0.0015**	**J**	0.010	0.0013	mg/L		07/10/17 07:45	07/11/17 12:22	1
Potassium	**0.96**		0.50	0.10	mg/L		07/10/17 07:45	07/11/17 12:22	1
Selenium	ND		0.025	0.0087	mg/L		07/10/17 07:45	07/11/17 12:22	1
Silver	ND		0.0060	0.0017	mg/L		07/10/17 07:45	07/11/17 12:22	1
Sodium	**12.0**		1.0	0.32	mg/L		07/10/17 07:45	07/11/17 12:22	1
Thallium	ND		0.020	0.010	mg/L		07/10/17 07:45	07/11/17 12:22	1
Vanadium	ND		0.0050	0.0015	mg/L		07/10/17 07:45	07/11/17 12:22	1
Zinc	ND		0.010	0.0015	mg/L		07/10/17 07:45	07/11/17 12:22	1

Client Sample ID: MW-3SR

Lab Sample ID: 480-120641-7

Date Collected: 07/05/17 15:15

Matrix: Water

Date Received: 07/07/17 01:15

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.82	ug/L			07/13/17 23:45	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			07/13/17 23:45	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0	0.31	ug/L			07/13/17 23:45	1
1,1,2-Trichloroethane	ND		1.0	0.23	ug/L			07/13/17 23:45	1
1,1-Dichloroethane	ND		1.0	0.38	ug/L			07/13/17 23:45	1
1,1-Dichloroethene	ND		1.0	0.29	ug/L			07/13/17 23:45	1
1,2,3-Trichlorobenzene	ND		1.0	0.41	ug/L			07/13/17 23:45	1
1,2,4-Trichlorobenzene	ND		1.0	0.41	ug/L			07/13/17 23:45	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.39	ug/L			07/13/17 23:45	1
1,2-Dibromoethane	ND		1.0	0.73	ug/L			07/13/17 23:45	1

Client Sample ID: MW-3SR

Date Collected: 07/05/17 15:15
Date Received: 07/07/17 01:15

Lab Sample ID: 480-120641-7

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichlorobenzene	ND		1.0	0.79	ug/L			07/13/17 23:45	1
1,2-Dichloroethane	ND		1.0	0.21	ug/L			07/13/17 23:45	1
1,2-Dichloropropane	ND		1.0	0.72	ug/L			07/13/17 23:45	1
1,3-Dichlorobenzene	ND		1.0	0.78	ug/L			07/13/17 23:45	1
1,4-Dichlorobenzene	ND		1.0	0.84	ug/L			07/13/17 23:45	1
1,4-Dioxane	ND		40	9.3	ug/L			07/13/17 23:45	1
2-Butanone (MEK)	ND		10	1.3	ug/L			07/13/17 23:45	1
2-Hexanone	ND		5.0	1.2	ug/L			07/13/17 23:45	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.1	ug/L			07/13/17 23:45	1
Acetone	ND		10	3.0	ug/L			07/13/17 23:45	1
Benzene	ND		1.0	0.41	ug/L			07/13/17 23:45	1
Bromochloromethane	ND		1.0	0.87	ug/L			07/13/17 23:45	1
Bromodichloromethane	ND		1.0	0.39	ug/L			07/13/17 23:45	1
Bromoform	ND		1.0	0.26	ug/L			07/13/17 23:45	1
Bromomethane	ND		1.0	0.69	ug/L			07/13/17 23:45	1
Carbon disulfide	ND		1.0	0.19	ug/L			07/13/17 23:45	1
Carbon tetrachloride	ND		1.0	0.27	ug/L			07/13/17 23:45	1
Chlorobenzene	ND		1.0	0.75	ug/L			07/13/17 23:45	1
Chloroethane	ND		1.0	0.32	ug/L			07/13/17 23:45	1
Chloroform	ND		1.0	0.34	ug/L			07/13/17 23:45	1
Chloromethane	ND		1.0	0.35	ug/L			07/13/17 23:45	1
cis-1,2-Dichloroethene	ND		1.0	0.81	ug/L			07/13/17 23:45	1
cis-1,3-Dichloropropene	ND		1.0	0.36	ug/L			07/13/17 23:45	1
Cyclohexane	ND		1.0	0.18	ug/L			07/13/17 23:45	1
Dibromochloromethane	ND		1.0	0.32	ug/L			07/13/17 23:45	1
Dichlorodifluoromethane	ND		1.0	0.68	ug/L			07/13/17 23:45	1
Ethylbenzene	ND		1.0	0.74	ug/L			07/13/17 23:45	1
Isopropylbenzene	ND		1.0	0.79	ug/L			07/13/17 23:45	1
Methyl acetate	ND		2.5	1.3	ug/L			07/13/17 23:45	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			07/13/17 23:45	1
Methylcyclohexane	ND		1.0	0.16	ug/L			07/13/17 23:45	1
Methylene Chloride	ND		1.0	0.44	ug/L			07/13/17 23:45	1
Styrene	ND		1.0	0.73	ug/L			07/13/17 23:45	1
Tetrachloroethene	ND		1.0	0.36	ug/L			07/13/17 23:45	1
Toluene	ND		1.0	0.51	ug/L			07/13/17 23:45	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			07/13/17 23:45	1
trans-1,3-Dichloropropene	ND		1.0	0.37	ug/L			07/13/17 23:45	1
Trichloroethene	**1.9**		1.0	0.46	ug/L			07/13/17 23:45	1
Trichlorofluoromethane	ND		1.0	0.88	ug/L			07/13/17 23:45	1
Vinyl chloride	ND		1.0	0.90	ug/L			07/13/17 23:45	1
Xylenes, Total	ND		2.0	0.66	ug/L			07/13/17 23:45	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*107*		*77 - 120*		*07/13/17 23:45*	*1*
4-Bromofluorobenzene (Surr)	*88*		*73 - 120*		*07/13/17 23:45*	*1*
Toluene-d8 (Surr)	*93*		*80 - 120*		*07/13/17 23:45*	*1*
Dibromofluoromethane (Surr)	*106*		*75 - 123*		*07/13/17 23:45*	*1*

Client Sample ID: MW-3SR

Lab Sample ID: 480-120641-7

Date Collected: 07/05/17 15:15
Matrix: Water
Date Received: 07/07/17 01:15

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	**1.4**		0.20	0.060	mg/L		07/10/17 07:45	07/11/17 12:26	1
Antimony	ND		0.020	0.0068	mg/L		07/10/17 07:45	07/11/17 12:26	1
Arsenic	ND		0.015	0.0056	mg/L		07/10/17 07:45	07/11/17 12:26	1
Barium	**0.072**		0.0020	0.00070	mg/L		07/10/17 07:45	07/11/17 12:26	1
Beryllium	ND		0.0020	0.00030	mg/L		07/10/17 07:45	07/11/17 12:26	1
Cadmium	ND		0.0020	0.00050	mg/L		07/10/17 07:45	07/11/17 12:26	1
Calcium	**69.8**		0.50	0.10	mg/L		07/10/17 07:45	07/11/17 12:26	1
Chromium	**0.0016**	**J**	0.0040	0.0010	mg/L		07/10/17 07:45	07/11/17 12:26	1
Cobalt	ND		0.0040	0.00063	mg/L		07/10/17 07:45	07/11/17 12:26	1
Copper	**0.0021**	**J**	0.010	0.0016	mg/L		07/10/17 07:45	07/11/17 12:26	1
Iron	**1.6**		0.050	0.019	mg/L		07/10/17 07:45	07/11/17 12:26	1
Lead	**0.0030**	**J**	0.010	0.0030	mg/L		07/10/17 07:45	07/11/17 12:26	1
Magnesium	**15.2**		0.20	0.043	mg/L		07/10/17 07:45	07/11/17 12:26	1
Manganese	**0.18**		0.0030	0.00040	mg/L		07/10/17 07:45	07/11/17 12:26	1
Nickel	**0.0019**	**J**	0.010	0.0013	mg/L		07/10/17 07:45	07/11/17 12:26	1
Potassium	**3.5**		0.50	0.10	mg/L		07/10/17 07:45	07/11/17 12:26	1
Selenium	ND		0.025	0.0087	mg/L		07/10/17 07:45	07/11/17 12:26	1
Silver	ND		0.0060	0.0017	mg/L		07/10/17 07:45	07/11/17 12:26	1
Sodium	**6.2**		1.0	0.32	mg/L		07/10/17 07:45	07/11/17 12:26	1
Thallium	ND		0.020	0.010	mg/L		07/10/17 07:45	07/11/17 12:26	1
Vanadium	**0.0018**	**J**	0.0050	0.0015	mg/L		07/10/17 07:45	07/11/17 12:26	1
Zinc	**0.0061**	**J**	0.010	0.0015	mg/L		07/10/17 07:45	07/11/17 12:26	1

Client Sample ID: MW-3BR

Lab Sample ID: 480-120641-8

Date Collected: 07/05/17 15:20
Matrix: Water
Date Received: 07/07/17 01:15

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.82	ug/L			07/14/17 00:08	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			07/14/17 00:08	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0	0.31	ug/L			07/14/17 00:08	1
1,1,2-Trichloroethane	ND		1.0	0.23	ug/L			07/14/17 00:08	1
1,1-Dichloroethane	ND		1.0	0.38	ug/L			07/14/17 00:08	1
1,1-Dichloroethene	ND		1.0	0.29	ug/L			07/14/17 00:08	1
1,2,3-Trichlorobenzene	ND		1.0	0.41	ug/L			07/14/17 00:08	1
1,2,4-Trichlorobenzene	ND		1.0	0.41	ug/L			07/14/17 00:08	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.39	ug/L			07/14/17 00:08	1
1,2-Dibromoethane	ND		1.0	0.73	ug/L			07/14/17 00:08	1
1,2-Dichlorobenzene	ND		1.0	0.79	ug/L			07/14/17 00:08	1
1,2-Dichloroethane	ND		1.0	0.21	ug/L			07/14/17 00:08	1
1,2-Dichloropropane	ND		1.0	0.72	ug/L			07/14/17 00:08	1
1,3-Dichlorobenzene	ND		1.0	0.78	ug/L			07/14/17 00:08	1
1,4-Dichlorobenzene	ND		1.0	0.84	ug/L			07/14/17 00:08	1
1,4-Dioxane	ND		40	9.3	ug/L			07/14/17 00:08	1
2-Butanone (MEK)	ND		10	1.3	ug/L			07/14/17 00:08	1
2-Hexanone	ND		5.0	1.2	ug/L			07/14/17 00:08	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.1	ug/L			07/14/17 00:08	1
Acetone	ND		10	3.0	ug/L			07/14/17 00:08	1
Benzene	ND		1.0	0.41	ug/L			07/14/17 00:08	1

Client Sample ID: MW-3BR

Date Collected: 07/05/17 15:20
Date Received: 07/07/17 01:15

Lab Sample ID: 480-120641-8

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromochloromethane	ND		1.0	0.87	ug/L			07/14/17 00:08	1
Bromodichloromethane	ND		1.0	0.39	ug/L			07/14/17 00:08	1
Bromoform	ND		1.0	0.26	ug/L			07/14/17 00:08	1
Bromomethane	ND		1.0	0.69	ug/L			07/14/17 00:08	1
Carbon disulfide	ND		1.0	0.19	ug/L			07/14/17 00:08	1
Carbon tetrachloride	ND		1.0	0.27	ug/L			07/14/17 00:08	1
Chlorobenzene	ND		1.0	0.75	ug/L			07/14/17 00:08	1
Chloroethane	ND		1.0	0.32	ug/L			07/14/17 00:08	1
Chloroform	ND		1.0	0.34	ug/L			07/14/17 00:08	1
Chloromethane	ND		1.0	0.35	ug/L			07/14/17 00:08	1
cis-1,2-Dichloroethene	ND		1.0	0.81	ug/L			07/14/17 00:08	1
cis-1,3-Dichloropropene	ND		1.0	0.36	ug/L			07/14/17 00:08	1
Cyclohexane	ND		1.0	0.18	ug/L			07/14/17 00:08	1
Dibromochloromethane	ND		1.0	0.32	ug/L			07/14/17 00:08	1
Dichlorodifluoromethane	ND		1.0	0.68	ug/L			07/14/17 00:08	1
Ethylbenzene	ND		1.0	0.74	ug/L			07/14/17 00:08	1
Isopropylbenzene	ND		1.0	0.79	ug/L			07/14/17 00:08	1
Methyl acetate	ND		2.5	1.3	ug/L			07/14/17 00:08	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			07/14/17 00:08	1
Methylcyclohexane	ND		1.0	0.16	ug/L			07/14/17 00:08	1
Methylene Chloride	ND		1.0	0.44	ug/L			07/14/17 00:08	1
Styrene	ND		1.0	0.73	ug/L			07/14/17 00:08	1
Tetrachloroethene	ND		1.0	0.36	ug/L			07/14/17 00:08	1
Toluene	ND		1.0	0.51	ug/L			07/14/17 00:08	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			07/14/17 00:08	1
trans-1,3-Dichloropropene	ND		1.0	0.37	ug/L			07/14/17 00:08	1
Trichloroethene	ND		1.0	0.46	ug/L			07/14/17 00:08	1
Trichlorofluoromethane	ND		1.0	0.88	ug/L			07/14/17 00:08	1
Vinyl chloride	ND		1.0	0.90	ug/L			07/14/17 00:08	1
Xylenes, Total	ND		2.0	0.66	ug/L			07/14/17 00:08	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*106*		*77 - 120*		*07/14/17 00:08*	*1*
4-Bromofluorobenzene (Surr)	*90*		*73 - 120*		*07/14/17 00:08*	*1*
Toluene-d8 (Surr)	*91*		*80 - 120*		*07/14/17 00:08*	*1*
Dibromofluoromethane (Surr)	*100*		*75 - 123*		*07/14/17 00:08*	*1*

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	ND		0.20	0.060	mg/L		07/10/17 07:45	07/11/17 12:29	1
Antimony	**0.011**	**J**	0.020	0.0068	mg/L		07/10/17 07:45	07/11/17 12:29	1
Arsenic	ND		0.015	0.0056	mg/L		07/10/17 07:45	07/11/17 12:29	1
Barium	**0.074**		0.0020	0.00070	mg/L		07/10/17 07:45	07/11/17 12:29	1
Beryllium	ND		0.0020	0.00030	mg/L		07/10/17 07:45	07/11/17 12:29	1
Cadmium	ND		0.0020	0.00050	mg/L		07/10/17 07:45	07/11/17 12:29	1
Calcium	**10**		0.50	0.10	mg/L		07/10/17 07:45	07/11/17 12:29	1
Chromium	ND		0.0040	0.0010	mg/L		07/10/17 07:45	07/11/17 12:29	1
Cobalt	**0.0013**	**J**	0.0040	0.00063	mg/L		07/10/17 07:45	07/11/17 12:29	1
Copper	**0.0020**	**J**	0.010	0.0016	mg/L		07/10/17 07:45	07/11/17 12:29	1
Iron	**124**		0.050	0.019	mg/L		07/10/17 07:45	07/11/17 12:29	1

Client Sample ID: MW-3BR

Date Collected: 07/05/17 15:20
Date Received: 07/07/17 01:15

Lab Sample ID: 480-120641-8

Matrix: Water

Method: 6010C - Metals (ICP) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	ND		0.010	0.0030	mg/L		07/10/17 07:45	07/11/17 12:29	1
Magnesium	**3.1**		0.20	0.043	mg/L		07/10/17 07:45	07/11/17 12:29	1
Manganese	**1.5**		0.0030	0.00040	mg/L		07/10/17 07:45	07/11/17 12:29	1
Nickel	**0.015**		0.010	0.0013	mg/L		07/10/17 07:45	07/11/17 12:29	1
Potassium	**2.3**		0.50	0.10	mg/L		07/10/17 07:45	07/11/17 12:29	1
Selenium	ND		0.025	0.0087	mg/L		07/10/17 07:45	07/11/17 12:29	1
Silver	ND		0.0060	0.0017	mg/L		07/10/17 07:45	07/11/17 12:29	1
Sodium	**14.9**		1.0	0.32	mg/L		07/10/17 07:45	07/11/17 12:29	1
Thallium	ND		0.020	0.010	mg/L		07/10/17 07:45	07/11/17 12:29	1
Vanadium	ND		0.0050	0.0015	mg/L		07/10/17 07:45	07/11/17 12:29	1
Zinc	**0.0043**	**J**	0.010	0.0015	mg/L		07/10/17 07:45	07/11/17 12:29	1

Client Sample ID: MW-1B

Date Collected: 07/05/17 17:00
Date Received: 07/07/17 01:15

Lab Sample ID: 480-120641-9

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		0.40	0.20	ug/L			07/12/17 02:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*100*		*71 - 144*		*07/12/17 02:46*	*1*
4-Bromofluorobenzene	*97*		*72 - 133*		*07/12/17 02:46*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.82	ug/L			07/14/17 00:31	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			07/14/17 00:31	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0	0.31	ug/L			07/14/17 00:31	1
1,1,2-Trichloroethane	ND		1.0	0.23	ug/L			07/14/17 00:31	1
1,1-Dichloroethane	ND		1.0	0.38	ug/L			07/14/17 00:31	1
1,1-Dichloroethene	ND		1.0	0.29	ug/L			07/14/17 00:31	1
1,2,3-Trichlorobenzene	ND		1.0	0.41	ug/L			07/14/17 00:31	1
1,2,4-Trichlorobenzene	ND		1.0	0.41	ug/L			07/14/17 00:31	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.39	ug/L			07/14/17 00:31	1
1,2-Dibromoethane	ND		1.0	0.73	ug/L			07/14/17 00:31	1
1,2-Dichlorobenzene	ND		1.0	0.79	ug/L			07/14/17 00:31	1
1,2-Dichloroethane	ND		1.0	0.21	ug/L			07/14/17 00:31	1
1,2-Dichloropropane	ND		1.0	0.72	ug/L			07/14/17 00:31	1
1,3-Dichlorobenzene	ND		1.0	0.78	ug/L			07/14/17 00:31	1
1,4-Dichlorobenzene	ND		1.0	0.84	ug/L			07/14/17 00:31	1
1,4-Dioxane	ND		40	9.3	ug/L			07/14/17 00:31	1
2-Butanone (MEK)	ND		10	1.3	ug/L			07/14/17 00:31	1
2-Hexanone	ND		5.0	1.2	ug/L			07/14/17 00:31	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.1	ug/L			07/14/17 00:31	1
Acetone	ND		10	3.0	ug/L			07/14/17 00:31	1
Benzene	ND		1.0	0.41	ug/L			07/14/17 00:31	1
Bromochloromethane	ND		1.0	0.87	ug/L			07/14/17 00:31	1
Bromodichloromethane	ND		1.0	0.39	ug/L			07/14/17 00:31	1
Bromoform	ND		1.0	0.26	ug/L			07/14/17 00:31	1

Client Sample ID: MW-1B
Date Collected: 07/05/17 17:00
Date Received: 07/07/17 01:15

Lab Sample ID: 480-120641-9
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromomethane	ND		1.0	0.69	ug/L			07/14/17 00:31	1
Carbon disulfide	ND		1.0	0.19	ug/L			07/14/17 00:31	1
Carbon tetrachloride	ND		1.0	0.27	ug/L			07/14/17 00:31	1
Chlorobenzene	ND		1.0	0.75	ug/L			07/14/17 00:31	1
Chloroethane	ND		1.0	0.32	ug/L			07/14/17 00:31	1
Chloroform	ND		1.0	0.34	ug/L			07/14/17 00:31	1
Chloromethane	ND		1.0	0.35	ug/L			07/14/17 00:31	1
cis-1,2-Dichloroethene	ND		1.0	0.81	ug/L			07/14/17 00:31	1
cis-1,3-Dichloropropene	ND		1.0	0.36	ug/L			07/14/17 00:31	1
Cyclohexane	ND		1.0	0.18	ug/L			07/14/17 00:31	1
Dibromochloromethane	ND		1.0	0.32	ug/L			07/14/17 00:31	1
Dichlorodifluoromethane	ND		1.0	0.68	ug/L			07/14/17 00:31	1
Ethylbenzene	ND		1.0	0.74	ug/L			07/14/17 00:31	1
Isopropylbenzene	ND		1.0	0.79	ug/L			07/14/17 00:31	1
Methyl acetate	ND		2.5	1.3	ug/L			07/14/17 00:31	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			07/14/17 00:31	1
Methylcyclohexane	ND		1.0	0.16	ug/L			07/14/17 00:31	1
Methylene Chloride	ND		1.0	0.44	ug/L			07/14/17 00:31	1
Styrene	ND		1.0	0.73	ug/L			07/14/17 00:31	1
Tetrachloroethene	ND		1.0	0.36	ug/L			07/14/17 00:31	1
Toluene	ND		1.0	0.51	ug/L			07/14/17 00:31	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			07/14/17 00:31	1
trans-1,3-Dichloropropene	ND		1.0	0.37	ug/L			07/14/17 00:31	1
Trichloroethene	ND		1.0	0.46	ug/L			07/14/17 00:31	1
Trichlorofluoromethane	ND		1.0	0.88	ug/L			07/14/17 00:31	1
Vinyl chloride	ND		1.0	0.90	ug/L			07/14/17 00:31	1
Xylenes, Total	ND		2.0	0.66	ug/L			07/14/17 00:31	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*105*		*77 - 120*		*07/14/17 00:31*	*1*
4-Bromofluorobenzene (Surr)	*90*		*73 - 120*		*07/14/17 00:31*	*1*
Toluene-d8 (Surr)	*89*		*80 - 120*		*07/14/17 00:31*	*1*
Dibromofluoromethane (Surr)	*94*		*75 - 123*		*07/14/17 00:31*	*1*

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	**0.30**		0.20	0.060	mg/L		07/10/17 07:45	07/11/17 12:32	1
Antimony	ND		0.020	0.0068	mg/L		07/10/17 07:45	07/11/17 12:32	1
Arsenic	ND		0.015	0.0056	mg/L		07/10/17 07:45	07/11/17 12:32	1
Barium	**0.017**		0.0020	0.00070	mg/L		07/10/17 07:45	07/11/17 12:32	1
Beryllium	ND		0.0020	0.00030	mg/L		07/10/17 07:45	07/11/17 12:32	1
Cadmium	ND		0.0020	0.00050	mg/L		07/10/17 07:45	07/11/17 12:32	1
Calcium	**17.6**		0.50	0.10	mg/L		07/10/17 07:45	07/11/17 12:32	1
Chromium	ND		0.0040	0.0010	mg/L		07/10/17 07:45	07/11/17 12:32	1
Cobalt	ND		0.0040	0.00063	mg/L		07/10/17 07:45	07/11/17 12:32	1
Copper	ND		0.010	0.0016	mg/L		07/10/17 07:45	07/11/17 12:32	1
Iron	**0.32**		0.050	0.019	mg/L		07/10/17 07:45	07/11/17 12:32	1
Lead	ND		0.010	0.0030	mg/L		07/10/17 07:45	07/11/17 12:32	1
Magnesium	**4.0**		0.20	0.043	mg/L		07/10/17 07:45	07/11/17 12:32	1
Manganese	**0.013**		0.0030	0.00040	mg/L		07/10/17 07:45	07/11/17 12:32	1

Client Sample ID: MW-1B

Date Collected: 07/05/17 17:00
Date Received: 07/07/17 01:15

Lab Sample ID: 480-120641-9
Matrix: Water

Method: 6010C - Metals (ICP) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nickel	ND		0.010	0.0013	mg/L		07/10/17 07:45	07/11/17 12:32	1
Potassium	**0.71**		0.50	0.10	mg/L		07/10/17 07:45	07/11/17 12:32	1
Selenium	ND		0.025	0.0087	mg/L		07/10/17 07:45	07/11/17 12:32	1
Silver	ND		0.0060	0.0017	mg/L		07/10/17 07:45	07/11/17 12:32	1
Sodium	**6.8**		1.0	0.32	mg/L		07/10/17 07:45	07/11/17 12:32	1
Thallium	ND		0.020	0.010	mg/L		07/10/17 07:45	07/11/17 12:32	1
Vanadium	ND		0.0050	0.0015	mg/L		07/10/17 07:45	07/11/17 12:32	1
Zinc	ND		0.010	0.0015	mg/L		07/10/17 07:45	07/11/17 12:32	1

Client Sample ID: MW-1S

Date Collected: 07/05/17 17:10
Date Received: 07/07/17 01:15

Lab Sample ID: 480-120641-10
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		0.40	0.20	ug/L			07/12/17 03:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*101*		*71 - 144*		*07/12/17 03:10*	*1*
4-Bromofluorobenzene	*96*		*72 - 133*		*07/12/17 03:10*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.82	ug/L			07/14/17 00:55	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			07/14/17 00:55	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0	0.31	ug/L			07/14/17 00:55	1
1,1,2-Trichloroethane	ND		1.0	0.23	ug/L			07/14/17 00:55	1
1,1-Dichloroethane	ND		1.0	0.38	ug/L			07/14/17 00:55	1
1,1-Dichloroethene	ND		1.0	0.29	ug/L			07/14/17 00:55	1
1,2,3-Trichlorobenzene	ND		1.0	0.41	ug/L			07/14/17 00:55	1
1,2,4-Trichlorobenzene	ND		1.0	0.41	ug/L			07/14/17 00:55	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.39	ug/L			07/14/17 00:55	1
1,2-Dibromoethane	ND		1.0	0.73	ug/L			07/14/17 00:55	1
1,2-Dichlorobenzene	ND		1.0	0.79	ug/L			07/14/17 00:55	1
1,2-Dichloroethane	ND		1.0	0.21	ug/L			07/14/17 00:55	1
1,2-Dichloropropane	ND		1.0	0.72	ug/L			07/14/17 00:55	1
1,3-Dichlorobenzene	ND		1.0	0.78	ug/L			07/14/17 00:55	1
1,4-Dichlorobenzene	ND		1.0	0.84	ug/L			07/14/17 00:55	1
1,4-Dioxane	ND		40	9.3	ug/L			07/14/17 00:55	1
2-Butanone (MEK)	ND		10	1.3	ug/L			07/14/17 00:55	1
2-Hexanone	ND		5.0	1.2	ug/L			07/14/17 00:55	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.1	ug/L			07/14/17 00:55	1
Acetone	ND		10	3.0	ug/L			07/14/17 00:55	1
Benzene	ND		1.0	0.41	ug/L			07/14/17 00:55	1
Bromochloromethane	ND		1.0	0.87	ug/L			07/14/17 00:55	1
Bromodichloromethane	ND		1.0	0.39	ug/L			07/14/17 00:55	1
Bromoform	ND		1.0	0.26	ug/L			07/14/17 00:55	1
Bromomethane	ND		1.0	0.69	ug/L			07/14/17 00:55	1
Carbon disulfide	ND		1.0	0.19	ug/L			07/14/17 00:55	1
Carbon tetrachloride	ND		1.0	0.27	ug/L			07/14/17 00:55	1

Client Sample ID: MW-1S

Date Collected: 07/05/17 17:10
Date Received: 07/07/17 01:15

Lab Sample ID: 480-120641-10

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlorobenzene	ND		1.0	0.75	ug/L			07/14/17 00:55	1
Chloroethane	ND		1.0	0.32	ug/L			07/14/17 00:55	1
Chloroform	ND		1.0	0.34	ug/L			07/14/17 00:55	1
Chloromethane	ND		1.0	0.35	ug/L			07/14/17 00:55	1
cis-1,2-Dichloroethene	ND		1.0	0.81	ug/L			07/14/17 00:55	1
cis-1,3-Dichloropropene	ND		1.0	0.36	ug/L			07/14/17 00:55	1
Cyclohexane	ND		1.0	0.18	ug/L			07/14/17 00:55	1
Dibromochloromethane	ND		1.0	0.32	ug/L			07/14/17 00:55	1
Dichlorodifluoromethane	ND		1.0	0.68	ug/L			07/14/17 00:55	1
Ethylbenzene	ND		1.0	0.74	ug/L			07/14/17 00:55	1
Isopropylbenzene	ND		1.0	0.79	ug/L			07/14/17 00:55	1
Methyl acetate	ND		2.5	1.3	ug/L			07/14/17 00:55	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			07/14/17 00:55	1
Methylcyclohexane	ND		1.0	0.16	ug/L			07/14/17 00:55	1
Methylene Chloride	ND		1.0	0.44	ug/L			07/14/17 00:55	1
Styrene	ND		1.0	0.73	ug/L			07/14/17 00:55	1
Tetrachloroethene	ND		1.0	0.36	ug/L			07/14/17 00:55	1
Toluene	ND		1.0	0.51	ug/L			07/14/17 00:55	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			07/14/17 00:55	1
trans-1,3-Dichloropropene	ND		1.0	0.37	ug/L			07/14/17 00:55	1
Trichloroethene	ND		1.0	0.46	ug/L			07/14/17 00:55	1
Trichlorofluoromethane	ND		1.0	0.88	ug/L			07/14/17 00:55	1
Vinyl chloride	ND		1.0	0.90	ug/L			07/14/17 00:55	1
Xylenes, Total	ND		2.0	0.66	ug/L			07/14/17 00:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*107*		*77 - 120*		*07/14/17 00:55*	*1*
4-Bromofluorobenzene (Surr)	*98*		*73 - 120*		*07/14/17 00:55*	*1*
Toluene-d8 (Surr)	*98*		*80 - 120*		*07/14/17 00:55*	*1*
Dibromofluoromethane (Surr)	*99*		*75 - 123*		*07/14/17 00:55*	*1*

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	**4.4**		0.20	0.060	mg/L		07/10/17 07:45	07/11/17 12:36	1
Antimony	ND		0.020	0.0068	mg/L		07/10/17 07:45	07/11/17 12:36	1
Arsenic	ND		0.015	0.0056	mg/L		07/10/17 07:45	07/11/17 12:36	1
Barium	**0.050**		0.0020	0.00070	mg/L		07/10/17 07:45	07/11/17 12:36	1
Beryllium	ND		0.0020	0.00030	mg/L		07/10/17 07:45	07/11/17 12:36	1
Cadmium	ND		0.0020	0.00050	mg/L		07/10/17 07:45	07/11/17 12:36	1
Calcium	**16.1**		0.50	0.10	mg/L		07/10/17 07:45	07/11/17 12:36	1
Chromium	**0.0044**		0.0040	0.0010	mg/L		07/10/17 07:45	07/11/17 12:36	1
Cobalt	**0.0015**	**J**	0.0040	0.00063	mg/L		07/10/17 07:45	07/11/17 12:36	1
Copper	**0.0031**	**J**	0.010	0.0016	mg/L		07/10/17 07:45	07/11/17 12:36	1
Iron	**3.9**		0.050	0.019	mg/L		07/10/17 07:45	07/11/17 12:36	1
Lead	**0.0041**	**J**	0.010	0.0030	mg/L		07/10/17 07:45	07/11/17 12:36	1
Magnesium	**4.4**		0.20	0.043	mg/L		07/10/17 07:45	07/11/17 12:36	1
Manganese	**0.070**		0.0030	0.00040	mg/L		07/10/17 07:45	07/11/17 12:36	1
Nickel	**0.0038**	**J**	0.010	0.0013	mg/L		07/10/17 07:45	07/11/17 12:36	1
Potassium	**1.7**		0.50	0.10	mg/L		07/10/17 07:45	07/11/17 12:36	1
Selenium	ND		0.025	0.0087	mg/L		07/10/17 07:45	07/11/17 12:36	1

Client Sample ID: MW-1S

Date Collected: 07/05/17 17:10
Date Received: 07/07/17 01:15

Lab Sample ID: 480-120641-10

Matrix: Water

Method: 6010C - Metals (ICP) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	ND		0.0060	0.0017	mg/L		07/10/17 07:45	07/11/17 12:36	1
Sodium	**6.1**		1.0	0.32	mg/L		07/10/17 07:45	07/11/17 12:36	1
Thallium	ND		0.020	0.010	mg/L		07/10/17 07:45	07/11/17 12:36	1
Vanadium	**0.0042**	**J**	0.0050	0.0015	mg/L		07/10/17 07:45	07/11/17 12:36	1
Zinc	**0.011**		0.010	0.0015	mg/L		07/10/17 07:45	07/11/17 12:36	1

Client Sample ID: SEEP-1

Date Collected: 07/06/17 08:20
Date Received: 07/07/17 01:15

Lab Sample ID: 480-120641-11

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.82	ug/L			07/14/17 01:18	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			07/14/17 01:18	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0	0.31	ug/L			07/14/17 01:18	1
1,1,2-Trichloroethane	ND		1.0	0.23	ug/L			07/14/17 01:18	1
1,1-Dichloroethane	ND		1.0	0.38	ug/L			07/14/17 01:18	1
1,1-Dichloroethene	ND		1.0	0.29	ug/L			07/14/17 01:18	1
1,2,3-Trichlorobenzene	ND		1.0	0.41	ug/L			07/14/17 01:18	1
1,2,4-Trichlorobenzene	ND		1.0	0.41	ug/L			07/14/17 01:18	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.39	ug/L			07/14/17 01:18	1
1,2-Dibromoethane	ND		1.0	0.73	ug/L			07/14/17 01:18	1
1,2-Dichlorobenzene	ND		1.0	0.79	ug/L			07/14/17 01:18	1
1,2-Dichloroethane	ND		1.0	0.21	ug/L			07/14/17 01:18	1
1,2-Dichloropropane	ND		1.0	0.72	ug/L			07/14/17 01:18	1
1,3-Dichlorobenzene	ND		1.0	0.78	ug/L			07/14/17 01:18	1
1,4-Dichlorobenzene	ND		1.0	0.84	ug/L			07/14/17 01:18	1
1,4-Dioxane	ND		40	9.3	ug/L			07/14/17 01:18	1
2-Butanone (MEK)	ND		10	1.3	ug/L			07/14/17 01:18	1
2-Hexanone	ND		5.0	1.2	ug/L			07/14/17 01:18	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.1	ug/L			07/14/17 01:18	1
Acetone	ND		10	3.0	ug/L			07/14/17 01:18	1
Benzene	ND		1.0	0.41	ug/L			07/14/17 01:18	1
Bromochloromethane	ND		1.0	0.87	ug/L			07/14/17 01:18	1
Bromodichloromethane	ND		1.0	0.39	ug/L			07/14/17 01:18	1
Bromoform	ND		1.0	0.26	ug/L			07/14/17 01:18	1
Bromomethane	ND		1.0	0.69	ug/L			07/14/17 01:18	1
Carbon disulfide	ND		1.0	0.19	ug/L			07/14/17 01:18	1
Carbon tetrachloride	ND		1.0	0.27	ug/L			07/14/17 01:18	1
Chlorobenzene	ND		1.0	0.75	ug/L			07/14/17 01:18	1
Chloroethane	ND		1.0	0.32	ug/L			07/14/17 01:18	1
Chloroform	ND		1.0	0.34	ug/L			07/14/17 01:18	1
Chloromethane	ND		1.0	0.35	ug/L			07/14/17 01:18	1
cis-1,2-Dichloroethene	ND		1.0	0.81	ug/L			07/14/17 01:18	1
cis-1,3-Dichloropropene	ND		1.0	0.36	ug/L			07/14/17 01:18	1
Cyclohexane	ND		1.0	0.18	ug/L			07/14/17 01:18	1
Dibromochloromethane	ND		1.0	0.32	ug/L			07/14/17 01:18	1
Dichlorodifluoromethane	ND		1.0	0.68	ug/L			07/14/17 01:18	1
Ethylbenzene	ND		1.0	0.74	ug/L			07/14/17 01:18	1
Isopropylbenzene	ND		1.0	0.79	ug/L			07/14/17 01:18	1

Client Sample ID: SEEP-1
Date Collected: 07/06/17 08:20
Date Received: 07/07/17 01:15

Lab Sample ID: 480-120641-11
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl acetate	ND		2.5	1.3	ug/L			07/14/17 01:18	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			07/14/17 01:18	1
Methylcyclohexane	ND		1.0	0.16	ug/L			07/14/17 01:18	1
Methylene Chloride	ND		1.0	0.44	ug/L			07/14/17 01:18	1
Styrene	ND		1.0	0.73	ug/L			07/14/17 01:18	1
Tetrachloroethene	ND		1.0	0.36	ug/L			07/14/17 01:18	1
Toluene	ND		1.0	0.51	ug/L			07/14/17 01:18	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			07/14/17 01:18	1
trans-1,3-Dichloropropene	ND		1.0	0.37	ug/L			07/14/17 01:18	1
Trichloroethene	ND		1.0	0.46	ug/L			07/14/17 01:18	1
Trichlorofluoromethane	ND		1.0	0.88	ug/L			07/14/17 01:18	1
Vinyl chloride	ND		1.0	0.90	ug/L			07/14/17 01:18	1
Xylenes, Total	ND		2.0	0.66	ug/L			07/14/17 01:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*103*		*77 - 120*		*07/14/17 01:18*	*1*
4-Bromofluorobenzene (Surr)	*84*		*73 - 120*		*07/14/17 01:18*	*1*
Toluene-d8 (Surr)	*95*		*80 - 120*		*07/14/17 01:18*	*1*
Dibromofluoromethane (Surr)	*97*		*75 - 123*		*07/14/17 01:18*	*1*

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.50	0.18	ug/L		07/10/17 07:51	07/11/17 15:50	1
PCB-1221	ND		0.50	0.18	ug/L		07/10/17 07:51	07/11/17 15:50	1
PCB-1232	ND		0.50	0.18	ug/L		07/10/17 07:51	07/11/17 15:50	1
PCB-1242	ND		0.50	0.18	ug/L		07/10/17 07:51	07/11/17 15:50	1
PCB-1248	ND		0.50	0.18	ug/L		07/10/17 07:51	07/11/17 15:50	1
PCB-1254	ND		0.50	0.25	ug/L		07/10/17 07:51	07/11/17 15:50	1
PCB-1260	ND		0.50	0.25	ug/L		07/10/17 07:51	07/11/17 15:50	1
PCB-1262	ND		0.50	0.25	ug/L		07/10/17 07:51	07/11/17 15:50	1
PCB-1268	ND		0.50	0.25	ug/L		07/10/17 07:51	07/11/17 15:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*79*		*19 - 120*	*07/10/17 07:51*	*07/11/17 15:50*	*1*
DCB Decachlorobiphenyl	*81*		*19 - 120*	*07/10/17 07:51*	*07/11/17 15:50*	*1*
Tetrachloro-m-xylene	*131*	*X*	*39 - 121*	*07/10/17 07:51*	*07/11/17 15:50*	*1*
Tetrachloro-m-xylene	*117*		*39 - 121*	*07/10/17 07:51*	*07/11/17 15:50*	*1*

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	**0.13**	**J**	0.20	0.060	mg/L		07/10/17 07:45	07/11/17 12:39	1
Antimony	ND		0.020	0.0068	mg/L		07/10/17 07:45	07/11/17 12:39	1
Arsenic	ND		0.015	0.0056	mg/L		07/10/17 07:45	07/11/17 12:39	1
Barium	**0.026**		0.0020	0.00070	mg/L		07/10/17 07:45	07/11/17 12:39	1
Beryllium	ND		0.0020	0.00030	mg/L		07/10/17 07:45	07/11/17 12:39	1
Cadmium	ND		0.0020	0.00050	mg/L		07/10/17 07:45	07/11/17 12:39	1
Calcium	**30.2**		0.50	0.10	mg/L		07/10/17 07:45	07/11/17 12:39	1
Chromium	ND		0.0040	0.0010	mg/L		07/10/17 07:45	07/11/17 12:39	1
Cobalt	ND		0.0040	0.00063	mg/L		07/10/17 07:45	07/11/17 12:39	1
Copper	**0.0016**	**J**	0.010	0.0016	mg/L		07/10/17 07:45	07/11/17 12:39	1

Client Sample ID: SEEP-1

Date Collected: 07/06/17 08:20
Date Received: 07/07/17 01:15

Lab Sample ID: 480-120641-11

Matrix: Water

Method: 6010C - Metals (ICP) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**0.14**		0.050	0.019	mg/L		07/10/17 07:45	07/11/17 12:39	1
Lead	ND		0.010	0.0030	mg/L		07/10/17 07:45	07/11/17 12:39	1
Magnesium	**4.7**		0.20	0.043	mg/L		07/10/17 07:45	07/11/17 12:39	1
Manganese	**0.0049**		0.0030	0.00040	mg/L		07/10/17 07:45	07/11/17 12:39	1
Nickel	ND		0.010	0.0013	mg/L		07/10/17 07:45	07/11/17 12:39	1
Potassium	**0.39**	**J**	0.50	0.10	mg/L		07/10/17 07:45	07/11/17 12:39	1
Selenium	ND		0.025	0.0087	mg/L		07/10/17 07:45	07/11/17 12:39	1
Silver	ND		0.0060	0.0017	mg/L		07/10/17 07:45	07/11/17 12:39	1
Sodium	**21.5**		1.0	0.32	mg/L		07/10/17 07:45	07/11/17 12:39	1
Thallium	ND		0.020	0.010	mg/L		07/10/17 07:45	07/11/17 12:39	1
Vanadium	ND		0.0050	0.0015	mg/L		07/10/17 07:45	07/11/17 12:39	1
Zinc	ND		0.010	0.0015	mg/L		07/10/17 07:45	07/11/17 12:39	1

Client Sample ID: SEEP-1 DUP

Date Collected: 07/06/17 08:20
Date Received: 07/07/17 01:15

Lab Sample ID: 480-120641-12

Matrix: Water

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.50	0.18	ug/L		07/10/17 07:51	07/11/17 16:06	1
PCB-1221	ND		0.50	0.18	ug/L		07/10/17 07:51	07/11/17 16:06	1
PCB-1232	ND		0.50	0.18	ug/L		07/10/17 07:51	07/11/17 16:06	1
PCB-1242	ND		0.50	0.18	ug/L		07/10/17 07:51	07/11/17 16:06	1
PCB-1248	ND		0.50	0.18	ug/L		07/10/17 07:51	07/11/17 16:06	1
PCB-1254	ND		0.50	0.25	ug/L		07/10/17 07:51	07/11/17 16:06	1
PCB-1260	ND		0.50	0.25	ug/L		07/10/17 07:51	07/11/17 16:06	1
PCB-1262	ND		0.50	0.25	ug/L		07/10/17 07:51	07/11/17 16:06	1
PCB-1268	ND		0.50	0.25	ug/L		07/10/17 07:51	07/11/17 16:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*72*		*19 - 120*	*07/10/17 07:51*	*07/11/17 16:06*	*1*
DCB Decachlorobiphenyl	*80*		*19 - 120*	*07/10/17 07:51*	*07/11/17 16:06*	*1*
Tetrachloro-m-xylene	*110*		*39 - 121*	*07/10/17 07:51*	*07/11/17 16:06*	*1*
Tetrachloro-m-xylene	*110*		*39 - 121*	*07/10/17 07:51*	*07/11/17 16:06*	*1*

Client Sample ID: SW-1

Date Collected: 07/06/17 10:30
Date Received: 07/07/17 01:15

Lab Sample ID: 480-120641-13

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.82	ug/L			07/14/17 01:41	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			07/14/17 01:41	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0	0.31	ug/L			07/14/17 01:41	1
1,1,2-Trichloroethane	ND		1.0	0.23	ug/L			07/14/17 01:41	1
1,1-Dichloroethane	ND		1.0	0.38	ug/L			07/14/17 01:41	1
1,1-Dichloroethene	ND		1.0	0.29	ug/L			07/14/17 01:41	1
1,2,3-Trichlorobenzene	ND		1.0	0.41	ug/L			07/14/17 01:41	1
1,2,4-Trichlorobenzene	ND		1.0	0.41	ug/L			07/14/17 01:41	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.39	ug/L			07/14/17 01:41	1

Client Sample ID: SW-1

Date Collected: 07/06/17 10:30
Date Received: 07/07/17 01:15

Lab Sample ID: 480-120641-13

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromoethane	ND		1.0	0.73	ug/L			07/14/17 01:41	1
1,2-Dichlorobenzene	ND		1.0	0.79	ug/L			07/14/17 01:41	1
1,2-Dichloroethane	ND		1.0	0.21	ug/L			07/14/17 01:41	1
1,2-Dichloropropane	ND		1.0	0.72	ug/L			07/14/17 01:41	1
1,3-Dichlorobenzene	ND		1.0	0.78	ug/L			07/14/17 01:41	1
1,4-Dichlorobenzene	ND		1.0	0.84	ug/L			07/14/17 01:41	1
1,4-Dioxane	ND		40	9.3	ug/L			07/14/17 01:41	1
2-Butanone (MEK)	ND		10	1.3	ug/L			07/14/17 01:41	1
2-Hexanone	ND		5.0	1.2	ug/L			07/14/17 01:41	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.1	ug/L			07/14/17 01:41	1
Acetone	ND		10	3.0	ug/L			07/14/17 01:41	1
Benzene	ND		1.0	0.41	ug/L			07/14/17 01:41	1
Bromochloromethane	ND		1.0	0.87	ug/L			07/14/17 01:41	1
Bromodichloromethane	ND		1.0	0.39	ug/L			07/14/17 01:41	1
Bromoform	ND		1.0	0.26	ug/L			07/14/17 01:41	1
Bromomethane	ND		1.0	0.69	ug/L			07/14/17 01:41	1
Carbon disulfide	ND		1.0	0.19	ug/L			07/14/17 01:41	1
Carbon tetrachloride	ND		1.0	0.27	ug/L			07/14/17 01:41	1
Chlorobenzene	ND		1.0	0.75	ug/L			07/14/17 01:41	1
Chloroethane	ND		1.0	0.32	ug/L			07/14/17 01:41	1
Chloroform	ND		1.0	0.34	ug/L			07/14/17 01:41	1
Chloromethane	ND		1.0	0.35	ug/L			07/14/17 01:41	1
cis-1,2-Dichloroethene	ND		1.0	0.81	ug/L			07/14/17 01:41	1
cis-1,3-Dichloropropene	ND		1.0	0.36	ug/L			07/14/17 01:41	1
Cyclohexane	ND		1.0	0.18	ug/L			07/14/17 01:41	1
Dibromochloromethane	ND		1.0	0.32	ug/L			07/14/17 01:41	1
Dichlorodifluoromethane	ND		1.0	0.68	ug/L			07/14/17 01:41	1
Ethylbenzene	ND		1.0	0.74	ug/L			07/14/17 01:41	1
Isopropylbenzene	ND		1.0	0.79	ug/L			07/14/17 01:41	1
Methyl acetate	ND		2.5	1.3	ug/L			07/14/17 01:41	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			07/14/17 01:41	1
Methylcyclohexane	ND		1.0	0.16	ug/L			07/14/17 01:41	1
Methylene Chloride	ND		1.0	0.44	ug/L			07/14/17 01:41	1
Styrene	ND		1.0	0.73	ug/L			07/14/17 01:41	1
Tetrachloroethene	ND		1.0	0.36	ug/L			07/14/17 01:41	1
Toluene	ND		1.0	0.51	ug/L			07/14/17 01:41	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			07/14/17 01:41	1
trans-1,3-Dichloropropene	ND		1.0	0.37	ug/L			07/14/17 01:41	1
Trichloroethene	ND		1.0	0.46	ug/L			07/14/17 01:41	1
Trichlorofluoromethane	ND		1.0	0.88	ug/L			07/14/17 01:41	1
Vinyl chloride	ND		1.0	0.90	ug/L			07/14/17 01:41	1
Xylenes, Total	ND		2.0	0.66	ug/L			07/14/17 01:41	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*102*		*77 - 120*		*07/14/17 01:41*	*1*
4-Bromofluorobenzene (Surr)	*90*		*73 - 120*		*07/14/17 01:41*	*1*
Toluene-d8 (Surr)	*93*		*80 - 120*		*07/14/17 01:41*	*1*
Dibromofluoromethane (Surr)	*96*		*75 - 123*		*07/14/17 01:41*	*1*

Client Sample ID: SW-1

Lab Sample ID: 480-120641-13

Date Collected: 07/06/17 10:30
Matrix: Water
Date Received: 07/07/17 01:15

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.50	0.18	ug/L		07/10/17 07:51	07/11/17 16:22	1
PCB-1221	ND		0.50	0.18	ug/L		07/10/17 07:51	07/11/17 16:22	1
PCB-1232	ND		0.50	0.18	ug/L		07/10/17 07:51	07/11/17 16:22	1
PCB-1242	ND		0.50	0.18	ug/L		07/10/17 07:51	07/11/17 16:22	1
PCB-1248	ND		0.50	0.18	ug/L		07/10/17 07:51	07/11/17 16:22	1
PCB-1254	ND		0.50	0.25	ug/L		07/10/17 07:51	07/11/17 16:22	1
PCB-1260	ND		0.50	0.25	ug/L		07/10/17 07:51	07/11/17 16:22	1
PCB-1262	ND		0.50	0.25	ug/L		07/10/17 07:51	07/11/17 16:22	1
PCB-1268	ND		0.50	0.25	ug/L		07/10/17 07:51	07/11/17 16:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*69*		*19 - 120*	*07/10/17 07:51*	*07/11/17 16:22*	*1*
DCB Decachlorobiphenyl	*72*		*19 - 120*	*07/10/17 07:51*	*07/11/17 16:22*	*1*
Tetrachloro-m-xylene	*137*	*X*	*39 - 121*	*07/10/17 07:51*	*07/11/17 16:22*	*1*
Tetrachloro-m-xylene	*118*		*39 - 121*	*07/10/17 07:51*	*07/11/17 16:22*	*1*

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	**0.50**		0.20	0.060	mg/L		07/10/17 07:45	07/11/17 12:43	1
Antimony	ND		0.020	0.0068	mg/L		07/10/17 07:45	07/11/17 12:43	1
Arsenic	ND		0.015	0.0056	mg/L		07/10/17 07:45	07/11/17 12:43	1
Barium	**0.048**		0.0020	0.00070	mg/L		07/10/17 07:45	07/11/17 12:43	1
Beryllium	ND		0.0020	0.00030	mg/L		07/10/17 07:45	07/11/17 12:43	1
Cadmium	ND		0.0020	0.00050	mg/L		07/10/17 07:45	07/11/17 12:43	1
Calcium	**61.8**		0.50	0.10	mg/L		07/10/17 07:45	07/11/17 12:43	1
Chromium	ND		0.0040	0.0010	mg/L		07/10/17 07:45	07/11/17 12:43	1
Cobalt	ND		0.0040	0.00063	mg/L		07/10/17 07:45	07/11/17 12:43	1
Copper	**0.0022**	**J**	0.010	0.0016	mg/L		07/10/17 07:45	07/11/17 12:43	1
Iron	**0.61**		0.050	0.019	mg/L		07/10/17 07:45	07/11/17 12:43	1
Lead	ND		0.010	0.0030	mg/L		07/10/17 07:45	07/11/17 12:43	1
Magnesium	**8.3**		0.20	0.043	mg/L		07/10/17 07:45	07/11/17 12:43	1
Manganese	**0.30**		0.0030	0.00040	mg/L		07/10/17 07:45	07/11/17 12:43	1
Nickel	**0.0018**	**J**	0.010	0.0013	mg/L		07/10/17 07:45	07/11/17 12:43	1
Potassium	**4.2**		0.50	0.10	mg/L		07/10/17 07:45	07/11/17 12:43	1
Selenium	ND		0.025	0.0087	mg/L		07/10/17 07:45	07/11/17 12:43	1
Silver	ND		0.0060	0.0017	mg/L		07/10/17 07:45	07/11/17 12:43	1
Sodium	**25.5**		1.0	0.32	mg/L		07/10/17 07:45	07/11/17 12:43	1
Thallium	ND		0.020	0.010	mg/L		07/10/17 07:45	07/11/17 12:43	1
Vanadium	**0.0019**	**J**	0.0050	0.0015	mg/L		07/10/17 07:45	07/11/17 12:43	1
Zinc	**0.0058**	**J**	0.010	0.0015	mg/L		07/10/17 07:45	07/11/17 12:43	1

Client Sample ID: SED-1

Lab Sample ID: 480-120641-14

Date Collected: 07/06/17 10:40
Matrix: Solid
Date Received: 07/07/17 01:15
Percent Solids: 62.6

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		6.2	0.45	ug/Kg	☼	07/07/17 06:30	07/12/17 12:31	1
1,1,2,2-Tetrachloroethane	ND		6.2	1.0	ug/Kg	☼	07/07/17 06:30	07/12/17 12:31	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		6.2	1.4	ug/Kg	☼	07/07/17 06:30	07/12/17 12:31	1

Client Sample ID: SED-1
Date Collected: 07/06/17 10:40
Date Received: 07/07/17 01:15

Lab Sample ID: 480-120641-14
Matrix: Solid
Percent Solids: 62.6

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2-Trichloroethane	ND		6.2	0.80	ug/Kg	☼	07/07/17 06:30	07/12/17 12:31	1
1,1-Dichloroethane	ND		6.2	0.75	ug/Kg	☼	07/07/17 06:30	07/12/17 12:31	1
1,1-Dichloroethene	ND		6.2	0.76	ug/Kg	☼	07/07/17 06:30	07/12/17 12:31	1
1,2,3-Trichlorobenzene	ND		6.2	0.66	ug/Kg	☼	07/07/17 06:30	07/12/17 12:31	1
1,2,4-Trichlorobenzene	ND		6.2	0.38	ug/Kg	☼	07/07/17 06:30	07/12/17 12:31	1
1,2-Dibromo-3-Chloropropane	ND		6.2	3.1	ug/Kg	☼	07/07/17 06:30	07/12/17 12:31	1
1,2-Dibromoethane	ND		6.2	0.79	ug/Kg	☼	07/07/17 06:30	07/12/17 12:31	1
1,2-Dichlorobenzene	ND		6.2	0.48	ug/Kg	☼	07/07/17 06:30	07/12/17 12:31	1
1,2-Dichloroethane	ND		6.2	0.31	ug/Kg	☼	07/07/17 06:30	07/12/17 12:31	1
1,2-Dichloropropane	ND		6.2	3.1	ug/Kg	☼	07/07/17 06:30	07/12/17 12:31	1
1,3-Dichlorobenzene	ND		6.2	0.32	ug/Kg	☼	07/07/17 06:30	07/12/17 12:31	1
1,4-Dichlorobenzene	ND		6.2	0.87	ug/Kg	☼	07/07/17 06:30	07/12/17 12:31	1
1,4-Dioxane	ND		120	27	ug/Kg	☼	07/07/17 06:30	07/12/17 12:31	1
2-Butanone (MEK)	ND		31	2.3	ug/Kg	☼	07/07/17 06:30	07/12/17 12:31	1
2-Hexanone	ND		31	3.1	ug/Kg	☼	07/07/17 06:30	07/12/17 12:31	1
4-Methyl-2-pentanone (MIBK)	ND		31	2.0	ug/Kg	☼	07/07/17 06:30	07/12/17 12:31	1
Acetone	ND		31	5.2	ug/Kg	☼	07/07/17 06:30	07/12/17 12:31	1
Benzene	ND		6.2	0.30	ug/Kg	☼	07/07/17 06:30	07/12/17 12:31	1
Bromochloromethane	ND		6.2	0.45	ug/Kg	☼	07/07/17 06:30	07/12/17 12:31	1
Bromodichloromethane	ND		6.2	0.83	ug/Kg	☼	07/07/17 06:30	07/12/17 12:31	1
Bromoform	ND		6.2	3.1	ug/Kg	☼	07/07/17 06:30	07/12/17 12:31	1
Bromomethane	ND		6.2	0.56	ug/Kg	☼	07/07/17 06:30	07/12/17 12:31	1
Carbon disulfide	ND		6.2	3.1	ug/Kg	☼	07/07/17 06:30	07/12/17 12:31	1
Carbon tetrachloride	ND		6.2	0.60	ug/Kg	☼	07/07/17 06:30	07/12/17 12:31	1
Chlorobenzene	ND		6.2	0.82	ug/Kg	☼	07/07/17 06:30	07/12/17 12:31	1
Chloroethane	ND		6.2	1.4	ug/Kg	☼	07/07/17 06:30	07/12/17 12:31	1
Chloroform	ND		6.2	0.38	ug/Kg	☼	07/07/17 06:30	07/12/17 12:31	1
Chloromethane	ND		6.2	0.37	ug/Kg	☼	07/07/17 06:30	07/12/17 12:31	1
cis-1,2-Dichloroethene	ND		6.2	0.79	ug/Kg	☼	07/07/17 06:30	07/12/17 12:31	1
cis-1,3-Dichloropropene	ND		6.2	0.89	ug/Kg	☼	07/07/17 06:30	07/12/17 12:31	1
Cyclohexane	ND		6.2	0.87	ug/Kg	☼	07/07/17 06:30	07/12/17 12:31	1
Dibromochloromethane	ND		6.2	0.79	ug/Kg	☼	07/07/17 06:30	07/12/17 12:31	1
Dichlorodifluoromethane	ND		6.2	0.51	ug/Kg	☼	07/07/17 06:30	07/12/17 12:31	1
Ethylbenzene	ND		6.2	0.43	ug/Kg	☼	07/07/17 06:30	07/12/17 12:31	1
Isopropylbenzene	ND		6.2	0.93	ug/Kg	☼	07/07/17 06:30	07/12/17 12:31	1
Methyl acetate	ND		31	3.7	ug/Kg	☼	07/07/17 06:30	07/12/17 12:31	1
Methyl tert-butyl ether	ND		6.2	0.61	ug/Kg	☼	07/07/17 06:30	07/12/17 12:31	1
Methylcyclohexane	ND		6.2	0.94	ug/Kg	☼	07/07/17 06:30	07/12/17 12:31	1
Methylene Chloride	ND		6.2	2.8	ug/Kg	☼	07/07/17 06:30	07/12/17 12:31	1
Styrene	ND		6.2	0.31	ug/Kg	☼	07/07/17 06:30	07/12/17 12:31	1
Tetrachloroethene	ND		6.2	0.83	ug/Kg	☼	07/07/17 06:30	07/12/17 12:31	1
Toluene	ND		6.2	0.47	ug/Kg	☼	07/07/17 06:30	07/12/17 12:31	1
trans-1,2-Dichloroethene	ND		6.2	0.64	ug/Kg	☼	07/07/17 06:30	07/12/17 12:31	1
trans-1,3-Dichloropropene	ND		6.2	2.7	ug/Kg	☼	07/07/17 06:30	07/12/17 12:31	1
Trichloroethene	ND		6.2	1.4	ug/Kg	☼	07/07/17 06:30	07/12/17 12:31	1
Trichlorofluoromethane	ND		6.2	0.59	ug/Kg	☼	07/07/17 06:30	07/12/17 12:31	1
Vinyl chloride	ND		6.2	0.75	ug/Kg	☼	07/07/17 06:30	07/12/17 12:31	1
Xylenes, Total	ND		12	1.0	ug/Kg	☼	07/07/17 06:30	07/12/17 12:31	1

Client Sample ID: SED-1
Date Collected: 07/06/17 10:40
Date Received: 07/07/17 01:15

Lab Sample ID: 480-120641-14
Matrix: Solid
Percent Solids: 62.6

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*95*		*64 - 126*	*07/07/17 06:30*	*07/12/17 12:31*	*1*
4-Bromofluorobenzene (Surr)	*111*		*72 - 126*	*07/07/17 06:30*	*07/12/17 12:31*	*1*
Dibromofluoromethane (Surr)	*107*		*60 - 140*	*07/07/17 06:30*	*07/12/17 12:31*	*1*
Toluene-d8 (Surr)	*101*		*71 - 125*	*07/07/17 06:30*	*07/12/17 12:31*	*1*

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.39	0.077	mg/Kg	☼	07/14/17 10:00	07/14/17 23:27	1
PCB-1221	ND		0.39	0.077	mg/Kg	☼	07/14/17 10:00	07/14/17 23:27	1
PCB-1232	ND		0.39	0.077	mg/Kg	☼	07/14/17 10:00	07/14/17 23:27	1
PCB-1242	ND		0.39	0.077	mg/Kg	☼	07/14/17 10:00	07/14/17 23:27	1
PCB-1248	ND		0.39	0.077	mg/Kg	☼	07/14/17 10:00	07/14/17 23:27	1
PCB-1254	ND		0.39	0.18	mg/Kg	☼	07/14/17 10:00	07/14/17 23:27	1
PCB-1260	ND		0.39	0.18	mg/Kg	☼	07/14/17 10:00	07/14/17 23:27	1
PCB-1262	ND		0.39	0.18	mg/Kg	☼	07/14/17 10:00	07/14/17 23:27	1
PCB-1268	ND		0.39	0.18	mg/Kg	☼	07/14/17 10:00	07/14/17 23:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*140*		*60 - 154*	*07/14/17 10:00*	*07/14/17 23:27*	*1*
Tetrachloro-m-xylene	*119*		*60 - 154*	*07/14/17 10:00*	*07/14/17 23:27*	*1*
DCB Decachlorobiphenyl	*140*		*65 - 174*	*07/14/17 10:00*	*07/14/17 23:27*	*1*
DCB Decachlorobiphenyl	*108*		*65 - 174*	*07/14/17 10:00*	*07/14/17 23:27*	*1*

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	**22600**		17.2	7.6	mg/Kg	☼	07/10/17 14:53	07/11/17 14:38	1
Antimony	**2.4**	**J**	25.8	0.69	mg/Kg	☼	07/10/17 14:53	07/11/17 14:38	1
Arsenic	**9.7**		3.4	0.69	mg/Kg	☼	07/10/17 14:53	07/11/17 14:38	1
Barium	**166**		0.86	0.19	mg/Kg	☼	07/10/17 14:53	07/11/17 14:38	1
Beryllium	**0.91**		0.34	0.048	mg/Kg	☼	07/10/17 14:53	07/11/17 14:38	1
Cadmium	**0.33**	**J**	0.34	0.052	mg/Kg	☼	07/10/17 14:53	07/11/17 14:38	1
Calcium	**4480**		86.1	5.7	mg/Kg	☼	07/10/17 14:53	07/11/17 14:38	1
Chromium	**26.5**		0.86	0.34	mg/Kg	☼	07/10/17 14:53	07/11/17 14:38	1
Cobalt	**16.2**		0.86	0.086	mg/Kg	☼	07/10/17 14:53	07/11/17 14:38	1
Copper	**18.2**		1.7	0.36	mg/Kg	☼	07/10/17 14:53	07/11/17 14:38	1
Iron	**35300**	**B**	17.2	6.0	mg/Kg	☼	07/10/17 14:53	07/11/17 14:38	1
Lead	**17.8**		1.7	0.41	mg/Kg	☼	07/10/17 14:53	07/11/17 14:38	1
Magnesium	**5240**		34.4	1.6	mg/Kg	☼	07/10/17 14:53	07/11/17 14:38	1
Manganese	**1890**		0.34	0.055	mg/Kg	☼	07/10/17 14:53	07/11/17 14:38	1
Nickel	**34.3**		8.6	0.40	mg/Kg	☼	07/10/17 14:53	07/11/17 14:38	1
Potassium	**2190**		51.6	34.4	mg/Kg	☼	07/10/17 14:53	07/11/17 14:38	1
Selenium	ND		6.9	0.69	mg/Kg	☼	07/10/17 14:53	07/11/17 14:38	1
Silver	ND		1.0	0.34	mg/Kg	☼	07/10/17 14:53	07/11/17 14:38	1
Sodium	**112**	**J**	241	22.4	mg/Kg	☼	07/10/17 14:53	07/11/17 14:38	1
Thallium	ND		10.3	0.52	mg/Kg	☼	07/10/17 14:53	07/11/17 14:38	1
Vanadium	**37.5**		0.86	0.19	mg/Kg	☼	07/10/17 14:53	07/11/17 14:38	1
Zinc	**89.2**		3.4	1.1	mg/Kg	☼	07/10/17 14:53	07/11/17 14:38	1

Client Sample ID: MW-2S

Date Collected: 07/06/17 11:15
Date Received: 07/07/17 01:15

Lab Sample ID: 480-120641-15

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.82	ug/L			07/14/17 02:04	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			07/14/17 02:04	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0	0.31	ug/L			07/14/17 02:04	1
1,1,2-Trichloroethane	ND		1.0	0.23	ug/L			07/14/17 02:04	1
1,1-Dichloroethane	ND		1.0	0.38	ug/L			07/14/17 02:04	1
1,1-Dichloroethene	ND		1.0	0.29	ug/L			07/14/17 02:04	1
1,2,3-Trichlorobenzene	ND		1.0	0.41	ug/L			07/14/17 02:04	1
1,2,4-Trichlorobenzene	ND		1.0	0.41	ug/L			07/14/17 02:04	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.39	ug/L			07/14/17 02:04	1
1,2-Dibromoethane	ND		1.0	0.73	ug/L			07/14/17 02:04	1
1,2-Dichlorobenzene	ND		1.0	0.79	ug/L			07/14/17 02:04	1
1,2-Dichloroethane	ND		1.0	0.21	ug/L			07/14/17 02:04	1
1,2-Dichloropropane	ND		1.0	0.72	ug/L			07/14/17 02:04	1
1,3-Dichlorobenzene	ND		1.0	0.78	ug/L			07/14/17 02:04	1
1,4-Dichlorobenzene	ND		1.0	0.84	ug/L			07/14/17 02:04	1
1,4-Dioxane	ND		40	9.3	ug/L			07/14/17 02:04	1
2-Butanone (MEK)	ND		10	1.3	ug/L			07/14/17 02:04	1
2-Hexanone	ND		5.0	1.2	ug/L			07/14/17 02:04	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.1	ug/L			07/14/17 02:04	1
Acetone	ND		10	3.0	ug/L			07/14/17 02:04	1
Benzene	ND		1.0	0.41	ug/L			07/14/17 02:04	1
Bromochloromethane	ND		1.0	0.87	ug/L			07/14/17 02:04	1
Bromodichloromethane	ND		1.0	0.39	ug/L			07/14/17 02:04	1
Bromoform	ND		1.0	0.26	ug/L			07/14/17 02:04	1
Bromomethane	ND		1.0	0.69	ug/L			07/14/17 02:04	1
Carbon disulfide	ND		1.0	0.19	ug/L			07/14/17 02:04	1
Carbon tetrachloride	ND		1.0	0.27	ug/L			07/14/17 02:04	1
Chlorobenzene	ND		1.0	0.75	ug/L			07/14/17 02:04	1
Chloroethane	ND		1.0	0.32	ug/L			07/14/17 02:04	1
Chloroform	ND		1.0	0.34	ug/L			07/14/17 02:04	1
Chloromethane	ND		1.0	0.35	ug/L			07/14/17 02:04	1
cis-1,2-Dichloroethene	ND		1.0	0.81	ug/L			07/14/17 02:04	1
cis-1,3-Dichloropropene	ND		1.0	0.36	ug/L			07/14/17 02:04	1
Cyclohexane	ND		1.0	0.18	ug/L			07/14/17 02:04	1
Dibromochloromethane	ND		1.0	0.32	ug/L			07/14/17 02:04	1
Dichlorodifluoromethane	ND		1.0	0.68	ug/L			07/14/17 02:04	1
Ethylbenzene	ND		1.0	0.74	ug/L			07/14/17 02:04	1
Isopropylbenzene	ND		1.0	0.79	ug/L			07/14/17 02:04	1
Methyl acetate	ND		2.5	1.3	ug/L			07/14/17 02:04	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			07/14/17 02:04	1
Methylcyclohexane	ND		1.0	0.16	ug/L			07/14/17 02:04	1
Methylene Chloride	ND		1.0	0.44	ug/L			07/14/17 02:04	1
Styrene	ND		1.0	0.73	ug/L			07/14/17 02:04	1
Tetrachloroethene	ND		1.0	0.36	ug/L			07/14/17 02:04	1
Toluene	ND		1.0	0.51	ug/L			07/14/17 02:04	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			07/14/17 02:04	1
trans-1,3-Dichloropropene	ND		1.0	0.37	ug/L			07/14/17 02:04	1
Trichloroethene	ND		1.0	0.46	ug/L			07/14/17 02:04	1
Trichlorofluoromethane	ND		1.0	0.88	ug/L			07/14/17 02:04	1

Client Sample ID: MW-2S

Date Collected: 07/06/17 11:15
Date Received: 07/07/17 01:15

Lab Sample ID: 480-120641-15

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	ND		1.0	0.90	ug/L			07/14/17 02:04	1
Xylenes, Total	ND		2.0	0.66	ug/L			07/14/17 02:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*107*		*77 - 120*		*07/14/17 02:04*	*1*
4-Bromofluorobenzene (Surr)	*85*		*73 - 120*		*07/14/17 02:04*	*1*
Toluene-d8 (Surr)	*86*		*80 - 120*		*07/14/17 02:04*	*1*
Dibromofluoromethane (Surr)	*99*		*75 - 123*		*07/14/17 02:04*	*1*

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	**2.6**		0.20	0.060	mg/L		07/10/17 07:45	07/11/17 12:46	1
Antimony	ND		0.020	0.0068	mg/L		07/10/17 07:45	07/11/17 12:46	1
Arsenic	ND		0.015	0.0056	mg/L		07/10/17 07:45	07/11/17 12:46	1
Barium	**0.042**		0.0020	0.00070	mg/L		07/10/17 07:45	07/11/17 12:46	1
Beryllium	ND		0.0020	0.00030	mg/L		07/10/17 07:45	07/11/17 12:46	1
Cadmium	ND		0.0020	0.00050	mg/L		07/10/17 07:45	07/11/17 12:46	1
Calcium	**73.8**		0.50	0.10	mg/L		07/10/17 07:45	07/11/17 12:46	1
Chromium	**0.0046**		0.0040	0.0010	mg/L		07/10/17 07:45	07/11/17 12:46	1
Cobalt	**0.00069**	**J**	0.0040	0.00063	mg/L		07/10/17 07:45	07/11/17 12:46	1
Copper	**0.0027**	**J**	0.010	0.0016	mg/L		07/10/17 07:45	07/11/17 12:46	1
Iron	**2.4**		0.050	0.019	mg/L		07/10/17 07:45	07/11/17 12:46	1
Lead	**0.0035**	**J**	0.010	0.0030	mg/L		07/10/17 07:45	07/11/17 12:46	1
Magnesium	**14.2**		0.20	0.043	mg/L		07/10/17 07:45	07/11/17 12:46	1
Manganese	**0.15**		0.0030	0.00040	mg/L		07/10/17 07:45	07/11/17 12:46	1
Nickel	**0.0027**	**J**	0.010	0.0013	mg/L		07/10/17 07:45	07/11/17 12:46	1
Potassium	**1.6**		0.50	0.10	mg/L		07/10/17 07:45	07/11/17 12:46	1
Selenium	ND		0.025	0.0087	mg/L		07/10/17 07:45	07/11/17 12:46	1
Silver	ND		0.0060	0.0017	mg/L		07/10/17 07:45	07/11/17 12:46	1
Sodium	**24.1**		1.0	0.32	mg/L		07/10/17 07:45	07/11/17 12:46	1
Thallium	ND		0.020	0.010	mg/L		07/10/17 07:45	07/11/17 12:46	1
Vanadium	**0.0029**	**J**	0.0050	0.0015	mg/L		07/10/17 07:45	07/11/17 12:46	1
Zinc	**0.020**		0.010	0.0015	mg/L		07/10/17 07:45	07/11/17 12:46	1

Client Sample ID: MW-2B

Date Collected: 07/06/17 11:20
Date Received: 07/07/17 01:15

Lab Sample ID: 480-120641-16

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.82	ug/L			07/14/17 02:27	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			07/14/17 02:27	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0	0.31	ug/L			07/14/17 02:27	1
1,1,2-Trichloroethane	ND		1.0	0.23	ug/L			07/14/17 02:27	1
1,1-Dichloroethane	ND		1.0	0.38	ug/L			07/14/17 02:27	1
1,1-Dichloroethene	ND		1.0	0.29	ug/L			07/14/17 02:27	1
1,2,3-Trichlorobenzene	ND		1.0	0.41	ug/L			07/14/17 02:27	1
1,2,4-Trichlorobenzene	ND		1.0	0.41	ug/L			07/14/17 02:27	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.39	ug/L			07/14/17 02:27	1
1,2-Dibromoethane	ND		1.0	0.73	ug/L			07/14/17 02:27	1

Client Sample ID: MW-2B

Date Collected: 07/06/17 11:20
Date Received: 07/07/17 01:15

Lab Sample ID: 480-120641-16

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichlorobenzene	ND		1.0	0.79	ug/L			07/14/17 02:27	1
1,2-Dichloroethane	ND		1.0	0.21	ug/L			07/14/17 02:27	1
1,2-Dichloropropane	ND		1.0	0.72	ug/L			07/14/17 02:27	1
1,3-Dichlorobenzene	ND		1.0	0.78	ug/L			07/14/17 02:27	1
1,4-Dichlorobenzene	ND		1.0	0.84	ug/L			07/14/17 02:27	1
1,4-Dioxane	ND		40	9.3	ug/L			07/14/17 02:27	1
2-Butanone (MEK)	ND		10	1.3	ug/L			07/14/17 02:27	1
2-Hexanone	ND		5.0	1.2	ug/L			07/14/17 02:27	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.1	ug/L			07/14/17 02:27	1
Acetone	ND		10	3.0	ug/L			07/14/17 02:27	1
Benzene	ND		1.0	0.41	ug/L			07/14/17 02:27	1
Bromochloromethane	ND		1.0	0.87	ug/L			07/14/17 02:27	1
Bromodichloromethane	ND		1.0	0.39	ug/L			07/14/17 02:27	1
Bromoform	ND		1.0	0.26	ug/L			07/14/17 02:27	1
Bromomethane	ND		1.0	0.69	ug/L			07/14/17 02:27	1
Carbon disulfide	ND		1.0	0.19	ug/L			07/14/17 02:27	1
Carbon tetrachloride	ND		1.0	0.27	ug/L			07/14/17 02:27	1
Chlorobenzene	ND		1.0	0.75	ug/L			07/14/17 02:27	1
Chloroethane	ND		1.0	0.32	ug/L			07/14/17 02:27	1
Chloroform	ND		1.0	0.34	ug/L			07/14/17 02:27	1
Chloromethane	ND		1.0	0.35	ug/L			07/14/17 02:27	1
cis-1,2-Dichloroethene	ND		1.0	0.81	ug/L			07/14/17 02:27	1
cis-1,3-Dichloropropene	ND		1.0	0.36	ug/L			07/14/17 02:27	1
Cyclohexane	ND		1.0	0.18	ug/L			07/14/17 02:27	1
Dibromochloromethane	ND		1.0	0.32	ug/L			07/14/17 02:27	1
Dichlorodifluoromethane	ND		1.0	0.68	ug/L			07/14/17 02:27	1
Ethylbenzene	ND		1.0	0.74	ug/L			07/14/17 02:27	1
Isopropylbenzene	ND		1.0	0.79	ug/L			07/14/17 02:27	1
Methyl acetate	ND		2.5	1.3	ug/L			07/14/17 02:27	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			07/14/17 02:27	1
Methylcyclohexane	ND		1.0	0.16	ug/L			07/14/17 02:27	1
Methylene Chloride	ND		1.0	0.44	ug/L			07/14/17 02:27	1
Styrene	ND		1.0	0.73	ug/L			07/14/17 02:27	1
Tetrachloroethene	ND		1.0	0.36	ug/L			07/14/17 02:27	1
Toluene	ND		1.0	0.51	ug/L			07/14/17 02:27	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			07/14/17 02:27	1
trans-1,3-Dichloropropene	ND		1.0	0.37	ug/L			07/14/17 02:27	1
Trichloroethene	ND		1.0	0.46	ug/L			07/14/17 02:27	1
Trichlorofluoromethane	ND		1.0	0.88	ug/L			07/14/17 02:27	1
Vinyl chloride	ND		1.0	0.90	ug/L			07/14/17 02:27	1
Xylenes, Total	ND		2.0	0.66	ug/L			07/14/17 02:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*105*		*77 - 120*		*07/14/17 02:27*	*1*
4-Bromofluorobenzene (Surr)	*89*		*73 - 120*		*07/14/17 02:27*	*1*
Toluene-d8 (Surr)	*93*		*80 - 120*		*07/14/17 02:27*	*1*
Dibromofluoromethane (Surr)	*102*		*75 - 123*		*07/14/17 02:27*	*1*

Client Sample ID: MW-2B

Date Collected: 07/06/17 11:20
Date Received: 07/07/17 01:15

Lab Sample ID: 480-120641-16

Matrix: Water

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	ND		0.20	0.060	mg/L		07/10/17 07:45	07/11/17 11:08	1
Antimony	**0.013**	**J**	0.020	0.0068	mg/L		07/10/17 07:45	07/11/17 11:08	1
Arsenic	ND		0.015	0.0056	mg/L		07/10/17 07:45	07/11/17 11:08	1
Barium	**0.12**		0.0020	0.00070	mg/L		07/10/17 07:45	07/11/17 11:08	1
Beryllium	ND		0.0020	0.00030	mg/L		07/10/17 07:45	07/11/17 11:08	1
Cadmium	ND		0.0020	0.00050	mg/L		07/10/17 07:45	07/11/17 11:08	1
Calcium	**32.3**		0.50	0.10	mg/L		07/10/17 07:45	07/11/17 11:08	1
Chromium	ND		0.0040	0.0010	mg/L		07/10/17 07:45	07/11/17 11:08	1
Cobalt	ND		0.0040	0.00063	mg/L		07/10/17 07:45	07/11/17 11:08	1
Copper	**0.0020**	**J**	0.010	0.0016	mg/L		07/10/17 07:45	07/11/17 11:08	1
Iron	**159**		0.050	0.019	mg/L		07/10/17 07:45	07/11/17 11:08	1
Lead	**0.0034**	**J**	0.010	0.0030	mg/L		07/10/17 07:45	07/11/17 11:08	1
Magnesium	**7.0**		0.20	0.043	mg/L		07/10/17 07:45	07/11/17 11:08	1
Manganese	**1.0**		0.0030	0.00040	mg/L		07/10/17 07:45	07/11/17 11:08	1
Nickel	**0.0065**	**J**	0.010	0.0013	mg/L		07/10/17 07:45	07/11/17 11:08	1
Potassium	**0.84**		0.50	0.10	mg/L		07/10/17 07:45	07/11/17 11:08	1
Selenium	ND		0.025	0.0087	mg/L		07/10/17 07:45	07/11/17 11:08	1
Silver	ND		0.0060	0.0017	mg/L		07/10/17 07:45	07/11/17 11:08	1
Sodium	**4.2**		1.0	0.32	mg/L		07/10/17 07:45	07/11/17 11:08	1
Thallium	ND		0.020	0.010	mg/L		07/10/17 07:45	07/11/17 11:08	1
Vanadium	**0.0022**	**J**	0.0050	0.0015	mg/L		07/10/17 07:45	07/11/17 11:08	1
Zinc	**0.0015**	**J**	0.010	0.0015	mg/L		07/10/17 07:45	07/11/17 11:08	1

Client Sample ID: MW-2D

Date Collected: 07/06/17 11:30
Date Received: 07/07/17 01:15

Lab Sample ID: 480-120641-17

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.82	ug/L			07/14/17 02:50	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			07/14/17 02:50	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0	0.31	ug/L			07/14/17 02:50	1
1,1,2-Trichloroethane	ND		1.0	0.23	ug/L			07/14/17 02:50	1
1,1-Dichloroethane	ND		1.0	0.38	ug/L			07/14/17 02:50	1
1,1-Dichloroethene	ND		1.0	0.29	ug/L			07/14/17 02:50	1
1,2,3-Trichlorobenzene	ND		1.0	0.41	ug/L			07/14/17 02:50	1
1,2,4-Trichlorobenzene	ND		1.0	0.41	ug/L			07/14/17 02:50	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.39	ug/L			07/14/17 02:50	1
1,2-Dibromoethane	ND		1.0	0.73	ug/L			07/14/17 02:50	1
1,2-Dichlorobenzene	ND		1.0	0.79	ug/L			07/14/17 02:50	1
1,2-Dichloroethane	ND		1.0	0.21	ug/L			07/14/17 02:50	1
1,2-Dichloropropane	ND		1.0	0.72	ug/L			07/14/17 02:50	1
1,3-Dichlorobenzene	ND		1.0	0.78	ug/L			07/14/17 02:50	1
1,4-Dichlorobenzene	ND		1.0	0.84	ug/L			07/14/17 02:50	1
1,4-Dioxane	ND		40	9.3	ug/L			07/14/17 02:50	1
2-Butanone (MEK)	ND		10	1.3	ug/L			07/14/17 02:50	1
2-Hexanone	ND		5.0	1.2	ug/L			07/14/17 02:50	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.1	ug/L			07/14/17 02:50	1
Acetone	ND		10	3.0	ug/L			07/14/17 02:50	1
Benzene	ND		1.0	0.41	ug/L			07/14/17 02:50	1

Client Sample ID: MW-2D

Date Collected: 07/06/17 11:30
Date Received: 07/07/17 01:15

Lab Sample ID: 480-120641-17

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromochloromethane	ND		1.0	0.87	ug/L			07/14/17 02:50	1
Bromodichloromethane	ND		1.0	0.39	ug/L			07/14/17 02:50	1
Bromoform	ND		1.0	0.26	ug/L			07/14/17 02:50	1
Bromomethane	ND		1.0	0.69	ug/L			07/14/17 02:50	1
Carbon disulfide	ND		1.0	0.19	ug/L			07/14/17 02:50	1
Carbon tetrachloride	ND		1.0	0.27	ug/L			07/14/17 02:50	1
Chlorobenzene	ND		1.0	0.75	ug/L			07/14/17 02:50	1
Chloroethane	ND		1.0	0.32	ug/L			07/14/17 02:50	1
Chloroform	ND		1.0	0.34	ug/L			07/14/17 02:50	1
Chloromethane	ND		1.0	0.35	ug/L			07/14/17 02:50	1
cis-1,2-Dichloroethene	ND		1.0	0.81	ug/L			07/14/17 02:50	1
cis-1,3-Dichloropropene	ND		1.0	0.36	ug/L			07/14/17 02:50	1
Cyclohexane	ND		1.0	0.18	ug/L			07/14/17 02:50	1
Dibromochloromethane	ND		1.0	0.32	ug/L			07/14/17 02:50	1
Dichlorodifluoromethane	ND		1.0	0.68	ug/L			07/14/17 02:50	1
Ethylbenzene	ND		1.0	0.74	ug/L			07/14/17 02:50	1
Isopropylbenzene	ND		1.0	0.79	ug/L			07/14/17 02:50	1
Methyl acetate	ND		2.5	1.3	ug/L			07/14/17 02:50	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			07/14/17 02:50	1
Methylcyclohexane	ND		1.0	0.16	ug/L			07/14/17 02:50	1
Methylene Chloride	ND		1.0	0.44	ug/L			07/14/17 02:50	1
Styrene	ND		1.0	0.73	ug/L			07/14/17 02:50	1
Tetrachloroethene	ND		1.0	0.36	ug/L			07/14/17 02:50	1
Toluene	ND		1.0	0.51	ug/L			07/14/17 02:50	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			07/14/17 02:50	1
trans-1,3-Dichloropropene	ND		1.0	0.37	ug/L			07/14/17 02:50	1
Trichloroethene	ND		1.0	0.46	ug/L			07/14/17 02:50	1
Trichlorofluoromethane	ND		1.0	0.88	ug/L			07/14/17 02:50	1
Vinyl chloride	ND		1.0	0.90	ug/L			07/14/17 02:50	1
Xylenes, Total	ND		2.0	0.66	ug/L			07/14/17 02:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*116*		*77 - 120*		*07/14/17 02:50*	*1*
4-Bromofluorobenzene (Surr)	*87*		*73 - 120*		*07/14/17 02:50*	*1*
Toluene-d8 (Surr)	*87*		*80 - 120*		*07/14/17 02:50*	*1*
Dibromofluoromethane (Surr)	*107*		*75 - 123*		*07/14/17 02:50*	*1*

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	**0.60**		0.20	0.060	mg/L		07/10/17 07:45	07/11/17 12:49	1
Antimony	ND		0.020	0.0068	mg/L		07/10/17 07:45	07/11/17 12:49	1
Arsenic	ND		0.015	0.0056	mg/L		07/10/17 07:45	07/11/17 12:49	1
Barium	**0.032**		0.0020	0.00070	mg/L		07/10/17 07:45	07/11/17 12:49	1
Beryllium	ND		0.0020	0.00030	mg/L		07/10/17 07:45	07/11/17 12:49	1
Cadmium	ND		0.0020	0.00050	mg/L		07/10/17 07:45	07/11/17 12:49	1
Calcium	**52.6**		0.50	0.10	mg/L		07/10/17 07:45	07/11/17 12:49	1
Chromium	**0.0018**	**J**	0.0040	0.0010	mg/L		07/10/17 07:45	07/11/17 12:49	1
Cobalt	ND		0.0040	0.00063	mg/L		07/10/17 07:45	07/11/17 12:49	1
Copper	ND		0.010	0.0016	mg/L		07/10/17 07:45	07/11/17 12:49	1
Iron	**0.68**		0.050	0.019	mg/L		07/10/17 07:45	07/11/17 12:49	1

Client Sample ID: MW-2D

Date Collected: 07/06/17 11:30
Date Received: 07/07/17 01:15

Lab Sample ID: 480-120641-17

Matrix: Water

Method: 6010C - Metals (ICP) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	ND		0.010	0.0030	mg/L		07/10/17 07:45	07/11/17 12:49	1
Magnesium	**13.2**		0.20	0.043	mg/L		07/10/17 07:45	07/11/17 12:49	1
Manganese	**0.030**		0.0030	0.00040	mg/L		07/10/17 07:45	07/11/17 12:49	1
Nickel	ND		0.010	0.0013	mg/L		07/10/17 07:45	07/11/17 12:49	1
Potassium	**1.0**		0.50	0.10	mg/L		07/10/17 07:45	07/11/17 12:49	1
Selenium	ND		0.025	0.0087	mg/L		07/10/17 07:45	07/11/17 12:49	1
Silver	ND		0.0060	0.0017	mg/L		07/10/17 07:45	07/11/17 12:49	1
Sodium	**3.6**		1.0	0.32	mg/L		07/10/17 07:45	07/11/17 12:49	1
Thallium	ND		0.020	0.010	mg/L		07/10/17 07:45	07/11/17 12:49	1
Vanadium	ND		0.0050	0.0015	mg/L		07/10/17 07:45	07/11/17 12:49	1
Zinc	**0.0050**	**J**	0.010	0.0015	mg/L		07/10/17 07:45	07/11/17 12:49	1

Surrogate Summary

Client: New York State D.E.C.
Project/Site: South Hill Dump #712009

TestAmerica Job ID: 480-120641-1

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

Matrix: Solid — **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)			
Lab Sample ID	Client Sample ID	12DCE (64-126)	BFB (72-126)	DBFM (60-140)	TOL (71-125)
480-120641-14	SED-1	95	111	107	101
LCS 480-366513/1-A	Lab Control Sample	95	117	105	102
MB 480-366513/2-A	Method Blank	94	115	106	101

Surrogate Legend

12DCE = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
DBFM = Dibromofluoromethane (Surr)
TOL = Toluene-d8 (Surr)

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

Matrix: Water — **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)			
Lab Sample ID	Client Sample ID	12DCE (77-120)	BFB (73-120)	TOL (80-120)	DBFM (75-123)
480-120641-1	TRIP BLANK	100	88	99	103
480-120641-2	MW-4B	103	86	99	101
480-120641-2 MS	MW-4B	102	96	94	97
480-120641-2 MSD	MW-4B	100	99	99	92
480-120641-3	MW-4B DUP	101	83	95	96
480-120641-4	MW-4S	106	87	100	101
480-120641-5	MW-3SR2	108	93	90	106
480-120641-6	MW-3BR2	107	91	102	101
480-120641-7	MW-3SR	107	88	93	106
480-120641-8	MW-3BR	106	90	91	100
480-120641-9	MW-1B	105	90	89	94
480-120641-10	MW-1S	107	98	98	99
480-120641-11	SEEP-1	103	84	95	97
480-120641-13	SW-1	102	90	93	96
480-120641-15	MW-2S	107	85	86	99
480-120641-16	MW-2B	105	89	93	102
480-120641-17	MW-2D	116	87	87	107
LCS 480-366876/4	Lab Control Sample	103	96	103	96
LCS 480-367101/4	Lab Control Sample	94	102	92	96
MB 480-366876/6	Method Blank	103	86	98	99
MB 480-367101/6	Method Blank	103	90	90	96

Surrogate Legend

12DCE = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
TOL = Toluene-d8 (Surr)
DBFM = Dibromofluoromethane (Surr)

Surrogate Summary

Client: New York State D.E.C.
Project/Site: South Hill Dump #712009

TestAmerica Job ID: 480-120641-1

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

Matrix: Water — **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	12DCE (71-144)	BFB (72-133)
480-120641-2	MW-4B	100	99
480-120641-2 MS	MW-4B	105	99
480-120641-2 MSD	MW-4B	105	98
480-120641-3	MW-4B DUP	100	97
480-120641-5	MW-3SR2	100	108
480-120641-6	MW-3BR2	101	100
480-120641-9	MW-1B	100	97
480-120641-10	MW-1S	101	96
LCS 460-448846/3	Lab Control Sample	96	98
LCSD 460-448846/4	Lab Control Sample Dup	99	97
MB 460-448846/7	Method Blank	98	98

Surrogate Legend

12DCE = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Matrix: Solid — **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)			
Lab Sample ID	Client Sample ID	TCX1 (60-154)	TCX2 (60-154)	DCB1 (65-174)	DCB2 (65-174)
480-120641-14	SED-1	140	119	140	108
LCS 480-367001/2-A	Lab Control Sample	163 X	132	171	130
MB 480-367001/1-A	Method Blank	126	96	132	97

Surrogate Legend

TCX = Tetrachloro-m-xylene
DCB = DCB Decachlorobiphenyl

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Matrix: Water — **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)			
Lab Sample ID	Client Sample ID	DCB1 (19-120)	DCB2 (19-120)	TCX1 (39-121)	TCX2 (39-121)
480-120641-11	SEEP-1	79	81	131 X	117
480-120641-11 MS	SEEP-1	69	72	124 X	119
480-120641-11 MSD	SEEP-1	67	74	111	109
480-120641-12	SEEP-1 DUP	72	80	110	110
480-120641-13	SW-1	69	72	137 X	118
LCS 480-366074/2-A	Lab Control Sample	58	64	113	113
MB 480-366074/1-A	Method Blank	56	66	116	123 X

Surrogate Legend

DCB = DCB Decachlorobiphenyl
TCX = Tetrachloro-m-xylene

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

Lab Sample ID: MB 480-366513/2-A
Matrix: Solid
Analysis Batch: 366471

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 366513

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		5.0	0.36	ug/Kg		07/12/17 09:23	07/12/17 11:51	1
1,1,2,2-Tetrachloroethane	ND		5.0	0.81	ug/Kg		07/12/17 09:23	07/12/17 11:51	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		5.0	1.1	ug/Kg		07/12/17 09:23	07/12/17 11:51	1
1,1,2-Trichloroethane	ND		5.0	0.65	ug/Kg		07/12/17 09:23	07/12/17 11:51	1
1,1-Dichloroethane	ND		5.0	0.61	ug/Kg		07/12/17 09:23	07/12/17 11:51	1
1,1-Dichloroethene	ND		5.0	0.61	ug/Kg		07/12/17 09:23	07/12/17 11:51	1
1,2,3-Trichlorobenzene	ND		5.0	0.53	ug/Kg		07/12/17 09:23	07/12/17 11:51	1
1,2,4-Trichlorobenzene	ND		5.0	0.30	ug/Kg		07/12/17 09:23	07/12/17 11:51	1
1,2-Dibromo-3-Chloropropane	ND		5.0	2.5	ug/Kg		07/12/17 09:23	07/12/17 11:51	1
1,2-Dibromoethane	ND		5.0	0.64	ug/Kg		07/12/17 09:23	07/12/17 11:51	1
1,2-Dichlorobenzene	ND		5.0	0.39	ug/Kg		07/12/17 09:23	07/12/17 11:51	1
1,2-Dichloroethane	ND		5.0	0.25	ug/Kg		07/12/17 09:23	07/12/17 11:51	1
1,2-Dichloropropane	ND		5.0	2.5	ug/Kg		07/12/17 09:23	07/12/17 11:51	1
1,3-Dichlorobenzene	ND		5.0	0.26	ug/Kg		07/12/17 09:23	07/12/17 11:51	1
1,4-Dichlorobenzene	ND		5.0	0.70	ug/Kg		07/12/17 09:23	07/12/17 11:51	1
1,4-Dioxane	ND		100	22	ug/Kg		07/12/17 09:23	07/12/17 11:51	1
2-Butanone (MEK)	ND		25	1.8	ug/Kg		07/12/17 09:23	07/12/17 11:51	1
2-Hexanone	ND		25	2.5	ug/Kg		07/12/17 09:23	07/12/17 11:51	1
4-Methyl-2-pentanone (MIBK)	ND		25	1.6	ug/Kg		07/12/17 09:23	07/12/17 11:51	1
Acetone	ND		25	4.2	ug/Kg		07/12/17 09:23	07/12/17 11:51	1
Benzene	ND		5.0	0.25	ug/Kg		07/12/17 09:23	07/12/17 11:51	1
Bromochloromethane	ND		5.0	0.36	ug/Kg		07/12/17 09:23	07/12/17 11:51	1
Bromodichloromethane	ND		5.0	0.67	ug/Kg		07/12/17 09:23	07/12/17 11:51	1
Bromoform	ND		5.0	2.5	ug/Kg		07/12/17 09:23	07/12/17 11:51	1
Bromomethane	ND		5.0	0.45	ug/Kg		07/12/17 09:23	07/12/17 11:51	1
Carbon disulfide	ND		5.0	2.5	ug/Kg		07/12/17 09:23	07/12/17 11:51	1
Carbon tetrachloride	ND		5.0	0.48	ug/Kg		07/12/17 09:23	07/12/17 11:51	1
Chlorobenzene	ND		5.0	0.66	ug/Kg		07/12/17 09:23	07/12/17 11:51	1
Chloroethane	ND		5.0	1.1	ug/Kg		07/12/17 09:23	07/12/17 11:51	1
Chloroform	ND		5.0	0.31	ug/Kg		07/12/17 09:23	07/12/17 11:51	1
Chloromethane	ND		5.0	0.30	ug/Kg		07/12/17 09:23	07/12/17 11:51	1
cis-1,2-Dichloroethene	ND		5.0	0.64	ug/Kg		07/12/17 09:23	07/12/17 11:51	1
cis-1,3-Dichloropropene	ND		5.0	0.72	ug/Kg		07/12/17 09:23	07/12/17 11:51	1
Cyclohexane	ND		5.0	0.70	ug/Kg		07/12/17 09:23	07/12/17 11:51	1
Dibromochloromethane	ND		5.0	0.64	ug/Kg		07/12/17 09:23	07/12/17 11:51	1
Dichlorodifluoromethane	ND		5.0	0.41	ug/Kg		07/12/17 09:23	07/12/17 11:51	1
Ethylbenzene	ND		5.0	0.35	ug/Kg		07/12/17 09:23	07/12/17 11:51	1
Isopropylbenzene	ND		5.0	0.75	ug/Kg		07/12/17 09:23	07/12/17 11:51	1
Methyl acetate	ND		25	3.0	ug/Kg		07/12/17 09:23	07/12/17 11:51	1
Methyl tert-butyl ether	ND		5.0	0.49	ug/Kg		07/12/17 09:23	07/12/17 11:51	1
Methylcyclohexane	ND		5.0	0.76	ug/Kg		07/12/17 09:23	07/12/17 11:51	1
Methylene Chloride	ND		5.0	2.3	ug/Kg		07/12/17 09:23	07/12/17 11:51	1
Styrene	ND		5.0	0.25	ug/Kg		07/12/17 09:23	07/12/17 11:51	1
Tetrachloroethene	ND		5.0	0.67	ug/Kg		07/12/17 09:23	07/12/17 11:51	1
Toluene	ND		5.0	0.38	ug/Kg		07/12/17 09:23	07/12/17 11:51	1
trans-1,2-Dichloroethene	ND		5.0	0.52	ug/Kg		07/12/17 09:23	07/12/17 11:51	1
trans-1,3-Dichloropropene	ND		5.0	2.2	ug/Kg		07/12/17 09:23	07/12/17 11:51	1
Trichloroethene	ND		5.0	1.1	ug/Kg		07/12/17 09:23	07/12/17 11:51	1

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

Lab Sample ID: MB 480-366513/2-A
Matrix: Solid
Analysis Batch: 366471

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 366513

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichlorofluoromethane	ND		5.0	0.47	ug/Kg		07/12/17 09:23	07/12/17 11:51	1
Vinyl chloride	ND		5.0	0.61	ug/Kg		07/12/17 09:23	07/12/17 11:51	1
Xylenes, Total	ND		10	0.84	ug/Kg		07/12/17 09:23	07/12/17 11:51	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*94*		*64 - 126*	*07/12/17 09:23*	*07/12/17 11:51*	*1*
4-Bromofluorobenzene (Surr)	*115*		*72 - 126*	*07/12/17 09:23*	*07/12/17 11:51*	*1*
Toluene-d8 (Surr)	*101*		*71 - 125*	*07/12/17 09:23*	*07/12/17 11:51*	*1*
Dibromofluoromethane (Surr)	*106*		*60 - 140*	*07/12/17 09:23*	*07/12/17 11:51*	*1*

Lab Sample ID: LCS 480-366513/1-A
Matrix: Solid
Analysis Batch: 366471

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 366513

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	50.0	43.7		ug/Kg		87	77 - 121
1,1,2,2-Tetrachloroethane	50.0	41.2		ug/Kg		82	80 - 120
1,1,2-Trichloro-1,2,2-trifluoroethane	50.0	47.5		ug/Kg		95	60 - 140
1,1,2-Trichloroethane	50.0	44.5		ug/Kg		89	78 - 122
1,1-Dichloroethane	50.0	41.0		ug/Kg		82	73 - 126
1,1-Dichloroethene	50.0	46.1		ug/Kg		92	59 - 125
1,2,3-Trichlorobenzene	50.0	50.0		ug/Kg		100	60 - 120
1,2,4-Trichlorobenzene	50.0	51.3		ug/Kg		103	64 - 120
1,2-Dibromo-3-Chloropropane	50.0	47.0		ug/Kg		94	63 - 124
1,2-Dibromoethane	50.0	45.6		ug/Kg		91	78 - 120
1,2-Dichlorobenzene	50.0	42.7		ug/Kg		85	75 - 120
1,2-Dichloroethane	50.0	38.5		ug/Kg		77	77 - 122
1,2-Dichloropropane	50.0	42.1		ug/Kg		84	75 - 124
1,3-Dichlorobenzene	50.0	40.4		ug/Kg		81	74 - 120
1,4-Dichlorobenzene	50.0	40.8		ug/Kg		82	73 - 120
1,4-Dioxane	1000	971		ug/Kg		97	64 - 124
2-Butanone (MEK)	250	200		ug/Kg		80	70 - 134
2-Hexanone	250	208		ug/Kg		83	59 - 130
4-Methyl-2-pentanone (MIBK)	250	212		ug/Kg		85	65 - 133
Acetone	250	204		ug/Kg		81	61 - 137
Benzene	50.0	43.0		ug/Kg		86	79 - 127
Bromochloromethane	50.0	48.9		ug/Kg		98	75 - 134
Bromodichloromethane	50.0	42.9		ug/Kg		86	80 - 122
Bromoform	50.0	52.9		ug/Kg		106	68 - 126
Bromomethane	50.0	43.3		ug/Kg		87	37 - 149
Carbon disulfide	50.0	45.7		ug/Kg		91	64 - 131
Carbon tetrachloride	50.0	47.4		ug/Kg		95	75 - 135
Chlorobenzene	50.0	45.5		ug/Kg		91	76 - 124
Chloroethane	50.0	38.0		ug/Kg		76	69 - 135
Chloroform	50.0	41.1		ug/Kg		82	80 - 120
Chloromethane	50.0	33.2		ug/Kg		66	63 - 127
cis-1,2-Dichloroethene	50.0	45.8		ug/Kg		92	81 - 120

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

Lab Sample ID: LCS 480-366513/1-A
Matrix: Solid
Analysis Batch: 366471

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 366513

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
cis-1,3-Dichloropropene	50.0	44.2		ug/Kg		88	80 - 120
Cyclohexane	50.0	40.0		ug/Kg		80	65 - 120
Dibromochloromethane	50.0	50.4		ug/Kg		101	76 - 125
Dichlorodifluoromethane	50.0	43.2		ug/Kg		86	57 - 142
Ethylbenzene	50.0	42.5		ug/Kg		85	80 - 120
Isopropylbenzene	50.0	38.7		ug/Kg		77	72 - 120
Methyl acetate	250	209		ug/Kg		83	55 - 136
Methyl tert-butyl ether	50.0	46.0		ug/Kg		92	63 - 125
Methylcyclohexane	50.0	42.1		ug/Kg		84	60 - 140
Methylene Chloride	50.0	45.7		ug/Kg		91	61 - 127
Styrene	50.0	44.0		ug/Kg		88	80 - 120
Tetrachloroethene	50.0	46.4		ug/Kg		93	74 - 122
Toluene	50.0	42.2		ug/Kg		84	74 - 128
trans-1,2-Dichloroethene	50.0	45.2		ug/Kg		90	78 - 126
trans-1,3-Dichloropropene	50.0	43.3		ug/Kg		87	73 - 123
Trichloroethene	50.0	42.9		ug/Kg		86	77 - 129
Trichlorofluoromethane	50.0	45.5		ug/Kg		91	65 - 146
Vinyl chloride	50.0	37.9		ug/Kg		76	61 - 133

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*95*		*64 - 126*
4-Bromofluorobenzene (Surr)	*117*		*72 - 126*
Toluene-d8 (Surr)	*102*		*71 - 125*
Dibromofluoromethane (Surr)	*105*		*60 - 140*

Lab Sample ID: MB 480-366876/6
Matrix: Water
Analysis Batch: 366876

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.82	ug/L			07/13/17 20:48	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			07/13/17 20:48	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0	0.31	ug/L			07/13/17 20:48	1
1,1,2-Trichloroethane	ND		1.0	0.23	ug/L			07/13/17 20:48	1
1,1-Dichloroethane	ND		1.0	0.38	ug/L			07/13/17 20:48	1
1,1-Dichloroethene	ND		1.0	0.29	ug/L			07/13/17 20:48	1
1,2,3-Trichlorobenzene	ND		1.0	0.41	ug/L			07/13/17 20:48	1
1,2,4-Trichlorobenzene	ND		1.0	0.41	ug/L			07/13/17 20:48	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.39	ug/L			07/13/17 20:48	1
1,2-Dibromoethane	ND		1.0	0.73	ug/L			07/13/17 20:48	1
1,2-Dichlorobenzene	ND		1.0	0.79	ug/L			07/13/17 20:48	1
1,2-Dichloroethane	ND		1.0	0.21	ug/L			07/13/17 20:48	1
1,2-Dichloropropane	ND		1.0	0.72	ug/L			07/13/17 20:48	1
1,3-Dichlorobenzene	ND		1.0	0.78	ug/L			07/13/17 20:48	1
1,4-Dichlorobenzene	ND		1.0	0.84	ug/L			07/13/17 20:48	1
1,4-Dioxane	ND		40	9.3	ug/L			07/13/17 20:48	1
2-Butanone (MEK)	ND		10	1.3	ug/L			07/13/17 20:48	1
2-Hexanone	ND		5.0	1.2	ug/L			07/13/17 20:48	1

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

Lab Sample ID: MB 480-366876/6
Matrix: Water
Analysis Batch: 366876

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.1	ug/L			07/13/17 20:48	1
Acetone	ND		10	3.0	ug/L			07/13/17 20:48	1
Benzene	ND		1.0	0.41	ug/L			07/13/17 20:48	1
Bromochloromethane	ND		1.0	0.87	ug/L			07/13/17 20:48	1
Bromodichloromethane	ND		1.0	0.39	ug/L			07/13/17 20:48	1
Bromoform	ND		1.0	0.26	ug/L			07/13/17 20:48	1
Bromomethane	ND		1.0	0.69	ug/L			07/13/17 20:48	1
Carbon disulfide	ND		1.0	0.19	ug/L			07/13/17 20:48	1
Carbon tetrachloride	ND		1.0	0.27	ug/L			07/13/17 20:48	1
Chlorobenzene	ND		1.0	0.75	ug/L			07/13/17 20:48	1
Chloroethane	ND		1.0	0.32	ug/L			07/13/17 20:48	1
Chloroform	ND		1.0	0.34	ug/L			07/13/17 20:48	1
Chloromethane	ND		1.0	0.35	ug/L			07/13/17 20:48	1
cis-1,2-Dichloroethene	ND		1.0	0.81	ug/L			07/13/17 20:48	1
cis-1,3-Dichloropropene	ND		1.0	0.36	ug/L			07/13/17 20:48	1
Cyclohexane	ND		1.0	0.18	ug/L			07/13/17 20:48	1
Dibromochloromethane	ND		1.0	0.32	ug/L			07/13/17 20:48	1
Dichlorodifluoromethane	ND		1.0	0.68	ug/L			07/13/17 20:48	1
Ethylbenzene	ND		1.0	0.74	ug/L			07/13/17 20:48	1
Isopropylbenzene	ND		1.0	0.79	ug/L			07/13/17 20:48	1
Methyl acetate	ND		2.5	1.3	ug/L			07/13/17 20:48	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			07/13/17 20:48	1
Methylcyclohexane	ND		1.0	0.16	ug/L			07/13/17 20:48	1
Methylene Chloride	ND		1.0	0.44	ug/L			07/13/17 20:48	1
Styrene	ND		1.0	0.73	ug/L			07/13/17 20:48	1
Tetrachloroethene	ND		1.0	0.36	ug/L			07/13/17 20:48	1
Toluene	ND		1.0	0.51	ug/L			07/13/17 20:48	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			07/13/17 20:48	1
trans-1,3-Dichloropropene	ND		1.0	0.37	ug/L			07/13/17 20:48	1
Trichloroethene	ND		1.0	0.46	ug/L			07/13/17 20:48	1
Trichlorofluoromethane	ND		1.0	0.88	ug/L			07/13/17 20:48	1
Vinyl chloride	ND		1.0	0.90	ug/L			07/13/17 20:48	1
Xylenes, Total	ND		2.0	0.66	ug/L			07/13/17 20:48	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*103*		*77 - 120*		*07/13/17 20:48*	*1*
4-Bromofluorobenzene (Surr)	*86*		*73 - 120*		*07/13/17 20:48*	*1*
Toluene-d8 (Surr)	*98*		*80 - 120*		*07/13/17 20:48*	*1*
Dibromofluoromethane (Surr)	*99*		*75 - 123*		*07/13/17 20:48*	*1*

Lab Sample ID: LCS 480-366876/4
Matrix: Water
Analysis Batch: 366876

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	25.0	29.9		ug/L		120	73 - 126
1,1,2,2-Tetrachloroethane	25.0	25.5		ug/L		102	76 - 120

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

Lab Sample ID: LCS 480-366876/4
Matrix: Water
Analysis Batch: 366876

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,2-Trichloro-1,2,2-trifluoroethane	25.0	23.6		ug/L		94	61 - 148
1,1,2-Trichloroethane	25.0	26.0		ug/L		104	76 - 122
1,1-Dichloroethane	25.0	23.4		ug/L		94	77 - 120
1,1-Dichloroethene	25.0	19.0		ug/L		76	66 - 127
1,2,3-Trichlorobenzene	25.0	24.2		ug/L		97	75 - 123
1,2,4-Trichlorobenzene	25.0	24.3		ug/L		97	79 - 122
1,2-Dibromo-3-Chloropropane	25.0	24.4		ug/L		98	56 - 134
1,2-Dibromoethane	25.0	25.8		ug/L		103	77 - 120
1,2-Dichlorobenzene	25.0	24.8		ug/L		99	80 - 124
1,2-Dichloroethane	25.0	24.3		ug/L		97	75 - 120
1,2-Dichloropropane	25.0	23.4		ug/L		94	76 - 120
1,3-Dichlorobenzene	25.0	23.1		ug/L		92	77 - 120
1,4-Dichlorobenzene	25.0	23.5		ug/L		94	80 - 120
1,4-Dioxane	500	559		ug/L		112	50 - 150
2-Butanone (MEK)	125	140		ug/L		112	57 - 140
2-Hexanone	125	143		ug/L		114	65 - 127
4-Methyl-2-pentanone (MIBK)	125	146		ug/L		117	71 - 125
Acetone	125	157		ug/L		126	56 - 142
Benzene	25.0	21.9		ug/L		88	71 - 124
Bromochloromethane	25.0	21.9		ug/L		87	72 - 130
Bromodichloromethane	25.0	23.9		ug/L		96	80 - 122
Bromoform	25.0	25.5		ug/L		102	61 - 132
Bromomethane	25.0	26.8		ug/L		107	55 - 144
Carbon disulfide	25.0	22.1		ug/L		88	59 - 134
Carbon tetrachloride	25.0	24.7		ug/L		99	72 - 134
Chlorobenzene	25.0	24.1		ug/L		96	80 - 120
Chloroethane	25.0	29.2		ug/L		117	69 - 136
Chloroform	25.0	23.1		ug/L		92	73 - 127
Chloromethane	25.0	23.6		ug/L		95	68 - 124
cis-1,2-Dichloroethene	25.0	20.7		ug/L		83	74 - 124
cis-1,3-Dichloropropene	25.0	24.9		ug/L		99	74 - 124
Cyclohexane	25.0	23.6		ug/L		94	59 - 135
Dibromochloromethane	25.0	26.6		ug/L		106	75 - 125
Dichlorodifluoromethane	25.0	25.6		ug/L		102	59 - 135
Ethylbenzene	25.0	24.1		ug/L		96	77 - 123
Isopropylbenzene	25.0	24.3		ug/L		97	77 - 122
Methyl acetate	125	133		ug/L		106	74 - 133
Methyl tert-butyl ether	25.0	23.5		ug/L		94	77 - 120
Methylcyclohexane	25.0	22.0		ug/L		88	68 - 134
Methylene Chloride	25.0	21.5		ug/L		86	75 - 124
Styrene	25.0	25.5		ug/L		102	80 - 120
Tetrachloroethene	25.0	22.2		ug/L		89	74 - 122
Toluene	25.0	24.7		ug/L		99	80 - 122
trans-1,2-Dichloroethene	25.0	21.2		ug/L		85	73 - 127
trans-1,3-Dichloropropene	25.0	27.2		ug/L		109	80 - 120
Trichloroethene	25.0	21.7		ug/L		87	74 - 123
Trichlorofluoromethane	25.0	24.1		ug/L		96	62 - 150

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

Lab Sample ID: LCS 480-366876/4
Matrix: Water
Analysis Batch: 366876

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Vinyl chloride	25.0	26.5		ug/L		106	65 - 133

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*103*		*77 - 120*
4-Bromofluorobenzene (Surr)	*96*		*73 - 120*
Toluene-d8 (Surr)	*103*		*80 - 120*
Dibromofluoromethane (Surr)	*96*		*75 - 123*

Lab Sample ID: 480-120641-2 MS
Matrix: Water
Analysis Batch: 366876

Client Sample ID: MW-4B
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	ND	F1	25.0	31.8	F1	ug/L		127	73 - 126
1,1,2,2-Tetrachloroethane	ND		25.0	24.0		ug/L		96	76 - 120
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		25.0	24.4		ug/L		98	61 - 148
1,1,2-Trichloroethane	ND		25.0	24.0		ug/L		96	76 - 122
1,1-Dichloroethane	ND		25.0	24.2		ug/L		97	77 - 120
1,1-Dichloroethene	ND		25.0	20.7		ug/L		83	66 - 127
1,2,3-Trichlorobenzene	ND		25.0	24.2		ug/L		97	75 - 123
1,2,4-Trichlorobenzene	ND		25.0	24.8		ug/L		99	79 - 122
1,2-Dibromo-3-Chloropropane	ND		25.0	26.7		ug/L		107	56 - 134
1,2-Dibromoethane	ND		25.0	21.8		ug/L		87	77 - 120
1,2-Dichlorobenzene	ND		25.0	24.8		ug/L		99	80 - 124
1,2-Dichloroethane	ND		25.0	24.6		ug/L		99	75 - 120
1,2-Dichloropropane	ND		25.0	22.5		ug/L		90	76 - 120
1,3-Dichlorobenzene	ND		25.0	24.2		ug/L		97	77 - 120
1,4-Dichlorobenzene	ND		25.0	23.8		ug/L		95	78 - 124
1,4-Dioxane	ND		500	471		ug/L		94	50 - 150
2-Butanone (MEK)	ND		125	124		ug/L		99	57 - 140
2-Hexanone	ND		125	119		ug/L		95	65 - 127
4-Methyl-2-pentanone (MIBK)	ND		125	126		ug/L		101	71 - 125
Acetone	ND		125	104		ug/L		83	56 - 142
Benzene	ND		25.0	23.6		ug/L		95	71 - 124
Bromochloromethane	ND		25.0	22.4		ug/L		89	72 - 130
Bromodichloromethane	ND		25.0	22.6		ug/L		91	80 - 122
Bromoform	ND		25.0	24.2		ug/L		97	61 - 132
Bromomethane	ND		25.0	33.4		ug/L		134	55 - 144
Carbon disulfide	ND		25.0	23.8		ug/L		95	59 - 134
Carbon tetrachloride	ND		25.0	26.0		ug/L		104	72 - 134
Chlorobenzene	ND		25.0	22.9		ug/L		91	80 - 120
Chloroethane	ND		25.0	33.5		ug/L		134	69 - 136
Chloroform	ND		25.0	23.7		ug/L		95	73 - 127
Chloromethane	ND		25.0	30.3		ug/L		121	68 - 124
cis-1,2-Dichloroethene	ND		25.0	22.9		ug/L		91	74 - 124
cis-1,3-Dichloropropene	ND		25.0	22.2		ug/L		89	74 - 124
Cyclohexane	ND		25.0	24.8		ug/L		99	59 - 135

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

Lab Sample ID: 480-120641-2 MS
Matrix: Water
Analysis Batch: 366876

Client Sample ID: MW-4B
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Dibromochloromethane	ND		25.0	22.4		ug/L		90	75 - 125
Dichlorodifluoromethane	ND		25.0	29.2		ug/L		117	59 - 135
Ethylbenzene	ND		25.0	23.6		ug/L		95	77 - 123
Isopropylbenzene	ND		25.0	24.2		ug/L		97	77 - 122
Methyl acetate	ND		125	123		ug/L		99	74 - 133
Methyl tert-butyl ether	ND		25.0	22.9		ug/L		92	77 - 120
Methylcyclohexane	ND		25.0	21.7		ug/L		87	68 - 134
Methylene Chloride	ND		25.0	21.7		ug/L		87	75 - 124
Styrene	ND		25.0	24.3		ug/L		97	80 - 120
Tetrachloroethene	ND		25.0	20.6		ug/L		83	74 - 122
Toluene	ND		25.0	22.6		ug/L		90	80 - 122
trans-1,2-Dichloroethene	ND		25.0	23.0		ug/L		92	73 - 127
trans-1,3-Dichloropropene	ND		25.0	23.1		ug/L		92	80 - 120
Trichloroethene	0.56	J	25.0	24.3		ug/L		95	74 - 123
Trichlorofluoromethane	ND		25.0	30.1		ug/L		121	62 - 150
Vinyl chloride	ND		25.0	32.5		ug/L		130	65 - 133

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*102*		*77 - 120*
4-Bromofluorobenzene (Surr)	*96*		*73 - 120*
Toluene-d8 (Surr)	*94*		*80 - 120*
Dibromofluoromethane (Surr)	*97*		*75 - 123*

Lab Sample ID: 480-120641-2 MSD
Matrix: Water
Analysis Batch: 366876

Client Sample ID: MW-4B
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1-Trichloroethane	ND	F1	25.0	31.2		ug/L		125	73 - 126	2	15
1,1,2,2-Tetrachloroethane	ND		25.0	23.7		ug/L		95	76 - 120	1	15
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		25.0	23.6		ug/L		94	61 - 148	4	20
1,1,2-Trichloroethane	ND		25.0	25.2		ug/L		101	76 - 122	5	15
1,1-Dichloroethane	ND		25.0	24.4		ug/L		97	77 - 120	1	20
1,1-Dichloroethene	ND		25.0	20.5		ug/L		82	66 - 127	1	16
1,2,3-Trichlorobenzene	ND		25.0	25.4		ug/L		102	75 - 123	5	20
1,2,4-Trichlorobenzene	ND		25.0	25.1		ug/L		101	79 - 122	1	20
1,2-Dibromo-3-Chloropropane	ND		25.0	24.1		ug/L		96	56 - 134	10	15
1,2-Dibromoethane	ND		25.0	24.0		ug/L		96	77 - 120	9	15
1,2-Dichlorobenzene	ND		25.0	25.4		ug/L		102	80 - 124	3	20
1,2-Dichloroethane	ND		25.0	24.0		ug/L		96	75 - 120	3	20
1,2-Dichloropropane	ND		25.0	23.3		ug/L		93	76 - 120	3	20
1,3-Dichlorobenzene	ND		25.0	25.0		ug/L		100	77 - 120	3	20
1,4-Dichlorobenzene	ND		25.0	24.3		ug/L		97	78 - 124	2	20
1,4-Dioxane	ND		500	469		ug/L		94	50 - 150	1	20
2-Butanone (MEK)	ND		125	118		ug/L		94	57 - 140	5	20
2-Hexanone	ND		125	124		ug/L		99	65 - 127	4	15
4-Methyl-2-pentanone (MIBK)	ND		125	132		ug/L		106	71 - 125	5	35

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

Lab Sample ID: 480-120641-2 MSD
Matrix: Water
Analysis Batch: 366876

Client Sample ID: MW-4B
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acetone	ND		125	100		ug/L		80	56 - 142	4	15
Benzene	ND		25.0	23.0		ug/L		92	71 - 124	3	13
Bromochloromethane	ND		25.0	21.3		ug/L		85	72 - 130	5	15
Bromodichloromethane	ND		25.0	22.0		ug/L		88	80 - 122	3	15
Bromoform	ND		25.0	24.6		ug/L		98	61 - 132	2	15
Bromomethane	ND		25.0	29.4		ug/L		118	55 - 144	13	15
Carbon disulfide	ND		25.0	23.6		ug/L		94	59 - 134	1	15
Carbon tetrachloride	ND		25.0	25.8		ug/L		103	72 - 134	1	15
Chlorobenzene	ND		25.0	23.3		ug/L		93	80 - 120	2	25
Chloroethane	ND		25.0	30.3		ug/L		121	69 - 136	10	15
Chloroform	ND		25.0	22.6		ug/L		90	73 - 127	5	20
Chloromethane	ND		25.0	27.6		ug/L		111	68 - 124	9	15
cis-1,2-Dichloroethene	ND		25.0	22.2		ug/L		89	74 - 124	3	15
cis-1,3-Dichloropropene	ND		25.0	22.4		ug/L		90	74 - 124	1	15
Cyclohexane	ND		25.0	25.0		ug/L		100	59 - 135	1	20
Dibromochloromethane	ND		25.0	24.9		ug/L		100	75 - 125	10	15
Dichlorodifluoromethane	ND		25.0	27.4		ug/L		110	59 - 135	6	20
Ethylbenzene	ND		25.0	24.5		ug/L		98	77 - 123	4	15
Isopropylbenzene	ND		25.0	25.3		ug/L		101	77 - 122	4	20
Methyl acetate	ND		125	117		ug/L		93	74 - 133	5	20
Methyl tert-butyl ether	ND		25.0	22.2		ug/L		89	77 - 120	3	37
Methylcyclohexane	ND		25.0	22.1		ug/L		88	68 - 134	2	20
Methylene Chloride	ND		25.0	21.7		ug/L		87	75 - 124	0	15
Styrene	ND		25.0	26.4		ug/L		105	80 - 120	8	20
Tetrachloroethene	ND		25.0	22.7		ug/L		91	74 - 122	9	20
Toluene	ND		25.0	24.6		ug/L		98	80 - 122	9	15
trans-1,2-Dichloroethene	ND		25.0	22.9		ug/L		92	73 - 127	0	20
trans-1,3-Dichloropropene	ND		25.0	25.2		ug/L		101	80 - 120	9	15
Trichloroethene	0.56	J	25.0	23.1		ug/L		90	74 - 123	5	16
Trichlorofluoromethane	ND		25.0	25.9		ug/L		103	62 - 150	15	20
Vinyl chloride	ND		25.0	29.2		ug/L		117	65 - 133	11	15

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*100*		*77 - 120*
4-Bromofluorobenzene (Surr)	*99*		*73 - 120*
Toluene-d8 (Surr)	*99*		*80 - 120*
Dibromofluoromethane (Surr)	*92*		*75 - 123*

Lab Sample ID: MB 480-367101/6
Matrix: Water
Analysis Batch: 367101

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.82	ug/L			07/14/17 22:15	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			07/14/17 22:15	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0	0.31	ug/L			07/14/17 22:15	1
1,1,2-Trichloroethane	ND		1.0	0.23	ug/L			07/14/17 22:15	1
1,1-Dichloroethane	ND		1.0	0.38	ug/L			07/14/17 22:15	1

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

Lab Sample ID: MB 480-367101/6
Matrix: Water
Analysis Batch: 367101

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	ND		1.0	0.29	ug/L			07/14/17 22:15	1
1,2,3-Trichlorobenzene	ND		1.0	0.41	ug/L			07/14/17 22:15	1
1,2,4-Trichlorobenzene	ND		1.0	0.41	ug/L			07/14/17 22:15	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.39	ug/L			07/14/17 22:15	1
1,2-Dibromoethane	ND		1.0	0.73	ug/L			07/14/17 22:15	1
1,2-Dichlorobenzene	ND		1.0	0.79	ug/L			07/14/17 22:15	1
1,2-Dichloroethane	ND		1.0	0.21	ug/L			07/14/17 22:15	1
1,2-Dichloropropane	ND		1.0	0.72	ug/L			07/14/17 22:15	1
1,3-Dichlorobenzene	ND		1.0	0.78	ug/L			07/14/17 22:15	1
1,4-Dichlorobenzene	ND		1.0	0.84	ug/L			07/14/17 22:15	1
1,4-Dioxane	ND		40	9.3	ug/L			07/14/17 22:15	1
2-Butanone (MEK)	ND		10	1.3	ug/L			07/14/17 22:15	1
2-Hexanone	ND		5.0	1.2	ug/L			07/14/17 22:15	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.1	ug/L			07/14/17 22:15	1
Acetone	ND		10	3.0	ug/L			07/14/17 22:15	1
Benzene	ND		1.0	0.41	ug/L			07/14/17 22:15	1
Bromochloromethane	ND		1.0	0.87	ug/L			07/14/17 22:15	1
Bromodichloromethane	ND		1.0	0.39	ug/L			07/14/17 22:15	1
Bromoform	ND		1.0	0.26	ug/L			07/14/17 22:15	1
Bromomethane	ND		1.0	0.69	ug/L			07/14/17 22:15	1
Carbon disulfide	ND		1.0	0.19	ug/L			07/14/17 22:15	1
Carbon tetrachloride	ND		1.0	0.27	ug/L			07/14/17 22:15	1
Chlorobenzene	ND		1.0	0.75	ug/L			07/14/17 22:15	1
Chloroethane	ND		1.0	0.32	ug/L			07/14/17 22:15	1
Chloroform	ND		1.0	0.34	ug/L			07/14/17 22:15	1
Chloromethane	ND		1.0	0.35	ug/L			07/14/17 22:15	1
cis-1,2-Dichloroethene	ND		1.0	0.81	ug/L			07/14/17 22:15	1
cis-1,3-Dichloropropene	ND		1.0	0.36	ug/L			07/14/17 22:15	1
Cyclohexane	ND		1.0	0.18	ug/L			07/14/17 22:15	1
Dibromochloromethane	ND		1.0	0.32	ug/L			07/14/17 22:15	1
Dichlorodifluoromethane	ND		1.0	0.68	ug/L			07/14/17 22:15	1
Ethylbenzene	ND		1.0	0.74	ug/L			07/14/17 22:15	1
Isopropylbenzene	ND		1.0	0.79	ug/L			07/14/17 22:15	1
Methyl acetate	ND		2.5	1.3	ug/L			07/14/17 22:15	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			07/14/17 22:15	1
Methylcyclohexane	ND		1.0	0.16	ug/L			07/14/17 22:15	1
Methylene Chloride	ND		1.0	0.44	ug/L			07/14/17 22:15	1
Styrene	ND		1.0	0.73	ug/L			07/14/17 22:15	1
Tetrachloroethene	ND		1.0	0.36	ug/L			07/14/17 22:15	1
Toluene	ND		1.0	0.51	ug/L			07/14/17 22:15	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			07/14/17 22:15	1
trans-1,3-Dichloropropene	ND		1.0	0.37	ug/L			07/14/17 22:15	1
Trichloroethene	ND		1.0	0.46	ug/L			07/14/17 22:15	1
Trichlorofluoromethane	ND		1.0	0.88	ug/L			07/14/17 22:15	1
Vinyl chloride	ND		1.0	0.90	ug/L			07/14/17 22:15	1
Xylenes, Total	ND		2.0	0.66	ug/L			07/14/17 22:15	1

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

Lab Sample ID: MB 480-367101/6
Matrix: Water
Analysis Batch: 367101

Client Sample ID: Method Blank
Prep Type: Total/NA

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	*103*		*77 - 120*		*07/14/17 22:15*	*1*
4-Bromofluorobenzene (Surr)	*90*		*73 - 120*		*07/14/17 22:15*	*1*
Toluene-d8 (Surr)	*90*		*80 - 120*		*07/14/17 22:15*	*1*
Dibromofluoromethane (Surr)	*96*		*75 - 123*		*07/14/17 22:15*	*1*

Lab Sample ID: LCS 480-367101/4
Matrix: Water
Analysis Batch: 367101

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	25.0	29.9		ug/L		120	73 - 126
1,1,2,2-Tetrachloroethane	25.0	25.2		ug/L		101	76 - 120
1,1,2-Trichloro-1,2,2-trifluoroethane	25.0	23.8		ug/L		95	61 - 148
1,1,2-Trichloroethane	25.0	24.0		ug/L		96	76 - 122
1,1-Dichloroethane	25.0	25.1		ug/L		101	77 - 120
1,1-Dichloroethene	25.0	20.2		ug/L		81	66 - 127
1,2,3-Trichlorobenzene	25.0	26.9		ug/L		108	75 - 123
1,2,4-Trichlorobenzene	25.0	28.0		ug/L		112	79 - 122
1,2-Dibromo-3-Chloropropane	25.0	25.7		ug/L		103	56 - 134
1,2-Dibromoethane	25.0	25.8		ug/L		103	77 - 120
1,2-Dichlorobenzene	25.0	25.5		ug/L		102	80 - 124
1,2-Dichloroethane	25.0	23.6		ug/L		94	75 - 120
1,2-Dichloropropane	25.0	24.3		ug/L		97	76 - 120
1,3-Dichlorobenzene	25.0	24.6		ug/L		99	77 - 120
1,4-Dichlorobenzene	25.0	25.2		ug/L		101	80 - 120
1,4-Dioxane	500	636		ug/L		127	50 - 150
2-Butanone (MEK)	125	152		ug/L		122	57 - 140
2-Hexanone	125	131		ug/L		105	65 - 127
4-Methyl-2-pentanone (MIBK)	125	134		ug/L		107	71 - 125
Acetone	125	168		ug/L		135	56 - 142
Benzene	25.0	23.3		ug/L		93	71 - 124
Bromochloromethane	25.0	24.4		ug/L		97	72 - 130
Bromodichloromethane	25.0	25.1		ug/L		100	80 - 122
Bromoform	25.0	23.1		ug/L		92	61 - 132
Bromomethane	25.0	31.7		ug/L		127	55 - 144
Carbon disulfide	25.0	24.6		ug/L		99	59 - 134
Carbon tetrachloride	25.0	23.3		ug/L		93	72 - 134
Chlorobenzene	25.0	24.1		ug/L		96	80 - 120
Chloroethane	25.0	32.2		ug/L		129	69 - 136
Chloroform	25.0	24.9		ug/L		100	73 - 127
Chloromethane	25.0	25.5		ug/L		102	68 - 124
cis-1,2-Dichloroethene	25.0	23.8		ug/L		95	74 - 124
cis-1,3-Dichloropropene	25.0	25.1		ug/L		101	74 - 124
Cyclohexane	25.0	22.9		ug/L		92	59 - 135
Dibromochloromethane	25.0	24.5		ug/L		98	75 - 125
Dichlorodifluoromethane	25.0	24.7		ug/L		99	59 - 135
Ethylbenzene	25.0	24.3		ug/L		97	77 - 123

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

Lab Sample ID: LCS 480-367101/4
Matrix: Water
Analysis Batch: 367101

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Isopropylbenzene	25.0	24.8		ug/L		99	77 - 122
Methyl acetate	125	136		ug/L		109	74 - 133
Methyl tert-butyl ether	25.0	26.5		ug/L		106	77 - 120
Methylcyclohexane	25.0	22.5		ug/L		90	68 - 134
Methylene Chloride	25.0	23.1		ug/L		93	75 - 124
Styrene	25.0	26.7		ug/L		107	80 - 120
Tetrachloroethene	25.0	21.4		ug/L		85	74 - 122
Toluene	25.0	23.2		ug/L		93	80 - 122
trans-1,2-Dichloroethene	25.0	24.2		ug/L		97	73 - 127
trans-1,3-Dichloropropene	25.0	23.9		ug/L		96	80 - 120
Trichloroethene	25.0	22.7		ug/L		91	74 - 123
Trichlorofluoromethane	25.0	27.2		ug/L		109	62 - 150
Vinyl chloride	25.0	24.1		ug/L		96	65 - 133

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*94*		*77 - 120*
4-Bromofluorobenzene (Surr)	*102*		*73 - 120*
Toluene-d8 (Surr)	*92*		*80 - 120*
Dibromofluoromethane (Surr)	*96*		*75 - 123*

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

Lab Sample ID: MB 460-448846/7
Matrix: Water
Analysis Batch: 448846

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		0.40	0.20	ug/L			07/11/17 21:41	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*98*		*71 - 144*		*07/11/17 21:41*	*1*
4-Bromofluorobenzene	*98*		*72 - 133*		*07/11/17 21:41*	*1*

Lab Sample ID: LCS 460-448846/3
Matrix: Water
Analysis Batch: 448846

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,4-Dioxane	5.00	4.74		ug/L		95	66 - 135

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*96*		*71 - 144*
4-Bromofluorobenzene	*98*		*72 - 133*

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

Lab Sample ID: LCSD 460-448846/4
Matrix: Water
Analysis Batch: 448846

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,4-Dioxane			5.00	4.99		ug/L		100	66 - 135	5	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*99*		*71 - 144*
4-Bromofluorobenzene	*97*		*72 - 133*

Lab Sample ID: 480-120641-2 MS
Matrix: Water
Analysis Batch: 448846

Client Sample ID: MW-4B
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
1,4-Dioxane	ND		5.00	5.33		ug/L		107	66 - 135		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*105*		*71 - 144*
4-Bromofluorobenzene	*99*		*72 - 133*

Lab Sample ID: 480-120641-2 MSD
Matrix: Water
Analysis Batch: 448846

Client Sample ID: MW-4B
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,4-Dioxane	ND		5.00	5.34		ug/L		107	66 - 135	0	30

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*105*		*71 - 144*
4-Bromofluorobenzene	*98*		*72 - 133*

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Lab Sample ID: MB 480-366074/1-A
Matrix: Water
Analysis Batch: 366370

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 366074

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.50	0.18	ug/L		07/10/17 07:51	07/11/17 14:47	1
PCB-1221	ND		0.50	0.18	ug/L		07/10/17 07:51	07/11/17 14:47	1
PCB-1232	ND		0.50	0.18	ug/L		07/10/17 07:51	07/11/17 14:47	1
PCB-1242	ND		0.50	0.18	ug/L		07/10/17 07:51	07/11/17 14:47	1
PCB-1248	ND		0.50	0.18	ug/L		07/10/17 07:51	07/11/17 14:47	1
PCB-1254	ND		0.50	0.25	ug/L		07/10/17 07:51	07/11/17 14:47	1
PCB-1260	ND		0.50	0.25	ug/L		07/10/17 07:51	07/11/17 14:47	1
PCB-1262	ND		0.50	0.25	ug/L		07/10/17 07:51	07/11/17 14:47	1
PCB-1268	ND		0.50	0.25	ug/L		07/10/17 07:51	07/11/17 14:47	1

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

Lab Sample ID: MB 480-366074/1-A
Matrix: Water
Analysis Batch: 366370

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 366074

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	56		19 - 120	07/10/17 07:51	07/11/17 14:47	1
DCB Decachlorobiphenyl	66		19 - 120	07/10/17 07:51	07/11/17 14:47	1
Tetrachloro-m-xylene	116		39 - 121	07/10/17 07:51	07/11/17 14:47	1
Tetrachloro-m-xylene	123	X	39 - 121	07/10/17 07:51	07/11/17 14:47	1

Lab Sample ID: LCS 480-366074/2-A
Matrix: Water
Analysis Batch: 366370

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 366074

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
PCB-1016			4.00	5.01		ug/L		125	62 - 130		
PCB-1260			4.00	4.43		ug/L		111	56 - 123		

Surrogate	LCS %Recovery	LCS Qualifier	Limits
DCB Decachlorobiphenyl	58		19 - 120
DCB Decachlorobiphenyl	64		19 - 120
Tetrachloro-m-xylene	113		39 - 121
Tetrachloro-m-xylene	113		39 - 121

Lab Sample ID: 480-120641-11 MS
Matrix: Water
Analysis Batch: 366370

Client Sample ID: SEEP-1
Prep Type: Total/NA
Prep Batch: 366074

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
PCB-1016	ND		4.00	5.23		ug/L		131	28 - 150		
PCB-1260	ND		4.00	4.21		ug/L		105	25 - 131		

Surrogate	MS %Recovery	MS Qualifier	Limits
DCB Decachlorobiphenyl	69		19 - 120
DCB Decachlorobiphenyl	72		19 - 120
Tetrachloro-m-xylene	124	X	39 - 121
Tetrachloro-m-xylene	119		39 - 121

Lab Sample ID: 480-120641-11 MSD
Matrix: Water
Analysis Batch: 366370

Client Sample ID: SEEP-1
Prep Type: Total/NA
Prep Batch: 366074

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
PCB-1016	ND		4.00	4.75		ug/L		119	28 - 150	10	50
PCB-1260	ND		4.00	3.89		ug/L		97	25 - 131	8	50

Surrogate	MSD %Recovery	MSD Qualifier	Limits
DCB Decachlorobiphenyl	67		19 - 120
DCB Decachlorobiphenyl	74		19 - 120
Tetrachloro-m-xylene	111		39 - 121
Tetrachloro-m-xylene	109		39 - 121

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

Lab Sample ID: MB 480-367001/1-A
Matrix: Solid
Analysis Batch: 367055

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 367001

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.24	0.047	mg/Kg		07/14/17 10:00	07/14/17 17:53	1
PCB-1221	ND		0.24	0.047	mg/Kg		07/14/17 10:00	07/14/17 17:53	1
PCB-1232	ND		0.24	0.047	mg/Kg		07/14/17 10:00	07/14/17 17:53	1
PCB-1242	ND		0.24	0.047	mg/Kg		07/14/17 10:00	07/14/17 17:53	1
PCB-1248	ND		0.24	0.047	mg/Kg		07/14/17 10:00	07/14/17 17:53	1
PCB-1254	ND		0.24	0.11	mg/Kg		07/14/17 10:00	07/14/17 17:53	1
PCB-1260	ND		0.24	0.11	mg/Kg		07/14/17 10:00	07/14/17 17:53	1
PCB-1262	ND		0.24	0.11	mg/Kg		07/14/17 10:00	07/14/17 17:53	1
PCB-1268	ND		0.24	0.11	mg/Kg		07/14/17 10:00	07/14/17 17:53	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*132*		*65 - 174*	*07/14/17 10:00*	*07/14/17 17:53*	*1*
DCB Decachlorobiphenyl	*97*		*65 - 174*	*07/14/17 10:00*	*07/14/17 17:53*	*1*
Tetrachloro-m-xylene	*126*		*60 - 154*	*07/14/17 10:00*	*07/14/17 17:53*	*1*
Tetrachloro-m-xylene	*96*		*60 - 154*	*07/14/17 10:00*	*07/14/17 17:53*	*1*

Lab Sample ID: LCS 480-367001/2-A
Matrix: Solid
Analysis Batch: 367055

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 367001

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
PCB-1016			2.14	3.20		mg/Kg		150	51 - 185		
PCB-1260			2.14	3.06		mg/Kg		143	61 - 184		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
DCB Decachlorobiphenyl	*171*		*65 - 174*
DCB Decachlorobiphenyl	*130*		*65 - 174*
Tetrachloro-m-xylene	*163*	*X*	*60 - 154*
Tetrachloro-m-xylene	*132*		*60 - 154*

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 480-365927/1-A
Matrix: Water
Analysis Batch: 366450

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 365927

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	ND		0.20	0.060	mg/L		07/10/17 07:45	07/11/17 11:11	1
Antimony	ND		0.020	0.0068	mg/L		07/10/17 07:45	07/11/17 11:11	1
Arsenic	ND		0.015	0.0056	mg/L		07/10/17 07:45	07/11/17 11:11	1
Barium	ND		0.0020	0.00070	mg/L		07/10/17 07:45	07/11/17 11:11	1
Beryllium	ND		0.0020	0.00030	mg/L		07/10/17 07:45	07/11/17 11:11	1
Cadmium	ND		0.0020	0.00050	mg/L		07/10/17 07:45	07/11/17 11:11	1
Calcium	ND		0.50	0.10	mg/L		07/10/17 07:45	07/11/17 11:11	1
Chromium	ND		0.0040	0.0010	mg/L		07/10/17 07:45	07/11/17 11:11	1
Cobalt	ND		0.0040	0.00063	mg/L		07/10/17 07:45	07/11/17 11:11	1
Copper	ND		0.010	0.0016	mg/L		07/10/17 07:45	07/11/17 11:11	1

Method: 6010C - Metals (ICP) (Continued)

Lab Sample ID: MB 480-365927/1-A
Matrix: Water
Analysis Batch: 366450

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 365927

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	ND		0.050	0.019	mg/L		07/10/17 07:45	07/11/17 11:11	1
Lead	ND		0.010	0.0030	mg/L		07/10/17 07:45	07/11/17 11:11	1
Magnesium	ND		0.20	0.043	mg/L		07/10/17 07:45	07/11/17 11:11	1
Manganese	ND		0.0030	0.00040	mg/L		07/10/17 07:45	07/11/17 11:11	1
Nickel	ND		0.010	0.0013	mg/L		07/10/17 07:45	07/11/17 11:11	1
Potassium	ND		0.50	0.10	mg/L		07/10/17 07:45	07/11/17 11:11	1
Selenium	ND		0.025	0.0087	mg/L		07/10/17 07:45	07/11/17 11:11	1
Silver	ND		0.0060	0.0017	mg/L		07/10/17 07:45	07/11/17 11:11	1
Sodium	ND		1.0	0.32	mg/L		07/10/17 07:45	07/11/17 11:11	1
Thallium	ND		0.020	0.010	mg/L		07/10/17 07:45	07/11/17 11:11	1
Vanadium	ND		0.0050	0.0015	mg/L		07/10/17 07:45	07/11/17 11:11	1
Zinc	ND		0.010	0.0015	mg/L		07/10/17 07:45	07/11/17 11:11	1

Lab Sample ID: LCS 480-365927/2-A
Matrix: Water
Analysis Batch: 366450

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 365927

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Aluminum	10.0	10.32		mg/L		103	80 - 120
Antimony	0.200	0.216		mg/L		108	80 - 120
Arsenic	0.200	0.208		mg/L		104	80 - 120
Barium	0.200	0.208		mg/L		104	80 - 120
Beryllium	0.200	0.205		mg/L		103	80 - 120
Cadmium	0.200	0.214		mg/L		107	80 - 120
Calcium	10.0	10.12		mg/L		101	80 - 120
Chromium	0.200	0.201		mg/L		100	80 - 120
Cobalt	0.200	0.201		mg/L		100	80 - 120
Copper	0.200	0.207		mg/L		104	80 - 120
Iron	10.0	10.38		mg/L		104	80 - 120
Lead	0.200	0.212		mg/L		106	80 - 120
Magnesium	10.0	10.54		mg/L		105	80 - 120
Manganese	0.200	0.212		mg/L		106	80 - 120
Nickel	0.200	0.202		mg/L		101	80 - 120
Potassium	10.0	10.21		mg/L		102	80 - 120
Selenium	0.200	0.207		mg/L		104	80 - 120
Silver	0.0500	0.0495		mg/L		99	80 - 120
Sodium	10.0	9.91		mg/L		99	80 - 120
Thallium	0.200	0.208		mg/L		104	80 - 120
Vanadium	0.200	0.199		mg/L		99	80 - 120
Zinc	0.200	0.213		mg/L		107	80 - 120

Lab Sample ID: 480-120641-2 MS
Matrix: Water
Analysis Batch: 366450

Client Sample ID: MW-4B
Prep Type: Total/NA
Prep Batch: 365927

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Aluminum	0.066	J	10.0	10.13		mg/L		101	75 - 125
Antimony	ND		0.200	0.214		mg/L		107	75 - 125
Arsenic	ND		0.200	0.205		mg/L		103	75 - 125

Method: 6010C - Metals (ICP) (Continued)

Lab Sample ID: 480-120641-2 MS
Matrix: Water
Analysis Batch: 366450

Client Sample ID: MW-4B
Prep Type: Total/NA
Prep Batch: 365927

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Barium	0.041		0.200	0.260		mg/L		109	75 - 125
Beryllium	0.00078	J	0.200	0.202		mg/L		101	75 - 125
Cadmium	ND		0.200	0.209		mg/L		105	75 - 125
Calcium	27.6		10.0	38.06		mg/L		104	75 - 125
Chromium	ND		0.200	0.199		mg/L		100	75 - 125
Cobalt	ND		0.200	0.197		mg/L		98	75 - 125
Copper	ND		0.200	0.203		mg/L		102	75 - 125
Iron	11.7	F1	10.0	43.10	F1	mg/L		314	75 - 125
Lead	ND		0.200	0.209		mg/L		104	75 - 125
Magnesium	6.9		10.0	17.21		mg/L		103	75 - 125
Manganese	0.11	F1	0.200	0.375	F1	mg/L		132	75 - 125
Nickel	0.0014	J	0.200	0.202		mg/L		100	75 - 125
Potassium	0.52		10.0	10.48		mg/L		100	75 - 125
Selenium	ND		0.200	0.201		mg/L		100	75 - 125
Silver	ND		0.0500	0.0492		mg/L		98	75 - 125
Sodium	3.2		10.0	12.90		mg/L		96	75 - 125
Thallium	ND		0.200	0.203		mg/L		102	75 - 125
Vanadium	ND		0.200	0.199		mg/L		100	75 - 125
Zinc	0.0017	J	0.200	0.208		mg/L		103	75 - 125

Lab Sample ID: 480-120641-2 MSD
Matrix: Water
Analysis Batch: 366450

Client Sample ID: MW-4B
Prep Type: Total/NA
Prep Batch: 365927

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Aluminum	0.066	J	10.0	10.20		mg/L		101	75 - 125	1	20
Antimony	ND		0.200	0.216		mg/L		108	75 - 125	1	20
Arsenic	ND		0.200	0.206		mg/L		103	75 - 125	0	20
Barium	0.041		0.200	0.260		mg/L		109	75 - 125	0	20
Beryllium	0.00078	J	0.200	0.203		mg/L		101	75 - 125	0	20
Cadmium	ND		0.200	0.212		mg/L		106	75 - 125	1	20
Calcium	27.6		10.0	37.61		mg/L		100	75 - 125	1	20
Chromium	ND		0.200	0.203		mg/L		102	75 - 125	2	20
Cobalt	ND		0.200	0.200		mg/L		100	75 - 125	2	20
Copper	ND		0.200	0.207		mg/L		104	75 - 125	2	20
Iron	11.7	F1	10.0	43.11	F1	mg/L		314	75 - 125	0	20
Lead	ND		0.200	0.213		mg/L		106	75 - 125	2	20
Magnesium	6.9		10.0	17.35		mg/L		105	75 - 125	1	20
Manganese	0.11	F1	0.200	0.377	F1	mg/L		133	75 - 125	1	20
Nickel	0.0014	J	0.200	0.205		mg/L		102	75 - 125	1	20
Potassium	0.52		10.0	10.53		mg/L		100	75 - 125	0	20
Selenium	ND		0.200	0.198		mg/L		99	75 - 125	2	20
Silver	ND		0.0500	0.0501		mg/L		100	75 - 125	2	20
Sodium	3.2		10.0	12.81		mg/L		96	75 - 125	1	20
Thallium	ND		0.200	0.207		mg/L		104	75 - 125	2	20
Vanadium	ND		0.200	0.200		mg/L		100	75 - 125	1	20
Zinc	0.0017	J	0.200	0.211		mg/L		105	75 - 125	2	20

Method: 6010C - Metals (ICP) (Continued)

Lab Sample ID: MB 480-366206/1-A
Matrix: Solid
Analysis Batch: 366395

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 366206

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	ND		9.2	4.0	mg/Kg		07/10/17 14:53	07/11/17 13:07	1
Antimony	ND		13.7	0.37	mg/Kg		07/10/17 14:53	07/11/17 13:07	1
Arsenic	ND		1.8	0.37	mg/Kg		07/10/17 14:53	07/11/17 13:07	1
Barium	ND		0.46	0.10	mg/Kg		07/10/17 14:53	07/11/17 13:07	1
Beryllium	ND		0.18	0.026	mg/Kg		07/10/17 14:53	07/11/17 13:07	1
Cadmium	ND		0.18	0.027	mg/Kg		07/10/17 14:53	07/11/17 13:07	1
Calcium	ND		45.8	3.0	mg/Kg		07/10/17 14:53	07/11/17 13:07	1
Chromium	ND		0.46	0.18	mg/Kg		07/10/17 14:53	07/11/17 13:07	1
Cobalt	ND		0.46	0.046	mg/Kg		07/10/17 14:53	07/11/17 13:07	1
Copper	ND		0.92	0.19	mg/Kg		07/10/17 14:53	07/11/17 13:07	1
Iron	4.03	J ^	9.2	3.2	mg/Kg		07/10/17 14:53	07/11/17 13:07	1
Lead	ND		0.92	0.22	mg/Kg		07/10/17 14:53	07/11/17 13:07	1
Magnesium	ND		18.3	0.85	mg/Kg		07/10/17 14:53	07/11/17 13:07	1
Manganese	ND		0.18	0.029	mg/Kg		07/10/17 14:53	07/11/17 13:07	1
Nickel	ND		4.6	0.21	mg/Kg		07/10/17 14:53	07/11/17 13:07	1
Potassium	ND		27.5	18.3	mg/Kg		07/10/17 14:53	07/11/17 13:07	1
Selenium	ND		3.7	0.37	mg/Kg		07/10/17 14:53	07/11/17 13:07	1
Silver	ND		0.55	0.18	mg/Kg		07/10/17 14:53	07/11/17 13:07	1
Sodium	ND		128	11.9	mg/Kg		07/10/17 14:53	07/11/17 13:07	1
Thallium	ND		5.5	0.27	mg/Kg		07/10/17 14:53	07/11/17 13:07	1
Vanadium	ND		0.46	0.10	mg/Kg		07/10/17 14:53	07/11/17 13:07	1
Zinc	ND		1.8	0.59	mg/Kg		07/10/17 14:53	07/11/17 13:07	1

Lab Sample ID: LCDSRM 480-366206/3-A
Matrix: Solid
Analysis Batch: 366395

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 366206

Analyte			Spike Added	LCDSRM Result	LCDSRM Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Aluminum			8200	9403		mg/Kg		114.7	40.0 - 159.8	2	20
Antimony			105	68.31		mg/Kg		65.1	19.6 - 254.3	1	20
Arsenic			221	194.2		mg/Kg		87.9	71.0 - 133.5	0	20
Barium			428	376.1		mg/Kg		87.9	74.3 - 125.5	2	20
Beryllium			112	97.20		mg/Kg		86.8	75.0 - 125.0	0	20
Cadmium			126	111.6		mg/Kg		88.6	73.3 - 126.2	1	20
Calcium			6160	5427		mg/Kg		88.1	73.9 - 126.1	0	20
Chromium			74.7	67.10		mg/Kg		89.8	68.5 - 131.3	2	20
Cobalt			198	202.7		mg/Kg		102.4	74.7 - 125.8	0	20
Copper			83.3	75.30		mg/Kg		90.4	73.8 - 130.9	1	20
Iron			14600	14450	^	mg/Kg		99.0	36.1 - 163.7	1	20

Method: 6010C - Metals (ICP) (Continued)

Lab Sample ID: LCDSRM 480-366206/3-A
Matrix: Solid
Analysis Batch: 366395

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 366206

Analyte	Spike Added	LCDSRM Result	LCDSRM Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Lead	76.9	79.97		mg/Kg		104.0	68.8 - 131.3	7	20
Magnesium	3180	2912		mg/Kg		91.6	67.0 - 133.3	1	20
Manganese	452	411.2		mg/Kg		91.0	76.5 - 123.5	5	20
Nickel	178	185.6		mg/Kg		104.2	73.6 - 128.7	0	20
Potassium	2820	2878		mg/Kg		102.0	62.1 - 137.9	0	20
Selenium	111	95.22		mg/Kg		85.8	65.7 - 134.2	1	20
Silver	59.6	50.30		mg/Kg		84.4	66.8 - 133.1	2	20
Sodium	643	572.5		mg/Kg		89.0	54.9 - 145.1	1	20
Thallium	151	149.9		mg/Kg		99.3	68.2 - 131.1	0	20
Vanadium	150	134.7		mg/Kg		89.8	70.7 - 129.3	0	20
Zinc	338	291.2		mg/Kg		86.1	71.9 - 127.8	0	20

Lab Sample ID: LCSSRM 480-366206/2-A
Matrix: Solid
Analysis Batch: 366395

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 366206

Analyte	Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	%Rec. Limits
Aluminum	8200	9615		mg/Kg		117.3	40.0 - 159.8
Antimony	105	68.80		mg/Kg		65.5	19.6 - 254.3
Arsenic	221	194.2		mg/Kg		87.9	71.0 - 133.5
Barium	428	382.4		mg/Kg		89.4	74.3 - 125.5
Beryllium	112	97.59		mg/Kg		87.1	75.0 - 125.0
Cadmium	126	111.0		mg/Kg		88.1	73.3 - 126.2
Calcium	6160	5420		mg/Kg		88.0	73.9 - 126.1
Chromium	74.7	68.39		mg/Kg		91.5	68.5 - 131.3
Cobalt	198	202.6		mg/Kg		102.3	74.7 - 125.8
Copper	83.3	75.74		mg/Kg		90.9	73.8 - 130.9
Iron	14600	14520	^	mg/Kg		99.5	36.1 - 163.7
Lead	76.9	85.62		mg/Kg		111.3	68.8 - 131.3
Magnesium	3180	2935		mg/Kg		92.3	67.0 - 133.3

Method: 6010C - Metals (ICP) (Continued)

Lab Sample ID: LCSSRM 480-366206/2-A
Matrix: Solid
Analysis Batch: 366395

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 366206

Analyte	Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	%Rec. Limits
Manganese	452	432.0		mg/Kg		95.6	76.5 - 123.5
Nickel	178	185.7		mg/Kg		104.3	73.6 - 128.7
Potassium	2820	2891		mg/Kg		102.5	62.1 - 137.9
Selenium	111	94.27		mg/Kg		84.9	65.7 - 134.2
Silver	59.6	51.21		mg/Kg		85.9	66.8 - 133.1
Sodium	643	580.8		mg/Kg		90.3	54.9 - 145.1
Thallium	151	150.2		mg/Kg		99.4	68.2 - 131.1
Vanadium	150	135.2		mg/Kg		90.1	70.7 - 129.3
Zinc	338	292.5		mg/Kg		86.5	71.9 - 127.8

Qualifiers

GC/MS VOA

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.

GC Semi VOA

Qualifier	Qualifier Description
X	Surrogate is outside control limits

Metals

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.
B	Compound was found in the blank and sample.
F1	MS and/or MSD Recovery is outside acceptance limits.
^	ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC is outside acceptance limits.

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)

GC/MS VOA

Analysis Batch: 366471

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-120641-14	SED-1	Total/NA	Solid	8260C	366513
MB 480-366513/2-A	Method Blank	Total/NA	Solid	8260C	366513
LCS 480-366513/1-A	Lab Control Sample	Total/NA	Solid	8260C	366513

Prep Batch: 366513

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-120641-14	SED-1	Total/NA	Solid	5035A_L	
MB 480-366513/2-A	Method Blank	Total/NA	Solid	5035A_L	
LCS 480-366513/1-A	Lab Control Sample	Total/NA	Solid	5035A_L	

Analysis Batch: 366876

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-120641-1	TRIP BLANK	Total/NA	Water	8260C	
480-120641-2	MW-4B	Total/NA	Water	8260C	
480-120641-3	MW-4B DUP	Total/NA	Water	8260C	
480-120641-4	MW-4S	Total/NA	Water	8260C	
480-120641-5	MW-3SR2	Total/NA	Water	8260C	
480-120641-7	MW-3SR	Total/NA	Water	8260C	
480-120641-8	MW-3BR	Total/NA	Water	8260C	
480-120641-9	MW-1B	Total/NA	Water	8260C	
480-120641-10	MW-1S	Total/NA	Water	8260C	
480-120641-11	SEEP-1	Total/NA	Water	8260C	
480-120641-13	SW-1	Total/NA	Water	8260C	
480-120641-15	MW-2S	Total/NA	Water	8260C	
480-120641-16	MW-2B	Total/NA	Water	8260C	
480-120641-17	MW-2D	Total/NA	Water	8260C	
MB 480-366876/6	Method Blank	Total/NA	Water	8260C	
LCS 480-366876/4	Lab Control Sample	Total/NA	Water	8260C	
480-120641-2 MS	MW-4B	Total/NA	Water	8260C	
480-120641-2 MSD	MW-4B	Total/NA	Water	8260C	

Analysis Batch: 367101

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-120641-6	MW-3BR2	Total/NA	Water	8260C	
MB 480-367101/6	Method Blank	Total/NA	Water	8260C	
LCS 480-367101/4	Lab Control Sample	Total/NA	Water	8260C	

Analysis Batch: 448846

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-120641-2	MW-4B	Total/NA	Water	8260C SIM	
480-120641-3	MW-4B DUP	Total/NA	Water	8260C SIM	
480-120641-5	MW-3SR2	Total/NA	Water	8260C SIM	
480-120641-6	MW-3BR2	Total/NA	Water	8260C SIM	
480-120641-9	MW-1B	Total/NA	Water	8260C SIM	
480-120641-10	MW-1S	Total/NA	Water	8260C SIM	
MB 460-448846/7	Method Blank	Total/NA	Water	8260C SIM	
LCS 460-448846/3	Lab Control Sample	Total/NA	Water	8260C SIM	
LCSD 460-448846/4	Lab Control Sample Dup	Total/NA	Water	8260C SIM	
480-120641-2 MS	MW-4B	Total/NA	Water	8260C SIM	
480-120641-2 MSD	MW-4B	Total/NA	Water	8260C SIM	

GC Semi VOA

Prep Batch: 366074

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-120641-11	SEEP-1	Total/NA	Water	3510C	
480-120641-12	SEEP-1 DUP	Total/NA	Water	3510C	
480-120641-13	SW-1	Total/NA	Water	3510C	
MB 480-366074/1-A	Method Blank	Total/NA	Water	3510C	
LCS 480-366074/2-A	Lab Control Sample	Total/NA	Water	3510C	
480-120641-11 MS	SEEP-1	Total/NA	Water	3510C	
480-120641-11 MSD	SEEP-1	Total/NA	Water	3510C	

Analysis Batch: 366370

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-120641-11	SEEP-1	Total/NA	Water	8082A	366074
480-120641-12	SEEP-1 DUP	Total/NA	Water	8082A	366074
480-120641-13	SW-1	Total/NA	Water	8082A	366074
MB 480-366074/1-A	Method Blank	Total/NA	Water	8082A	366074
LCS 480-366074/2-A	Lab Control Sample	Total/NA	Water	8082A	366074
480-120641-11 MS	SEEP-1	Total/NA	Water	8082A	366074
480-120641-11 MSD	SEEP-1	Total/NA	Water	8082A	366074

Prep Batch: 367001

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-120641-14	SED-1	Total/NA	Solid	3550C	
MB 480-367001/1-A	Method Blank	Total/NA	Solid	3550C	
LCS 480-367001/2-A	Lab Control Sample	Total/NA	Solid	3550C	

Analysis Batch: 367055

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-120641-14	SED-1	Total/NA	Solid	8082A	367001
MB 480-367001/1-A	Method Blank	Total/NA	Solid	8082A	367001
LCS 480-367001/2-A	Lab Control Sample	Total/NA	Solid	8082A	367001

Metals

Prep Batch: 365927

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-120641-2	MW-4B	Total/NA	Water	3005A	
480-120641-3	MW-4B DUP	Total/NA	Water	3005A	
480-120641-4	MW-4S	Total/NA	Water	3005A	
480-120641-5	MW-3SR2	Total/NA	Water	3005A	
480-120641-6	MW-3BR2	Total/NA	Water	3005A	
480-120641-7	MW-3SR	Total/NA	Water	3005A	
480-120641-8	MW-3BR	Total/NA	Water	3005A	
480-120641-9	MW-1B	Total/NA	Water	3005A	
480-120641-10	MW-1S	Total/NA	Water	3005A	
480-120641-11	SEEP-1	Total/NA	Water	3005A	
480-120641-13	SW-1	Total/NA	Water	3005A	
480-120641-15	MW-2S	Total/NA	Water	3005A	
480-120641-16	MW-2B	Total/NA	Water	3005A	
480-120641-17	MW-2D	Total/NA	Water	3005A	
MB 480-365927/1-A	Method Blank	Total/NA	Water	3005A	
LCS 480-365927/2-A	Lab Control Sample	Total/NA	Water	3005A	

Metals (Continued)

Prep Batch: 365927 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-120641-2 MS	MW-4B	Total/NA	Water	3005A	
480-120641-2 MSD	MW-4B	Total/NA	Water	3005A	

Prep Batch: 366206

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-120641-14	SED-1	Total/NA	Solid	3050B	
MB 480-366206/1-A	Method Blank	Total/NA	Solid	3050B	
LCDSRM 480-366206/3-A	Lab Control Sample Dup	Total/NA	Solid	3050B	
LCSSRM 480-366206/2-A	Lab Control Sample	Total/NA	Solid	3050B	

Analysis Batch: 366395

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-120641-14	SED-1	Total/NA	Solid	6010C	366206
MB 480-366206/1-A	Method Blank	Total/NA	Solid	6010C	366206
LCDSRM 480-366206/3-A	Lab Control Sample Dup	Total/NA	Solid	6010C	366206
LCSSRM 480-366206/2-A	Lab Control Sample	Total/NA	Solid	6010C	366206

Analysis Batch: 366450

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-120641-2	MW-4B	Total/NA	Water	6010C	365927
480-120641-3	MW-4B DUP	Total/NA	Water	6010C	365927
480-120641-4	MW-4S	Total/NA	Water	6010C	365927
480-120641-5	MW-3SR2	Total/NA	Water	6010C	365927
480-120641-6	MW-3BR2	Total/NA	Water	6010C	365927
480-120641-7	MW-3SR	Total/NA	Water	6010C	365927
480-120641-8	MW-3BR	Total/NA	Water	6010C	365927
480-120641-9	MW-1B	Total/NA	Water	6010C	365927
480-120641-10	MW-1S	Total/NA	Water	6010C	365927
480-120641-11	SEEP-1	Total/NA	Water	6010C	365927
480-120641-13	SW-1	Total/NA	Water	6010C	365927
480-120641-15	MW-2S	Total/NA	Water	6010C	365927
480-120641-17	MW-2D	Total/NA	Water	6010C	365927
MB 480-365927/1-A	Method Blank	Total/NA	Water	6010C	365927
LCS 480-365927/2-A	Lab Control Sample	Total/NA	Water	6010C	365927
480-120641-2 MS	MW-4B	Total/NA	Water	6010C	365927
480-120641-2 MSD	MW-4B	Total/NA	Water	6010C	365927

Analysis Batch: 367696

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-120641-16	MW-2B	Total/NA	Water	6010C	365927

General Chemistry

Analysis Batch: 366232

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-120641-14	SED-1	Total/NA	Solid	Moisture	

Lab Chronicle

Client: New York State D.E.C.
Project/Site: South Hill Dump #712009

TestAmerica Job ID: 480-120641-1

Client Sample ID: TRIP BLANK
Lab Sample ID: 480-120641-1
Date Collected: 07/05/17 11:30
Matrix: Water
Date Received: 07/07/17 01:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	366876	07/13/17 21:26	JAS	TAL BUF

Client Sample ID: MW-4B
Lab Sample ID: 480-120641-2
Date Collected: 07/05/17 11:49
Matrix: Water
Date Received: 07/07/17 01:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	366876	07/13/17 21:50	JAS	TAL BUF
Total/NA	Analysis	8260C SIM		1	448846	07/12/17 01:13	DAS	TAL EDI
Total/NA	Prep	3005A			365927	07/10/17 07:45	MJW	TAL BUF
Total/NA	Analysis	6010C		1	366450	07/11/17 11:45	LMH	TAL BUF

Client Sample ID: MW-4B DUP
Lab Sample ID: 480-120641-3
Date Collected: 07/05/17 11:49
Matrix: Water
Date Received: 07/07/17 01:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	366876	07/13/17 22:13	JAS	TAL BUF
Total/NA	Analysis	8260C SIM		1	448846	07/12/17 01:36	DAS	TAL EDI
Total/NA	Prep	3005A			365927	07/10/17 07:45	MJW	TAL BUF
Total/NA	Analysis	6010C		1	366450	07/11/17 12:02	LMH	TAL BUF

Client Sample ID: MW-4S
Lab Sample ID: 480-120641-4
Date Collected: 07/05/17 11:58
Matrix: Water
Date Received: 07/07/17 01:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	366876	07/13/17 22:36	JAS	TAL BUF
Total/NA	Prep	3005A			365927	07/10/17 07:45	MJW	TAL BUF
Total/NA	Analysis	6010C		1	366450	07/11/17 12:05	LMH	TAL BUF

Client Sample ID: MW-3SR2
Lab Sample ID: 480-120641-5
Date Collected: 07/05/17 13:38
Matrix: Water
Date Received: 07/07/17 01:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		4	366876	07/13/17 22:59	JAS	TAL BUF
Total/NA	Analysis	8260C SIM		1	448846	07/12/17 01:59	DAS	TAL EDI
Total/NA	Prep	3005A			365927	07/10/17 07:45	MJW	TAL BUF
Total/NA	Analysis	6010C		1	366450	07/11/17 12:09	LMH	TAL BUF

Client Sample ID: MW-3BR2
Date Collected: 07/05/17 13:48
Date Received: 07/07/17 01:15

Lab Sample ID: 480-120641-6
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	367101	07/15/17 04:43	RJF	TAL BUF
Total/NA	Analysis	8260C SIM		1	448846	07/12/17 02:23	DAS	TAL EDI
Total/NA	Prep	3005A			365927	07/10/17 07:45	MJW	TAL BUF
Total/NA	Analysis	6010C		1	366450	07/11/17 12:22	LMH	TAL BUF

Client Sample ID: MW-3SR
Date Collected: 07/05/17 15:15
Date Received: 07/07/17 01:15

Lab Sample ID: 480-120641-7
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	366876	07/13/17 23:45	JAS	TAL BUF
Total/NA	Prep	3005A			365927	07/10/17 07:45	MJW	TAL BUF
Total/NA	Analysis	6010C		1	366450	07/11/17 12:26	LMH	TAL BUF

Client Sample ID: MW-3BR
Date Collected: 07/05/17 15:20
Date Received: 07/07/17 01:15

Lab Sample ID: 480-120641-8
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	366876	07/14/17 00:08	JAS	TAL BUF
Total/NA	Prep	3005A			365927	07/10/17 07:45	MJW	TAL BUF
Total/NA	Analysis	6010C		1	366450	07/11/17 12:29	LMH	TAL BUF

Client Sample ID: MW-1B
Date Collected: 07/05/17 17:00
Date Received: 07/07/17 01:15

Lab Sample ID: 480-120641-9
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	366876	07/14/17 00:31	JAS	TAL BUF
Total/NA	Analysis	8260C SIM		1	448846	07/12/17 02:46	DAS	TAL EDI
Total/NA	Prep	3005A			365927	07/10/17 07:45	MJW	TAL BUF
Total/NA	Analysis	6010C		1	366450	07/11/17 12:32	LMH	TAL BUF

Client Sample ID: MW-1S
Date Collected: 07/05/17 17:10
Date Received: 07/07/17 01:15

Lab Sample ID: 480-120641-10
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	366876	07/14/17 00:55	JAS	TAL BUF
Total/NA	Analysis	8260C SIM		1	448846	07/12/17 03:10	DAS	TAL EDI
Total/NA	Prep	3005A			365927	07/10/17 07:45	MJW	TAL BUF
Total/NA	Analysis	6010C		1	366450	07/11/17 12:36	LMH	TAL BUF

Lab Chronicle

Client: New York State D.E.C.
Project/Site: South Hill Dump #712009

TestAmerica Job ID: 480-120641-1

Client Sample ID: SEEP-1
Date Collected: 07/06/17 08:20
Date Received: 07/07/17 01:15

Lab Sample ID: 480-120641-11
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	366876	07/14/17 01:18	JAS	TAL BUF
Total/NA	Prep	3510C			366074	07/10/17 07:51	JMP	TAL BUF
Total/NA	Analysis	8082A		1	366370	07/11/17 15:50	JMO	TAL BUF
Total/NA	Prep	3005A			365927	07/10/17 07:45	MJW	TAL BUF
Total/NA	Analysis	6010C		1	366450	07/11/17 12:39	LMH	TAL BUF

Client Sample ID: SEEP-1 DUP
Date Collected: 07/06/17 08:20
Date Received: 07/07/17 01:15

Lab Sample ID: 480-120641-12
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			366074	07/10/17 07:51	JMP	TAL BUF
Total/NA	Analysis	8082A		1	366370	07/11/17 16:06	JMO	TAL BUF

Client Sample ID: SW-1
Date Collected: 07/06/17 10:30
Date Received: 07/07/17 01:15

Lab Sample ID: 480-120641-13
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	366876	07/14/17 01:41	JAS	TAL BUF
Total/NA	Prep	3510C			366074	07/10/17 07:51	JMP	TAL BUF
Total/NA	Analysis	8082A		1	366370	07/11/17 16:22	JMO	TAL BUF
Total/NA	Prep	3005A			365927	07/10/17 07:45	MJW	TAL BUF
Total/NA	Analysis	6010C		1	366450	07/11/17 12:43	LMH	TAL BUF

Client Sample ID: SED-1
Date Collected: 07/06/17 10:40
Date Received: 07/07/17 01:15

Lab Sample ID: 480-120641-14
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	366232	07/10/17 16:53	MJH	TAL BUF

Client Sample ID: SED-1
Date Collected: 07/06/17 10:40
Date Received: 07/07/17 01:15

Lab Sample ID: 480-120641-14
Matrix: Solid
Percent Solids: 62.6

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035A_L			366513	07/07/17 06:30	AMM	TAL BUF
Total/NA	Analysis	8260C		1	366471	07/12/17 12:31	SWO	TAL BUF
Total/NA	Prep	3550C			367001	07/14/17 10:00	CAM	TAL BUF
Total/NA	Analysis	8082A		1	367055	07/14/17 23:27	JMO	TAL BUF
Total/NA	Prep	3050B			366206	07/10/17 14:53	EMB	TAL BUF
Total/NA	Analysis	6010C		1	366395	07/11/17 14:38	LMH	TAL BUF

Lab Chronicle

Client: New York State D.E.C.
Project/Site: South Hill Dump #712009

TestAmerica Job ID: 480-120641-1

Client Sample ID: MW-2S
Date Collected: 07/06/17 11:15
Date Received: 07/07/17 01:15

Lab Sample ID: 480-120641-15
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	366876	07/14/17 02:04	JAS	TAL BUF
Total/NA	Prep	3005A			365927	07/10/17 07:45	MJW	TAL BUF
Total/NA	Analysis	6010C		1	366450	07/11/17 12:46	LMH	TAL BUF

Client Sample ID: MW-2B
Date Collected: 07/06/17 11:20
Date Received: 07/07/17 01:15

Lab Sample ID: 480-120641-16
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	366876	07/14/17 02:27	JAS	TAL BUF
Total/NA	Prep	3005A			365927	07/10/17 07:45	MJW	TAL BUF
Total/NA	Analysis	6010C		1	367696	07/11/17 11:08	LMH	TAL BUF

Client Sample ID: MW-2D
Date Collected: 07/06/17 11:30
Date Received: 07/07/17 01:15

Lab Sample ID: 480-120641-17
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	366876	07/14/17 02:50	JAS	TAL BUF
Total/NA	Prep	3005A			365927	07/10/17 07:45	MJW	TAL BUF
Total/NA	Analysis	6010C		1	366450	07/11/17 12:49	LMH	TAL BUF

Laboratory References:

TAL BUF = TestAmerica Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

TAL EDI = TestAmerica Edison, 777 New Durham Road, Edison, NJ 08817, TEL (732)549-3900

Accreditation/Certification Summary

Client: New York State D.E.C.
Project/Site: South Hill Dump #712009

TestAmerica Job ID: 480-120641-1

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	03-31-18

The following analytes are included in this report, but accreditation/certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
Moisture		Solid	Percent Moisture
Moisture		Solid	Percent Solids

Laboratory: TestAmerica Edison

The accreditations/certifications listed below are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
New York	NELAP	2	11452	04-01-18

Shipping and Receiving Documents

TestAmerica Buffalo
10 Hazelwood Drive
Amherst, NY 14228-2298
Phone (716) 691-2600 Fax (716) 691-7991

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information
Client Contact: ~~Daniel Nierenberg~~ Julie Ricardi
Company: AMEC Foster Wheeler E & I, Inc
Address: ~~459 Route 146, Suite 201~~ 511 Congress St
City: ~~Clifton Park~~ Portland
State, Zip: ~~NY, 12065~~ ME, 04101
Phone: ~~518-402-9814(Tel)~~ 207-828-3200
Email: ~~daniel.nierenberg@amecfw.com~~ julie.ricardi@amecfw.com
Project Name: South Hill Dump #712009
Site: South Hill Dump

Sampler: Nate Vogan / Alex Klein
Phone: 207-828-3652
Lab PM: Stone, Judy L
E-Mail: judy.stone@testamericainc.com
Carrier Tracking No(s): Service Center
COC No: 480-99372-19491.1
Page: Page 1 of 2
Job #:

Due Date Requested:
TAT Requested (days): 10 B day
PO #: CallOut ID 120579
WO #:
Project #: 48005447
SSOW#:

480-120641 COC

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:

Analysis Requested

Sample Identification	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)	6010C - TAL Metals ICP	8260C - (MOD) TCL list OLM04.2	8082A - TCL PCBs - OLM04.2	6010C - TAL Metals ICP	8260C - (MOD) TCL list OLM04.2	Moisture - Local Method	8260C_SIM - (MOD) Volatile SIM-Dioxane	Total Number of containers	Special Instructions/Note:
			Preservation Code:				D	A	N	N	N	N	A		
Trip Blank	7/5/17	1130	G	Water	N	N		X						1	
MW-4B	7/5/17	1149	G	Water	N	N	X	X					X	5	
MW-4B Dup	7/5/17	1149	G	Water	N	N	X	X					X	5	Dupe
MW-4B MS/MSD	7/5/17	1149	G	Water	N	Y	X	X					X	7	MS/MSD
MW-4S	7/5/17	1158	G	Water	N	N	X	X						4	
MW-35R2	7/5/17	1338	G	Water	N	N	X	X					X	7	
MW-3BR2	7/5/17	1348	G	Water	N	N	X	X					X	6	
MW-35R	7/5/17	1515	G	Water	N	N	X	X						4	
MW-3BR	7/5/17	1520	G	Water	N	N	X	X						4	
MW-1B	7/5/17	1700	G	Water	N	N	X	X					X	6	
MW-1S	7/5/17	1710	G	Water	N	N	X	X					X	7	

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

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): See work order
Special Instructions/QC Requirements: All VOCs, 1 cooler. Keep SDG open until notified

Empty Kit Relinquished by:
Date:
Time:
Method of Shipment:

	Date/Time	Company		Date/Time	Company
Relinquished by:	7/6/17 1410	AMEC	Received by:	7/6/17 1410	S/A
Relinquished by:	7-6-17 1900	S/A	Received by:	7-7-17 0115	DAD
Relinquished by:			Received by:		

Custody Seals Intact: Δ Yes Δ No
Custody Seal No.:
Cooler Temperature(s) °C and Other Remarks: 1.5, 1.4 #1

TestAmerica Buffalo
10 Hazelwood Drive
Amherst, NY 14228-2298
Phone (716) 691-2600 Fax (716) 691-7991

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: Nate Vigon / Alex Klein	Lab PM: Stone, Judy L	Carrier Tracking No(s): Service Center	COC No: 480-99372-19491.2
Client Contact: ~~Daniel Nierenberg~~ Julie Ricard	Phone: 207. 828 - 3652	E-Mail: judy.stone@testamericainc.com		Page: Page 2 of 2
Company: AMEC Foster Wheeler E & I, Inc				Job #:
Address: ~~453 Route 146 Suite 201~~ 511 Congress St	Due Date Requested:	Analysis Requested		
City: ~~Clifton Park~~ Portland	TAT Requested (days): 10 Bday			
State, Zip: ~~NY, 12065~~ ME, 04101				
Phone: ~~518-402-9614(Tel)~~ 207- 828 - 3700	PO #: CallOut ID 120579			
Email: ~~daniel.nierenberg@amecfw.com~~ julie.ricard@amecfw.com	WO #:			
Project Name: South Hill Dump #712009	Project #: 48005447			
Site: South Hill Dump	SSOW#:			

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	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)	6010C - TAL Metals ICP	8260C - (MOD) TCL list OLM04.2	8082A - TCL PCBs - OLM04.2	6010C - TAL Metals ICP	8260C - (MOD) TCL list OLM04.2	Moisture - Local Method	8260C_SIM - (MOD) Volatile SIM-Dioxane	Total Number of containers	Special Instructions/Note:
			Preservation Code:				D	A	N	N	N	N	A		
SEEP-1	7/6/17	0820	G	Water	N	N	X	X	X					6	
SEEP-1 Dup	7/6/17	0820	G	Water	N	N			X					2	
SEEP-1 MS	7/6/17	0820	G	Water	N	Y			X					2	
SEEP-1 MSD	7/6/17	0820	G	Water	N	Y			X					2	
SW-1	7/6/17	1030	G	Water	N	Y	X	X	X					6	
SED-1	7/6/17	1040	G	~~Water~~ Sed	N	Y				X	X	X		7	
MW-2S	7/6/17	1115	G	Water	N	Y	X	X						4	
MW-2B	7/6/17	1120	G	Water	N	Y	X	X						4	
MW-2D	7/6/17	1130	G	Water	N	Y	X	X						4	
				Water											
				Solid											

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

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) See work order

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1		7/6/17 1410	AMEC		7/6/17 1410	SVR
2	Relinquished by:	Date/Time: 7-6-17, 19:00	Company SVR	Received by:	Date/Time: 7-7-17 0115	Company TAB
3	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: 1.4, 1.5 #1

TestAmerica Buffalo
10 Hazelwood Drive
Amherst, NY 14228-2298
Phone (716) 691-2600 Fax (716) 691-7991

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Stone, Judy L	Carrier Tracking No(s):	COC No: 480-35923.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: judy.stone@testamericainc.com	State of Origin: New York	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): NELAP - New York		Job #: 480-120641-1
Address: 777 New Durham Road, ,	Due Date Requested: 8/11/2017			
City: Edison	TAT Requested (days):			
State, Zip: NJ, 08817				
Phone: 732-549-3900(Tel) 732-549-3679(Fax)	PO #:			
Email:	WO #:			
Project Name: South Hill Dump #712009	Project #: 48005447			
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)	8260C_SIM/5030C (MOD) Volatile SIM	Total Number of containers	Special Instructions/Note:
			Preservation Code:					
MW-4B (480-120641-2)	7/5/17	11:49 Eastern		Water		X	1	
MW-4B (480-120641-2MS)	7/5/17	11:49 Eastern	MS	Water		X	3	SHARED VOLUME
MW-4B (480-120641-2MSD)	7/5/17	11:49 Eastern	MSD	Water		X	3	SHARED VOLUME
MW-4B DUP (480-120641-3)	7/5/17	11:49 Eastern		Water		X	1	
MW-3SR2 (480-120641-5)	7/5/17	13:38 Eastern		Water		X	3	
MW-3BR2 (480-120641-6)	7/5/17	13:48 Eastern		Water		X	2	
MW-1B (480-120641-9)	7/5/17	17:00 Eastern		Water		X	2	
MW-1S (480-120641-10)	7/5/17	17:10 Eastern		Water		X	3	

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	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ 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:	Company	Received by:	Date/Time:	Company
[signature]	1340 7/7/17	TAL BUFFALO	[signature] (VIA FEDEX)	7/8/17 1050	TAL BUFFALO
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.: 033771	Cooler Temperature(s) °C and Other Remarks: 3.9°C IR#8

Login Sample Receipt Checklist

Client: New York State D.E.C. Job Number: 480-120641-1

Login Number: 120641 **List Source: TestAmerica Buffalo**
List Number: 1
Creator: Williams, Christopher S

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 07JULY2017 @0630
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	False	MS/MSD SHARED VOLUME
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	AMEC
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	

Login Sample Receipt Checklist

Client: New York State D.E.C. Job Number: 480-120641-1

Login Number: 120641 **List Source: TestAmerica Edison**
List Number: 2 **List Creation: 07/08/17 11:50 AM**
Creator: Wisnewski, Kelly R

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	CS#033771
Sample custody seals, if present, are 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	3.9°C, IR#8
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 containers received 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	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

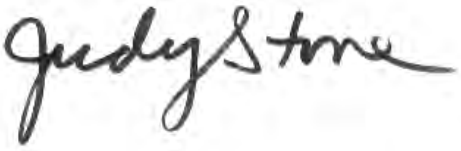
Job Number: 480-120783-1

Job Description: South Hill Dump #712009

Contract Number: C008010

For:
New York State D.E.C.
625 Broadway
12th Floor
Albany, NY 12233-7017

Attention: Mr. Dave Chiusano



Approved for release.
Judy L Stone
Senior Project Manager
7/28/2017 1:50 PM

Judy L Stone, Senior Project Manager
10 Hazelwood Drive, Amherst, NY, 14228-2298
(484)685-0868
judy.stone@testamericainc.com
07/28/2017

cc: Nathan Vogan

The test results in this report meet all NELAP requirements for analytes for which accreditation is required or available. Any exceptions to the NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory. All questions regarding this test report should be directed to the TestAmerica Project Manager who has signed this report. TestAmerica Buffalo NELAC Certifications: CADPH 01169CA, FLDOH E87672, ILEPA 200003, KSDOH E-10187, LADEQ 30708, MDH 036-999-337, NHELAP 2973, NJDEP NY455, NHDOH 10026, ORELAP NY200003, PADEP 68-00281, TXCEQ T-104704412-10-1

Table of Contents

Table of Contents

Job Narrative
480-120783-1

Receipt
The samples were received on 7/7/2017 9:30 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 3.3º C.

LCMS
Method(s) 537 (modified): The laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for preparation batch 320-175074 and analytical batch 320-175952 recovered outside control limits for the following analyte: Perfluorotetradecanoic acid (PFTeA). This analyte was biased high in the LCS/LCSD and was detected below the reporting limit in the associated samples; therefore, the data have been reported.

Method(s) 537 (modified): Isotope Dilution Analyte (IDA) recovery is above the method recommended limit for 13C4-PFHpA in the following sample: (MB 320-175074/1-A). Quantitation by isotope dilution generally precludes any adverse effect on data quality due to elevated IDA recoveries.

Method(s) 537 (modified): Isotope Dilution Analyte (IDA) recovery is above the method recommended limit for 13C2 PFUnA in the following sample: MW-1B (480-120783-2). Quantitation by isotope dilution generally precludes any adverse effect on data quality due to elevated IDA recoveries.

Method(s) 537 (modified): Isotope Dilution Analyte (IDA) recoveries are above the method recommended limit for several analytes in the following sample: MW-4B (480-120783-6). Quantitation by isotope dilution generally precludes any adverse effect on data quality due to elevated IDA recoveries.

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

Organic Prep
Method(s) 3535: Approximately 250 mL of the aqueous portion of the following samples were decanted into a new polyethylene bottle prior to extraction due to the original sample bottle containing an excess amount of sediment which had the potential to clog the solid-phase column: MW-1B (480-120783-2), MW-3BR2 (480-120783-4) and MW-4B (480-120783-6)

Method(s) 3535: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 320-175074.

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

Sample Summary

Client: New York State D.E.C.
Project/Site: South Hill Dump #712009

TestAmerica Job ID: 480-120783-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
480-120783-1	MW-1S	Water	07/06/17 08:00	07/07/17 09:30
480-120783-2	MW-1B	Water	07/06/17 08:10	07/07/17 09:30
480-120783-3	MW-3SR2	Water	07/06/17 09:15	07/07/17 09:30
480-120783-4	MW-3BR2	Water	07/06/17 09:20	07/07/17 09:30
480-120783-5	MW-4S	Water	07/06/17 09:45	07/07/17 09:30
480-120783-6	MW-4B	Water	07/06/17 09:50	07/07/17 09:30
480-120783-7	REAGENT BLANK	Water	07/06/17 10:00	07/07/17 09:30

Detection Summary

Client: New York State D.E.C.
Project/Site: South Hill Dump #712009

TestAmerica Job ID: 480-120783-1

Client Sample ID: MW-1S — Lab Sample ID: 480-120783-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	2.1	B	1.9	0.43	ng/L	1		537 (modified)	Total/NA
Perfluoropentanoic acid (PFPeA)	5.8		1.9	0.94	ng/L	1		537 (modified)	Total/NA
Perfluorohexanoic acid (PFHxA)	16		1.9	0.74	ng/L	1		537 (modified)	Total/NA
Perfluoroheptanoic acid (PFHpA)	2.3		1.9	0.76	ng/L	1		537 (modified)	Total/NA
Perfluorooctanoic acid (PFOA)	2.8		1.9	0.71	ng/L	1		537 (modified)	Total/NA
Perfluorotetradecanoic acid (PFTeA)	0.74	J B *	1.9	0.19	ng/L	1		537 (modified)	Total/NA
Total PFOA and PFOS	2.8		1.9	0.71	ng/L	1		537 (modified)	Total/NA

Client Sample ID: MW-1B — Lab Sample ID: 480-120783-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	6.3	B	2.0	0.45	ng/L	1		537 (modified)	Total/NA
Perfluoropentanoic acid (PFPeA)	2.7		2.0	0.97	ng/L	1		537 (modified)	Total/NA
Perfluorohexanoic acid (PFHxA)	5.6		2.0	0.77	ng/L	1		537 (modified)	Total/NA
Perfluoroheptanoic acid (PFHpA)	1.8	J	2.0	0.79	ng/L	1		537 (modified)	Total/NA
Perfluorooctanoic acid (PFOA)	5.0		2.0	0.74	ng/L	1		537 (modified)	Total/NA
Perfluorotetradecanoic acid (PFTeA)	0.75	J B *	2.0	0.20	ng/L	1		537 (modified)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	2.5		2.0	1.3	ng/L	1		537 (modified)	Total/NA
Total PFOA and PFOS	7.5		2.0	0.74	ng/L	1		537 (modified)	Total/NA

Client Sample ID: MW-3SR2 — Lab Sample ID: 480-120783-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	11	B	1.9	0.44	ng/L	1		537 (modified)	Total/NA
Perfluoropentanoic acid (PFPeA)	4.9		1.9	0.95	ng/L	1		537 (modified)	Total/NA
Perfluorohexanoic acid (PFHxA)	6.3		1.9	0.76	ng/L	1		537 (modified)	Total/NA
Perfluoroheptanoic acid (PFHpA)	2.7		1.9	0.77	ng/L	1		537 (modified)	Total/NA
Perfluorooctanoic acid (PFOA)	7.7		1.9	0.72	ng/L	1		537 (modified)	Total/NA
Perfluorotetradecanoic acid (PFTeA)	1.6	J B *	1.9	0.19	ng/L	1		537 (modified)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	1.1	J	1.9	0.84	ng/L	1		537 (modified)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	5.1		1.9	1.2	ng/L	1		537 (modified)	Total/NA
Total PFOA and PFOS	13		1.9	0.72	ng/L	1		537 (modified)	Total/NA

Client Sample ID: MW-3BR2 — Lab Sample ID: 480-120783-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	9.4	B	1.9	0.44	ng/L	1		537 (modified)	Total/NA
Perfluoropentanoic acid (PFPeA)	3.9		1.9	0.95	ng/L	1		537 (modified)	Total/NA
Perfluorohexanoic acid (PFHxA)	5.7		1.9	0.76	ng/L	1		537 (modified)	Total/NA
Perfluoroheptanoic acid (PFHpA)	1.8	J	1.9	0.77	ng/L	1		537 (modified)	Total/NA
Perfluorooctanoic acid (PFOA)	5.6		1.9	0.72	ng/L	1		537 (modified)	Total/NA
Perfluorotetradecanoic acid (PFTeA)	1.3	J B *	1.9	0.19	ng/L	1		537 (modified)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	2.2		1.9	1.2	ng/L	1		537 (modified)	Total/NA
Total PFOA and PFOS	7.8		1.9	0.72	ng/L	1		537 (modified)	Total/NA

Client Sample ID: MW-4S — Lab Sample ID: 480-120783-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	0.81	J B	1.9	0.44	ng/L	1		537 (modified)	Total/NA
Perfluorohexanoic acid (PFHxA)	1.8	J	1.9	0.76	ng/L	1		537 (modified)	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: MW-4S (Continued) — Lab Sample ID: 480-120783-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorotetradecanoic acid (PFTeA)	0.98	J B *	1.9	0.19	ng/L	1		537 (modified)	Total/NA

Client Sample ID: MW-4B — Lab Sample ID: 480-120783-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	3.1	B	2.0	0.45	ng/L	1		537 (modified)	Total/NA
Perfluoropentanoic acid (PFPeA)	0.99	J	2.0	0.98	ng/L	1		537 (modified)	Total/NA
Perfluorohexanoic acid (PFHxA)	2.2		2.0	0.78	ng/L	1		537 (modified)	Total/NA
Perfluorooctanoic acid (PFOA)	1.8	J	2.0	0.74	ng/L	1		537 (modified)	Total/NA
Perfluorotetradecanoic acid (PFTeA)	0.50	J B *	2.0	0.20	ng/L	1		537 (modified)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	1.4	J	2.0	1.3	ng/L	1		537 (modified)	Total/NA
Total PFOA and PFOS	3.2		2.0	0.74	ng/L	1		537 (modified)	Total/NA

Client Sample ID: REAGENT BLANK — Lab Sample ID: 480-120783-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	0.93	J B	2.0	0.45	ng/L	1		537 (modified)	Total/NA
Perfluorohexanoic acid (PFHxA)	2.1		2.0	0.77	ng/L	1		537 (modified)	Total/NA
Perfluorotetradecanoic acid (PFTeA)	1.0	J B *	2.0	0.20	ng/L	1		537 (modified)	Total/NA

This Detection Summary does not include radiochemical test results.

Method Summary

Client: New York State D.E.C.
Project/Site: South Hill Dump #712009

TestAmerica Job ID: 480-120783-1

Method	Method Description	Protocol	Laboratory
537 (modified)	Perfluorinated Hydrocarbons	EPA	TAL SAC

Protocol References:

EPA = US Environmental Protection Agency

Laboratory References:

TAL SAC = TestAmerica Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Client Sample ID: MW-1S

Lab Sample ID: 480-120783-1

Date Collected: 07/06/17 08:00

Matrix: Water

Date Received: 07/07/17 09:30

Method: 537 (modified) - Perfluorinated Hydrocarbons

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	**2.1**	**B**	1.9	0.43	ng/L		07/20/17 09:15	07/25/17 15:47	1
Perfluoropentanoic acid (PFPeA)	**5.8**		1.9	0.94	ng/L		07/20/17 09:15	07/25/17 15:47	1
Perfluorohexanoic acid (PFHxA)	**16**		1.9	0.74	ng/L		07/20/17 09:15	07/25/17 15:47	1
Perfluoroheptanoic acid (PFHpA)	**2.3**		1.9	0.76	ng/L		07/20/17 09:15	07/25/17 15:47	1
Perfluorooctanoic acid (PFOA)	**2.8**		1.9	0.71	ng/L		07/20/17 09:15	07/25/17 15:47	1
Perfluorononanoic acid (PFNA)	ND		1.9	0.62	ng/L		07/20/17 09:15	07/25/17 15:47	1
Perfluorodecanoic acid (PFDA)	ND		1.9	0.42	ng/L		07/20/17 09:15	07/25/17 15:47	1
Perfluoroundecanoic acid (PFUnA)	ND		1.9	0.71	ng/L		07/20/17 09:15	07/25/17 15:47	1
Perfluorododecanoic acid (PFDoA)	ND		1.9	0.55	ng/L		07/20/17 09:15	07/25/17 15:47	1
Perfluorotridecanoic Acid (PFTriA)	ND		1.9	0.52	ng/L		07/20/17 09:15	07/25/17 15:47	1
Perfluorotetradecanoic acid (PFTeA)	**0.74**	**J B ***	1.9	0.19	ng/L		07/20/17 09:15	07/25/17 15:47	1
Perfluorobutanesulfonic acid (PFBS)	ND		1.9	0.87	ng/L		07/20/17 09:15	07/25/17 15:47	1
Perfluorohexanesulfonic acid (PFHxS)	ND		1.9	0.82	ng/L		07/20/17 09:15	07/25/17 15:47	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		1.9	0.67	ng/L		07/20/17 09:15	07/25/17 15:47	1
Perfluorooctanesulfonic acid (PFOS)	ND		1.9	1.2	ng/L		07/20/17 09:15	07/25/17 15:47	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.9	1.1	ng/L		07/20/17 09:15	07/25/17 15:47	1
Total PFOA and PFOS	**2.8**		1.9	0.71	ng/L		07/20/17 09:15	07/25/17 15:47	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*56*		*25 - 150*	*07/20/17 09:15*	*07/25/17 15:47*	*1*
13C2 PFHxA	*81*		*25 - 150*	*07/20/17 09:15*	*07/25/17 15:47*	*1*
13C4 PFOA	*108*		*25 - 150*	*07/20/17 09:15*	*07/25/17 15:47*	*1*
13C5 PFNA	*101*		*25 - 150*	*07/20/17 09:15*	*07/25/17 15:47*	*1*
13C2 PFDA	*121*		*25 - 150*	*07/20/17 09:15*	*07/25/17 15:47*	*1*
13C2 PFUnA	*127*		*25 - 150*	*07/20/17 09:15*	*07/25/17 15:47*	*1*
13C2 PFDoA	*104*		*25 - 150*	*07/20/17 09:15*	*07/25/17 15:47*	*1*
18O2 PFHxS	*133*		*25 - 150*	*07/20/17 09:15*	*07/25/17 15:47*	*1*
13C4 PFOS	*122*		*25 - 150*	*07/20/17 09:15*	*07/25/17 15:47*	*1*
13C4-PFHpA	*109*		*25 - 150*	*07/20/17 09:15*	*07/25/17 15:47*	*1*
13C5 PFPeA	*70*		*25 - 150*	*07/20/17 09:15*	*07/25/17 15:47*	*1*

Client Sample ID: MW-1B

Lab Sample ID: 480-120783-2

Date Collected: 07/06/17 08:10

Matrix: Water

Date Received: 07/07/17 09:30

Method: 537 (modified) - Perfluorinated Hydrocarbons

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	**6.3**	**B**	2.0	0.45	ng/L		07/20/17 09:15	07/25/17 15:54	1
Perfluoropentanoic acid (PFPeA)	**2.7**		2.0	0.97	ng/L		07/20/17 09:15	07/25/17 15:54	1
Perfluorohexanoic acid (PFHxA)	**5.6**		2.0	0.77	ng/L		07/20/17 09:15	07/25/17 15:54	1
Perfluoroheptanoic acid (PFHpA)	**1.8**	**J**	2.0	0.79	ng/L		07/20/17 09:15	07/25/17 15:54	1
Perfluorooctanoic acid (PFOA)	**5.0**		2.0	0.74	ng/L		07/20/17 09:15	07/25/17 15:54	1
Perfluorononanoic acid (PFNA)	ND		2.0	0.64	ng/L		07/20/17 09:15	07/25/17 15:54	1
Perfluorodecanoic acid (PFDA)	ND		2.0	0.43	ng/L		07/20/17 09:15	07/25/17 15:54	1
Perfluoroundecanoic acid (PFUnA)	ND		2.0	0.74	ng/L		07/20/17 09:15	07/25/17 15:54	1
Perfluorododecanoic acid (PFDoA)	ND		2.0	0.57	ng/L		07/20/17 09:15	07/25/17 15:54	1
Perfluorotridecanoic Acid (PFTriA)	ND		2.0	0.54	ng/L		07/20/17 09:15	07/25/17 15:54	1
Perfluorotetradecanoic acid (PFTeA)	**0.75**	**J B ***	2.0	0.20	ng/L		07/20/17 09:15	07/25/17 15:54	1

Client Sample ID: MW-1B

Date Collected: 07/06/17 08:10
Date Received: 07/07/17 09:30

Lab Sample ID: 480-120783-2

Matrix: Water

Method: 537 (modified) - Perfluorinated Hydrocarbons (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanesulfonic acid (PFBS)	ND		2.0	0.90	ng/L		07/20/17 09:15	07/25/17 15:54	1
Perfluorohexanesulfonic acid (PFHxS)	ND		2.0	0.85	ng/L		07/20/17 09:15	07/25/17 15:54	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		2.0	0.70	ng/L		07/20/17 09:15	07/25/17 15:54	1
Perfluorooctanesulfonic acid (PFOS)	**2.5**		2.0	1.3	ng/L		07/20/17 09:15	07/25/17 15:54	1
Perfluorodecanesulfonic acid (PFDS)	ND		2.0	1.2	ng/L		07/20/17 09:15	07/25/17 15:54	1
Total PFOA and PFOS	**7.5**		2.0	0.74	ng/L		07/20/17 09:15	07/25/17 15:54	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*110*		*25 - 150*	*07/20/17 09:15*	*07/25/17 15:54*	*1*
13C2 PFHxA	*121*		*25 - 150*	*07/20/17 09:15*	*07/25/17 15:54*	*1*
13C4 PFOA	*128*		*25 - 150*	*07/20/17 09:15*	*07/25/17 15:54*	*1*
13C5 PFNA	*122*		*25 - 150*	*07/20/17 09:15*	*07/25/17 15:54*	*1*
13C2 PFDA	*139*		*25 - 150*	*07/20/17 09:15*	*07/25/17 15:54*	*1*
13C2 PFUnA	*151*	*	*25 - 150*	*07/20/17 09:15*	*07/25/17 15:54*	*1*
13C2 PFDoA	*139*		*25 - 150*	*07/20/17 09:15*	*07/25/17 15:54*	*1*
18O2 PFHxS	*114*		*25 - 150*	*07/20/17 09:15*	*07/25/17 15:54*	*1*
13C4 PFOS	*107*		*25 - 150*	*07/20/17 09:15*	*07/25/17 15:54*	*1*
13C4-PFHpA	*138*		*25 - 150*	*07/20/17 09:15*	*07/25/17 15:54*	*1*
13C5 PFPeA	*124*		*25 - 150*	*07/20/17 09:15*	*07/25/17 15:54*	*1*

Client Sample ID: MW-3SR2

Date Collected: 07/06/17 09:15
Date Received: 07/07/17 09:30

Lab Sample ID: 480-120783-3

Matrix: Water

Method: 537 (modified) - Perfluorinated Hydrocarbons

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	**11**	**B**	1.9	0.44	ng/L		07/20/17 09:15	07/25/17 16:01	1
Perfluoropentanoic acid (PFPeA)	**4.9**		1.9	0.95	ng/L		07/20/17 09:15	07/25/17 16:01	1
Perfluorohexanoic acid (PFHxA)	**6.3**		1.9	0.76	ng/L		07/20/17 09:15	07/25/17 16:01	1
Perfluoroheptanoic acid (PFHpA)	**2.7**		1.9	0.77	ng/L		07/20/17 09:15	07/25/17 16:01	1
Perfluorooctanoic acid (PFOA)	**7.7**		1.9	0.72	ng/L		07/20/17 09:15	07/25/17 16:01	1
Perfluorononanoic acid (PFNA)	ND		1.9	0.63	ng/L		07/20/17 09:15	07/25/17 16:01	1
Perfluorodecanoic acid (PFDA)	ND		1.9	0.42	ng/L		07/20/17 09:15	07/25/17 16:01	1
Perfluoroundecanoic acid (PFUnA)	ND		1.9	0.72	ng/L		07/20/17 09:15	07/25/17 16:01	1
Perfluorododecanoic acid (PFDoA)	ND		1.9	0.56	ng/L		07/20/17 09:15	07/25/17 16:01	1
Perfluorotridecanoic Acid (PFTriA)	ND		1.9	0.53	ng/L		07/20/17 09:15	07/25/17 16:01	1
Perfluorotetradecanoic acid (PFTeA)	**1.6**	**J B ***	1.9	0.19	ng/L		07/20/17 09:15	07/25/17 16:01	1
Perfluorobutanesulfonic acid (PFBS)	ND		1.9	0.88	ng/L		07/20/17 09:15	07/25/17 16:01	1
Perfluorohexanesulfonic acid (PFHxS)	**1.1**	**J**	1.9	0.84	ng/L		07/20/17 09:15	07/25/17 16:01	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		1.9	0.69	ng/L		07/20/17 09:15	07/25/17 16:01	1
Perfluorooctanesulfonic acid (PFOS)	**5.1**		1.9	1.2	ng/L		07/20/17 09:15	07/25/17 16:01	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.9	1.2	ng/L		07/20/17 09:15	07/25/17 16:01	1
Total PFOA and PFOS	**13**		1.9	0.72	ng/L		07/20/17 09:15	07/25/17 16:01	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*65*		*25 - 150*	*07/20/17 09:15*	*07/25/17 16:01*	*1*
13C2 PFHxA	*90*		*25 - 150*	*07/20/17 09:15*	*07/25/17 16:01*	*1*

Client Sample ID: MW-3SR2

Lab Sample ID: 480-120783-3

Date Collected: 07/06/17 09:15

Matrix: Water

Date Received: 07/07/17 09:30

Method: 537 (modified) - Perfluorinated Hydrocarbons (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFOA	102		25 - 150	07/20/17 09:15	07/25/17 16:01	1
13C5 PFNA	92		25 - 150	07/20/17 09:15	07/25/17 16:01	1
13C2 PFDA	87		25 - 150	07/20/17 09:15	07/25/17 16:01	1
13C2 PFUnA	73		25 - 150	07/20/17 09:15	07/25/17 16:01	1
13C2 PFDoA	59		25 - 150	07/20/17 09:15	07/25/17 16:01	1
18O2 PFHxS	111		25 - 150	07/20/17 09:15	07/25/17 16:01	1
13C4 PFOS	103		25 - 150	07/20/17 09:15	07/25/17 16:01	1
13C4-PFHpA	114		25 - 150	07/20/17 09:15	07/25/17 16:01	1
13C5 PFPeA	82		25 - 150	07/20/17 09:15	07/25/17 16:01	1

Client Sample ID: MW-3BR2

Lab Sample ID: 480-120783-4

Date Collected: 07/06/17 09:20

Matrix: Water

Date Received: 07/07/17 09:30

Method: 537 (modified) - Perfluorinated Hydrocarbons

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	**9.4**	**B**	1.9	0.44	ng/L		07/20/17 09:15	07/25/17 16:08	1
Perfluoropentanoic acid (PFPeA)	**3.9**		1.9	0.95	ng/L		07/20/17 09:15	07/25/17 16:08	1
Perfluorohexanoic acid (PFHxA)	**5.7**		1.9	0.76	ng/L		07/20/17 09:15	07/25/17 16:08	1
Perfluoroheptanoic acid (PFHpA)	**1.8**	**J**	1.9	0.77	ng/L		07/20/17 09:15	07/25/17 16:08	1
Perfluorooctanoic acid (PFOA)	**5.6**		1.9	0.72	ng/L		07/20/17 09:15	07/25/17 16:08	1
Perfluorononanoic acid (PFNA)	ND		1.9	0.63	ng/L		07/20/17 09:15	07/25/17 16:08	1
Perfluorodecanoic acid (PFDA)	ND		1.9	0.42	ng/L		07/20/17 09:15	07/25/17 16:08	1
Perfluoroundecanoic acid (PFUnA)	ND		1.9	0.72	ng/L		07/20/17 09:15	07/25/17 16:08	1
Perfluorododecanoic acid (PFDoA)	ND		1.9	0.56	ng/L		07/20/17 09:15	07/25/17 16:08	1
Perfluorotridecanoic Acid (PFTriA)	ND		1.9	0.53	ng/L		07/20/17 09:15	07/25/17 16:08	1
Perfluorotetradecanoic acid (PFTeA)	**1.3**	**J B ***	1.9	0.19	ng/L		07/20/17 09:15	07/25/17 16:08	1
Perfluorobutanesulfonic acid (PFBS)	ND		1.9	0.88	ng/L		07/20/17 09:15	07/25/17 16:08	1
Perfluorohexanesulfonic acid (PFHxS)	ND		1.9	0.84	ng/L		07/20/17 09:15	07/25/17 16:08	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		1.9	0.69	ng/L		07/20/17 09:15	07/25/17 16:08	1
Perfluorooctanesulfonic acid (PFOS)	**2.2**		1.9	1.2	ng/L		07/20/17 09:15	07/25/17 16:08	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.9	1.2	ng/L		07/20/17 09:15	07/25/17 16:08	1
Total PFOA and PFOS	**7.8**		1.9	0.72	ng/L		07/20/17 09:15	07/25/17 16:08	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFBA	65		25 - 150	07/20/17 09:15	07/25/17 16:08	1
13C2 PFHxA	88		25 - 150	07/20/17 09:15	07/25/17 16:08	1
13C4 PFOA	108		25 - 150	07/20/17 09:15	07/25/17 16:08	1
13C5 PFNA	98		25 - 150	07/20/17 09:15	07/25/17 16:08	1
13C2 PFDA	109		25 - 150	07/20/17 09:15	07/25/17 16:08	1
13C2 PFUnA	107		25 - 150	07/20/17 09:15	07/25/17 16:08	1
13C2 PFDoA	88		25 - 150	07/20/17 09:15	07/25/17 16:08	1
18O2 PFHxS	96		25 - 150	07/20/17 09:15	07/25/17 16:08	1
13C4 PFOS	94		25 - 150	07/20/17 09:15	07/25/17 16:08	1
13C4-PFHpA	109		25 - 150	07/20/17 09:15	07/25/17 16:08	1
13C5 PFPeA	84		25 - 150	07/20/17 09:15	07/25/17 16:08	1

Client Sample ID: MW-4S

Date Collected: 07/06/17 09:45
Date Received: 07/07/17 09:30

Lab Sample ID: 480-120783-5

Matrix: Water

Method: 537 (modified) - Perfluorinated Hydrocarbons

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	**0.81**	**J B**	1.9	0.44	ng/L		07/20/17 09:15	07/25/17 16:14	1
Perfluoropentanoic acid (PFPeA)	ND		1.9	0.95	ng/L		07/20/17 09:15	07/25/17 16:14	1
Perfluorohexanoic acid (PFHxA)	**1.8**	**J**	1.9	0.76	ng/L		07/20/17 09:15	07/25/17 16:14	1
Perfluoroheptanoic acid (PFHpA)	ND		1.9	0.77	ng/L		07/20/17 09:15	07/25/17 16:14	1
Perfluorooctanoic acid (PFOA)	ND		1.9	0.72	ng/L		07/20/17 09:15	07/25/17 16:14	1
Perfluorononanoic acid (PFNA)	ND		1.9	0.63	ng/L		07/20/17 09:15	07/25/17 16:14	1
Perfluorodecanoic acid (PFDA)	ND		1.9	0.42	ng/L		07/20/17 09:15	07/25/17 16:14	1
Perfluoroundecanoic acid (PFUnA)	ND		1.9	0.72	ng/L		07/20/17 09:15	07/25/17 16:14	1
Perfluorododecanoic acid (PFDoA)	ND		1.9	0.56	ng/L		07/20/17 09:15	07/25/17 16:14	1
Perfluorotridecanoic Acid (PFTriA)	ND		1.9	0.53	ng/L		07/20/17 09:15	07/25/17 16:14	1
Perfluorotetradecanoic acid (PFTeA)	**0.98**	**J B ***	1.9	0.19	ng/L		07/20/17 09:15	07/25/17 16:14	1
Perfluorobutanesulfonic acid (PFBS)	ND		1.9	0.88	ng/L		07/20/17 09:15	07/25/17 16:14	1
Perfluorohexanesulfonic acid (PFHxS)	ND		1.9	0.84	ng/L		07/20/17 09:15	07/25/17 16:14	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		1.9	0.69	ng/L		07/20/17 09:15	07/25/17 16:14	1
Perfluorooctanesulfonic acid (PFOS)	ND		1.9	1.2	ng/L		07/20/17 09:15	07/25/17 16:14	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.9	1.2	ng/L		07/20/17 09:15	07/25/17 16:14	1
Total PFOA and PFOS	ND		1.9	0.72	ng/L		07/20/17 09:15	07/25/17 16:14	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*76*		*25 - 150*	*07/20/17 09:15*	*07/25/17 16:14*	*1*
13C2 PFHxA	*96*		*25 - 150*	*07/20/17 09:15*	*07/25/17 16:14*	*1*
13C4 PFOA	*113*		*25 - 150*	*07/20/17 09:15*	*07/25/17 16:14*	*1*
13C5 PFNA	*100*		*25 - 150*	*07/20/17 09:15*	*07/25/17 16:14*	*1*
13C2 PFDA	*115*		*25 - 150*	*07/20/17 09:15*	*07/25/17 16:14*	*1*
13C2 PFUnA	*110*		*25 - 150*	*07/20/17 09:15*	*07/25/17 16:14*	*1*
13C2 PFDoA	*93*		*25 - 150*	*07/20/17 09:15*	*07/25/17 16:14*	*1*
18O2 PFHxS	*118*		*25 - 150*	*07/20/17 09:15*	*07/25/17 16:14*	*1*
13C4 PFOS	*103*		*25 - 150*	*07/20/17 09:15*	*07/25/17 16:14*	*1*
13C4-PFHpA	*113*		*25 - 150*	*07/20/17 09:15*	*07/25/17 16:14*	*1*
13C5 PFPeA	*90*		*25 - 150*	*07/20/17 09:15*	*07/25/17 16:14*	*1*

Client Sample ID: MW-4B

Date Collected: 07/06/17 09:50
Date Received: 07/07/17 09:30

Lab Sample ID: 480-120783-6

Matrix: Water

Method: 537 (modified) - Perfluorinated Hydrocarbons

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	**3.1**	**B**	2.0	0.45	ng/L		07/20/17 09:15	07/25/17 16:21	1
Perfluoropentanoic acid (PFPeA)	**0.99**	**J**	2.0	0.98	ng/L		07/20/17 09:15	07/25/17 16:21	1
Perfluorohexanoic acid (PFHxA)	**2.2**		2.0	0.78	ng/L		07/20/17 09:15	07/25/17 16:21	1
Perfluoroheptanoic acid (PFHpA)	ND		2.0	0.79	ng/L		07/20/17 09:15	07/25/17 16:21	1
Perfluorooctanoic acid (PFOA)	**1.8**	**J**	2.0	0.74	ng/L		07/20/17 09:15	07/25/17 16:21	1
Perfluorononanoic acid (PFNA)	ND		2.0	0.65	ng/L		07/20/17 09:15	07/25/17 16:21	1
Perfluorodecanoic acid (PFDA)	ND		2.0	0.43	ng/L		07/20/17 09:15	07/25/17 16:21	1
Perfluoroundecanoic acid (PFUnA)	ND		2.0	0.74	ng/L		07/20/17 09:15	07/25/17 16:21	1
Perfluorododecanoic acid (PFDoA)	ND		2.0	0.58	ng/L		07/20/17 09:15	07/25/17 16:21	1
Perfluorotridecanoic Acid (PFTriA)	ND		2.0	0.54	ng/L		07/20/17 09:15	07/25/17 16:21	1
Perfluorotetradecanoic acid (PFTeA)	**0.50**	**J B ***	2.0	0.20	ng/L		07/20/17 09:15	07/25/17 16:21	1

Client Sample ID: MW-4B

Date Collected: 07/06/17 09:50
Date Received: 07/07/17 09:30

Lab Sample ID: 480-120783-6

Matrix: Water

Method: 537 (modified) - Perfluorinated Hydrocarbons (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanesulfonic acid (PFBS)	ND		2.0	0.91	ng/L		07/20/17 09:15	07/25/17 16:21	1
Perfluorohexanesulfonic acid (PFHxS)	ND		2.0	0.86	ng/L		07/20/17 09:15	07/25/17 16:21	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		2.0	0.70	ng/L		07/20/17 09:15	07/25/17 16:21	1
Perfluorooctanesulfonic acid (PFOS)	**1.4**	**J**	2.0	1.3	ng/L		07/20/17 09:15	07/25/17 16:21	1
Perfluorodecanesulfonic acid (PFDS)	ND		2.0	1.2	ng/L		07/20/17 09:15	07/25/17 16:21	1
Total PFOA and PFOS	**3.2**		2.0	0.74	ng/L		07/20/17 09:15	07/25/17 16:21	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*105*		*25 - 150*	*07/20/17 09:15*	*07/25/17 16:21*	*1*
13C2 PFHxA	*121*		*25 - 150*	*07/20/17 09:15*	*07/25/17 16:21*	*1*
13C4 PFOA	*135*		*25 - 150*	*07/20/17 09:15*	*07/25/17 16:21*	*1*
13C5 PFNA	*143*		*25 - 150*	*07/20/17 09:15*	*07/25/17 16:21*	*1*
13C2 PFDA	*158*	*	*25 - 150*	*07/20/17 09:15*	*07/25/17 16:21*	*1*
13C2 PFUnA	*171*	*	*25 - 150*	*07/20/17 09:15*	*07/25/17 16:21*	*1*
13C2 PFDoA	*154*	*	*25 - 150*	*07/20/17 09:15*	*07/25/17 16:21*	*1*
18O2 PFHxS	*114*		*25 - 150*	*07/20/17 09:15*	*07/25/17 16:21*	*1*
13C4 PFOS	*108*		*25 - 150*	*07/20/17 09:15*	*07/25/17 16:21*	*1*
13C4-PFHpA	*143*		*25 - 150*	*07/20/17 09:15*	*07/25/17 16:21*	*1*
13C5 PFPeA	*121*		*25 - 150*	*07/20/17 09:15*	*07/25/17 16:21*	*1*

Client Sample ID: REAGENT BLANK

Date Collected: 07/06/17 10:00
Date Received: 07/07/17 09:30

Lab Sample ID: 480-120783-7

Matrix: Water

Method: 537 (modified) - Perfluorinated Hydrocarbons

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	**0.93**	**J B**	2.0	0.45	ng/L		07/20/17 09:15	07/25/17 16:28	1
Perfluoropentanoic acid (PFPeA)	ND		2.0	0.97	ng/L		07/20/17 09:15	07/25/17 16:28	1
Perfluorohexanoic acid (PFHxA)	**2.1**		2.0	0.77	ng/L		07/20/17 09:15	07/25/17 16:28	1
Perfluoroheptanoic acid (PFHpA)	ND		2.0	0.79	ng/L		07/20/17 09:15	07/25/17 16:28	1
Perfluorooctanoic acid (PFOA)	ND		2.0	0.74	ng/L		07/20/17 09:15	07/25/17 16:28	1
Perfluorononanoic acid (PFNA)	ND		2.0	0.64	ng/L		07/20/17 09:15	07/25/17 16:28	1
Perfluorodecanoic acid (PFDA)	ND		2.0	0.43	ng/L		07/20/17 09:15	07/25/17 16:28	1
Perfluoroundecanoic acid (PFUnA)	ND		2.0	0.74	ng/L		07/20/17 09:15	07/25/17 16:28	1
Perfluorododecanoic acid (PFDoA)	ND		2.0	0.57	ng/L		07/20/17 09:15	07/25/17 16:28	1
Perfluorotridecanoic Acid (PFTriA)	ND		2.0	0.54	ng/L		07/20/17 09:15	07/25/17 16:28	1
Perfluorotetradecanoic acid (PFTeA)	**1.0**	**J B ***	2.0	0.20	ng/L		07/20/17 09:15	07/25/17 16:28	1
Perfluorobutanesulfonic acid (PFBS)	ND		2.0	0.90	ng/L		07/20/17 09:15	07/25/17 16:28	1
Perfluorohexanesulfonic acid (PFHxS)	ND		2.0	0.86	ng/L		07/20/17 09:15	07/25/17 16:28	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		2.0	0.70	ng/L		07/20/17 09:15	07/25/17 16:28	1
Perfluorooctanesulfonic acid (PFOS)	ND		2.0	1.3	ng/L		07/20/17 09:15	07/25/17 16:28	1
Perfluorodecanesulfonic acid (PFDS)	ND		2.0	1.2	ng/L		07/20/17 09:15	07/25/17 16:28	1
Total PFOA and PFOS	ND		2.0	0.74	ng/L		07/20/17 09:15	07/25/17 16:28	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*105*		*25 - 150*	*07/20/17 09:15*	*07/25/17 16:28*	*1*
13C2 PFHxA	*104*		*25 - 150*	*07/20/17 09:15*	*07/25/17 16:28*	*1*
13C4 PFOA	*109*		*25 - 150*	*07/20/17 09:15*	*07/25/17 16:28*	*1*

Client Sample ID: REAGENT BLANK

Date Collected: 07/06/17 10:00
Date Received: 07/07/17 09:30

Lab Sample ID: 480-120783-7

Matrix: Water

Method: 537 (modified) - Perfluorinated Hydrocarbons (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C5 PFNA	98		25 - 150	07/20/17 09:15	07/25/17 16:28	1
13C2 PFDA	106		25 - 150	07/20/17 09:15	07/25/17 16:28	1
13C2 PFUnA	104		25 - 150	07/20/17 09:15	07/25/17 16:28	1
13C2 PFDoA	81		25 - 150	07/20/17 09:15	07/25/17 16:28	1
18O2 PFHxS	100		25 - 150	07/20/17 09:15	07/25/17 16:28	1
13C4 PFOS	86		25 - 150	07/20/17 09:15	07/25/17 16:28	1
13C4-PFHpA	116		25 - 150	07/20/17 09:15	07/25/17 16:28	1
13C5 PFPeA	101		25 - 150	07/20/17 09:15	07/25/17 16:28	1

Isotope Dilution Summary

Client: New York State D.E.C.
Project/Site: South Hill Dump #712009

TestAmerica Job ID: 480-120783-1

Method: 537 (modified) - Perfluorinated Hydrocarbons

Matrix: Water **Prep Type: Total/NA**

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	3C4 PFBA (25-150)	3C2 PFHx (25-150)	3C4 PFOA (25-150)	3C5 PFNA (25-150)	3C2 PFDA (25-150)	3C2 PFUn (25-150)	3C2 PFDo (25-150)	3O2 PFHx (25-150)
480-120783-1	MW-1S	56	81	108	101	121	127	104	133
480-120783-2	MW-1B	110	121	128	122	139	151 *	139	114
480-120783-3	MW-3SR2	65	90	102	92	87	73	59	111
480-120783-4	MW-3BR2	65	88	108	98	109	107	88	96
480-120783-5	MW-4S	76	96	113	100	115	110	93	118
480-120783-6	MW-4B	105	121	135	143	158 *	171 *	154 *	114
480-120783-7	REAGENT BLANK	105	104	109	98	106	104	81	100
LCS 320-175074/2-A	Lab Control Sample	115	117	129	112	123	124	105	115
LCSD 320-175074/3-A	Lab Control Sample Dup	111	117	125	112	129	124	106	114
MB 320-175074/1-A	Method Blank	125	130	147	133	147	147	116	129

		Percent Isotope Dilution Recovery (Acceptance Limits)		
Lab Sample ID	Client Sample ID	3C4 PFOS (25-150)	3C4-PFHpA (25-150)	3C5 PFPeA (25-150)
480-120783-1	MW-1S	122	109	70
480-120783-2	MW-1B	107	138	124
480-120783-3	MW-3SR2	103	114	82
480-120783-4	MW-3BR2	94	109	84
480-120783-5	MW-4S	103	113	90
480-120783-6	MW-4B	108	143	121
480-120783-7	REAGENT BLANK	86	116	101
LCS 320-175074/2-A	Lab Control Sample	106	136	115
LCSD 320-175074/3-A	Lab Control Sample Dup	99	134	111
MB 320-175074/1-A	Method Blank	121	154 *	130

Surrogate Legend

13C4 PFBA = 13C4 PFBA
13C2 PFHxA = 13C2 PFHxA
13C4 PFOA = 13C4 PFOA
13C5 PFNA = 13C5 PFNA
13C2 PFDA = 13C2 PFDA
13C2 PFUnA = 13C2 PFUnA
13C2 PFDoA = 13C2 PFDoA
18O2 PFHxS = 18O2 PFHxS
13C4 PFOS = 13C4 PFOS
13C4-PFHpA = 13C4-PFHpA
13C5 PFPeA = 13C5 PFPeA

Method: 537 (modified) - Perfluorinated Hydrocarbons

Lab Sample ID: MB 320-175074/1-A
Matrix: Water
Analysis Batch: 175952

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 175074

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	1.06	J	2.0	0.46	ng/L		07/20/17 09:15	07/25/17 14:17	1
Perfluoropentanoic acid (PFPeA)	ND		2.0	0.99	ng/L		07/20/17 09:15	07/25/17 14:17	1
Perfluorohexanoic acid (PFHxA)	ND		2.0	0.79	ng/L		07/20/17 09:15	07/25/17 14:17	1
Perfluoroheptanoic acid (PFHpA)	ND		2.0	0.80	ng/L		07/20/17 09:15	07/25/17 14:17	1
Perfluorooctanoic acid (PFOA)	ND		2.0	0.75	ng/L		07/20/17 09:15	07/25/17 14:17	1
Perfluorononanoic acid (PFNA)	ND		2.0	0.65	ng/L		07/20/17 09:15	07/25/17 14:17	1
Perfluorodecanoic acid (PFDA)	ND		2.0	0.44	ng/L		07/20/17 09:15	07/25/17 14:17	1
Perfluoroundecanoic acid (PFUnA)	ND		2.0	0.75	ng/L		07/20/17 09:15	07/25/17 14:17	1
Perfluorododecanoic acid (PFDoA)	ND		2.0	0.58	ng/L		07/20/17 09:15	07/25/17 14:17	1
Perfluorotridecanoic Acid (PFTriA)	ND		2.0	0.55	ng/L		07/20/17 09:15	07/25/17 14:17	1
Perfluorotetradecanoic acid (PFTeA)	0.807	J	2.0	0.20	ng/L		07/20/17 09:15	07/25/17 14:17	1
Perfluorobutanesulfonic acid (PFBS)	ND		2.0	0.92	ng/L		07/20/17 09:15	07/25/17 14:17	1
Perfluorohexanesulfonic acid (PFHxS)	ND		2.0	0.87	ng/L		07/20/17 09:15	07/25/17 14:17	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		2.0	0.71	ng/L		07/20/17 09:15	07/25/17 14:17	1
Perfluorooctanesulfonic acid (PFOS)	ND		2.0	1.3	ng/L		07/20/17 09:15	07/25/17 14:17	1
Perfluorodecanesulfonic acid (PFDS)	ND		2.0	1.2	ng/L		07/20/17 09:15	07/25/17 14:17	1
Total PFOA and PFOS	ND		2.0	0.75	ng/L		07/20/17 09:15	07/25/17 14:17	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*125*		*25 - 150*	*07/20/17 09:15*	*07/25/17 14:17*	*1*
13C2 PFHxA	*130*		*25 - 150*	*07/20/17 09:15*	*07/25/17 14:17*	*1*
13C4 PFOA	*147*		*25 - 150*	*07/20/17 09:15*	*07/25/17 14:17*	*1*
13C5 PFNA	*133*		*25 - 150*	*07/20/17 09:15*	*07/25/17 14:17*	*1*
13C2 PFDA	*147*		*25 - 150*	*07/20/17 09:15*	*07/25/17 14:17*	*1*
13C2 PFUnA	*147*		*25 - 150*	*07/20/17 09:15*	*07/25/17 14:17*	*1*
13C2 PFDoA	*116*		*25 - 150*	*07/20/17 09:15*	*07/25/17 14:17*	*1*
18O2 PFHxS	*129*		*25 - 150*	*07/20/17 09:15*	*07/25/17 14:17*	*1*
13C4 PFOS	*121*		*25 - 150*	*07/20/17 09:15*	*07/25/17 14:17*	*1*
13C4-PFHpA	*154*	*	*25 - 150*	*07/20/17 09:15*	*07/25/17 14:17*	*1*
13C5 PFPeA	*130*		*25 - 150*	*07/20/17 09:15*	*07/25/17 14:17*	*1*

Lab Sample ID: LCS 320-175074/2-A
Matrix: Water
Analysis Batch: 175952

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 175074

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Perfluorobutanoic acid (PFBA)	40.0	46.2		ng/L		115	74 - 138
Perfluoropentanoic acid (PFPeA)	40.0	42.0		ng/L		105	69 - 134
Perfluorohexanoic acid (PFHxA)	40.0	43.2		ng/L		108	70 - 136
Perfluoroheptanoic acid (PFHpA)	40.0	42.6		ng/L		107	63 - 135
Perfluorooctanoic acid (PFOA)	40.0	41.4		ng/L		104	63 - 141
Perfluorononanoic acid (PFNA)	40.0	42.0		ng/L		105	71 - 140
Perfluorodecanoic acid (PFDA)	40.0	44.6		ng/L		112	66 - 141
Perfluoroundecanoic acid (PFUnA)	40.0	43.0		ng/L		107	68 - 139
Perfluorododecanoic acid (PFDoA)	40.0	46.2		ng/L		116	71 - 139

Method: 537 (modified) - Perfluorinated Hydrocarbons (Continued)

Lab Sample ID: LCS 320-175074/2-A
Matrix: Water
Analysis Batch: 175952

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 175074

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Perfluorotridecanoic Acid (PFTriA)	40.0	47.3		ng/L		118	51 - 139
Perfluorotetradecanoic acid (PFTeA)	40.0	58.6	*	ng/L		146	47 - 130
Perfluorobutanesulfonic acid (PFBS)	35.4	41.2		ng/L		117	55 - 147
Perfluorohexanesulfonic acid (PFHxS)	36.4	36.0		ng/L		99	58 - 138
Perfluoroheptanesulfonic Acid (PFHpS)	38.1	45.6		ng/L		120	32 - 170
Perfluorooctanesulfonic acid (PFOS)	37.1	40.9		ng/L		110	47 - 162
Perfluorodecanesulfonic acid (PFDS)	38.6	41.1		ng/L		107	35 - 157

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
13C4 PFBA	*115*		*25 - 150*
13C2 PFHxA	*117*		*25 - 150*
13C4 PFOA	*129*		*25 - 150*
13C5 PFNA	*112*		*25 - 150*
13C2 PFDA	*123*		*25 - 150*
13C2 PFUnA	*124*		*25 - 150*
13C2 PFDoA	*105*		*25 - 150*
18O2 PFHxS	*115*		*25 - 150*
13C4 PFOS	*106*		*25 - 150*
13C4-PFHpA	*136*		*25 - 150*
13C5 PFPeA	*115*		*25 - 150*

Lab Sample ID: LCSD 320-175074/3-A
Matrix: Water
Analysis Batch: 175952

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 175074

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Perfluorobutanoic acid (PFBA)	40.0	48.7		ng/L		122	74 - 138	5	30
Perfluoropentanoic acid (PFPeA)	40.0	44.4		ng/L		111	69 - 134	6	30
Perfluorohexanoic acid (PFHxA)	40.0	43.2		ng/L		108	70 - 136	0	30
Perfluoroheptanoic acid (PFHpA)	40.0	43.7		ng/L		109	63 - 135	2	30
Perfluorooctanoic acid (PFOA)	40.0	42.7		ng/L		107	63 - 141	3	30
Perfluorononanoic acid (PFNA)	40.0	43.6		ng/L		109	71 - 140	4	30
Perfluorodecanoic acid (PFDA)	40.0	43.6		ng/L		109	66 - 141	2	30
Perfluoroundecanoic acid (PFUnA)	40.0	45.0		ng/L		112	68 - 139	5	30
Perfluorododecanoic acid (PFDoA)	40.0	45.7		ng/L		114	71 - 139	1	30
Perfluorotridecanoic Acid (PFTriA)	40.0	48.7		ng/L		122	51 - 139	3	30
Perfluorotetradecanoic acid (PFTeA)	40.0	64.6	*	ng/L		162	47 - 130	10	30
Perfluorobutanesulfonic acid (PFBS)	35.4	41.9		ng/L		119	55 - 147	2	30
Perfluorohexanesulfonic acid (PFHxS)	36.4	37.2		ng/L		102	58 - 138	3	30

Method: 537 (modified) - Perfluorinated Hydrocarbons (Continued)

Lab Sample ID: LCSD 320-175074/3-A
Matrix: Water
Analysis Batch: 175952

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 175074

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Perfluoroheptanesulfonic Acid (PFHpS)			38.1	50.0		ng/L		131	32 - 170	9	30
Perfluorooctanesulfonic acid (PFOS)			37.1	41.6		ng/L		112	47 - 162	2	30
Perfluorodecanesulfonic acid (PFDS)			38.6	46.3		ng/L		120	35 - 157	12	30

Isotope Dilution	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
13C4 PFBA	*111*		*25 - 150*
13C2 PFHxA	*117*		*25 - 150*
13C4 PFOA	*125*		*25 - 150*
13C5 PFNA	*112*		*25 - 150*
13C2 PFDA	*129*		*25 - 150*
13C2 PFUnA	*124*		*25 - 150*
13C2 PFDoA	*106*		*25 - 150*
18O2 PFHxS	*114*		*25 - 150*
13C4 PFOS	*99*		*25 - 150*
13C4-PFHpA	*134*		*25 - 150*
13C5 PFPeA	*111*		*25 - 150*

Qualifiers

LCMS

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
*	LCS or LCSD 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.
*	Isotope Dilution analyte is outside acceptance limits.

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)

QC Association Summary

Client: New York State D.E.C.
Project/Site: South Hill Dump #712009

TestAmerica Job ID: 480-120783-1

LCMS

Prep Batch: 175074

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-120783-1	MW-1S	Total/NA	Water	3535	
480-120783-2	MW-1B	Total/NA	Water	3535	
480-120783-3	MW-3SR2	Total/NA	Water	3535	
480-120783-4	MW-3BR2	Total/NA	Water	3535	
480-120783-5	MW-4S	Total/NA	Water	3535	
480-120783-6	MW-4B	Total/NA	Water	3535	
480-120783-7	REAGENT BLANK	Total/NA	Water	3535	
MB 320-175074/1-A	Method Blank	Total/NA	Water	3535	
LCS 320-175074/2-A	Lab Control Sample	Total/NA	Water	3535	
LCSD 320-175074/3-A	Lab Control Sample Dup	Total/NA	Water	3535	

Analysis Batch: 175952

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-120783-1	MW-1S	Total/NA	Water	537 (modified)	175074
480-120783-2	MW-1B	Total/NA	Water	537 (modified)	175074
480-120783-3	MW-3SR2	Total/NA	Water	537 (modified)	175074
480-120783-4	MW-3BR2	Total/NA	Water	537 (modified)	175074
480-120783-5	MW-4S	Total/NA	Water	537 (modified)	175074
480-120783-6	MW-4B	Total/NA	Water	537 (modified)	175074
480-120783-7	REAGENT BLANK	Total/NA	Water	537 (modified)	175074
MB 320-175074/1-A	Method Blank	Total/NA	Water	537 (modified)	175074
LCS 320-175074/2-A	Lab Control Sample	Total/NA	Water	537 (modified)	175074
LCSD 320-175074/3-A	Lab Control Sample Dup	Total/NA	Water	537 (modified)	175074

Client Sample ID: MW-1S
Date Collected: 07/06/17 08:00
Date Received: 07/07/17 09:30

Lab Sample ID: 480-120783-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			175074	07/20/17 09:15	J1S	TAL SAC
Total/NA	Analysis	537 (modified)		1	175952	07/25/17 15:47	SBC	TAL SAC

Client Sample ID: MW-1B
Date Collected: 07/06/17 08:10
Date Received: 07/07/17 09:30

Lab Sample ID: 480-120783-2
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			175074	07/20/17 09:15	J1S	TAL SAC
Total/NA	Analysis	537 (modified)		1	175952	07/25/17 15:54	SBC	TAL SAC

Client Sample ID: MW-3SR2
Date Collected: 07/06/17 09:15
Date Received: 07/07/17 09:30

Lab Sample ID: 480-120783-3
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			175074	07/20/17 09:15	J1S	TAL SAC
Total/NA	Analysis	537 (modified)		1	175952	07/25/17 16:01	SBC	TAL SAC

Client Sample ID: MW-3BR2
Date Collected: 07/06/17 09:20
Date Received: 07/07/17 09:30

Lab Sample ID: 480-120783-4
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			175074	07/20/17 09:15	J1S	TAL SAC
Total/NA	Analysis	537 (modified)		1	175952	07/25/17 16:08	SBC	TAL SAC

Client Sample ID: MW-4S
Date Collected: 07/06/17 09:45
Date Received: 07/07/17 09:30

Lab Sample ID: 480-120783-5
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			175074	07/20/17 09:15	J1S	TAL SAC
Total/NA	Analysis	537 (modified)		1	175952	07/25/17 16:14	SBC	TAL SAC

Client Sample ID: MW-4B
Date Collected: 07/06/17 09:50
Date Received: 07/07/17 09:30

Lab Sample ID: 480-120783-6
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			175074	07/20/17 09:15	J1S	TAL SAC
Total/NA	Analysis	537 (modified)		1	175952	07/25/17 16:21	SBC	TAL SAC

Lab Chronicle

Client: New York State D.E.C.
Project/Site: South Hill Dump #712009

TestAmerica Job ID: 480-120783-1

Client Sample ID: REAGENT BLANK

Date Collected: 07/06/17 10:00
Date Received: 07/07/17 09:30

Lab Sample ID: 480-120783-7

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			175074	07/20/17 09:15	J1S	TAL SAC
Total/NA	Analysis	537 (modified)		1	175952	07/25/17 16:28	SBC	TAL SAC

Laboratory References:

TAL SAC = TestAmerica Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Accreditation/Certification Summary

Client: New York State D.E.C. TestAmerica Job ID: 480-120783-1
Project/Site: South Hill Dump #712009

Laboratory: TestAmerica Buffalo

The accreditations/certifications listed below are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
New York	NELAP	2	10026	03-31-18

Laboratory: TestAmerica Sacramento

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	11666	04-01-18

The following analytes are included in this report, but accreditation/certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
537 (modified)	3535	Water	Perfluorobutanesulfonic acid (PFBS)
537 (modified)	3535	Water	Perfluorobutanoic acid (PFBA)
537 (modified)	3535	Water	Perfluorodecanesulfonic acid (PFDS)
537 (modified)	3535	Water	Perfluorodecanoic acid (PFDA)
537 (modified)	3535	Water	Perfluorododecanoic acid (PFDoA)
537 (modified)	3535	Water	Perfluoroheptanesulfonic Acid (PFHpS)
537 (modified)	3535	Water	Perfluoroheptanoic acid (PFHpA)
537 (modified)	3535	Water	Perfluorohexanesulfonic acid (PFHxS)
537 (modified)	3535	Water	Perfluorohexanoic acid (PFHxA)
537 (modified)	3535	Water	Perfluorononanoic acid (PFNA)
537 (modified)	3535	Water	Perfluorooctanesulfonic acid (PFOS)
537 (modified)	3535	Water	Perfluorooctanoic acid (PFOA)
537 (modified)	3535	Water	Perfluoropentanoic acid (PFPeA)
537 (modified)	3535	Water	Perfluorotetradecanoic acid (PFTeA)
537 (modified)	3535	Water	Perfluorotridecanoic Acid (PFTriA)
537 (modified)	3535	Water	Perfluoroundecanoic acid (PFUnA)
537 (modified)	3535	Water	Total PFOA and PFOS

Shipping and Receiving Documents

TestAmerica Buffalo
10 Hazelwood Drive
Amherst, NY 14228-2298
Phone (716) 691-2600 Fax (716) 691-7991

Chain of Custody Record

TestAmerica THE LEADER IN ENVIRONMENTAL TESTING

480-120783 COC

Client Information	Sampler: Nate Vagen / Alex Klein	Lab PM: Stone, Judy L	Carrier Tracking No(s): Service Center	COC No: 480-99373-2366
Client Contact: Ms. Julie Ricardi	Phone: 207-838-3652	E-Mail: judy.stone@testamericainc.com		Page: Page 1 of 1
Company: AMEC Foster Wheeler E & I, Inc				Job #:
Address: 511 Congress St. Suite 200	Due Date Requested:			
City: Portland	TAT Requested (days): 10 Bday			
State, Zip: ME, 04101				
Phone: 518-402-9814(Tel)	PO #: CallOut ID 120579			
Email: julie.ricardi@amecfw.com	WO #:			
Project Name: South Hill Dump #712009	Project #: 48005447			
Site: South Hill Dump	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification	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)	PFC_IDA - (MOD) PFAS, Standard List	Total Number of containers	Special Instructions/Note:
			Preservation Code:				N		
MW-1S	7/6/17	0800	G	Water	N	N	X	2	
MW-1B	7/6/17	0810	G	Water	N	N	X	2	
MW-35R2	7/6/17	0915	G	Water	N	N	X	2	
MW-3BR2	7/6/17	0920	G	Water	N	N	X	2	
MW-4S	7/6/17	0945	G	Water	N	N	X	2	
MW-4B	7/6/17	0950	G	Water	N	N	X	2	
Reagent Blank	7/6/17	1000	G	Water	N	N	X	2	Field Blank

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

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) Sea Work other

Special Instructions/QC Requirements:

Empty Kit Relinquished by: | Date: | Time: | Method of Shipment:

	Date/Time	Company		Date/Time	Company
Relinquished by:	7/6/17 1410	AMEC	Received by:	7/6/17 1410	SYR
Relinquished by: RELINQUISHED	7-6-17 19:10	SYR	Received by:	7/7/17 0930	TAB
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 3.3

TestAmerica Buffalo
10 Hazelwood Drive
Amherst, NY 14228-2298
Phone (716) 691-2600 Fax (716) 691-7991

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Stone, Judy L	Carrier Tracking No(s):	COC No: 480-35980.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: judy.stone@testamericainc.com	State of Origin: New York	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): NELAP - New York		Job #: 480-120783-1
Address: 880 Riverside Parkway, ,	Due Date Requested: 8/11/2017			
City: West Sacramento	TAT Requested (days):			
State, Zip: CA, 95605				
Phone: 916-373-5600(Tel) 916-372-1059(Fax)	PO #:			
Email:	WO #:			
Project Name: South Hill Dump #712009	Project #: 48005447			
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)	PFC_IDA/3535_PFC (MOD) PFAS, Standard List	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
MW-1S (480-120783-1)	7/6/17	08:00 Eastern		Water			X	2	
MW-1B (480-120783-2)	7/6/17	08:10 Eastern		Water			X	2	
MW-35SR2 (480-120783-3)	7/6/17	09:15 Eastern		Water			X	2	
MW-35BR2 (480-120783-4)	7/6/17	09:20 Eastern		Water			X	2	
MW-4S (480-120783-5)	7/6/17	09:45 Eastern		Water			X	2	
MW-4B (480-120783-6)	7/6/17	09:50 Eastern		Water			X	2	
REAGENT (480-120783-7)	7/6/17	10:00 Eastern		Water			X	2	

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 compliance 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	Company	Received by	Date/Time	Company
[signature]	7/10/17 1500	TAB			
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:

Login Sample Receipt Checklist

Client: New York State D.E.C. Job Number: 480-120783-1

Login Number: 120783 **List Source: TestAmerica Buffalo**
List Number: 1
Creator: Wallace, Cameron

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.	N/A	
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	AMEC
Samples received within 48 hours of sampling.	True	
Samples requiring field filtration have been filtered in the field.	True	
Chlorine Residual checked.	N/A	

Login Sample Receipt Checklist

Client: New York State D.E.C.

Job Number: 480-120783-1

Login Number: 120783
List Number: 2
Creator: Aguayo, Alonso

List Source: TestAmerica Sacramento
List Creation: 07/11/17 04:09 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	033764
Sample custody seals, if present, are intact.	N/A	
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?	N/A	
There are no discrepancies between the containers received 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.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

APPENDIX D

AZTECH ENVIRONMENTAL SITE SERVICES REPORT

Woman Owned Business
Aztech Environmental
TECHNOLOGIES
5 McCrea Hill Road • Ballston Spa, New York 12020

August 22, 2017

VIA EMAIL: mark.stelmack@amecfw.com

Mr. Mark Stelmack - AMEC
AMEC Environment & Infrastructure
511 Congress Street, Suite 200,
Portland, Maine 04101, USA

RE: Site Services Status Report
South Hill Dump Site
South Hill Road
Cortlandville, Cortland County, NY
NYSDEC Site No. 712009

Dear Mr. Stelmack:

Aztech Technologies, Inc. (Aztech) has prepared the following correspondence to summarize the site work activities conducted at the South Hill Dump Site, New York State Department of Environmental Conservation (NYSDEC) site number 712009 located on South Hill Road in Cortlandville (McGraw), New York

Aztech conducted the following site work on August 17 & 18, 2017:

- Mow the landfill and surrounding vegetated areas
- Inspection of drainage and erosion control structures

Mowing Activities

Aztech performed mowing and trimming activities at the site using a Bobcat T-650 track loader with brush hog/mower attachment, and weed whacker. The extents of the mowing included the landfill, the detention pond perimeter area and the immediate areas outside the drainage swales. These areas were mowed down to between 6 to 10 inches above the existing ground surface. All grass clippings were left in place.

Photo 1 – Mowing in Progress: Before/After (looking southeast)

Photo 2 Mowed Vegetation & Drainage Structure (looking northwest)

Photo 3 – Mowed Vegetation & Drainage Structure (looking northeast)

Photo 4 – Mowed Vegetation & Drainage Structure (looking south)

Photo 5 Mowed Vegetation & Drainage Structure (looking northwest)

Visual Site Inspection
All riprap and drainage swales were in good condition during the August 17 & 18, 2017 site visit. Inspection of the detention pond outlet control structure and proximate area show the structure and the area to have minimal forest litter and debris. Vegetation is becoming thick within the detention pond.

Future Tasks
Aztech recommends a summer 2018 Site visit to continue with vegetation control and erosion monitoring. Please inform Aztech if this task is approved.

If you have any questions or comments regarding the information contained herein, please contact this office at 518-885-5383.

Sincerely,
AZTECH ENVIRONMENTAL TECHNOLOGIES

William A. Toran
Sr. Hydrogeologist

Cc: D. Chiusano – NYSDEC

APPENDIX B

Institutional and Engineering Controls Certification Forms

Enclosure 2
NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
Site Management Periodic Review Report Notice
Institutional and Engineering Controls Certification Form

Site Details **Box 1**

Site No. 712009

Site Name: South Hill Dump

Site Address: South Hill Road Zip Code: 13073
City/Town: Syracuse, NY
County: Onondaga
Site Acreage: 53.10 acres

Reporting Period: April 25, 2015 to December 31, 2016

	YES	NO
1. Is the information above correct?	☑	☐
If NO, include handwritten above or on a separate sheet.		
2. Has some or all of the site property been sold, subdivided, merged, or undergone a tax map amendment during this Reporting Period?	☐	☑
3. Has there been any change of use at the site during this Reporting Period (see 6NYCRR 375-1.11(d))?	☐	☑
4. Have any federal, state, and/or local permits (e.g., building, discharge) been issued for or at the property during this Reporting Period?	☐	☑
If you answered YES to questions 2 thru 4, include documentation or evidence that documentation has been previously submitted with this certification form.		
5. Is the site currently undergoing development?	☐	☑

Box 2

	YES	NO
6. Is the current site use consistent with the use(s) listed below?	☑	☐
7. Are all ICs/ECs in place and functioning as designed?	☑	☐

IF THE ANSWER TO EITHER QUESTION 6 OR 7 IS NO, sign and date below and DO NOT COMPLETE THE REST OF THIS FORM. Otherwise continue.

A Corrective Measures Work Plan must be submitted along with this form to address these issues.

_____ _____
Signature of Owner, Remedial Party or Designated Representative Date

SITE NO. **Box 3**

Description of Institutional Controls

A series of ICs are required to implement, maintain and monitor the ECs. The Environmental Easement (EE) requires compliance with the ICs. The EE for this site was recorded on 10/11/13 in Cortland County as instrument #2013-05304.

The EE ensures that:
* All ECs must be operated and maintained as specified in the SMP
* All ECs on the Site must be inspected and certified at a frequency and in a manner defined in the SMP
* Environmental monitoring must be performed as defined in the SMP
* Data and information pertinent to SM for the Controlled Property must be reported at the frequency and in a manner defined in the SMP
* On-site environmental monitoring devices, including but not limited to groundwater monitoring wells, must be protected and replaced as necessary to ensure continued functioning in the manner specified in the SMP.

In addition, the Environmental Easement places the following restrictions on the property:
* Required compliance with the approved SMP. Restrict the use of groundwater as a source of potable water, without necessary water quality treatment as determined by the New York State Department of Health (NYSDOH) and/or the NYSDEC
* the owner of the Property shall provide information to the NYSDEC to assist in carrying out its obligation to provide a periodic certification, prepared and submitted by a professional engineer or environmental professional acceptable to the NYSDEC or Relevant Agency, which will certify that the IC/ECs put in place are unchanged from the previous certification, comply with the SMP, and have not been impaired
* The owner of the Property shall continue in full force and effect any IC/ECs required for the Remedy and shall not, through any act or omission, interfere with the NYSDEC's maintenance and monitoring of such controls, unless the owner first obtains permission to discontinue such controls from the NYSDEC or Relevant Agency, in compliance with the approved SMP subject to modifications as approved by the NYSDEC or Relevant Agency
* Limit the use and development of the property to the current use as a closed and capped/covered landfill only

Description of Engineering Controls **Box 4**

Because remaining contamination is present at the Site, ECs and ICs have been implemented to protect public health and the environment for the applicable future use. The controlled Property has the following ECs:
* A cover system placed over the landfilled waste
* Site access controls
* Surface water drainage conveyance
* Landfill gas vents

Box 5

Periodic Review Report (PRR) Certification Statements

1. I certify by checking "YES" below that:

   a) the Periodic Review report and all attachments were prepared under the direction of, and reviewed by, the party making the certification;

   b) to the best of my knowledge and belief, the work and conclusions described in this certification are in accordance with the requirements of the site remedial program, and generally accepted

YES	NO
☑	☐

2. If this site has an IC/EC Plan (or equivalent as required in the Decision Document), for each Institutional or Engineering control listed in Boxes 3 and/or 4, I certify by checking "YES" below that all of the following statements are true:

(a) the Institutional Control and/or Engineering Control(s) employed at this site is unchanged since the date that the Control was put in-place, or was last approved by the Department;

(b) nothing has occurred that would impair the ability of such Control, to protect public health and the environment;

(c) access to the site will continue to be provided to the Department, to evaluate the remedy, including access to evaluate the continued maintenance of this Control;

(d) nothing has occurred that would constitute a violation or failure to comply with the Site Management Plan for this Control; and

(e) if a financial assurance mechanism is required by the oversight document for the site, the mechanism remains valid and sufficient for its intended purpose established in the document.

YES	NO
☑	☐

IF THE ANSWER TO QUESTION 2 IS NO, sign and date below and DO NOT COMPLETE THE REST OF THIS FORM. Otherwise continue.

A Corrective Measures Work Plan must be submitted along with this form to address these issues.

_____ _____

Signature of Owner, Remedial Party or Designated Representative — Date

IC CERTIFICATIONS
SITE NO.

Box 6

SITE OWNER OR DESIGNATED REPRESENTATIVE SIGNATURE

I certify that all information and statements in Boxes 1,2, and 3 are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law.

I Richard Tupper, Town Supervisor at 3577 Terrace Road, Cortlandville, NY 13045,
print name print business address

am certifying as Owner (Owner or Remedial Party)

for the Site named in the Site Details Section of this form.

Richard C. Tupper 5/15/18
Signature of Owner, Remedial Party, or Designated Representative Rendering Certification Date

IC/EC CERTIFICATIONS

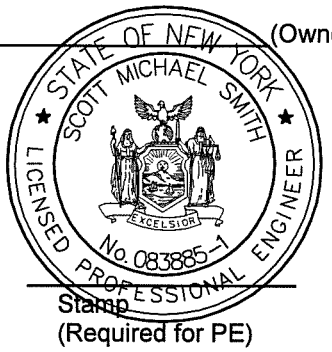
Box 7

Signature

I certify that all information in Boxes 4 and 5 are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law.

I Scott. M. Smith (print name) 300 South State Street, Ste 600, Syracuse, NY 13202, (print business address)

am certifying as a Professional Engineer for the Owner (Owner or Remedial Party)



Signature of Professional Engineer for the Owner or Remedial Party, Rendering Certification

Stamp (Required for PE)

05/16/18
Date