F&T Darrigo Site

84 LAKESIDE ROAD, NEWBURGH
ORANGE COUNTY, NEW YORK

Periodic Review Report

NYSDEC Site Number: 3-36-002

Prepared for:

The Frank Darrigo Revocable Trust
67 South Plank Road
New Windsor, New York

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JULY 2018

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1.0 EXECUTIVE SUMMARY

This Periodic Review Report (PRR) is required as an element of the remedial program at the F&T Darrigo property (hereinafter referred to as the "Site") shown on Figures 1 and 2 under the New York State (NYS) Inactive Hazardous Waste Disposal Site Remedial Program administered by New York State Department of Environmental Conservation (NYSDEC). The site was remediated in accordance with Order on Consent Index #W3-0841-03-05, Site #3-36-002, which was executed on March 29, 1999.

The purpose of the PRR is to summarize the compliance with the Site Management Plan (SMP) for that certification period. The compliance components to be reviewed are Engineering Controls, Institutional Controls, Site-Wide Inspections, and Site Monitoring.

From 1948 until 1985, the Site was operated by F&T Darrigo for septage disposal. In 1984, NYSDEC collected samples of onsite soils that revealed concentrations of several metals at levels of concern. A State-funded Phase II investigation report dated 1991 confirmed the presence of metals in soil piles and two lagoons. In March 1999, NYSDEC issued an Order on Consent, which set forth requirements for a Focused Remedial Investigation (FRI) and Focused Feasibility Study (FFS).

From 1999 through 2001, remedial investigations were performed. A total of 108 soil samples were collected: 56 from the two lagoons, 18 samples from former soil pile locations, 30 samples collected from 12 locations within the land spreading area, and four (4) samples were also collected to establish background concentrations of metals.

Concentrations of heavy metals in soil in the lagoons and land spreading area were compared to Soil Cleanup Objectives (SCOs) and Eastern U.S. Background Levels listed in NYSDEC TAGM #4046 standards. Soil in the lagoons and land spreading area contained concentrations of copper, chromium, lead, nickel and zinc warranting additional investigations. Concentrations of cadmium, mercury, arsenic and barium were also detected in these areas.

NYSDEC Approved Remedial Work Plan

In 2009, NYSDEC approved the Remedial Work Plan which consists of the following:

- Offsite disposal of stockpiled soil and soil containing chromium in excess of 1,000 mg/kg (Figure 2).

- Contaminated soil in the lagoons area (East Lagoon (EL) and West Lagoon (WL)) will be left in place. Contaminated soil in the Land Spreading Area (LSA) will be excavated and placed in a consolidation area, which will be centered over the two lagoons. The consolidation area will then be covered with two feet of clean fill

(Figure 2).

- The six monitoring wells will be monitored semi-annually.

- A SMP will be developed and implemented. The SMP will include institutional controls and engineering controls to: Address soils that may be excavated from the consolidation area in the future; Provide for the operation and maintenance of the components of the remedy; Outline and monitor the groundwater monitoring program; and identify any restrictions on site development or groundwater use.

- A Declaration of Covenants and Restrictions will be recorded, which identifies all use restrictions. Uses in the consolidation area will be limited to green space or parking.

- The SMP will require that the property owner complete and submit to the NYSDEC an Institutional Control/Engineering Control (IC/EC) certification periodically.

Summary of Remedy

During July and August 2010, the following were completed:

- Excavation and stockpiling of approximately 150 cubic yards of contaminated soil from the LSA and WL with chromium concentrations in excess of 1,000 mg/kg.

- 2,100 cubic yards of soil excavated from LSA and placed into Consolidation Area.

- 8,625 cubic yards of soil placed over contaminated soil to create the Consolidation Area Cap.

- Replaced monitoring well damaged prior to construction of Consolidation Area.

- Completed pre- and post-cap construction groundwater monitoring at the 6 stipulated groundwater monitoring wells.

- Supervised offsite disposal of approximately 640 tons of stockpiled soil with chromium concentrations in excess of 1,000 mg/kg.

Following the completion of the remedy, eleven (11) rounds of groundwater sampling have been conducted at the site monitoring wells to monitor the performance of the remedial action (Table 1). After evaluation of the results and the recommendations from the 2013 groundwater sampling event, the SMP was modified. Communication with project manager R. Witcher (NYSDEC Division of Environmental Remediation) on July 29, 2013 confirmed a reduction in the number of monitoring wells sampled annually from six (6) to three (3). The data obtained up to and including the 2018 sampling event demonstrated that contaminants in surface soil have not adversely impacted groundwater present in unconsolidated materials beneath the Soil Cover Area at the Darrigo site. Of the primary contaminants of concern (As,

Ba, Cd, Cr, Cu, Ni, Zn an Hg), only Nickel was detected in one incidence at concentrations exceeding 6NYCRR Part 705 Class GA groundwater standards.

In the annual 2014 Groundwater Monitoring Report, permission was requested to terminate periodic sampling of the on-site wells and modify the Site Management Plan to reflect this change but was not granted.

A request to reduce sampling frequency was submitted via letter by PVE Sheffler to the NYSDEC on May 24, 2016. The NYSDEC responded in a letter dated July 1, 2016 (Appendix D) outlining the approved modification to reduce the frequency of groundwater monitoring and submission of Periodic Review Reports for the Site. This modification involved reducing the frequency of groundwater monitoring events, site inspections, and Periodic Review Report submissions from once annually to once every three years.

2.0 SITE OVERVIEW

The site is located between Lakeside Road and Interstate 84, in the Town of Newburgh, Orange County, New York. From 1948 until 1985, the Site was operated by F&T Darrigo for septic disposal. The operation utilized two lagoons and a land spreading area. Previous reports and studies indicate that the Site received an estimated 800,000 gallons per year of liquid waste. It is suspected that the hazardous materials including spent cleaning solution from metal finishing, furniture stripping waste, and batteries containing lead were disposed of in the onsite lagoons and spread with the septic waste.

In March 1984, the NYSDEC collected samples of on-site soils that revealed elevated concentrations of metals. In 1986, a state-funded Phase II Investigation was conducted that confirmed the presence of elevated concentrations of a variety of metals in on site soils.

In 1989 and 1990, an additional state-funded Phase II Investigation was conducted. A Phase II Investigation Report was submitted to the NYSDEC in January 1991 that confirmed the presence of metals at hazardous levels. The Phase II results indicated a small area of soil piles highly contaminated with metals and two lagoons, also containing elevated concentrations of metals, although to a lesser degree. Groundwater samples collected during the Phase II indicated that the groundwater had not been affected. The Phase II Investigation concluded that further investigation was necessary to determine the extent of the contamination at the site and an appropriate remedial measure. A Focused Remedial Investigation/Focused Feasibility Study (FRI/FFS) was deemed necessary.

In 1991, as a result of the Phase II Investigation, the NYSDEC reclassified the F&T Darrigo site from a Class 2a to a Class 2 on the Registry. Sites with this classification pose a significant threat to the public health or environment and action is required.

In March 1999, an Order on Consent requiring a FRI/FFS for the site was executed by F&T Darrigo and the NYSDEC.

Within the Site, an area of approximately 2.5 acres is known to be contaminated with heavy metals (Chromium (Cr), Copper (Cu), Nickel (Ni), Lead (Pb), and Zinc (Zn)). Concentrations of cadmium, mercury, arsenic and barium were also detected in these areas.

NYSDEC Approved Remedial Work Plan

In 2009, NYSDEC approved the Remedial Work Plan which consists of the following:

- Offsite disposal of stockpiled soil and soil containing chromium in excess of 1,000 mg/kg.

- Contaminated soil in the lagoons area (East Lagoon (EL) and West Lagoon (WL)) will be left in place. Contaminated soil in the Land Spreading Area (LSA) will be excavated and placed in a consolidation area, which will be centered over the two lagoons. The consolidation area will then be covered with two feet of clean fill.

- The six monitoring wells will be monitored semi-annually.

- A SMP will be developed and implemented. The SMP will include institutional controls and engineering controls to: Address soils that may be excavated from the consolidation area in the future; Provide for the operation and maintenance of the components of the remedy; Outline and monitor the groundwater monitoring program; and identify any restrictions on site development or groundwater use.

- A Declaration of Covenants and Restrictions will be recorded, which identifies all use restrictions. Uses in the consolidation area will be limited to green space or parking.

- The SMP will require that the property owner complete and submit to the NYSDEC an Institutional Control/Engineering Control (IC/EC) certification periodically.

Summary of Remedy

During July and August 2010, the following were completed:

- Excavation and stockpiling of approximately 150 cubic yards of contaminated soil from the LSA and WL with chromium concentrations in excess of 1,000 mg/kg.

- 2,100 cubic yards of soil excavated from LSA and placed into Consolidation Area.

- 8,625 cubic yards of soil placed over contaminated soil to create the Consolidation Area Cap.

- Replaced monitoring well damaged prior to construction of Consolidation Area.

- Completed pre and post-cap construction groundwater monitoring at the six (6) stipulated groundwater monitoring wells.

- Supervised offsite disposal of approximately 640 tons of stockpiled soil with chromium concentrations in excess of 1,000 mg/kg.

The success of the remedies was evaluated by sampling the on-site monitoring wells. A more detailed discussion of the groundwater monitoring program is provided in Section 7.2.

3.0 PERFORMANCE EVALUATION

Periodic monitoring, including inspection of the soil cover system and collection/analysis of groundwater samples has been conducted at the site since closure in 2010. The Site Management Plan was modified in 2015 based on the review of groundwater monitoring results received in 2015. Frequency of groundwater monitoring was reduced from annually to once every three years. Groundwater data collected between December 2010 and May 2018 have demonstrated that contaminants in surface soil have not adversely impacted groundwater present in unconsolidated materials beneath the Soil Cover Area at the Darrigo site. None of the primary contaminants of concern (As, Ba, Cd, Cr, Cu, Ni, Zn an Hg), were detected at concentrations exceeding 6NYCRR Part 705 Class GA groundwater standards; only Nickel was detected in one incidence (September 2010) at concentrations exceeding 6NYCRR Part 705 Class GA groundwater standards.

Permission to terminate periodic groundwater sample collection and analysis was requested in the annual 2018 Groundwater Monitoring Report. If granted, the Site Management Plan would be modified to reflect this change.

4.0 ENGINEERING CONTROLS

4.1 SOIL COVER AREA

Exposure to remaining contamination in soil/fill at the site is prevented by a soil cover system (Figure 3). This cover system is comprised of a permeable geotextile fabric overlain by a minimum of 24 inches of clean soil. During the site inspection (Appendix A) no areas were noted where the soil cover was absent. No trees or shrubs were growing on the soil cover, and the area had been mowed. No animal borrows were noted in the soil cover area.

4.2 SITE FENCE

A fence has been erected around the site to limit access. The site fence surrounds both the Soil Consolidation Area and the former Land Spreading Area of the site. During the site inspection, the fence was found to have small breaches on the south perimeter along Route 84 and on the north perimeter east of monitoring well GWFT-1. The gate along the north perimeter also needs to be repaired. Access to the Site is controlled by a gate located in the driveway near the Darrigo Bros supply yard.

5.0 INSTITUTIONAL CONTROLS

A series of Institutional Controls are required by the Record of Decision to: (1) implement, maintain and monitor Engineering Control systems; (2) prevent future exposure to remaining contamination by controlling disturbances of the subsurface contamination; and, (3) limit the use and development of the Soil Cover Area to commercial and industrial uses only. Adherence to these Institutional Controls on the site is required by the Deed Restriction and are implemented under the Site Management Plan. The Institutional Controls are:

- Compliance with the Deed Restriction and the SMP by the Grantor and the Grantor's successors and assigns;
- All Engineering Controls must be maintained as specified in the SMP;
- All Engineering Controls on the Controlled Property must be inspected at a frequency and in a manner defined in the SMP;
- Groundwater monitoring must be performed as defined in the SMP; and
- Data and information pertinent to Site Management of the Controlled Property must be reported at the frequency and in a manner defined in the SMP. Institutional Controls identified in the Deed Restriction may not be discontinued without an amendment to or extinguishment of the Deed Restriction.

The site is in compliance with the Deed Restriction and SMP. As discussed in Section 2.0 of this report, all Engineering Controls are maintained as specified in the SMP and are inspected at the frequency and manner defined in the SMP. Data and information pertinent to the Site Management of the Controlled Property are reported at the frequency and in the manner defined in the SMP by this report and annual groundwater monitoring reports sent to the NYSDEC.

6.0 SITE-WIDE INSPECTION

Site-wide inspections are performed on a regular schedule at a minimum of once every three years. Site-wide inspections will also be performed after all severe weather conditions that may affect Engineering Controls or monitoring devices. During these inspections, an inspection form is completed (Appendix A). The form compiles sufficient information to assess the following:

- Compliance with all ICs, including site usage;
- An evaluation of the condition and continued effectiveness of ECs;
- General site conditions at the time of the inspection;
- The site management activities being conducted including, where appropriate, confirmation sampling and a health and safety inspection;
- Compliance with permits and schedules included in the Operation and Maintenance Plan; and
- Confirm that site records are up to date.

The site-wide inspection was conducted in May 2018. The inspection form is included as Appendix A.

7.0 SITE MONITORING PLAN

7.1 SOIL COVER SYSTEM MONITORING

The soil cover system is inspected periodically during the Site-wide Inspection, summarized in Sections 4.1 and 6.0.

7.2 GROUNDWATER MONITORING

Groundwater monitoring is performed on a periodic basis to assess the performance of the remedy. The network of monitoring wells has been installed to monitor both up-gradient and down-gradient groundwater conditions at the site (Figure 4).

Periodic groundwater monitoring for the Target Analyte List (TAL) of Metals is currently conducted at three (3) monitoring well locations at the site as summarized below. Groundwater sampling has been conducted during the following:

- Baseline: November 2009.
- Quarterly: September 2010, December 2010, March 2011 and June 2011.
- Semi-annually: December 2011 and June 2012.
- Annually thereafter. Monitoring wells MW-3, MW-4, MW-5, MW-6, GWFT-1 and GWFT-2R were sampled following USEPA Low Flow (minimal drawdown) procedures.
- Starting in 2014, only monitoring wells MW-4, MW-5, and MW-6 are sampled annually, following USEPA Low Flow (minimal drawdown) procedures.
- Starting in 2018, only monitoring wells MW-4, MW-5, and MW-6 are sampled, following USEPA Low Flow (minimal drawdown) procedures, once every three years.

Prior to sample collection, static water levels are measured in each of the wells using a depth-to-water probe. Samples are collected using low-flow purge techniques. Water temperature, pH, conductivity, turbidity, oxidation-reduction potential, and dissolved oxygen are monitored during purging until all parameters have stabilized, and turbidity is less than 50 nephelometric turbidity units (NTUs). Samples are collected via a peristaltic pump and dedicated tubing, recorded on chain-of-custody forms, and transported on ice to a NYSDOH Environmental Laboratory Approval Program (ELAP) certified laboratory for analysis.

All monitoring results have been reported to NYSDEC on aperiodic basis in groundwater monitoring reports, and in the Periodic Review Reports as applicable. The results for all eleven (11) groundwater sampling events are provided in Table 1. The 2018 Groundwater Monitoring Report is included in Appendix B.

These data demonstrate that contaminants in surface soil have not adversely impacted groundwater present in unconsolidated materials beneath the Soil Cover Area at the Darrigo site. None of the primary contaminants of concern were detected at concentrations exceeding 6NYCRR Part 705 Class GA groundwater standards; only Nickel was detected in one incidence (September 2010) at concentrations exceeding 6NYCRR Part 705 Class GA groundwater standards. Permission to terminate periodic sampling of the on-site wells was requested in the 2018 groundwater monitoring report.

8.0 CONCLUSIONS AND RECOMMENDATIONS

- Institutional controls that have been established for this site continue to be effective in supporting the remedial goals.

- Site inspections indicate the engineering controls remain in place and continue to provide the protection for the remedial solutions that have been established. The IC/EC Certification Form is provided as Appendix C.

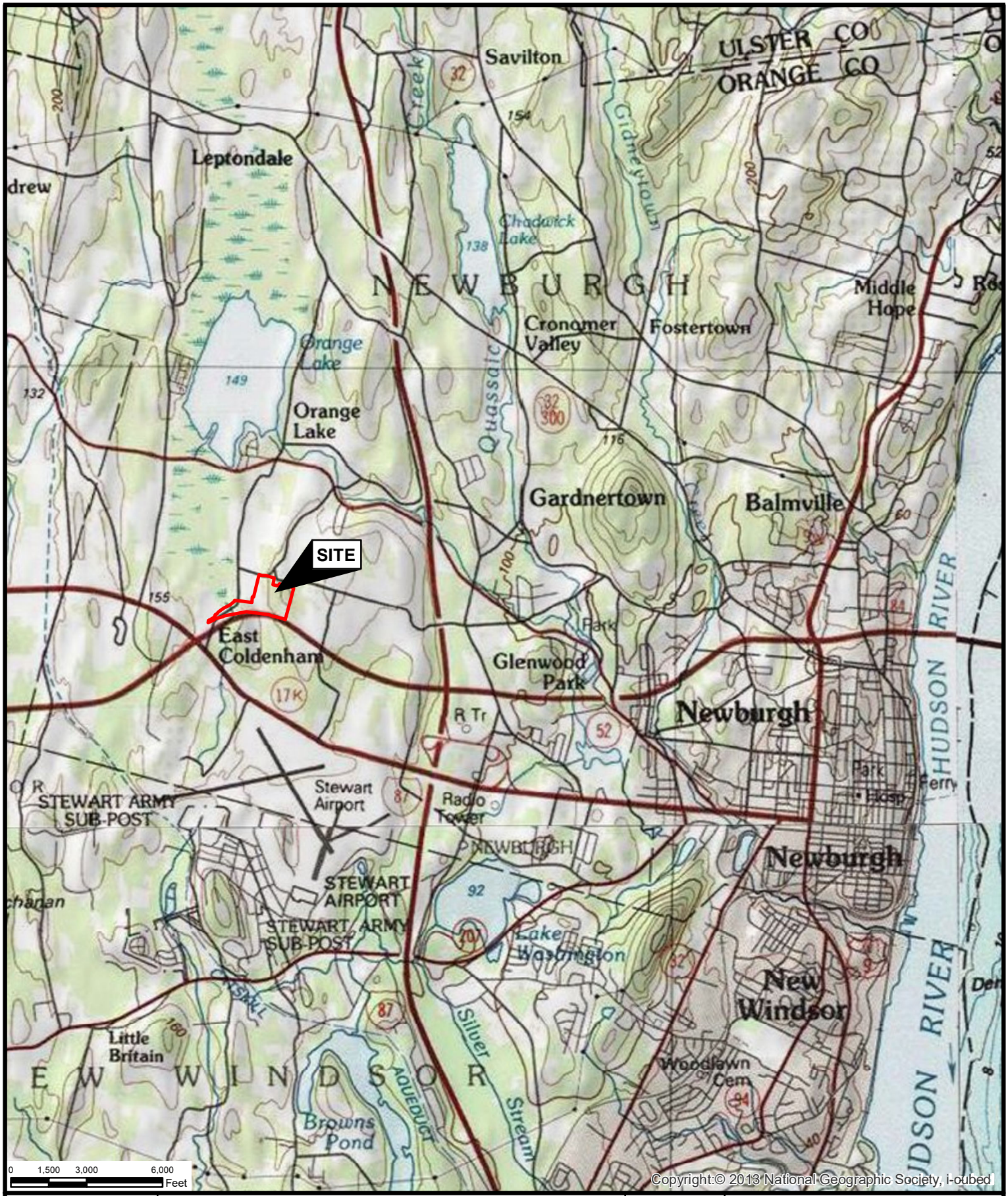
- Eleven (11) rounds of groundwater monitoring have been conducted since November of 2009 and data demonstrates that contaminants in surface soil have not adversely impacted groundwater present in unconsolidated materials beneath the Soil Cover Area at the Darrigo site.

- Permission to terminate periodic groundwater monitoring was denied by NYSDEC in 2015.

- NYSDEC granted the request from PVE dated May 24, 2016 to reduce the groundwater sampling frequency to every 3 years, in a letter dated July 1, 2016 (Appendix D). The frequency Periodic Review Reports for the Site was also modified to a 3-year cycle.

- Permission to terminate periodic groundwater monitoring was requested in the 2018 Groundwater Monitoring Report.

FIGURES



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SITE LOCATION MAP

F & T DARRIGO SUITE
84 LAKESIDE ROAD
TOWN OF NEWBURGH,
ORANGE COUNTY, NEW YORK

PROJECT NO. 560556	FIGURE 1
	DATE: 5/21/2018
	SCALE: AS INDICATED
	PROJECTION: NAD83 STATE PLANE NY EAST
	ALL LOCATIONS APPROXIMATE

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SELECTED SITE FEATURES

F & T DARRIGO SITE
84 LAKESIDE ROAD
TOWN OF NEWBURGH,
ORANGE COUNTY, NEW YORK

LEGEND

- Clean Fill Screening Area
- Former Soil Pile Area
- Soil Stockpile
- Parcel Outline
- Lagoons and LSA

PROJECT NO. 560556

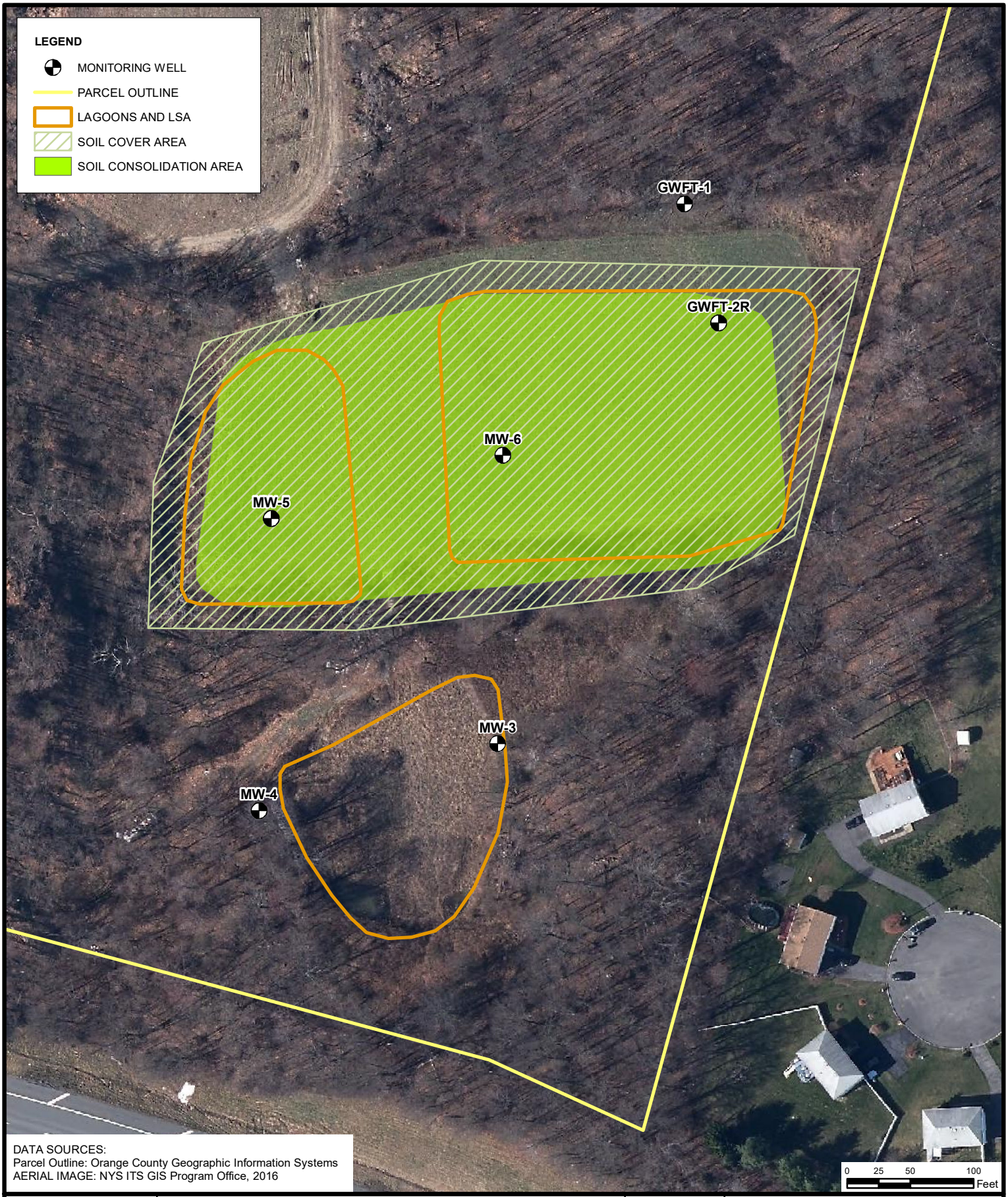
FIGURE 2

DATE: 5/21/2018

SCALE: AS INDICATED

PROJECTION: NAD83 STATE PLANE NY EAST

ALL LOCATIONS APPROXIMATE



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SOIL COVER AREA

F & T DARRIGO SUITE
84 LAKESIDE ROAD
TOWN OF NEWBURGH,
ORANGE COUNTY, NEW YORK

PROJECT NO. 560556

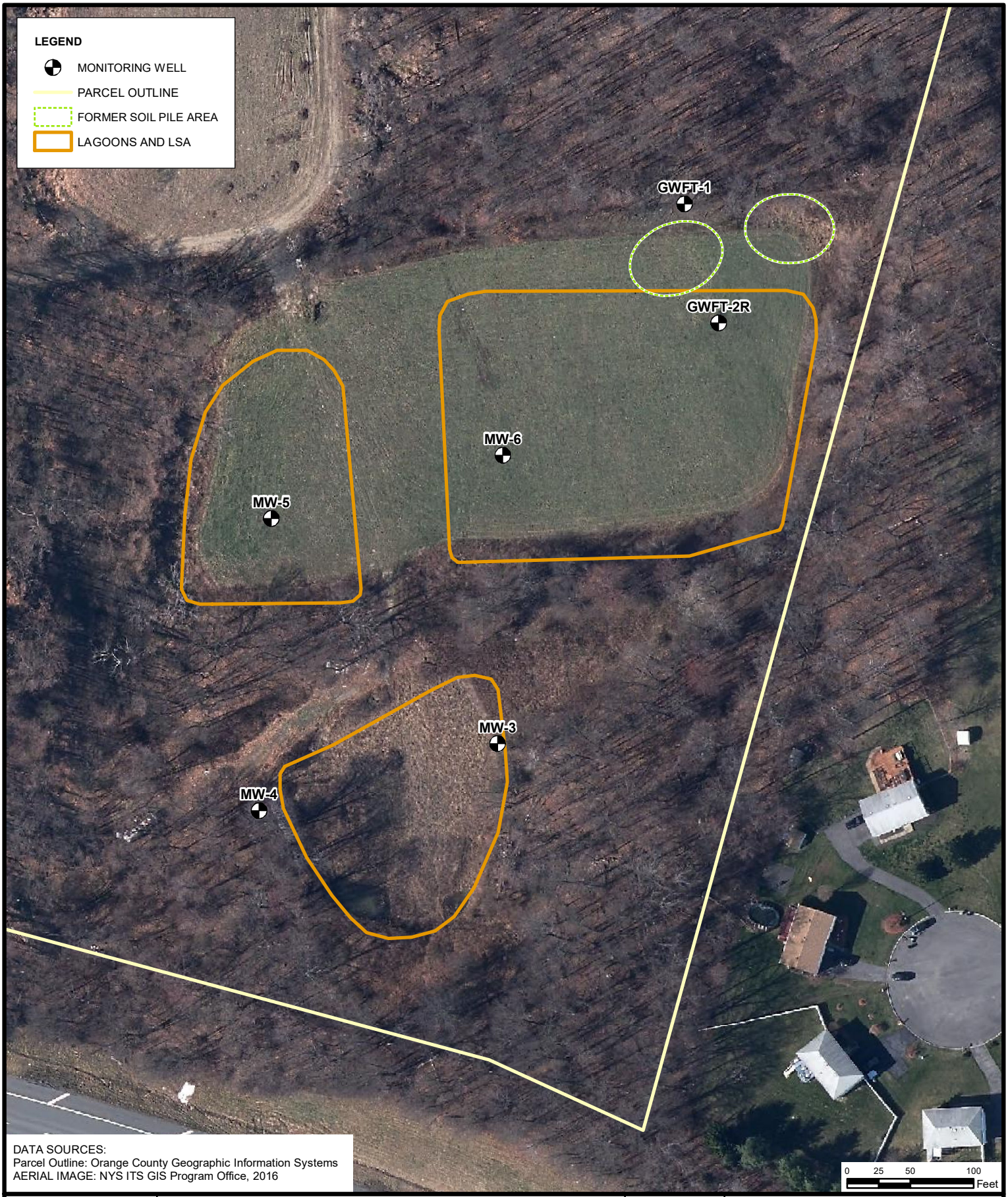
FIGURE 3

DATE: 5/21/2018

SCALE: AS INDICATED

PROJECTION: NAD83 STATE PLANE NY EAST

ALL LOCATIONS APPROXIMATE



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GROUNDWATER MONITORING WELL LOCATIONS

F & T DARRIGO SUITE
84 LAKESIDE ROAD
TOWN OF NEWBURGH,
ORANGE COUNTY, NEW YORK

PROJECT NO. 560556

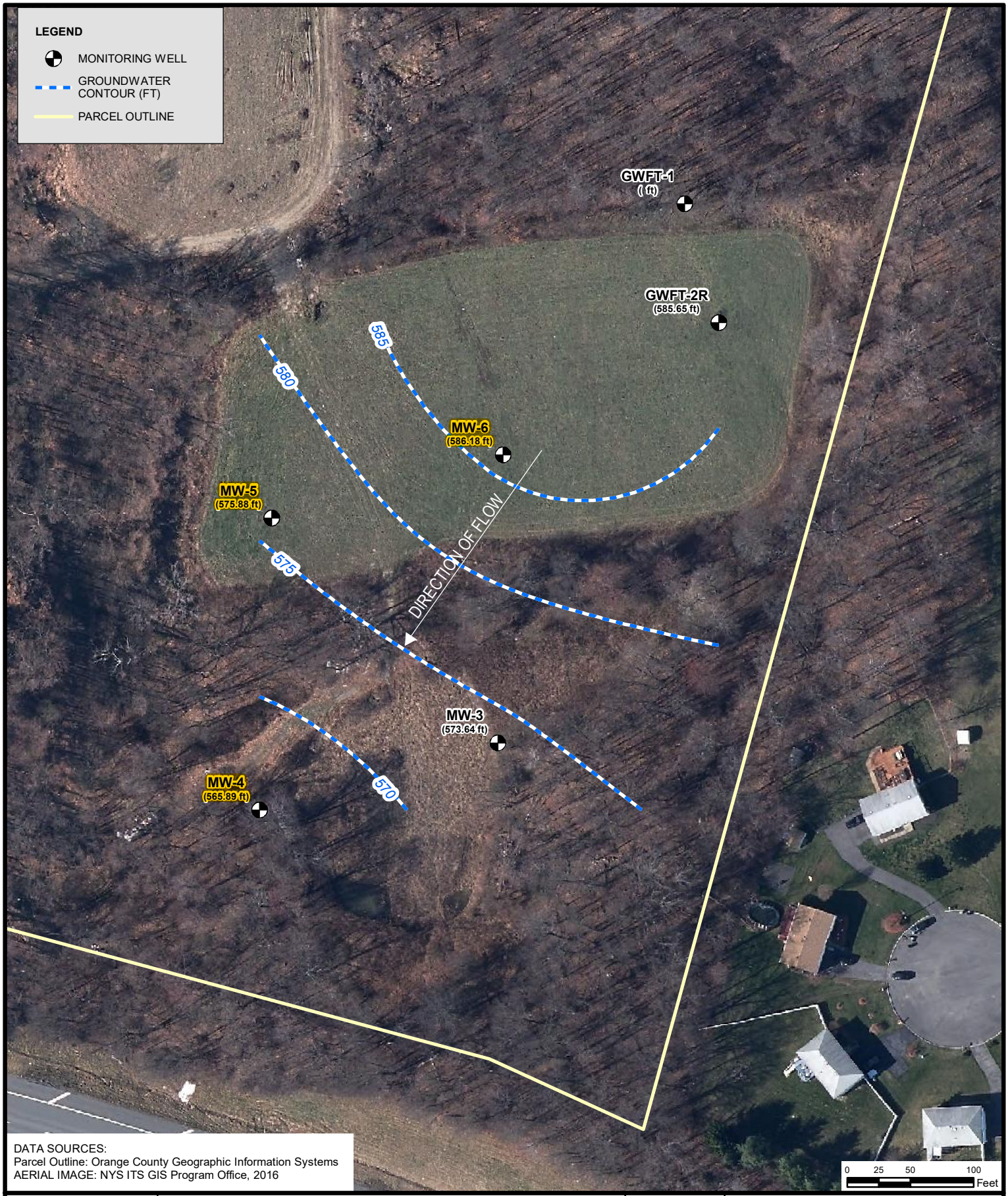
FIGURE 4

DATE: 5/21/2018

SCALE: AS INDICATED

PROJECTION: NAD83 STATE PLANE NY EAST

ALL LOCATIONS APPROXIMATE



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GROUNDWATER MONITORING WELL LOCATIONS

F & T DARRIGO SUITE
84 LAKESIDE ROAD
TOWN OF NEWBURGH,
ORANGE COUNTY, NEW YORK

PROJECT NO. 560556	FIGURE 5
	DATE: 5/21/2018
	SCALE: AS INDICATED
	PROJECTION: NAD83 STATE PLANE NY EAST
	ALL LOCATIONS APPROXIMATE

TABLE

Table 1. **Metals in Groundwater Samples;** USEPA Methods SW 846: 6010, 7470;
collected **Novermber 2009 to May 2018**; F&T Darrigo, 67 South Plank Road, Newburgh, New York;
PVE File #560566

Sample Identification	Date Sampled	Arsenic (0.025[1])	Barium (1.000[1])	Cadmium (0.005[1])	Chromium (0.050[1])	Copper (0.200[1])	Nickel (0.100[1])	Lead (0.025[1])	Zinc (NE[1])	Mercury (0.0007[1])
GWFT-1	11/6/2009	NS	NS	NS	NS	NS	NS	NS	NS	NS
	9/23/2010	0.007	0.082	ND<0.005	ND<0.005	0.012	ND<0.040	ND<0.005	ND<0.020	ND<0.0002
	12/8/2010	NS (Dry)	NS (Dry)	NS (Dry)	NS (Dry)	NS (Dry)	NS (Dry)	NS (Dry)	NS (Dry)	NS (Dry)
	3/29/2011	ND<0.010	ND<0.100	ND<0.005	ND<0.010	ND<0.025	ND<0.040	ND<0.010	ND<0.060	ND<0.0002
	6/23/2011	ND<0.010	ND<0.100	ND<0.005	ND<0.010	ND<0.025	ND<0.040	ND<0.010	ND<0.060	NS
	12/29/2011	ND<0.010	ND<0.100	ND<0.005	ND<0.010	ND<0.025	ND<0.040	ND<0.010	ND<0.060	ND<0.0002
	6/29/2012	ND<0.010	ND<0.100	ND<0.005	ND<0.010	ND<0.025	ND<0.040	ND<0.010	ND<0.060	ND<0.0002
	5/30/2013	ND<0.010	ND<0.100	ND<0.005	ND<0.010	ND<0.025	ND<0.040	ND<0.010	ND<0.060	ND<0.0002
	7/17/2014	NS	NS	NS	NS	NS	NS	NS	NS	NS
	8/7/2015	NS	NS	NS	NS	NS	NS	NS	NS	NS
	5/11/2018	NS	NS	NS	NS	NS	NS	NS	NS	NS
GWFT-2R	11/6/2009	NS	NS	NS	NS	NS	NS	NS	NS	NS
	9/23/2010	ND<0.005	0.050	ND<0.005	ND<0.005	ND<0.010	ND<0.040	ND<0.005	ND<0.020	ND<0.0002
	12/8/2010	ND<0.005	0.053	ND<0.005	ND<0.005	ND<0.010	ND<0.040	ND<0.005	ND<0.020	ND<0.0002
	3/29/2011	ND<0.010	ND<0.100	ND<0.005	ND<0.010	ND<0.025	ND<0.040	ND<0.010	ND<0.060	ND<0.0002
	6/23/2011	ND<0.010	ND<0.100	ND<0.005	ND<0.010	ND<0.025	ND<0.040	ND<0.010	ND<0.060	NS
	12/29/2011	ND<0.010	ND<0.100	ND<0.005	ND<0.010	ND<0.025	ND<0.040	ND<0.010	ND<0.060	ND<0.0002
	6/29/2012	ND<0.010	ND<0.100	ND<0.005	ND<0.010	ND<0.025	ND<0.040	ND<0.010	ND<0.060	ND<0.0002
	5/30/2013	ND<0.010	ND<0.100	ND<0.005	ND<0.010	ND<0.025	ND<0.040	ND<0.010	ND<0.060	ND<0.0002
	7/17/2014	NS	NS	NS	NS	NS	NS	NS	NS	NS
	8/7/2015	NS	NS	NS	NS	NS	NS	NS	NS	NS
	5/11/2018	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-3	11/6/2009	ND<0.005	ND<0.020	ND<0.005	ND<0.010	ND<0.010	ND<0.040	ND<0.005	ND<0.020	ND<0.0002
	9/23/2010	ND<0.005	ND<0.020	ND<0.005	ND<0.005	ND<0.010	ND<0.040	ND<0.005	ND<0.020	ND<0.0002
	12/8/2010	ND<0.005	ND<0.020	ND<0.005	ND<0.005	ND<0.010	ND<0.040	ND<0.005	ND<0.020	ND<0.0002
	3/29/2011	ND<0.010	ND<0.100	ND<0.005	ND<0.010	ND<0.025	ND<0.040	ND<0.010	ND<0.060	ND<0.0002
	6/23/2011	ND<0.010	ND<0.100	ND<0.005	ND<0.010	ND<0.025	ND<0.040	ND<0.010	ND<0.060	NS
	12/29/2011	ND<0.010	ND<0.100	ND<0.005	ND<0.010	ND<0.025	ND<0.040	ND<0.010	ND<0.060	ND<0.0002
	6/29/2012	ND<0.010	ND<0.100	ND<0.005	ND<0.010	ND<0.025	ND<0.040	ND<0.010	ND<0.060	ND<0.0002
	5/30/2013	ND<0.010	ND<0.100	ND<0.005	ND<0.010	ND<0.025	ND<0.040	ND<0.010	ND<0.060	ND<0.0002
	7/17/2014	NS	NS	NS	NS	NS	NS	NS	NS	NS
	8/7/2015	NS	NS	NS	NS	NS	NS	NS	NS	NS
	5/11/2018	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-4	11/6/2009	ND<0.005	ND<0.020	ND<0.005	ND<0.010	ND<0.010	ND<0.040	ND<0.005	ND<0.020	ND<0.0002
	9/23/2010	ND<0.005	0.023	ND<0.005	ND<0.005	ND<0.010	**0.124**	ND<0.005	ND<0.020	ND<0.0002
	12/8/2010	ND<0.005	ND<0.020	ND<0.005	ND<0.005	ND<0.010	ND<0.040	ND<0.005	ND<0.020	ND<0.0002
	3/29/2011	ND<0.010	ND<0.100	ND<0.005	ND<0.010	ND<0.025	ND<0.040	ND<0.010	ND<0.060	ND<0.0002
	6/23/2011	ND<0.010	ND<0.100	ND<0.005	ND<0.010	ND<0.025	ND<0.040	ND<0.010	ND<0.060	NS
	12/29/2011	ND<0.010	ND<0.100	ND<0.005	ND<0.010	ND<0.025	ND<0.040	ND<0.010	ND<0.060	ND<0.0002
	6/29/2012	ND<0.010	ND<0.100	ND<0.005	ND<0.010	ND<0.025	ND<0.040	ND<0.010	ND<0.060	ND<0.0002
	5/30/2013	ND<0.010	ND<0.100	ND<0.005	ND<0.010	ND<0.025	ND<0.040	ND<0.010	ND<0.060	ND<0.0002
	7/17/2014	ND<0.010	ND<0.200	ND<0.005	ND<0.007	ND<0.025	ND<0.040	ND<0.0053	ND<0.020	ND<0.0002
	8/7/2015	ND<0.010	ND<0.200	ND<0.005	ND<0.007	ND<0.025	ND<0.040	0.0051	ND<0.020	ND<0.0002
	5/11/2018	ND<0.011	0.119	ND<0.003	ND<0.006	0.005	ND<0.006	ND<0.006	ND<0.017	ND<0.0002
MW-5	11/6/2009	0.005	0.065	ND<0.005	ND<0.010	ND<0.010	ND<0.040	ND<0.005	ND<0.020	ND<0.0002
	9/23/2010	ND<0.005	0.063	ND<0.005	ND<0.005	ND<0.010	ND<0.040	ND<0.005	ND<0.020	ND<0.0002
	12/8/2010	ND<0.005	0.057	ND<0.005	ND<0.005	ND<0.010	ND<0.040	ND<0.005	ND<0.020	ND<0.0002
	3/29/2011	ND<0.010	ND<0.100	ND<0.005	ND<0.010	ND<0.025	ND<0.040	ND<0.010	ND<0.060	ND<0.0002
	6/23/2011	ND<0.010	ND<0.100	ND<0.005	ND<0.010	ND<0.025	ND<0.040	ND<0.010	ND<0.060	NS
	12/29/2011	ND<0.010	ND<0.100	ND<0.005	ND<0.010	ND<0.025	ND<0.040	ND<0.060	ND<0.060	ND<0.0002
	6/29/2012	ND<0.010	ND<0.100	ND<0.005	ND<0.010	ND<0.025	ND<0.040	ND<0.010	ND<0.060	ND<0.0002
	5/28/2013	ND<0.010	ND<0.100	ND<0.005	ND<0.010	ND<0.025	ND<0.040	ND<0.010	ND<0.060	ND<0.0002
	7/17/2014	ND<0.010	ND<0.200	ND<0.005	ND<0.007	ND<0.025	ND<0.040	ND<0.005	ND<0.020	ND<0.0002
	8/7/2015	ND<0.010	ND<0.200	ND<0.005	ND<0.007	ND<0.025	ND<0.040	ND<0.005	ND<0.020	ND<0.0002
	5/11/2018	0.011	0.105	ND<0.003	ND<0.006	0.005	ND<0.006	ND<0.006	ND<0.017	ND<0.0002
MW-6	11/6/2009	ND<0.005	0.061	ND<0.005	ND<0.010	ND<0.010	ND<0.040	ND<0.005	ND<0.020	ND<0.0002
	9/23/2010	ND<0.005	0.066	ND<0.005	ND<0.005	ND<0.010	ND<0.040	ND<0.005	ND<0.020	ND<0.0002
	12/8/2010	ND<0.005	0.062	ND<0.005	ND<0.005	ND<0.010	ND<0.040	ND<0.005	ND<0.020	ND<0.0002
	3/29/2011	ND<0.010	ND<0.100	ND<0.005	ND<0.010	ND<0.025	ND<0.040	ND<0.010	ND<0.060	ND<0.0002
	6/23/2011	ND<0.010	ND<0.100	ND<0.005	ND<0.010	ND<0.025	ND<0.040	ND<0.010	ND<0.060	NS
	12/29/2011	ND<0.010	ND<0.100	ND<0.005	ND<0.010	ND<0.025	ND<0.040	ND<0.010	ND<0.060	ND<0.0002
	6/29/2012	ND<0.010	ND<0.100	ND<0.005	ND<0.010	ND<0.025	ND<0.040	ND<0.010	ND<0.060	ND<0.0002
	5/28/2013	ND<0.010	ND<0.100	ND<0.005	ND<0.010	ND<0.025	ND<0.040	ND<0.010	ND<0.060	ND<0.0002
	7/17/2014	ND<0.010	ND<0.200	ND<0.005	ND<0.007	ND<0.025	ND<0.040	ND<0.005	ND<0.020	ND<0.0002
	8/7/2015	ND<0.010	ND<0.200	ND<0.005	ND<0.007	ND<0.025	ND<0.040	0.0059	ND<0.020	ND<0.0002
	5/11/2018	ND< 0.011	0.082	ND<0.003	ND<0.006	0.006	ND<0.006	ND<0.006	ND<0.017	ND<0.0002

Notes:

1 – Standards are for Class GA groundwater according to 6NYCRR Part 700-705;

All concentrations are in mg/l unless otherwise indicated;

Boldface type designates those compounds detected at concentrations exceeding NYSDEC Limit;

NS = Not sampled;

ND = Not detected, detection limit listed;

NE = No standard established.

APPENDIX A
SITE INSPECTION FORM

Hudson Valley
48 Springside Avenue
Poughkeepsie, NY 12603
845.454.2544
www.pve-llc.com

Civil Engineering • Energy • Environmental • Land Development • Landscape Architecture • Municipal • Structure Design • Survey

SITE-WIDE INSPECTION FORM

Site Code #: 3-36-002	Date: 5/11/2018	Report #:

Site Name: F & T Darrigo
Location: 184 Lakeside Road, Newburgh, New York
PRP Proj. Mgr.: Christopher Brown
DEC Proj. Mgr.: Amen Omorogbe
Consultant Proj. Mgr.:
Proj. Contr.:
Site Phone & Fax:

	AM	PM
Weather	~~SUNNY~~; CLOUDY	~~CLOUDY~~; SUNNY
Temperature	57°	64°
Wind Direction	WEST <5MPH	W/NW <5MPH

Description of work performed by contr. this report period:

Periodic soil-cover inspection

Periodic Groundwater Monitoring

Discussions/comments regarding visitors, contractor and/or engineer:

- No visitors or contractors

Sampling and Analyses:

- Sampling stipulated monitoring wells for TAL metals following USEPA Low-flow (minimal drawdown) sampling procedure.

MINOR ~~Major~~ Issues	Description & Reason
TURBIDITY	NTUs FLUXUATING ALOT DURING PUMP; WATER CLEAR DURING PUMP AND SAMPLE.

Pennsylvania
Waterfront Corporate Park III
Suite 101
2000 Georgetowne Drive
Sewickley, PA 15143
724.444.1100

NYC
108 West 39th Street
Suite 500
New York, NY 10018
646.602.4999

West Virginia
1700 MacCorkle Avenue, S.E.
Charleston, WV 25314
304.340.4821

Ohio
1156 E. State Street
Salem, OH 44460
330.332.5200

Texas
10550 Richmond Avenue
Suite 160
Houston, TX 77042
713.375.1400 ext. 456

Health & Safety:

Level of protection: D

Is the level of protection in conformance with the approved Health & Safety Plan? YES

List of deviations: N/A

Are atmospheric monitoring results acceptable? 29.98

Site Visitors	Representing	Level of H&S Training
ANTHONY SPADAVECCHIA	PVE, LLC	

Site Representative: ANTHONY SPADAVECCHIA **Date:** 5/11/2018

Representative's signature: Anthony J. S

SOIL COVER INSPECTION CHECKLIST

ITEM	RESPONSE
1. Does the soil cover appear to be disturbed to the point that the demarcation barrier beneath the soil cover is exposed? *If yes – uncover the area, repair demarcation layer with similar material and backfill.*	NO
2. Are there open holes on the cover that may be caused by burrowing animals? *If yes –backfill the hole with native fill material, consider*	No
3. Are there noticeable depressions or ponding of surface water on the soil cover? *If yes – backfill and compact with native material, slope the ground surface to promote run-off.*	No
4. Are there large cracks in the soil cover? *If yes – document, and monitor, fill as needed.*	No
5. Have any trees or shrubs grown on the soil cover? *If yes – remove*	No
6. Are silt fences, hay bales, fiber rolls or other erosion control devices intact and functioning properly? *If NO – replace/repair as needed.*	YES
7. Is there excessive accumulation of sediment along any erosion control devices? *If yes – inspect for source of erosion.*	No
8. Is the perimeter security fence in good condition and able to control access to the site by unauthorized personnel? *If NO – notify responsible party and direct to repair as needed.*	YES
9. Are posted signs in place and legible? *If NO – replace as needed.*	YES
ADDITIONAL COMMENTS	

APPENDIX B
2018 GROUNDWATER MONITORING REPORT

Hudson Valley Office
48 Springside Avenue
Poughkeepsie, NY 12603
845.454.2544
www.pve-llc.com

July 18, 2018

Amen Omorogbe
New York State Department of Environmental Conservation
Division of Environmental Remediation -Remedial Bureau C
625 Broadway, 11th Floor
Albany, NY 12233-7014

Re: **Periodic Groundwater Monitoring:** F&T Darrigo Site, 3-84 Lakeside Road, Newburgh, Orange County, New York.
PVE File #560556
NYSDEC Site #03-36-002

Dear Mr. Omorogbe:

This document is required as an element of the remedial program at the F&T Darrigo property (Figure 1) under the New York State (NYS) Inactive Hazardous Waste Disposal Site Remedial Program administered by New York State Department of Environmental Conservation (NYSDEC). The site was remediated in accordance with Order on Consent Index #W3-0841-03-05, Site #3-36-002, which was executed on March 29, 1999.

As part of this program, a Site Management Plan (SMP) was prepared by PVE Sheffler, LLC, on behalf of the Frank Darrigo Revocable Trust, in accordance with the requirements in NYSDEC DER-10 Technical Guidance for Site Investigation and Remediation, dated March 2012. The SMP addresses the means for implementing the Institutional Controls (ICs) and Engineering Controls (ECs) that are required by the Deed Restriction for the site.

Based on the results and the recommendations from the 2015 groundwater sampling event, the SMP was modified. The NYSDEC allowed a reduction in the frequency of sampling groundwater monitoring wells MW-4, MW-5 and MW-6, from annually to once every three years.

1.0 FIELD ACTIVITIES

On May 11, 2018, groundwater samples were collected from monitoring wells MW-4, MW-5, and MW-6 (Figure 2) for analysis. Prior to sample collection, static water levels were measured. The wells were purged using USEPA low flow purge techniques until physical water quality parameters had stabilized. Groundwater samples were collected using a peristaltic pump and dedicated tubing, retained on ice, and transported to a NYSDOH-ELAP certified laboratory via courier for analysis of Target Analyte List (TAL) Metals via USEPA Method 6010 and 7473.

2.0 RESULTS

The groundwater analytical results are summarized in Tables 1 and 2. The analytical report is attached. Analytical results were submitted to an independent 3rd party data validator, Premier Environmental Services, Inc.(Premier); their report is attached. Only antimony and selenium in MW-4, iron, manganese and selenium in MW-5, and antimony, iron, selenium and sodium in MW-6 were detected at concentrations exceeding 6NYCRR Part 703 Class GA groundwater standards. None of the primary contaminants of concern (As, Ba, Cd, Cr, Cu, Ni, Zn an Hg) were detected at concentrations exceeding 6NYCRR Part 703 Class GA groundwater standards.

3.0 CONCLUSIONS

Cumulative groundwater data are presented in Table 2. Eleven (11) rounds of sampling have been conducted since November of 2009. These data demonstrate that contaminants in surface soil have not adversely impacted groundwater present in unconsolidated materials beneath the Soil Cover Area at the Darrigo site.

We request permission to terminate periodic sampling of the on-site wells, and modification of the Site Management Plan to reflect this change.

If you have any questions or concerns, please do not hesitate to contact us.

Sincerely,

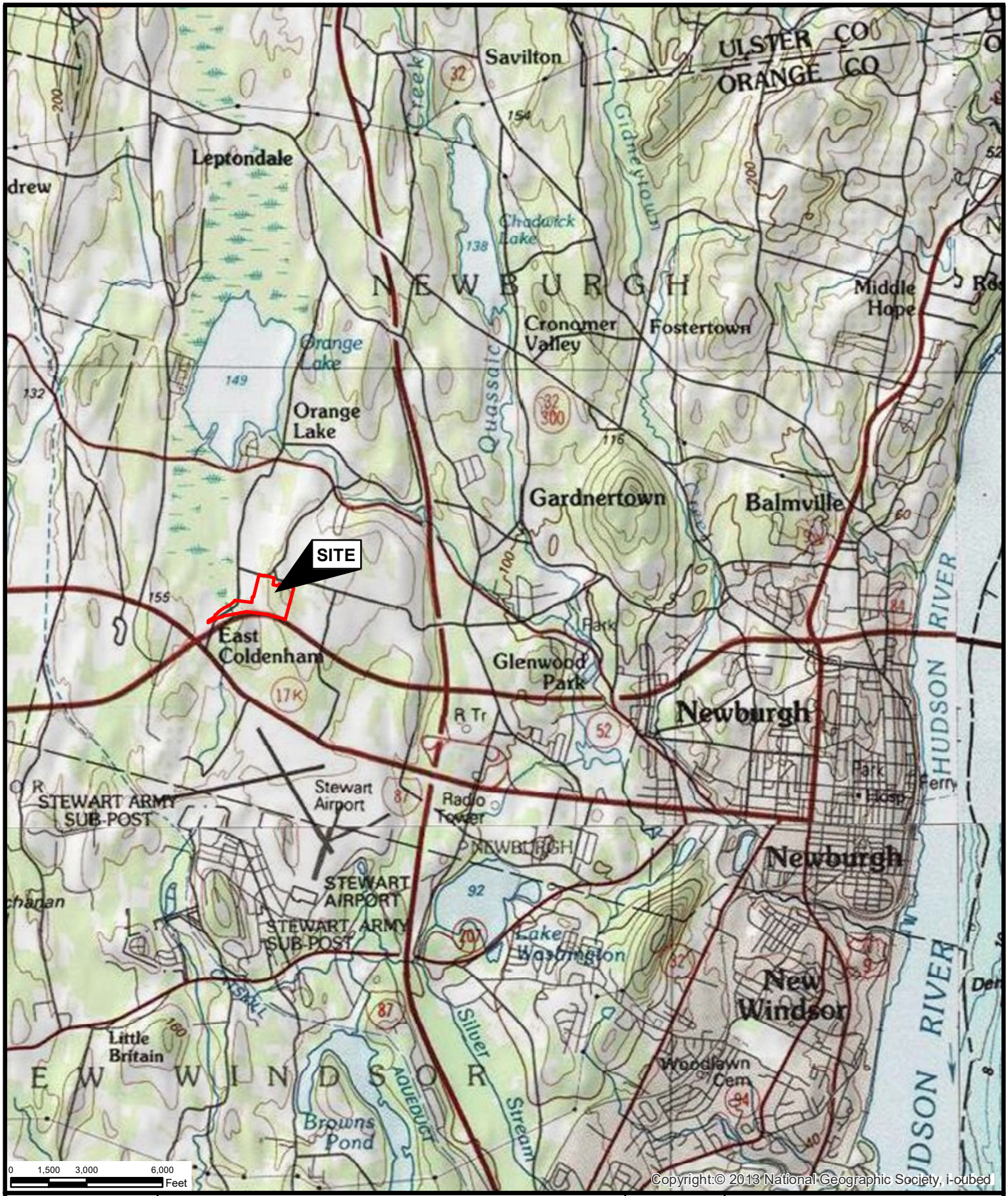
PVE, LLC

Christopher B. Brown, P.G.
Principal/Director of Environmental Services

CBB/CBT

cc: Carl Darrigo
Dan Darrigo

FIGURES



PVE
48 Springside Avenue
Poughkeepsie, NY 12603
Office: 845.454.2544
Fax: 845.454.2655

SITE LOCATION MAP

F & T DARRIGO SUITE
84 LAKESIDE ROAD
TOWN OF NEWBURGH,
ORANGE COUNTY, NEW YORK

PROJECT NO. 560556	FIGURE 1
	DATE: 5/21/2018
	SCALE: AS INDICATED
	PROJECTION: NAD83 STATE PLANE NY EAST
	ALL LOCATIONS APPROXIMATE

PVE
48 Springside Avenue
Poughkeepsie, NY 12603
Office: 845.454.2544
Fax: 845.454.2655

SELECTED SITE FEATURES

F & T DARRIGO SITE
84 LAKESIDE ROAD
TOWN OF NEWBURGH,
ORANGE COUNTY, NEW YORK

LEGEND

- Clean Fill Screening Area
- Former Soil Pile Area
- Soil Stockpile
- Parcel Outline
- Lagoons and LSA

PROJECT NO. 560556

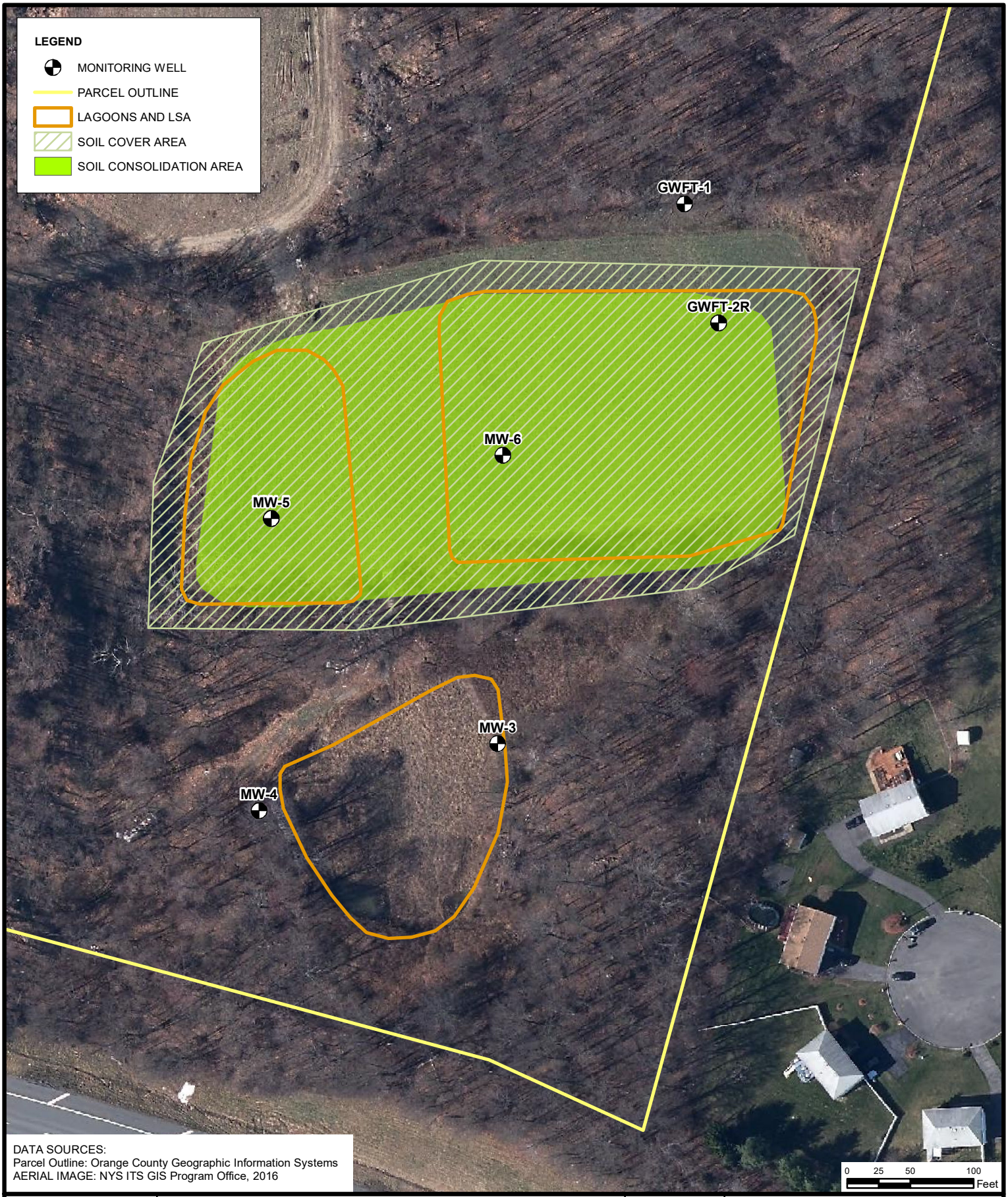
FIGURE 2

DATE: 5/21/2018

SCALE: AS INDICATED

PROJECTION: NAD83 STATE PLANE NY EAST

ALL LOCATIONS APPROXIMATE



PVE
48 Springside Avenue
Poughkeepsie, NY 12603
Office: 845.454.2544
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SOIL COVER AREA

F & T DARRIGO SUITE
84 LAKESIDE ROAD
TOWN OF NEWBURGH,
ORANGE COUNTY, NEW YORK

PROJECT NO. 560556

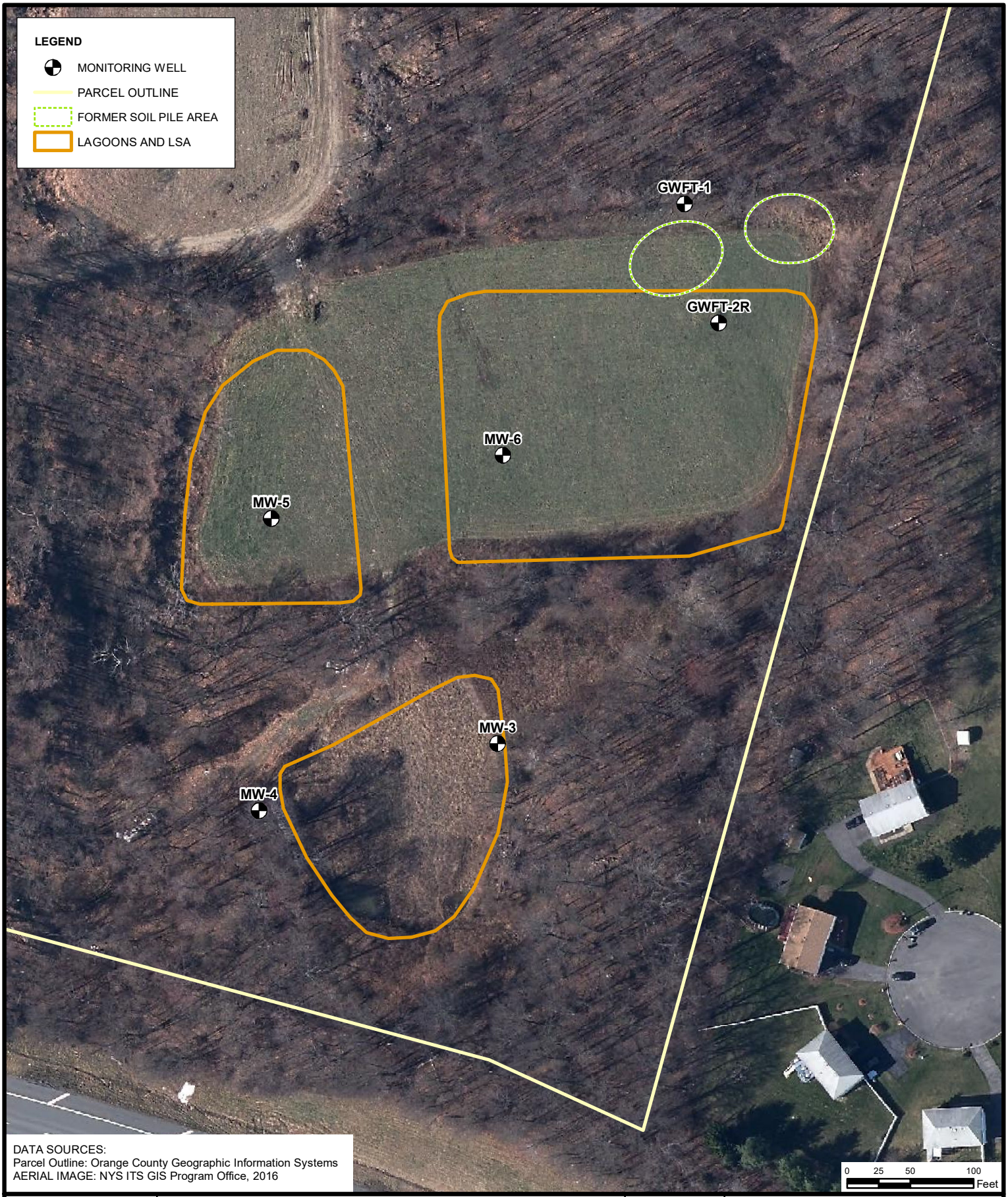
FIGURE 3

DATE: 5/21/2018

SCALE: AS INDICATED

PROJECTION: NAD83 STATE PLANE NY EAST

ALL LOCATIONS APPROXIMATE



PVE
48 Springside Avenue
Poughkeepsie, NY 12603
Office: 845.454.2544
Fax: 845.454.2655

GROUNDWATER MONITORING WELL LOCATIONS

F & T DARRIGO SUITE
84 LAKESIDE ROAD
TOWN OF NEWBURGH,
ORANGE COUNTY, NEW YORK

PROJECT NO. 560556

FIGURE 4

DATE: 5/21/2018

SCALE: AS INDICATED

PROJECTION: NAD83 STATE PLANE NY EAST

ALL LOCATIONS APPROXIMATE

TABLES

Table 1 - Metals in Groundwater Samples
Compared to Class GA Standards per 6NYCRR Part 700-705
3-84 Lakeside Road, Newburgh, New York
NYSDEC Site #3-36-002
PVE #560556

					Date Sampled	5/11/2018			5/11/2018			5/11/2018		
					Location	MW-4			MW-5			MW-6		
					Sample ID	MW-4 20180511			MW-5 20180511			MW-6 20180511		
Method	Analyte	CAS RN	CLASS GA	Unit		Result	Unit	Q	Result	Unit	Q	Result	Unit	Q
SW6010B	Aluminum	7429-90-5	NE			ND< 0.056	mg/l	U	ND< 0.056	mg/l	U	0.302	mg/l	
SW6010B	Antimony	7440-36-0	0.003	mg/l		**0.018**	**mg/l**		**0.011**	**mg/l**		**0.010**	**mg/l**	
SW6010B	Arsenic	7440-38-2	0.025	mg/l		ND< 0.011	mg/l	U	ND< 0.011	mg/l	U	ND< 0.011	mg/l	U
SW6010B	Barium	7440-39-3	1	mg/l		0.119	mg/l	J	0.105	mg/l		0.082	mg/l	
SW6010B	Beryllium	7440-41-7	0.003	mg/l		ND< 0.001	mg/l	U	ND< 0.001	mg/l	U	ND< 0.001	mg/l	U
SW6010B	Cadmium	7440-43-9	0.005			ND< 0.003	mg/l	U	ND< 0.003	mg/l	U	ND< 0.003	mg/l	U
SW6010B	Calcium	7440-70-2	NE			19.3	mg/l		125	mg/l		68.7	mg/l	
SW6010B	Chromium, Total	7440-47-3	0.05	mg/l		ND< 0.006	mg/l	U	ND< 0.006	mg/l	U	ND< 0.006	mg/l	U
SW6010B	Cobalt	7440-48-4	NE			ND< 0.006	mg/l	U	ND< 0.006	mg/l	U	ND< 0.006	mg/l	U
SW6010B	Copper	7440-50-8	0.2	mg/l		0.005	mg/l		0.005	mg/l		0.006	mg/l	
SW6010B	Iron	7439-89-6	0.3	mg/l		0.081	mg/l	J	**0.551**	**mg/l**	**J**	**0.530**	**mg/l**	
SW6010B	Lead	7439-92-1	0.025	mg/l		ND< 0.006	mg/l	U	ND< 0.006	mg/l	U	ND< 0.006	mg/l	J
SW6010B	Magnesium	7439-95-4	35	mg/l		3.18	mg/l		31.7	mg/l		23.5	mg/l	
SW6010B	Manganese	7439-96-5	0.3	mg/l		0.007	mg/l		**2.15**	**mg/l**		0.098	mg/l	
SW6010B	Nickel	7440-02-0	0.1	mg/l		ND< 0.006	mg/l	U	ND< 0.006	mg/l	U	ND< 0.006	mg/l	U
SW6010B	Potassium	7440-09-7	NE			0.277	mg/l	J	3.11	mg/l	J	2.55	mg/l	J
SW6010B	Selenium	7782-49-2	0.01	mg/l		**0.011**	**mg/l**		**0.062**	**mg/l**		**0.041**	**mg/l**	
SW6010B	Silver	7440-22-4	0.05	mg/l		ND< 0.006	mg/l	U	ND< 0.006	mg/l	U	ND< 0.006	mg/l	U
SW6010B	Sodium	7440-23-5	20	mg/l		4.70	mg/l	B	13.5	mg/l	B	**20.3**	**mg/l**	**B**
SW6010B	Thallium	7440-28-0	0.0005	mg/l		ND< 0.006	mg/l	U	ND< 0.006	mg/l	U	ND< 0.006	mg/l	U
SW6010B	Vanadium	7440-62-2	NE			ND< 0.011	mg/l	U	ND< 0.011	mg/l	U	ND< 0.011	mg/l	U
SW6010B	Zinc	7440-66-6	2	mg/l		ND< 0.017	mg/l	U	ND< 0.017	mg/l	U	ND< 0.017	mg/l	U
SW7473	Mercury	7439-97-6	0.0007	mg/l		ND< 0.0002	mg/l	U	ND< 0.0002	mg/l	U	ND< 0.0002	mg/l	U

Notes:
Standards are for Class GA groundwater according 6NYCRR Part 700-705;
Red Shading designates those compounds detected at concentrations exceeding Class GA;
NE = No standard established;
ND and U = Not detected at MDL for sample;
B = Analyte is found in the associated analysis batch blank.

Table 2. **Metals in Groundwater Samples;** USEPA Methods SW 846: 6010, 7470;
collected **Novermber 2009 to May 2018**; F&T Darrigo, 84 Lakeside Road, Newburgh, New York;
PVE File #560566

Sample Identification	Date Sampled	Arsenic (0.025[1])	Barium (1.000[1])	Cadmium (0.005[1])	Chromium (0.050[1])	Copper (0.200[1])	Nickel (0.100[1])	Lead (0.025[1])	Zinc (NE[1])	Mercury (0.0007[1])
GWFT-1	11/6/2009	NS	NS	NS	NS	NS	NS	NS	NS	NS
	9/23/2010	0.007	0.082	ND<0.005	ND<0.005	0.012	ND<0.040	ND<0.005	ND<0.020	ND<0.0002
	12/8/2010	NS (Dry)	NS (Dry)	NS (Dry)	NS (Dry)	NS (Dry)	NS (Dry)	NS (Dry)	NS (Dry)	NS (Dry)
	3/29/2011	ND<0.010	ND<0.100	ND<0.005	ND<0.010	ND<0.025	ND<0.040	ND<0.010	ND<0.060	ND<0.0002
	6/23/2011	ND<0.010	ND<0.100	ND<0.005	ND<0.010	ND<0.025	ND<0.040	ND<0.010	ND<0.060	NS
	12/29/2011	ND<0.010	ND<0.100	ND<0.005	ND<0.010	ND<0.025	ND<0.040	ND<0.010	ND<0.060	ND<0.0002
	6/29/2012	ND<0.010	ND<0.100	ND<0.005	ND<0.010	ND<0.025	ND<0.040	ND<0.010	ND<0.060	ND<0.0002
	5/30/2013	ND<0.010	ND<0.100	ND<0.005	ND<0.010	ND<0.025	ND<0.040	ND<0.010	ND<0.060	ND<0.0002
	7/17/2014	NS	NS	NS	NS	NS	NS	NS	NS	NS
	8/7/2015	NS	NS	NS	NS	NS	NS	NS	NS	NS
	5/11/2018	NS	NS	NS	NS	NS	NS	NS	NS	NS
GWFT-2R	11/6/2009	NS	NS	NS	NS	NS	NS	NS	NS	NS
	9/23/2010	ND<0.005	0.050	ND<0.005	ND<0.005	ND<0.010	ND<0.040	ND<0.005	ND<0.020	ND<0.0002
	12/8/2010	ND<0.005	0.053	ND<0.005	ND<0.005	ND<0.010	ND<0.040	ND<0.005	ND<0.020	ND<0.0002
	3/29/2011	ND<0.010	ND<0.100	ND<0.005	ND<0.010	ND<0.025	ND<0.040	ND<0.010	ND<0.060	ND<0.0002
	6/23/2011	ND<0.010	ND<0.100	ND<0.005	ND<0.010	ND<0.025	ND<0.040	ND<0.010	ND<0.060	NS
	12/29/2011	ND<0.010	ND<0.100	ND<0.005	ND<0.010	ND<0.025	ND<0.040	ND<0.010	ND<0.060	ND<0.0002
	6/29/2012	ND<0.010	ND<0.100	ND<0.005	ND<0.010	ND<0.025	ND<0.040	ND<0.010	ND<0.060	ND<0.0002
	5/30/2013	ND<0.010	ND<0.100	ND<0.005	ND<0.010	ND<0.025	ND<0.040	ND<0.010	ND<0.060	ND<0.0002
	7/17/2014	NS	NS	NS	NS	NS	NS	NS	NS	NS
	8/7/2015	NS	NS	NS	NS	NS	NS	NS	NS	NS
	5/11/2018	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-3	11/6/2009	ND<0.005	ND<0.020	ND<0.005	ND<0.010	ND<0.010	ND<0.040	ND<0.005	ND<0.020	ND<0.0002
	9/23/2010	ND<0.005	ND<0.020	ND<0.005	ND<0.005	ND<0.010	ND<0.040	ND<0.005	ND<0.020	ND<0.0002
	12/8/2010	ND<0.005	ND<0.020	ND<0.005	ND<0.005	ND<0.010	ND<0.040	ND<0.005	ND<0.020	ND<0.0002
	3/29/2011	ND<0.010	ND<0.100	ND<0.005	ND<0.010	ND<0.025	ND<0.040	ND<0.010	ND<0.060	ND<0.0002
	6/23/2011	ND<0.010	ND<0.100	ND<0.005	ND<0.010	ND<0.025	ND<0.040	ND<0.010	ND<0.060	NS
	12/29/2011	ND<0.010	ND<0.100	ND<0.005	ND<0.010	ND<0.025	ND<0.040	ND<0.010	ND<0.060	ND<0.0002
	6/29/2012	ND<0.010	ND<0.100	ND<0.005	ND<0.010	ND<0.025	ND<0.040	ND<0.010	ND<0.060	ND<0.0002
	5/30/2013	ND<0.010	ND<0.100	ND<0.005	ND<0.010	ND<0.025	ND<0.040	ND<0.010	ND<0.060	ND<0.0002
	7/17/2014	NS	NS	NS	NS	NS	NS	NS	NS	NS
	8/7/2015	NS	NS	NS	NS	NS	NS	NS	NS	NS
	5/11/2018	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-4	11/6/2009	ND<0.005	ND<0.020	ND<0.005	ND<0.010	ND<0.010	ND<0.040	ND<0.005	ND<0.020	ND<0.0002
	9/23/2010	ND<0.005	0.023	ND<0.005	ND<0.005	ND<0.010	**0.124**	ND<0.005	ND<0.020	ND<0.0002
	12/8/2010	ND<0.005	ND<0.020	ND<0.005	ND<0.005	ND<0.010	ND<0.040	ND<0.005	ND<0.020	ND<0.0002
	3/29/2011	ND<0.010	ND<0.100	ND<0.005	ND<0.010	ND<0.025	ND<0.040	ND<0.010	ND<0.060	ND<0.0002
	6/23/2011	ND<0.010	ND<0.100	ND<0.005	ND<0.010	ND<0.025	ND<0.040	ND<0.010	ND<0.060	NS
	12/29/2011	ND<0.010	ND<0.100	ND<0.005	ND<0.010	ND<0.025	ND<0.040	ND<0.010	ND<0.060	ND<0.0002
	6/29/2012	ND<0.010	ND<0.100	ND<0.005	ND<0.010	ND<0.025	ND<0.040	ND<0.010	ND<0.060	ND<0.0002
	5/30/2013	ND<0.010	ND<0.100	ND<0.005	ND<0.010	ND<0.025	ND<0.040	ND<0.010	ND<0.060	ND<0.0002
	7/17/2014	ND<0.010	ND<0.200	ND<0.005	ND<0.007	ND<0.025	ND<0.040	ND<0.0053	ND<0.020	ND<0.0002
	8/7/2015	ND<0.010	ND<0.200	ND<0.005	ND<0.007	ND<0.025	ND<0.040	0.0051	ND<0.020	ND<0.0002
	5/11/2018	ND<0.011	0.119	ND<0.003	ND<0.006	0.005	ND<0.006	ND<0.006	ND<0.017	ND<0.0002
MW-5	11/6/2009	0.005	0.065	ND<0.005	ND<0.010	ND<0.010	ND<0.040	ND<0.005	ND<0.020	ND<0.0002
	9/23/2010	ND<0.005	0.063	ND<0.005	ND<0.005	ND<0.010	ND<0.040	ND<0.005	ND<0.020	ND<0.0002
	12/8/2010	ND<0.005	0.057	ND<0.005	ND<0.005	ND<0.010	ND<0.040	ND<0.005	ND<0.020	ND<0.0002
	3/29/2011	ND<0.010	ND<0.100	ND<0.005	ND<0.010	ND<0.025	ND<0.040	ND<0.010	ND<0.060	ND<0.0002
	6/23/2011	ND<0.010	ND<0.100	ND<0.005	ND<0.010	ND<0.025	ND<0.040	ND<0.010	ND<0.060	NS
	12/29/2011	ND<0.010	ND<0.100	ND<0.005	ND<0.010	ND<0.025	ND<0.040	ND<0.060	ND<0.060	ND<0.0002
	6/29/2012	ND<0.010	ND<0.100	ND<0.005	ND<0.010	ND<0.025	ND<0.040	ND<0.010	ND<0.060	ND<0.0002
	5/28/2013	ND<0.010	ND<0.100	ND<0.005	ND<0.010	ND<0.025	ND<0.040	ND<0.010	ND<0.060	ND<0.0002
	7/17/2014	ND<0.010	ND<0.200	ND<0.005	ND<0.007	ND<0.025	ND<0.040	ND<0.005	ND<0.020	ND<0.0002
	8/7/2015	ND<0.010	ND<0.200	ND<0.005	ND<0.007	ND<0.025	ND<0.040	ND<0.005	ND<0.020	ND<0.0002
	5/11/2018	0.011	0.105	ND<0.003	ND<0.006	0.005	ND<0.006	ND<0.006	ND<0.017	ND<0.0002
MW-6	11/6/2009	ND<0.005	0.061	ND<0.005	ND<0.010	ND<0.010	ND<0.040	ND<0.005	ND<0.020	ND<0.0002
	9/23/2010	ND<0.005	0.066	ND<0.005	ND<0.005	ND<0.010	ND<0.040	ND<0.005	ND<0.020	ND<0.0002
	12/8/2010	ND<0.005	0.062	ND<0.005	ND<0.005	ND<0.010	ND<0.040	ND<0.005	ND<0.020	ND<0.0002
	3/29/2011	ND<0.010	ND<0.100	ND<0.005	ND<0.010	ND<0.025	ND<0.040	ND<0.010	ND<0.060	ND<0.0002
	6/23/2011	ND<0.010	ND<0.100	ND<0.005	ND<0.010	ND<0.025	ND<0.040	ND<0.010	ND<0.060	NS
	12/29/2011	ND<0.010	ND<0.100	ND<0.005	ND<0.010	ND<0.025	ND<0.040	ND<0.010	ND<0.060	ND<0.0002
	6/29/2012	ND<0.010	ND<0.100	ND<0.005	ND<0.010	ND<0.025	ND<0.040	ND<0.010	ND<0.060	ND<0.0002
	5/28/2013	ND<0.010	ND<0.100	ND<0.005	ND<0.010	ND<0.025	ND<0.040	ND<0.010	ND<0.060	ND<0.0002
	7/17/2014	ND<0.010	ND<0.200	ND<0.005	ND<0.007	ND<0.025	ND<0.040	ND<0.005	ND<0.020	ND<0.0002
	8/7/2015	ND<0.010	ND<0.200	ND<0.005	ND<0.007	ND<0.025	ND<0.040	0.0059	ND<0.020	ND<0.0002
	5/11/2018	ND< 0.011	0.082	ND<0.003	ND<0.006	0.006	ND<0.006	ND<0.006	ND<0.017	ND<0.0002

Notes:

1 – Standards are for Class GA groundwater according to 6NYCRR Part 700-705;

All concentrations are in mg/l unless otherwise indicated;

Boldface type designates those compounds detected at concentrations exceeding NYSDEC Limit;

NS = Not sampled;

ND = Not detected, detection limit listed;

NE = No standard established.

WELL PURGE LOGS

Periodic Groundwater Monitoring - MW-4 Purge Log
F&T Darrigo
PVE# 560556

Project Information:		**Pump Information:**	
Operator Name	Anthony Spadavecchia	Pump Model/Type	Peristaltic
Company Name	PVE, LLC	Tubing Type	Polyethylene
Project Name	F&T Darrigo	Tubing Diameter	0.25 [in]
Site Name	560556	Tubing Length	10 [ft]
		Pump Placement from TOC	2 [ft]

Well Information:	
Well ID	MW-4
Well diameter	2 [in]
Well total depth	17 [ft]
Depth to top of screen	7 [ft]
Screen length	10 [ft]
Depth to Water from TOC	4.51 [ft]

Low-Flow Sampling Stabilization Summary

	Time	Temp [C]	pH [pH]	Sp.Cond [mS/cm]	Turb [NTU]	DO [mg/L]	ORP [mV]
Stabilization Settings							
Last 5 Readings	8:58:42 AM	8.2	5.6	0.158	8.99	0.61	71.8
	9:00:12 AM	8.2	5.6	0.158	10.97	0.6	76.6
	9:01:42 AM	8.2	5.6	0.158	15.14	0.58	80.8
	9:03:12 AM	8.2	5.5	0.157	16.66	0.57	84.9
	9:04:42 AM	8.2	5.5	0.157	17.64	0.54	89.3
Variance in last 3 readings (percent)	9:01:42 AM	0.00	0.00	0.00	38.01	3.33	5.48
	9:03:12 AM	0.00	1.79	0.63	10.04	1.72	5.07
	9:04:42 AM	0.00	0.00	0.00	5.88	5.26	5.18

Periodic Groundwater Monitoring - MW-5 Purge Log
F&T Darrigo
PVE# 560556

Project Information:		**Pump Information:**	
Operator Name	Anthony Spadavecchia	Pump Model/Type	Peristaltic
Company Name	PVE, LLC	Tubing Type	Polyethylene
Project Name	F&T Darrigo	Tubing Diameter	0.25 [in]
Site Name	560556	Tubing Length	16.5 [ft]
		Pump Placement from TOC	2 [ft]

Well Information:	
Well ID	MW-5
Well diameter	2 [in]
Well total depth	24.5 [ft]
Depth to top of screen	14.5 [ft]
Screen length	10 [ft]
Depth to Water from TOC	5.63 [ft]

Low-Flow Sampling Stabilization Summary

	Time	Temp [C]	pH [pH]	Sp.Cond [mS/cm]	Turb [NTU]	DO [mg/L]	ORP [mV]
Stabilization Settings							
Last 5 Readings	11:38:13 AM	10.6	7.4	0.613	249.76	9.48	62
	11:39:43 AM	10.6	7.4	0.614	473.55	9.94	64.3
	11:41:13 AM	10.5	7.4	0.614	407.91	10.22	67.4
	11:42:43 AM	10.6	7.4	0.615	322.09	10.2	69.6
	11:44:13 AM	10.6	7.4	0.615	417.31	10.17	71.6
Variance in last 3 readings (percent)	11:41:13 AM	0.94	0.00	0.00	13.86	2.82	4.82
	11:42:43 AM	0.95	0.00	0.16	21.04	0.20	3.26
	11:44:13 AM	0.00	0.00	0.00	29.56	0.29	2.87

Periodic Groundwater Monitoring - MW-6 Purge Log
F&T Darrigo
PVE# 560556

Project Information:		**Pump Information:**	
Operator Name	Anthony Spadavecchia	Pump Model/Type	Peristaltic
Company Name	PVE, LLC	Tubing Type	Polyethylene
Project Name	F&T Darrigo	Tubing Diameter	0.25 [in]
Site Name	560556	Tubing Length	16 [ft]
		Pump Placement from TOC	10 [ft]

Well Information:	
Well ID	MW-6
Well diameter	2 [in]
Well total depth	24 [ft]
Depth to top of screen	14 [ft]
Screen length	10 [ft]
Depth to Water from TOC	2.52 [ft]

Low-Flow Sampling Stabilization Summary

	Time	Temp [C]	pH [pH]	Sp.Cond [mS/cm]	Turb [NTU]	DO [mg/L]	ORP [mV]
Stabilization Settings							
Last 5 Readings	10:56:04 AM	9.8	7.1	0.913	61.73	0.06	-133.7
	10:57:34 AM	9.8	7.1	0.917	16497.16	0.05	-131.3
	10:59:04 AM	9.8	7.1	0.919	16761.33	0.05	-129.2
	11:00:34 AM	9.9	7.1	0.921	3626.49	0.04	-126.9
	11:02:04 AM	9.9	7.1	0.922	107.61	0.03	-124.1
Variance in last 3 readings (percent)	10:59:04 AM	0.00	0.00	0.22	1.60	0.00	1.60
	11:00:34 AM	1.02	0.00	0.22	78.36	20.00	1.78
	11:02:04 AM	0.00	0.00	0.11	97.03	25.00	2.21

ANALYTICAL

Technical Report

prepared for:

PVE, LLC.
48 Springside Avenue
Poughkeepsie NY, 12603
Attention: Conor Tarbell

Report Date: 05/17/2018
Client Project ID: 560556
York Project (SDG) No.: 18E0635

CT Cert. No. PH-0723 New Jersey Cert. No. CT005 and NY037 New York Cert. Nos. 10854 and 12058 PA Cert. No. 68-04440

120 RESEARCH DRIVE STRATFORD, CT 06615 ■ 132-02 89th AVENUE RICHMOND HILL, NY 11418
www.YORKLAB.com (203) 325-1371 FAX (203) 357-0166 ClientServices@yorklab.com

Report Date: 05/17/2018
Client Project ID: 560556
York Project (SDG) No.: 18E0635

PVE, LLC.
48 Springside Avenue
Poughkeepsie NY, 12603
Attention: Conor Tarbell

Purpose and Results

This report contains the analytical data for the sample(s) identified on the attached chain-of-custody received in our laboratory on May 14, 2018 and listed below. The project was identified as your project: **560556**.

The analyses were conducted utilizing appropriate EPA, Standard Methods, and ASTM methods as detailed in the data summary tables.

All samples were received in proper condition meeting the customary acceptance requirements for environmental samples except those indicated under the Sample and Analysis Qualifiers section of this report.

All analyses met the method and laboratory standard operating procedure requirements except as indicated by any data flags, the meaning of which are explained in the Sample and Data Qualifiers Relating to This Work Order section of this report and case narrative if applicable.

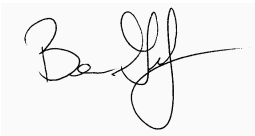
The results of the analyses, which are all reported on dry weight basis (soils) unless otherwise noted, are detailed in the following pages.

Please contact Client Services at 203.325.1371 with any questions regarding this report.

York Sample ID	Client Sample ID	Matrix	Date Collected	Date Received
18E0635-01	MW-4 20180511	Water	05/11/2018	05/14/2018
18E0635-02	MW-6 20180511	Water	05/11/2018	05/14/2018
18E0635-03	MW-5 20180511	Water	05/11/2018	05/14/2018

General Notes for York Project (SDG) No.: 18E0635

1. The RLs and MDLs (Reporting Limit and Method Detection Limit respectively) reported are adjusted for any dilution necessary due to the levels of target and/or non-target analytes and matrix interference. The RL(REPORTING LIMIT) is based upon the lowest standard utilized for the calibration where applicable.
2. Samples are retained for a period of thirty days after submittal of report, unless other arrangements are made.
3. York's liability for the above data is limited to the dollar value paid to York for the referenced project.
4. This report shall not be reproduced without the written approval of York Analytical Laboratories, Inc.
5. All analyses conducted met method or Laboratory SOP requirements. See the Sample and Data Qualifiers Section for further information.
6. It is noted that no analyses reported herein were subcontracted to another laboratory, unless noted in the report.
7. This report reflects results that relate only to the samples submitted on the attached chain-of-custody form(s) received by York.
8. Analyses conducted at York Analytical Laboratories, Inc. Stratford, CT are indicated by NY Cert. No. 10854; those conducted at York Analytical Laboratories, Inc., Richmond Hill, NY are indicated by NY Cert. No. 12058.

Approved By: 

Date: 05/17/2018

Benjamin Gulizia
Laboratory Director

Sample Information

Client Sample ID: **MW-4 20180511**

York Sample ID: **18E0635-01**

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
18E0635	560556	Water	May 11, 2018 9:05 am	05/14/2018

Metals, Target Analyte

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3015A

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7429-90-5	**Aluminum**	**0.087**		mg/L	0.056	1	EPA 6010C	05/16/2018 09:47	05/16/2018 18:04	KML
							Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP			
7440-36-0	**Antimony**	**0.007**	B	mg/L	0.006	1	EPA 6010C	05/16/2018 09:47	05/16/2018 18:04	KML
							Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP			
7440-38-2	Arsenic	ND		mg/L	0.004	1	EPA 6010C	05/16/2018 09:47	05/16/2018 18:04	KML
							Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP			
7440-39-3	**Barium**	**0.011**		mg/L	0.011	1	EPA 6010C	05/16/2018 09:47	05/16/2018 18:04	KML
							Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP			
7440-41-7	Beryllium	ND		mg/L	0.001	1	EPA 6010C	05/16/2018 09:47	05/16/2018 18:04	KML
							Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP			
7440-43-9	Cadmium	ND		mg/L	0.003	1	EPA 6010C	05/16/2018 09:47	05/16/2018 18:04	KML
							Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP			
7440-70-2	**Calcium**	**16.7**		mg/L	0.056	1	EPA 6010C	05/16/2018 09:47	05/16/2018 18:04	KML
							Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP			
7440-47-3	Chromium	ND		mg/L	0.006	1	EPA 6010C	05/16/2018 09:47	05/16/2018 18:04	KML
							Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP			
7440-48-4	Cobalt	ND		mg/L	0.006	1	EPA 6010C	05/16/2018 09:47	05/16/2018 18:04	KML
							Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP			
7440-50-8	**Copper**	**0.004**		mg/L	0.003	1	EPA 6010C	05/16/2018 09:47	05/16/2018 18:04	KML
							Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP			
7439-89-6	**Iron**	**0.083**		mg/L	0.022	1	EPA 6010C	05/16/2018 09:47	05/16/2018 18:04	KML
							Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP			
7439-92-1	Lead	ND		mg/L	0.006	1	EPA 6010C	05/16/2018 09:47	05/16/2018 18:04	KML
							Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP			
7439-95-4	**Magnesium**	**2.85**		mg/L	0.056	1	EPA 6010C	05/16/2018 09:47	05/16/2018 18:04	KML
							Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP			
7439-96-5	Manganese	ND		mg/L	0.006	1	EPA 6010C	05/16/2018 09:47	05/16/2018 18:04	KML
							Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP			
7440-02-0	Nickel	ND		mg/L	0.006	1	EPA 6010C	05/16/2018 09:47	05/16/2018 18:04	KML
							Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP			
7440-09-7	**Potassium**	**0.279**		mg/L	0.056	1	EPA 6010C	05/16/2018 09:47	05/16/2018 18:04	KML
							Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP			
7782-49-2	**Selenium**	**0.028**	B	mg/L	0.011	1	EPA 6010C	05/16/2018 09:47	05/16/2018 18:04	KML
							Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP			
7440-22-4	Silver	ND		mg/L	0.006	1	EPA 6010C	05/16/2018 09:47	05/16/2018 18:04	KML
							Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP			
7440-23-5	**Sodium**	**4.50**	B	mg/L	0.111	1	EPA 6010C	05/16/2018 09:47	05/16/2018 18:04	KML
							Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP			
7440-28-0	Thallium	ND		mg/L	0.006	1	EPA 6010C	05/16/2018 09:47	05/16/2018 18:04	KML
							Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP			
7440-62-2	Vanadium	ND		mg/L	0.011	1	EPA 6010C	05/16/2018 09:47	05/16/2018 18:04	KML
							Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP			
7440-66-6	Zinc	ND		mg/L	0.017	1	EPA 6010C	05/16/2018 09:47	05/16/2018 18:04	KML
							Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP			

Sample Information

Client Sample ID: MW-4 20180511 **York Sample ID:** 18E0635-01

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
18E0635	560556	Water	May 11, 2018 9:05 am	05/14/2018

Mercury by 7473

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 7473 water

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7439-97-6	Mercury	ND		mg/L	0.00020	1	EPA 7473	05/15/2018 09:54	05/15/2018 13:41	SY
							Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP			

Sample Information

Client Sample ID: MW-6 20180511 **York Sample ID:** 18E0635-02

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
18E0635	560556	Water	May 11, 2018 11:05 am	05/14/2018

Metals, Target Analyte

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3015A

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7429-90-5	**Aluminum**	**0.306**		mg/L	0.056	1	EPA 6010C	05/16/2018 09:47	05/16/2018 18:15	KML
							Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP			
7440-36-0	**Antimony**	**0.010**	B	mg/L	0.006	1	EPA 6010C	05/16/2018 09:47	05/16/2018 18:15	KML
							Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP			
7440-38-2	**Arsenic**	**0.012**		mg/L	0.004	1	EPA 6010C	05/16/2018 09:47	05/16/2018 18:15	KML
							Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP			
7440-39-3	**Barium**	**0.082**		mg/L	0.011	1	EPA 6010C	05/16/2018 09:47	05/16/2018 18:15	KML
							Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP			
7440-41-7	Beryllium	ND		mg/L	0.001	1	EPA 6010C	05/16/2018 09:47	05/16/2018 18:15	KML
							Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP			
7440-43-9	Cadmium	ND		mg/L	0.003	1	EPA 6010C	05/16/2018 09:47	05/16/2018 18:15	KML
							Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP			
7440-70-2	**Calcium**	**68.0**		mg/L	0.056	1	EPA 6010C	05/16/2018 09:47	05/16/2018 18:15	KML
							Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP			
7440-47-3	Chromium	ND		mg/L	0.006	1	EPA 6010C	05/16/2018 09:47	05/16/2018 18:15	KML
							Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP			
7440-48-4	Cobalt	ND		mg/L	0.006	1	EPA 6010C	05/16/2018 09:47	05/16/2018 18:15	KML
							Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP			
7440-50-8	**Copper**	**0.007**		mg/L	0.003	1	EPA 6010C	05/16/2018 09:47	05/16/2018 18:15	KML
							Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP			
7439-89-6	**Iron**	**0.394**		mg/L	0.022	1	EPA 6010C	05/16/2018 09:47	05/16/2018 18:15	KML
							Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP			
7439-92-1	Lead	ND		mg/L	0.006	1	EPA 6010C	05/16/2018 09:47	05/16/2018 18:15	KML
							Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP			
7439-95-4	**Magnesium**	**23.8**		mg/L	0.056	1	EPA 6010C	05/16/2018 09:47	05/16/2018 18:15	KML
							Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP			

Sample Information

Client Sample ID: MW-6 20180511 **York Sample ID:** 18E0635-02

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
18E0635	560556	Water	May 11, 2018 11:05 am	05/14/2018

Metals, Target Analyte

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3015A

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7439-96-5	**Manganese**	**0.097**		mg/L	0.006	1	EPA 6010C	05/16/2018 09:47	05/16/2018 18:15	KML
							Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP		
7440-02-0	Nickel	ND		mg/L	0.006	1	EPA 6010C	05/16/2018 09:47	05/16/2018 18:15	KML
							Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP		
7440-09-7	**Potassium**	**2.65**		mg/L	0.056	1	EPA 6010C	05/16/2018 09:47	05/16/2018 18:15	KML
							Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP		
7782-49-2	**Selenium**	**0.065**	B	mg/L	0.011	1	EPA 6010C	05/16/2018 09:47	05/16/2018 18:15	KML
							Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP		
7440-22-4	Silver	ND		mg/L	0.006	1	EPA 6010C	05/16/2018 09:47	05/16/2018 18:15	KML
							Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP		
7440-23-5	**Sodium**	**20.3**	B	mg/L	0.111	1	EPA 6010C	05/16/2018 09:47	05/16/2018 18:15	KML
							Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP		
7440-28-0	Thallium	ND		mg/L	0.006	1	EPA 6010C	05/16/2018 09:47	05/16/2018 18:15	KML
							Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP		
7440-62-2	Vanadium	ND		mg/L	0.011	1	EPA 6010C	05/16/2018 09:47	05/16/2018 18:15	KML
							Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP		
7440-66-6	Zinc	ND		mg/L	0.017	1	EPA 6010C	05/16/2018 09:47	05/16/2018 18:15	KML
							Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP		

Mercury by 7473

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 7473 water

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7439-97-6	Mercury	ND		mg/L	0.00020	1	EPA 7473	05/15/2018 09:54	05/15/2018 13:52	SY
							Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP		

Sample Information

Client Sample ID: MW-5 20180511 **York Sample ID:** 18E0635-03

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
18E0635	560556	Water	May 11, 2018 11:45 am	05/14/2018

Metals, Target Analyte

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3015A

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7429-90-5	Aluminum	ND		mg/L	0.056	1	EPA 6010C	05/16/2018 09:47	05/16/2018 18:17	KML
							Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP		
7440-36-0	Antimony	ND		mg/L	0.006	1	EPA 6010C	05/16/2018 09:47	05/16/2018 18:17	KML
							Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP		

Sample Information

Client Sample ID: MW-5 20180511 **York Sample ID:** 18E0635-03

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
18E0635	560556	Water	May 11, 2018 11:45 am	05/14/2018

Metals, Target Analyte

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3015A

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7440-38-2	**Arsenic**	**0.005**		mg/L	0.004	1	EPA 6010C	05/16/2018 09:47	05/16/2018 18:17	KML
							Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP		
7440-39-3	**Barium**	**0.102**		mg/L	0.011	1	EPA 6010C	05/16/2018 09:47	05/16/2018 18:17	KML
							Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP		
7440-41-7	Beryllium	ND		mg/L	0.001	1	EPA 6010C	05/16/2018 09:47	05/16/2018 18:17	KML
							Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP		
7440-43-9	Cadmium	ND		mg/L	0.003	1	EPA 6010C	05/16/2018 09:47	05/16/2018 18:17	KML
							Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP		
7440-70-2	**Calcium**	**122**		mg/L	0.056	1	EPA 6010C	05/16/2018 09:47	05/16/2018 18:17	KML
							Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP		
7440-47-3	Chromium	ND		mg/L	0.006	1	EPA 6010C	05/16/2018 09:47	05/16/2018 18:17	KML
							Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP		
7440-48-4	Cobalt	ND		mg/L	0.006	1	EPA 6010C	05/16/2018 09:47	05/16/2018 18:17	KML
							Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP		
7440-50-8	**Copper**	**0.005**		mg/L	0.003	1	EPA 6010C	05/16/2018 09:47	05/16/2018 18:17	KML
							Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP		
7439-89-6	**Iron**	**0.545**		mg/L	0.022	1	EPA 6010C	05/16/2018 09:47	05/16/2018 18:17	KML
							Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP		
7439-92-1	Lead	ND		mg/L	0.006	1	EPA 6010C	05/16/2018 09:47	05/16/2018 18:17	KML
							Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP		
7439-95-4	**Magnesium**	**31.8**		mg/L	0.056	1	EPA 6010C	05/16/2018 09:47	05/16/2018 18:17	KML
							Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP		
7439-96-5	**Manganese**	**2.09**		mg/L	0.006	1	EPA 6010C	05/16/2018 09:47	05/16/2018 18:17	KML
							Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP		
7440-02-0	Nickel	ND		mg/L	0.006	1	EPA 6010C	05/16/2018 09:47	05/16/2018 18:17	KML
							Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP		
7440-09-7	**Potassium**	**3.28**		mg/L	0.056	1	EPA 6010C	05/16/2018 09:47	05/16/2018 18:17	KML
							Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP		
7782-49-2	**Selenium**	**0.072**	B	mg/L	0.011	1	EPA 6010C	05/16/2018 09:47	05/16/2018 18:17	KML
							Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP		
7440-22-4	Silver	ND		mg/L	0.006	1	EPA 6010C	05/16/2018 09:47	05/16/2018 18:17	KML
							Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP		
7440-23-5	**Sodium**	**13.4**	B	mg/L	0.111	1	EPA 6010C	05/16/2018 09:47	05/16/2018 18:17	KML
							Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP		
7440-28-0	Thallium	ND		mg/L	0.006	1	EPA 6010C	05/16/2018 09:47	05/16/2018 18:17	KML
							Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP		
7440-62-2	Vanadium	ND		mg/L	0.011	1	EPA 6010C	05/16/2018 09:47	05/16/2018 18:17	KML
							Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP		
7440-66-6	Zinc	ND		mg/L	0.017	1	EPA 6010C	05/16/2018 09:47	05/16/2018 18:17	KML
							Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP		

Mercury by 7473

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 7473 water

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst

Sample Information

Client Sample ID: MW-5 20180511 **York Sample ID:** 18E0635-03

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
18E0635	560556	Water	May 11, 2018 11:45 am	05/14/2018

Mercury by 7473

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 7473 water

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7439-97-6	Mercury	ND		mg/L	0.00020	1	EPA 7473	05/15/2018 09:54	05/15/2018 14:03	SY
							Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP		

Analytical Batch Summary

Batch ID: BE80773 **Preparation Method:** EPA 7473 water **Prepared By:** SY

YORK Sample ID	Client Sample ID	Preparation Date
18E0635-01	MW-4 20180511	05/15/18
18E0635-02	MW-6 20180511	05/15/18
18E0635-03	MW-5 20180511	05/15/18
BE80773-BLK1	Blank	05/15/18
BE80773-SRM1	Reference	05/15/18

Batch ID: BE80846 **Preparation Method:** EPA 3015A **Prepared By:** SY

YORK Sample ID	Client Sample ID	Preparation Date
18E0635-01	MW-4 20180511	05/16/18
18E0635-02	MW-6 20180511	05/16/18
18E0635-03	MW-5 20180511	05/16/18
BE80846-BLK1	Blank	05/16/18
BE80846-BS1	LCS	05/16/18
BE80846-DUP1	Duplicate	05/16/18
BE80846-MS1	Matrix Spike	05/16/18

Metals by ICP - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BE80846 - EPA 3015A											
Blank (BE80846-BLK1)											Prepared & Analyzed: 05/16/2018
Aluminum	ND	0.056	mg/L								
Antimony	0.011	0.006	"								
Arsenic	ND	0.004	"								
Barium	ND	0.011	"								
Beryllium	ND	0.001	"								
Cadmium	ND	0.003	"								
Calcium	ND	0.056	"								
Chromium	ND	0.006	"								
Cobalt	ND	0.006	"								
Copper	ND	0.003	"								
Iron	ND	0.022	"								
Lead	ND	0.006	"								
Magnesium	ND	0.056	"								
Manganese	ND	0.006	"								
Nickel	ND	0.006	"								
Potassium	ND	0.056	"								
Selenium	0.019	0.011	"								
Silver	ND	0.006	"								
Sodium	0.154	0.111	"								
Thallium	ND	0.006	"								
Vanadium	ND	0.011	"								
Zinc	ND	0.017	"								
LCS (BE80846-BS1)											Prepared & Analyzed: 05/16/2018
Aluminum	1.97		ug/mL	2.00		98.7	80-120				
Antimony	0.240		"	0.250		96.1	80-120				
Arsenic	1.83		"	2.00		91.7	80-120				
Barium	2.05		"	2.00		103	80-120				
Beryllium	0.049		"	0.0500		97.7	80-120				
Cadmium	0.049		"	0.0500		98.8	80-120				
Calcium	0.799		"	1.00		79.9	80-120	Low Bias			
Chromium	0.204		"	0.200		102	80-120				
Cobalt	0.526		"	0.500		105	80-120				
Copper	0.258		"	0.250		103	80-120				
Iron	1.05		"	1.00		105	80-120				
Lead	0.498		"	0.500		99.6	80-120				
Magnesium	1.02		"	1.00		102	80-120				
Manganese	0.516		"	0.500		103	80-120				
Nickel	0.512		"	0.500		102	80-120				
Potassium	1.02		"	1.00		102	80-120				
Selenium	1.67		"	2.00		83.4	80-120				
Silver	0.033		"	0.0500		65.7	80-120	Low Bias			
Sodium	1.12		"	1.00		112	80-120				
Thallium	1.90		"	2.00		94.9	80-120				
Vanadium	0.496		"	0.500		99.3	80-120				
Zinc	0.479		"	0.500		95.8	80-120				

Metals by ICP - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BE80846 - EPA 3015A											
Duplicate (BE80846-DUP1)	*Source sample: 18E0635-01 (MW-4 20180511)							Prepared & Analyzed: 05/16/2018			
Aluminum	0.113	0.056	mg/L		0.087				26.5	20	Non-dir.
Antimony	0.011	0.006	"		0.007				48.5	20	Non-dir.
Arsenic	ND	0.004	"		ND					20	
Barium	0.011	0.011	"		0.011				0.493	20	
Beryllium	ND	0.001	"		ND					20	
Cadmium	ND	0.003	"		ND					20	
Calcium	17.3	0.056	"		16.7				3.20	20	
Chromium	ND	0.006	"		ND					20	
Cobalt	ND	0.006	"		ND					20	
Copper	ND	0.003	"		0.004					20	
Iron	0.065	0.022	"		0.083				24.3	20	Non-dir.
Lead	ND	0.006	"		ND					20	
Magnesium	2.94	0.056	"		2.85				3.16	20	
Manganese	ND	0.006	"		ND					20	
Nickel	ND	0.006	"		ND					20	
Potassium	0.174	0.056	"		0.279				46.1	20	Non-dir.
Selenium	0.023	0.011	"		0.028				22.1	20	Non-dir.
Silver	ND	0.006	"		ND					20	
Sodium	4.64	0.111	"		4.50				3.19	20	
Thallium	ND	0.006	"		ND					20	
Vanadium	ND	0.011	"		ND					20	
Zinc	ND	0.017	"		ND					20	
Matrix Spike (BE80846-MS1)	*Source sample: 18E0635-01 (MW-4 20180511)							Prepared & Analyzed: 05/16/2018			
Antimony	0.268	0.006	mg/L	0.278	0.007	94.0	75-125				
Arsenic	2.13	0.004	"	2.22	ND	96.0	75-125				
Barium	2.30	0.011	"	2.22	0.011	103	75-125				
Beryllium	0.056	0.001	"	0.0556	ND	100	75-125				
Cadmium	0.056	0.003	"	0.0556	ND	101	75-125				
Chromium	0.229	0.006	"	0.222	ND	103	75-125				
Cobalt	0.589	0.006	"	0.556	ND	106	75-125				
Copper	0.287	0.003	"	0.278	0.004	102	75-125				
Iron	1.26	0.022	"	1.11	0.083	106	75-125				
Lead	0.560	0.006	"	0.556	ND	101	75-125				
Manganese	0.588	0.006	"	0.556	ND	106	75-125				
Nickel	0.574	0.006	"	0.556	ND	103	75-125				
Selenium	1.94	0.011	"	2.22	0.028	85.9	75-125				
Silver	0.036	0.006	"	0.0556	ND	64.9	75-125	Low Bias			
Thallium	2.01	0.006	"	2.22	ND	90.6	75-125				
Vanadium	0.558	0.011	"	0.556	ND	101	75-125				
Zinc	0.563	0.017	"	0.556	ND	101	75-125				

Mercury by EPA 7000/200 Series Methods - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BE80773 - EPA 7473 water											
Blank (BE80773-BLK1)									Prepared & Analyzed: 05/15/2018		
Mercury	ND	0.00020	mg/L								
Reference (BE80773-SRM1)									Prepared & Analyzed: 05/15/2018		
Mercury	0.00936		mg/L	0.0100		93.6	70-130				

Sample and Data Qualifiers Relating to This Work Order

QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
QL-02	This LCS analyte is outside Laboratory Recovery limits due the analyte behavior using the referenced method. The reference method has certain limitations with respect to analytes of this nature.
M-SRD1	The serial dilution for this element was outside control limits.
M-MBLk	Analyte was detected in the batch method blank above the Reporting Limit.
M-DUPS	The RPD between the native sample and the duplicate is outside of limits due to sample non-homogeneity
M-CRL	The RL check for this element recovered outside of control limits.
B	Analyte is found in the associated analysis batch blank. For volatiles, methylene chloride and acetone are common lab contaminants.

Definitions and Other Explanations

*	Analyte is not certified or the state of the samples origination does not offer certification for the Analyte.
ND	NOT DETECTED - the analyte is not detected at the Reported to level (LOQ/RL or LOD/MDL)
RL	REPORTING LIMIT - the minimum reportable value based upon the lowest point in the analyte calibration curve.
LOQ	LIMIT OF QUANTITATION - the minimum concentration of a target analyte that can be reported within a specified degree of confidence. This is the lowest point in an analyte calibration curve that has been subjected to all steps of the processing/analysis and verified to meet defined criteria. This is based upon NELAC 2009 Standards and applies to all analyses.
LOD	LIMIT OF DETECTION - a verified estimate of the minimum concentration of a substance in a given matrix that an analytical process can reliably detect. This is based upon NELAC 2009 Standards and applies to all analyses conducted under the auspices of EPA SW-846.
MDL	METHOD DETECTION LIMIT - a statistically derived estimate of the minimum amount of a substance an analytical system can reliably detect with a 99% confidence that the concentration of the substance is greater than zero. This is based upon 40 CFR Part 136 Appendix B and applies only to EPA 600 and 200 series methods.
Reported to	This indicates that the data for a particular analysis is reported to either the LOD/MDL, or the LOQ/RL. In cases where the "Reported to" is located above the LOD/MDL, any value between this and the LOQ represents an estimated value which is "J" flagged accordingly. This applies to volatile and semi-volatile target compounds only.
NR	Not reported
RPD	Relative Percent Difference
Wet	The data has been reported on an as-received (wet weight) basis
Low Bias	Low Bias flag indicates that the recovery of the flagged analyte is below the laboratory or regulatory lower control limit. The data user should take note that this analyte may be biased low but should evaluate multiple lines of evidence including the LCS and site-specific MS/MSD data to draw bias conclusions. In cases where no site-specific MS/MSD was requested, only the LCS data can be used to evaluate such bias.
High Bias	High Bias flag indicates that the recovery of the flagged analyte is above the laboratory or regulatory upper control limit. The data user should take note that this analyte may be biased high but should evaluate multiple lines of evidence including the LCS and site-specific MS/MSD data to draw bias conclusions. In cases where no site-specific MS/MSD was requested, only the LCS data can be used to evaluate such bias.
Non-Dir.	Non-dir. flag (Non-Directional Bias) indicates that the Relative Percent Difference (RPD) (a measure of precision) among the MS and MSD data is outside the laboratory or regulatory control limit. This alerts the data user where the MS and MSD are from site-specific samples that the RPD is high due to either non-homogeneous distribution of target analyte between the MS/MSD or indicates poor reproducibility for other reasons.

If EPA SW-846 method 8270 is included herein it is noted that the target compound N-nitrosodiphenylamine (NDPA) decomposes in the gas chromatographic inlet and cannot be separated from diphenylamine (DPA). These results could actually represent 100% DPA, 100% NDPA or some combination of the two. For this reason, York reports the combined result for n-nitrosodiphenylamine and diphenylamine for either of these compounds as a combined concentration as Diphenylamine.

If Total PCBs are detected and the target aroclors reported are "Not detected", the Total PCB value is reported due to the presence of either or both Aroclors 1262 and 1268 which are non-target aroclors for some regulatory lists.

2-chloroethylvinyl ether readily breaks down under acidic conditions. Samples that are acid preserved, including standards will exhibit breakdown. The data user should take note.

Certification for pH is no longer offered by NYDOH ELAP.

Semi-Volatile and Volatile analyses are reported down to the LOD/MDL, with values between the LOD/MDL and the LOQ being "J" flagged as estimated results.

For analyses by EPA SW-846-8270D, the Limit of Quantitation (LOQ) reported for benzidine is based upon the lowest standard used for calibration and is not a verified LOQ due to this compound's propensity for oxidative losses during extraction/concentration procedures and non-reproducible chromatographic performance.

YORK ANALYTICAL LABORATORIES
120 RESEARCH DR.
STRATFORD, CT 06615
(203) 325-1371
FAX (203) 357-0166

Field Chain-of-Custody Record

NOTE: York's Std. Terms & Conditions are listed on the back side of this document. This document serves as your written authorization to York to proceed with the analyses requested and your signature binds you to York's Std. Terms & Conditions.

York Project No. 18E0635

YOUR Information

Company: PVE, LLC
Address: 48 SPRINGTIDE AVE. POUGHKEEPSIE, N.Y. 12603
Phone No. 845-454-2544
Contact Person: ANTHONY SPADAVECCHIA
E-Mail Address: ASPADAVECCHIA@PVE-LLC.COM

Report To:

Company: SAME
Address:
Phone No.
Attention: CONOR TARBELL
E-Mail Address: CTARBELL@PVE-LLC.COM

Invoice To:

Company: SAME
Address:
Phone No.
Attention: TARA ALVARADO
E-Mail Address: TALVARADO@PVE-LLC.COM

YOUR Project ID

560556

Purchase Order No.

Samples from: CT ___ NY X NJ ___

Turn-Around Time

- RUSH - Same Day ☐
- RUSH - Next Day ☐
- RUSH - Two Day ☐
- RUSH - Three Day ☐
- RUSH - Four Day ☐
- Standard(5-7 Days) ☒

Report Type

- Summary Report X
- Summary w/ QA Summary
- CT RCP Package
- CTRCP DQA/DUE Pkg
- NY ASP A Package
- NY ASP B Package X
- NJDEP Red. Deliv.

Electronic Data Deliverables (EDD)

- Simple Excel
- NYSDEC EQuIS X
- EQuIS (std)
- EZ-EDD (EQuIS)
- NJDEP SRP HazSite EDD
- GIS/KEY (std)
- Other

York Regulatory Comparison Excel Spreadsheet
Compare to the following Regs. (please fill in):

Print Clearly and Legibly. All Information must be complete. Samples will NOT be logged in and the turn-around time clock will not begin until any questions by York are resolved.

Samples Collected/Authorized By (Signature)
ANTHONY J. SPADAVECCHIA
Name (printed)

Matrix Codes
S - soil
Other - specify(oil, etc.)
WW - wastewater
GW - groundwater
DW - drinking water
Air-A - ambient air
Air-SV - soil vapor

Volatiles		Semi-Vols.	Pest/PCB/Herb	Metals	Misc. Org.	Full Lists	Misc.
8260 full	TICs	8270 or 625	8082PCB	RCRA8	TPH GRO	Pri.Poll.	Corrosivity
624	Site Spec.	STARS list	8081Pest	PP13 list	TPH DRO	TCL Organics	Reactivity
STARS list	Nassau Co.	BN Only	8151Herb	TAL	CT ETPH	TAL Met/CN	Ignitability
BTEX	Suffolk Co.	Acids Only	CT RCP	CT15 list	NY 310-13	Full TCLP	Flash Point
MTBE	Ketones	PAH list	App. IX	TAGM list	TPH 1664	Full App. IX	Sieve Anal.
TCL list	Oxygenates	TAGM list	Site Spec.	NJDEP list	Air TO14A	Part 360-Routine	Heterotrophs
TAGM list	TCLP list	CT RCP list	SPLP or TCLP	Total	Air TO15	Part 360-Baseline	TOX
CT RCP list	524.2	TCL list	TCLP Pest	Dissolved	Air STARS	Part 360-Expanded No Dioxins Furans	BTU/lb.
Arom. only	502.2	NJDEP list	TCLP Herb	SPLP or TCLP	Air VPH	Part 360-Expanded Full List	Aquatic Tox.
Halog.only	NJDEP list	App. IX	Chlordane	Indiv. Metals	Air TICs	NYCDEP Sewer	TOC
App.IX list	SPLP or TCLP	TCLP BNA	608 Pest	LIST Below	Methane	NYSDEC Sewer	Asbestos
8021B list		SPLP or TCLP	608 PCB		Helium	TAGM	Silica

Sample Identification	Date/Time Sampled	Sample Matrix	Choose Analyses Needed from the Menu Above and Enter Below	Container Description(s)
MW-4 20180511	5-11-2018/0905	GW	TAL METALS	250 mL NITRIC ACID
MW-6 20180511	5-11-2018/1105	GW		
MW-5 20180511	5-11-2018/1145	GW		

Comments

Preservation Check those Applicable
Special Instructions
Field Filtered ☐
Lab to Filter ☐

4°C ___ Frozen ___ HCl ___ MeOH ___ HNO_3 ___ H_2SO_4 ___ NaOH ___
ZnAc ___ Ascorbic Acid ___ Other ___

Samples Relinquished By	Date/Time	Samples Received By	Date/Time
	5/14/18 10:00		5-14-18 10:00
	5-14-18 1522		5/14/18 1522

Samples Received in LAB by

Temperature on Receipt 3.3 °C

Table of Contents for York SDG 18E0635

Technical Report

prepared for:

PVE, LLC.
48 Springside Avenue
Poughkeepsie NY, 12603
Attention: Conor Tarbell

Report Date: 06/11/2018
Client Project ID: 560556
York Project (SDG) No.: 18E0635

CT Cert. No. PH-0723 New Jersey Cert. No. CT005 and NY037 New York Cert. Nos. 10854 and 12058 PA Cert. No. 68-04440

120 RESEARCH DRIVE STRATFORD, CT 06615 ■ 132-02 89th AVENUE RICHMOND HILL, NY 11418
www.YORKLAB.com (203) 325-1371 FAX (203) 357-0166 ClientServices@yorklab.com

Report Date: 06/11/2018
Client Project ID: 560556
York Project (SDG) No.: 18E0635

PVE, LLC.
48 Springside Avenue
Poughkeepsie NY, 12603
Attention: Conor Tarbell

Purpose and Results

This report contains the analytical data for the sample(s) identified on the attached chain-of-custody received in our laboratory on May 14, 2018 and listed below. The project was identified as your project: **560556**.

The analyses were conducted utilizing appropriate EPA, Standard Methods, and ASTM methods as detailed in the data summary tables.

All samples were received in proper condition meeting the customary acceptance requirements for environmental samples except those indicated under the Sample and Analysis Qualifiers section of this report.

All analyses met the method and laboratory standard operating procedure requirements except as indicated by any data flags, the meaning of which are explained in the Sample and Data Qualifiers Relating to This Work Order section of this report and case narrative if applicable.

The results of the analyses, which are all reported on dry weight basis (soils) unless otherwise noted, are detailed in the following pages.

Please contact Client Services at 203.325.1371 with any questions regarding this report.

York Sample ID	Client Sample ID	Matrix	Date Collected	Date Received
18E0635-01	MW-4 20180511	Water	05/11/2018	05/14/2018
18E0635-02	MW-6 20180511	Water	05/11/2018	05/14/2018
18E0635-03	MW-5 20180511	Water	05/11/2018	05/14/2018

General Notes for York Project (SDG) No.: 18E0635

1. The RLs and MDLs (Reporting Limit and Method Detection Limit respectively) reported are adjusted for any dilution necessary due to the levels of target and/or non-target analytes and matrix interference. The RL(REPORTING LIMIT) is based upon the lowest standard utilized for the calibration where applicable.
2. Samples are retained for a period of thirty days after submittal of report, unless other arrangements are made.
3. York's liability for the above data is limited to the dollar value paid to York for the referenced project.
4. This report shall not be reproduced without the written approval of York Analytical Laboratories, Inc.
5. All analyses conducted met method or Laboratory SOP requirements. See the Sample and Data Qualifiers Section for further information.
6. It is noted that no analyses reported herein were subcontracted to another laboratory, unless noted in the report.
7. This report reflects results that relate only to the samples submitted on the attached chain-of-custody form(s) received by York.
8. Analyses conducted at York Analytical Laboratories, Inc. Stratford, CT are indicated by NY Cert. No. 10854; those conducted at York Analytical Laboratories, Inc., Richmond Hill, NY are indicated by NY Cert. No. 12058.

Approved By: 

Date: 06/11/2018

Benjamin Gulizia
Laboratory Director

Sample Information

Client Sample ID: MW-4 20180511 **York Sample ID:** 18E0635-01

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
18E0635	560556	Water	May 11, 2018 9:05 am	05/14/2018

Metals, Target Analyte

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3015A

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7429-90-5	Aluminum	ND		mg/L	0.056	1	EPA 6010C	05/21/2018 18:24	05/22/2018 12:17	BML
						Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP			
7440-36-0	**Antimony**	**0.018**		mg/L	0.006	1	EPA 6010C	05/21/2018 18:24	05/22/2018 12:17	BML
						Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP			
7440-38-2	Arsenic	ND		mg/L	0.011	1	EPA 6010C	05/21/2018 18:24	05/22/2018 12:17	BML
						Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP			
7440-39-3	**Barium**	**0.119**		mg/L	0.011	1	EPA 6010C	05/21/2018 18:24	05/22/2018 12:17	BML
						Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP			
7440-41-7	Beryllium	ND		mg/L	0.001	1	EPA 6010C	05/21/2018 18:24	05/22/2018 12:17	BML
						Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP			
7440-43-9	Cadmium	ND		mg/L	0.003	1	EPA 6010C	05/21/2018 18:24	05/22/2018 12:17	BML
						Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP			
7440-70-2	**Calcium**	**19.3**		mg/L	0.056	1	EPA 6010C	05/21/2018 18:24	05/22/2018 12:17	BML
						Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP			
7440-47-3	Chromium	ND		mg/L	0.006	1	EPA 6010C	05/21/2018 18:24	05/22/2018 12:17	BML
						Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP			
7440-48-4	Cobalt	ND		mg/L	0.006	1	EPA 6010C	05/21/2018 18:24	05/22/2018 12:17	BML
						Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP			
7440-50-8	**Copper**	**0.005**		mg/L	0.003	1	EPA 6010C	05/21/2018 18:24	05/22/2018 12:17	BML
						Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP			
7439-89-6	**Iron**	**0.081**		mg/L	0.022	1	EPA 6010C	05/21/2018 18:24	05/22/2018 12:17	BML
						Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP			
7439-92-1	Lead	ND		mg/L	0.006	1	EPA 6010C	05/21/2018 18:24	05/22/2018 12:17	BML
						Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP			
7439-95-4	**Magnesium**	**3.18**		mg/L	0.056	1	EPA 6010C	05/21/2018 18:24	05/22/2018 12:17	BML
						Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP			
7439-96-5	**Manganese**	**0.007**		mg/L	0.006	1	EPA 6010C	05/21/2018 18:24	05/22/2018 12:17	BML
						Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP			
7440-02-0	Nickel	ND		mg/L	0.006	1	EPA 6010C	05/21/2018 18:24	05/22/2018 12:17	BML
						Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP			
7440-09-7	**Potassium**	**0.277**		mg/L	0.056	1	EPA 6010C	05/21/2018 18:24	05/22/2018 12:17	BML
						Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP			
7782-49-2	**Selenium**	**0.011**		mg/L	0.011	1	EPA 6010C	05/21/2018 18:24	05/22/2018 12:17	BML
						Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP			
7440-22-4	Silver	ND		mg/L	0.006	1	EPA 6010C	05/21/2018 18:24	05/22/2018 12:17	BML
						Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP			
7440-23-5	**Sodium**	**4.70**	B	mg/L	0.111	1	EPA 6010C	05/21/2018 18:24	05/22/2018 12:17	BML
						Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP			
7440-28-0	Thallium	ND		mg/L	0.006	1	EPA 6010C	05/21/2018 18:24	05/22/2018 12:17	BML
						Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP			
7440-62-2	Vanadium	ND		mg/L	0.011	1	EPA 6010C	05/21/2018 18:24	05/22/2018 12:17	BML
						Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP			
7440-66-6	Zinc	ND		mg/L	0.017	1	EPA 6010C	05/21/2018 18:24	05/22/2018 12:17	BML
						Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP			

Sample Information

Client Sample ID: MW-4 20180511 **York Sample ID:** 18E0635-01

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
18E0635	560556	Water	May 11, 2018 9:05 am	05/14/2018

Mercury by 7473

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 7473 water

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7439-97-6	Mercury	ND		mg/L	0.00020	1	EPA 7473	05/15/2018 09:54	05/15/2018 13:41	SY
						Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP			

Sample Information

Client Sample ID: MW-6 20180511 **York Sample ID:** 18E0635-02

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
18E0635	560556	Water	May 11, 2018 11:05 am	05/14/2018

Metals, Target Analyte

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3015A

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7429-90-5	**Aluminum**	**0.302**		mg/L	0.056	1	EPA 6010C	05/21/2018 18:24	05/22/2018 12:24	BML
						Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP			
7440-36-0	**Antimony**	**0.010**		mg/L	0.006	1	EPA 6010C	05/21/2018 18:24	05/22/2018 12:24	BML
						Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP			
7440-38-2	Arsenic	ND		mg/L	0.011	1	EPA 6010C	05/21/2018 18:24	05/22/2018 12:24	BML
						Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP			
7440-39-3	**Barium**	**0.082**		mg/L	0.011	1	EPA 6010C	05/21/2018 18:24	05/22/2018 12:24	BML
						Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP			
7440-41-7	Beryllium	ND		mg/L	0.001	1	EPA 6010C	05/21/2018 18:24	05/22/2018 12:24	BML
						Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP			
7440-43-9	Cadmium	ND		mg/L	0.003	1	EPA 6010C	05/21/2018 18:24	05/22/2018 12:24	BML
						Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP			
7440-70-2	**Calcium**	**68.7**		mg/L	0.056	1	EPA 6010C	05/21/2018 18:24	05/22/2018 12:24	BML
						Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP			
7440-47-3	Chromium	ND		mg/L	0.006	1	EPA 6010C	05/21/2018 18:24	05/22/2018 12:24	BML
						Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP			
7440-48-4	Cobalt	ND		mg/L	0.006	1	EPA 6010C	05/21/2018 18:24	05/22/2018 12:24	BML
						Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP			
7440-50-8	**Copper**	**0.006**		mg/L	0.003	1	EPA 6010C	05/21/2018 18:24	05/22/2018 12:24	BML
						Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP			
7439-89-6	**Iron**	**0.530**		mg/L	0.022	1	EPA 6010C	05/21/2018 18:24	05/22/2018 12:24	BML
						Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP			
7439-92-1	Lead	ND		mg/L	0.006	1	EPA 6010C	05/21/2018 18:24	05/22/2018 12:24	BML
						Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP			
7439-95-4	**Magnesium**	**23.5**		mg/L	0.056	1	EPA 6010C	05/21/2018 18:24	05/22/2018 12:24	BML
						Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP			
7439-96-5	**Manganese**	**0.098**		mg/L	0.006	1	EPA 6010C	05/21/2018 18:24	05/22/2018 12:24	BML
						Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP			
7440-02-0	Nickel	ND		mg/L	0.006	1	EPA 6010C	05/21/2018 18:24	05/22/2018 12:24	BML
						Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP			

Sample Information

Client Sample ID: MW-6 20180511 **York Sample ID:** 18E0635-02

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
18E0635	560556	Water	May 11, 2018 11:05 am	05/14/2018

Metals, Target Analyte

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3015A

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7440-09-7	**Potassium**	**2.55**		mg/L	0.056	1	EPA 6010C	05/21/2018 18:24	05/22/2018 12:24	BML
						Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP			
7782-49-2	**Selenium**	**0.041**		mg/L	0.011	1	EPA 6010C	05/21/2018 18:24	05/22/2018 12:24	BML
						Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP			
7440-22-4	Silver	ND		mg/L	0.006	1	EPA 6010C	05/21/2018 18:24	05/22/2018 12:24	BML
						Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP			
7440-23-5	**Sodium**	**20.3**	B	mg/L	0.111	1	EPA 6010C	05/21/2018 18:24	05/22/2018 12:24	BML
						Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP			
7440-28-0	Thallium	ND		mg/L	0.006	1	EPA 6010C	05/21/2018 18:24	05/22/2018 12:24	BML
						Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP			
7440-62-2	Vanadium	ND		mg/L	0.011	1	EPA 6010C	05/21/2018 18:24	05/22/2018 12:24	BML
						Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP			
7440-66-6	Zinc	ND		mg/L	0.017	1	EPA 6010C	05/21/2018 18:24	05/22/2018 12:24	BML
						Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP			

Mercury by 7473

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 7473 water

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7439-97-6	Mercury	ND		mg/L	0.00020	1	EPA 7473	05/15/2018 09:54	05/15/2018 13:52	SY
						Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP			

Sample Information

Client Sample ID: MW-5 20180511 **York Sample ID:** 18E0635-03

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
18E0635	560556	Water	May 11, 2018 11:45 am	05/14/2018

Metals, Target Analyte

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3015A

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7429-90-5	Aluminum	ND		mg/L	0.056	1	EPA 6010C	05/21/2018 18:24	05/22/2018 12:26	BML
						Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP			
7440-36-0	**Antimony**	**0.011**		mg/L	0.006	1	EPA 6010C	05/21/2018 18:24	05/22/2018 12:26	BML
						Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP			
7440-38-2	Arsenic	ND		mg/L	0.011	1	EPA 6010C	05/21/2018 18:24	05/22/2018 12:26	BML
						Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP			
7440-39-3	**Barium**	**0.105**		mg/L	0.011	1	EPA 6010C	05/21/2018 18:24	05/22/2018 12:26	BML
						Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP			
7440-41-7	Beryllium	ND		mg/L	0.001	1	EPA 6010C	05/21/2018 18:24	05/22/2018 12:26	BML
						Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP			

Sample Information

Client Sample ID: MW-5 20180511 **York Sample ID:** 18E0635-03

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
18E0635	560556	Water	May 11, 2018 11:45 am	05/14/2018

Metals, Target Analyte

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3015A

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7440-43-9	Cadmium	ND		mg/L	0.003	1	EPA 6010C	05/21/2018 18:24	05/22/2018 12:26	BML
						Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP			
7440-70-2	**Calcium**	**125**		mg/L	0.056	1	EPA 6010C	05/21/2018 18:24	05/22/2018 12:26	BML
						Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP			
7440-47-3	Chromium	ND		mg/L	0.006	1	EPA 6010C	05/21/2018 18:24	05/22/2018 12:26	BML
						Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP			
7440-48-4	Cobalt	ND		mg/L	0.006	1	EPA 6010C	05/21/2018 18:24	05/22/2018 12:26	BML
						Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP			
7440-50-8	**Copper**	**0.005**		mg/L	0.003	1	EPA 6010C	05/21/2018 18:24	05/22/2018 12:26	BML
						Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP			
7439-89-6	**Iron**	**0.551**		mg/L	0.022	1	EPA 6010C	05/21/2018 18:24	05/22/2018 12:26	BML
						Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP			
7439-92-1	Lead	ND		mg/L	0.006	1	EPA 6010C	05/21/2018 18:24	05/22/2018 12:26	BML
						Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP			
7439-95-4	**Magnesium**	**31.7**		mg/L	0.056	1	EPA 6010C	05/21/2018 18:24	05/22/2018 12:26	BML
						Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP			
7439-96-5	**Manganese**	**2.15**		mg/L	0.006	1	EPA 6010C	05/21/2018 18:24	05/22/2018 12:26	BML
						Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP			
7440-02-0	Nickel	ND		mg/L	0.006	1	EPA 6010C	05/21/2018 18:24	05/22/2018 12:26	BML
						Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP			
7440-09-7	**Potassium**	**3.11**		mg/L	0.056	1	EPA 6010C	05/21/2018 18:24	05/22/2018 12:26	BML
						Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP			
7782-49-2	**Selenium**	**0.062**		mg/L	0.011	1	EPA 6010C	05/21/2018 18:24	05/22/2018 12:26	BML
						Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP			
7440-22-4	Silver	ND		mg/L	0.006	1	EPA 6010C	05/21/2018 18:24	05/22/2018 12:26	BML
						Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP			
7440-23-5	**Sodium**	**13.5**	B	mg/L	0.111	1	EPA 6010C	05/21/2018 18:24	05/22/2018 12:26	BML
						Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP			
7440-28-0	Thallium	ND		mg/L	0.006	1	EPA 6010C	05/21/2018 18:24	05/22/2018 12:26	BML
						Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP			
7440-62-2	Vanadium	ND		mg/L	0.011	1	EPA 6010C	05/21/2018 18:24	05/22/2018 12:26	BML
						Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP			
7440-66-6	Zinc	ND		mg/L	0.017	1	EPA 6010C	05/21/2018 18:24	05/22/2018 12:26	BML
						Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP			

Mercury by 7473

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 7473 water

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7439-97-6	Mercury	ND		mg/L	0.00020	1	EPA 7473	05/15/2018 09:54	05/15/2018 14:03	SY
						Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP			

Case Narrative

Client: PVE, LLC.
Client Project ID: 560556
Prepared for: Conor Tarbell

Introduction

This Case Narrative applies only to the samples submitted to our laboratory on **05/14/2018 15:22** as detailed on the chain-of-custody form.

The 3 sample(s) were received intact in a custody-sealed cooler unless otherwise noted. Upon receipt, cooler temperature(s) was determined using a NIST traceable digital infrared thermometer. The cooler temperature was acceptable (≤ 6°C) and documented as:

Cooler	Temp C°
Default Cooler	**3.3**

Chain-of-custody was maintained from receipt through analysis in the laboratory.

Methodology

All preparation and analyses were conducted according to the appropriate EPA methods detailed in the report.

Sample and Analysis Qualifiers

Sample Name	Matrix
MW-4 20180511	Water
MW-5 20180511	Water
MW-6 20180511	Water

QC Sample Non-Conformances

Any QC sample non-conformances (CCV, LCS, DUP, MS) are detailed in the data package and in the attached tables.

No other problems were encountered during analysis.

York Project/SDG no.: 18E0635 Statement

We certify that these data are in compliance with SOP requirements both technically and for completeness for other than the conditions stated above. Release of the data contained in the hard copy report and any electronic deliverables has been authorized by the Laboratory Manager as verified by the signature on this laboratory report.

Approved by: *Ben Gulizia*
Laboratory Director

Date: 06/11/2018

York Analytical Laboratories, Inc.

Formulae Used for Sample Calculations

VOLATILE ORGANICS

1. Volatiles in Air-ppbv

Cx (ppbv) = Compound concentration, ppbv (parts per billion by volume)

$$Cx = \frac{(Ax)(Cis)(DF)}{(Ais)(RRF)}$$

2. Volatiles in Air-ug/m³

Cx (ug/m³)= Compound concentration in ug/m³

$$Cx\ (ug/m^3) = \frac{(ppbv \times Molecular\ wt.)}{(24.040)}$$

3. Volatile Organics (water and soil), ug/L or ug/kg

Soils/Waters

$$Cx = \frac{(Ax)(IS)(DF)}{(Ais)(RRF)(V)(\%\ solids)}$$

Medium Level Soils

$$Cx = \frac{(Ax)(IS)(VT)(1000)(DF)}{(Ais)(RRF)(VA)(V)(\%\ solids)}$$

4. Semi-Volatiles (waters and soils)

$$Cx = \frac{(Ax)(IS)(VE)(DF)}{(Ais)(RRF)(Volume\ injected,\ uL)(V)(\%\ solids)}$$

5. Pesticides/PCB (waters and soils), DRO, CTETPH

$$Cx = \frac{(Ax)(VE)(DF)}{(CF)(Volume\ injected,\ uL)(V)(\%\ solids)}$$

WHERE:

Cx = concentration of analyte as ug/L or ug/kg
Ax = Area of the characteristic ion for the compound to be measured, counts.
Ais = Area of the characteristic ion for the specific internal standard, counts.
IS = Concentration of the internal standard spiking mixture, ng
RRF = Mean relative response factor from the initial calibration.
DF = Dilution factor calculated as described in section 2. If no dilution is performed, DF= 1
V = Volume for liquids in mL, weight for soils/solids in grams.
VA = volume of MeOH aliquot for medium level soils
VE = final volume of concentrated extract
VT = volume of MeOH for volatiles medium level soils

CF = calibration factor for external calibration used in GC pest/pcb
Cis = Concentration of the internal standard spiking mixture, ppbv

Case Narrative Non-Conformance Summary

Laboratory:	York Analytical Laboratories, Inc.	Client:	PVE, LLC.
Project:	560556	Lab Project No:	18E0635
Laboratory Sample ID(s):	18E0635-01 - 18E0635-03RE1	Sampling Date(s):	05/11/2018 - 05/11/2018
Review Date(s):	06/11/2018 - 06/11/2018	Laboratory Reviewer(s):	SBW

QC Sample Nonconformances

Batch ID: BE81107 **Affected Samples:** **See Batch Summary**

QC Sample ID	Analyte - CAS No.	Result	Type of QC Nonconformance	%REC	%REC Limits	Bias	RPD	RPD Limit	Bias	Notes
BE81107-BLK1	Sodium - 7440-23-5	0.220 mg/L	Blank		-					
BE81107-BS1	Potassium - 7440-09-7	0.833 ug/mL	LCS	167	80-120	High Bias				
BE81107-DUP1	Barium - 7440-39-3	0.012 mg/L	Duplicate (MW-4 20180511)		-		163	20	Non-dir.	
BE81107-DUP1	Potassium - 7440-09-7	0.198 mg/L	Duplicate (MW-4 20180511)		-		33.4	20	Non-dir.	

Batch ID: Y8E2221 **Affected Samples:** **See Batch Summary**

QC Sample ID	Analyte - CAS No.	Result	Type of QC Nonconformance	%REC	%REC Limits	Bias	RPD	RPD Limit	Bias	Notes
Y8E2221-ICV1	Selenium - 7782-49-2	0.276 ug/mL	Initial Cal Check	110	90-110	High Bias				
Y8E2221-SRD1	Iron - 7439-89-6	0.159 mg/L	Serial Dilution (MW-4 20180511)		-		95.3	10	Non-dir.	

Batch ID: Y8F1123 **Affected Samples:** **See Batch Summary**

QC Sample ID	Analyte - CAS No.	Result	Type of QC Nonconformance	%REC	%REC Limits	Bias	RPD	RPD Limit	Bias	Notes
Y8F1123-CCVB	Aluminum - 7429-90-5	11.1 ug/mL	Calibration Check	111	90-110	High Bias				
Y8F1123-ICV1	Selenium - 7782-49-2	0.276 ug/mL	Initial Cal Check	110	90-110	High Bias				

Batch ID: BE81107 **General Method:** Metals by ICP

YORK Sample ID	Client Sample ID
18E0635-01RE1	MW-4 20180511
18E0635-02RE1	MW-6 20180511
18E0635-03RE1	MW-5 20180511
BE81107-BLK1	Blank
BE81107-BS1	LCS
BE81107-DUP1	Duplicate
BE81107-MS1	Matrix Spike

No Sample Nonconformances Found

Notes: Other nonconformances, if any, are detailed in the Data Quality Assessment worksheets.

For multiple surrogate analyses such as semi-volatiles, volatiles, etc, single surrogate excursions do not necessarily indicate a bias in the sample. Samples with multiple surrogate excursions may exhibit a bias in the results.

Definitions:
LCS - Laboratory Control Sample
LCS dup - Laboratory Control Sample Duplicate
MS - Matrix Spike
MSD - Matrix Spike Duplicate
BS - Blank Spike also called LCS
BSD - Blank Spike Duplicate also called LCS dup
SRM - Standard Reference Material
DUP - Duplicate

Analytical Batch Summary

Batch ID: BE80773 **Preparation Method:** EPA 7473 water **Prepared By:** SY

YORK Sample ID	Client Sample ID	Preparation Date
18E0635-01	MW-4 20180511	05/15/18
18E0635-02	MW-6 20180511	05/15/18
18E0635-03	MW-5 20180511	05/15/18
BE80773-BLK1	Blank	05/15/18
BE80773-SRM1	Reference	05/15/18

Batch ID: BE80846 **Preparation Method:** EPA 3015A **Prepared By:** SY

YORK Sample ID	Client Sample ID	Preparation Date
18E0635-01	MW-4 20180511	05/16/18
18E0635-02	MW-6 20180511	05/16/18
18E0635-03	MW-5 20180511	05/16/18

Batch ID: BE81107 **Preparation Method:** EPA 3015A **Prepared By:** SY

YORK Sample ID	Client Sample ID	Preparation Date
18E0635-01RE1	MW-4 20180511	05/21/18
18E0635-02RE1	MW-6 20180511	05/21/18
18E0635-03RE1	MW-5 20180511	05/21/18
BE81107-BLK1	Blank	05/21/18
BE81107-BS1	LCS	05/21/18
BE81107-DUP1	Duplicate	05/21/18
BE81107-MS1	Matrix Spike	05/21/18

Metals by ICP - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BE81107 - EPA 3015A											
Blank (BE81107-BLK1)											Prepared: 05/21/2018 Analyzed: 05/22/2018
Aluminum	ND	0.056	mg/L								
Antimony	ND	0.006	"								
Arsenic	ND	0.011	"								
Barium	ND	0.011	"								
Beryllium	ND	0.001	"								
Cadmium	ND	0.003	"								
Calcium	ND	0.056	"								
Chromium	ND	0.006	"								
Cobalt	ND	0.006	"								
Copper	ND	0.003	"								
Iron	ND	0.022	"								
Lead	ND	0.006	"								
Magnesium	ND	0.056	"								
Manganese	ND	0.006	"								
Nickel	ND	0.006	"								
Potassium	ND	0.056	"								
Selenium	ND	0.011	"								
Silver	ND	0.006	"								
Sodium	0.220	0.111	"								
Thallium	ND	0.006	"								
Vanadium	ND	0.011	"								
Zinc	ND	0.017	"								
LCS (BE81107-BS1)											Prepared: 05/21/2018 Analyzed: 05/22/2018
Aluminum	2.13		ug/mL	2.00		107	80-120				
Antimony	0.267		"	0.250		107	80-120				
Arsenic	1.91		"	2.00		95.5	80-120				
Barium	2.12		"	2.00		106	80-120				
Beryllium	0.052		"	0.0500		103	80-120				
Cadmium	0.050		"	0.0500		99.7	80-120				
Calcium	0.953		"	1.00		95.3	80-120				
Chromium	0.212		"	0.200		106	80-120				
Cobalt	0.531		"	0.500		106	80-120				
Copper	0.269		"	0.250		108	80-120				
Iron	1.05		"	1.00		105	80-120				
Lead	0.498		"	0.500		99.6	80-120				
Magnesium	1.06		"	1.00		106	80-120				
Manganese	0.533		"	0.500		107	80-120				
Nickel	0.518		"	0.500		104	80-120				
Potassium	0.833		"	0.500		167	80-120	High Bias			
Selenium	1.77		"	2.00		88.5	80-120				
Silver	0.056		"	0.0500		112	80-120				
Sodium	1.04		"	1.00		104	80-120				
Thallium	2.08		"	2.00		104	80-120				
Vanadium	0.521		"	0.500		104	80-120				
Zinc	0.493		"	0.500		98.6	80-120				

Metals by ICP - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BE81107 - EPA 3015A											
Duplicate (BE81107-DUP1)	*Source sample: 18E0635-01RE1 (MW-4 20180511)								Prepared: 05/21/2018 Analyzed: 05/22/2018		
Aluminum	ND	0.056	mg/L		ND					20	
Antimony	0.019	0.006	"		0.018				3.37	20	
Arsenic	ND	0.011	"		ND					20	
Barium	0.012	0.011	"		0.119				163	20	Non-dir.
Beryllium	ND	0.001	"		ND					20	
Cadmium	ND	0.003	"		ND					20	
Calcium	19.1	0.056	"		19.3				0.907	20	
Chromium	ND	0.006	"		ND					20	
Cobalt	ND	0.006	"		ND					20	
Copper	ND	0.003	"		0.005					20	
Iron	0.094	0.022	"		0.081				14.7	20	
Lead	ND	0.006	"		ND					20	
Magnesium	3.15	0.056	"		3.18				0.970	20	
Manganese	ND	0.006	"		0.007					20	
Nickel	ND	0.006	"		ND					20	
Potassium	0.198	0.056	"		0.277				33.4	20	Non-dir.
Selenium	0.012	0.011	"		0.011				9.42	20	
Silver	ND	0.006	"		ND					20	
Sodium	4.70	0.111	"		4.70				0.0695	20	
Thallium	ND	0.006	"		ND					20	
Vanadium	ND	0.011	"		ND					20	
Zinc	ND	0.017	"		ND					20	
Matrix Spike (BE81107-MS1)	*Source sample: 18E0635-01RE1 (MW-4 20180511)								Prepared: 05/21/2018 Analyzed: 05/22/2018		
Antimony	0.288	0.006	mg/L	0.278	0.018	97.2	75-125				
Arsenic	2.10	0.011	"	2.22	ND	94.3	75-125				
Barium	2.32	0.011	"	2.22	0.119	99.2	75-125				
Beryllium	0.057	0.001	"	0.0556	ND	102	75-125				
Cadmium	0.055	0.003	"	0.0556	ND	98.8	75-125				
Chromium	0.241	0.006	"	0.222	ND	108	75-125				
Cobalt	0.586	0.006	"	0.556	ND	106	75-125				
Copper	0.297	0.003	"	0.278	0.005	105	75-125				
Iron	1.22	0.022	"	1.11	0.081	102	75-125				
Lead	0.545	0.006	"	0.556	ND	98.2	75-125				
Manganese	0.593	0.006	"	0.556	0.007	106	75-125				
Nickel	0.574	0.006	"	0.556	ND	103	75-125				
Selenium	1.90	0.011	"	2.22	0.011	85.1	75-125				
Silver	0.063	0.006	"	0.0556	ND	113	75-125				
Thallium	2.22	0.006	"	2.22	ND	99.7	75-125				
Vanadium	0.573	0.011	"	0.556	ND	103	75-125				
Zinc	0.553	0.017	"	0.556	ND	99.5	75-125				

Mercury by EPA 7000/200 Series Methods - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BE80773 - EPA 7473 water											
Blank (BE80773-BLK1)									Prepared & Analyzed: 05/15/2018		
Mercury	ND	0.00020	mg/L								
Reference (BE80773-SRM1)									Prepared & Analyzed: 05/15/2018		
Mercury	0.00936		mg/L	0.0100		93.6	70-130				

Sample and Data Qualifiers Relating to This Work Order

M-MBLk	Analyte was detected in the batch method blank above the Reporting Limit.
M-ICV	The recovery for this element in the ICV was outside the 95-105% Recovery criteria for EPA 200.7
M-CRL	The RL check for this element recovered outside of control limits.
B	Analyte is found in the associated analysis batch blank. For volatiles, methylene chloride and acetone are common lab contaminants.
-	The reporting limits have been elevated due to a reduction in the amount of sample used during preparation.

Definitions and Other Explanations

*	Analyte is not certified or the state of the samples origination does not offer certification for the Analyte.
ND	NOT DETECTED - the analyte is not detected at the Reported to level (LOQ/RL or LOD/MDL)
RL	REPORTING LIMIT - the minimum reportable value based upon the lowest point in the analyte calibration curve.
LOQ	LIMIT OF QUANTITATION - the minimum concentration of a target analyte that can be reported within a specified degree of confidence. This is the lowest point in an analyte calibration curve that has been subjected to all steps of the processing/analysis and verified to meet defined criteria. This is based upon NELAC 2009 Standards and applies to all analyses.
LOD	LIMIT OF DETECTION - a verified estimate of the minimum concentration of a substance in a given matrix that an analytical process can reliably detect. This is based upon NELAC 2009 Standards and applies to all analyses conducted under the auspices of EPA SW-846.
MDL	METHOD DETECTION LIMIT - a statistically derived estimate of the minimum amount of a substance an analytical system can reliably detect with a 99% confidence that the concentration of the substance is greater than zero. This is based upon 40 CFR Part 136 Appendix B and applies only to EPA 600 and 200 series methods.
Reported to	This indicates that the data for a particular analysis is reported to either the LOD/MDL, or the LOQ/RL. In cases where the "Reported to" is located above the LOD/MDL, any value between this and the LOQ represents an estimated value which is "J" flagged accordingly. This applies to volatile and semi-volatile target compounds only.
NR	Not reported
RPD	Relative Percent Difference
Wet	The data has been reported on an as-received (wet weight) basis
Low Bias	Low Bias flag indicates that the recovery of the flagged analyte is below the laboratory or regulatory lower control limit. The data user should take note that this analyte may be biased low but should evaluate multiple lines of evidence including the LCS and site-specific MS/MSD data to draw bias conclusions. In cases where no site-specific MS/MSD was requested, only the LCS data can be used to evaluate such bias.
High Bias	High Bias flag indicates that the recovery of the flagged analyte is above the laboratory or regulatory upper control limit. The data user should take note that this analyte may be biased high but should evaluate multiple lines of evidence including the LCS and site-specific MS/MSD data to draw bias conclusions. In cases where no site-specific MS/MSD was requested, only the LCS data can be used to evaluate such bias.
Non-Dir.	Non-dir. flag (Non-Directional Bias) indicates that the Relative Percent Difference (RPD) (a measure of precision) among the MS and MSD data is outside the laboratory or regulatory control limit. This alerts the data user where the MS and MSD are from site-specific samples that the RPD is high due to either non-homogeneous distribution of target analyte between the MS/MSD or indicates poor reproducibility for other reasons.

If EPA SW-846 method 8270 is included herein it is noted that the target compound N-nitrosodiphenylamine (NDPA) decomposes in the gas chromatographic inlet and cannot be separated from diphenylamine (DPA). These results could actually represent 100% DPA, 100% NDPA or some combination of the two. For this reason, York reports the combined result for n-nitrosodiphenylamine and diphenylamine for either of these compounds as a combined concentration as Diphenylamine.

If Total PCBs are detected and the target aroclors reported are "Not detected", the Total PCB value is reported due to the presence of either or both Aroclors 1262 and 1268 which are non-target aroclors for some regulatory lists.

2-chloroethylvinyl ether readily breaks down under acidic conditions. Samples that are acid preserved, including standards will exhibit breakdown. The data user should take note.

Certification for pH is no longer offered by NYDOH ELAP.

Semi-Volatile and Volatile analyses are reported down to the LOD/MDL, with values between the LOD/MDL and the LOQ being "J" flagged as estimated results.

For analyses by EPA SW-846-8270D, the Limit of Quantitation (LOQ) reported for benzidine is based upon the lowest standard used for calibration and is not a verified LOQ due to this compound's propensity for oxidative losses during extraction/concentration procedures and non-reproducible chromatographic performance.

Laboratory Chain-of-Custody Record

York Project (SDG) No.: 18E0635

Samples Received: 05/14/2018 15:22 **By:** Paul Grace **Logged In:** 05/14/2018 10:00 **By:** Paul Grace

Sample Conditions:

- [x] Custody Seals
- [x] Containers Intact
- [x] COC/Labels Agree
- [x] Preservation Confirmed
- [x] Cooler Temperature Confirmed
- [x] COC Complete
- [x] Chain of Custody Form Received
- [x] Appropriate Sample Volumes Received
- [x] Appropriate Sample Containers Submitted
- [x] Samples Submitted within Holding Times
- [ ] Corrective Action Form Required

Preparation Chain-of-Custody

Sample ID	Reason Prep	Prep Start Date	Prep End Date	Prep Analyst
18E0635-01RE1	EPA 3015A	05/21/2018 18:24	05/21/2018 18:24	Sarah Yu
18E0635-02RE1	EPA 3015A	05/21/2018 18:24	05/21/2018 18:24	Sarah Yu
18E0635-03RE1	EPA 3015A	05/21/2018 18:24	05/21/2018 18:24	Sarah Yu
18E0635-01	EPA 7473 water	05/15/2018 9:54	05/15/2018 9:54	Sarah Yu
18E0635-02	EPA 7473 water	05/15/2018 9:54	05/15/2018 9:54	Sarah Yu
18E0635-03	EPA 7473 water	05/15/2018 9:54	05/15/2018 9:54	Sarah Yu

Analysis Chain-of-Custody

Sample ID	Reason Analysis	Analysis Start Date	Analysis End Date	Analyst
18E0635-01	Mercury by 7473	05/15/2018 9:54	05/15/2018 13:41	Sarah Yu
18E0635-02	Mercury by 7473	05/15/2018 9:54	05/15/2018 13:52	Sarah Yu
18E0635-03	Mercury by 7473	05/15/2018 9:54	05/15/2018 14:03	Sarah Yu
18E0635-01RE1	Metals, Target Analyte	05/21/2018 18:24	05/22/2018 12:17	Brian M. Loftus
18E0635-02RE1	Metals, Target Analyte	05/21/2018 18:24	05/22/2018 12:24	Brian M. Loftus
18E0635-03RE1	Metals, Target Analyte	05/21/2018 18:24	05/22/2018 12:26	Brian M. Loftus

YORK ANALYTICAL LABORATORIES
120 RESEARCH DR.
STRATFORD, CT 06615
(203) 325-1371
FAX (203) 357-0166

Field Chain-of-Custody Record

NOTE: York's Std. Terms & Conditions are listed on the back side of this document. This document serves as your written authorization to York to proceed with the analyses requested and your signature binds you to York's Std. Terms & Conditions.

York Project No. 18E0635

YOUR Information

Company: PVE, LLC
Address: 48 SPRINGTIDE AVE
POUGHKEEPSIE, N.Y. 12603
Phone No. 845-454-2544
Contact Person: ANTHONY SPADAVECCHIA
E-Mail Address: ASPADAVECCHIA@PVE-LLC.COM

Report To:

Company: SAME
Address:
Phone No.
Attention: CONOR TARBELL
E-Mail Address: CTARBELL@PVE-LLC.COM

Invoice To:

Company: SAME
Address:
Phone No.
Attention: TARA ALVARADO
E-Mail Address: TALVARADO@PVE-LLC.COM

YOUR Project ID

560556

Purchase Order No.

Samples from: CT ___ NY X NJ ___

Turn-Around Time

- RUSH - Same Day ☐
- RUSH - Next Day ☐
- RUSH - Two Day ☐
- RUSH - Three Day ☐
- RUSH - Four Day ☐
- Standard(5-7 Days) ☒

Report Type

- Summary Report X
- Summary w/ QA Summary
- CT RCP Package
- CTRCP DQA/DUE Pkg
- NY ASP A Package
- NY ASP B Package X
- NJDEP Red. Deliv.

Electronic Data Deliverables (EDD)

- Simple Excel
- NYSDEC EQuIS X
- EQuIS (std)
- EZ-EDD (EQuIS)
- NJDEP SRP HazSite EDD
- GIS/KEY (std)
- Other

York Regulatory Comparison
Excel Spreadsheet
Compare to the following Regs. (please fill in):

Print Clearly and Legibly. All Information must be complete. Samples will NOT be logged in and the turn-around time clock will not begin until any questions by York are resolved.

Samples Collected/Authorized By (Signature)
ANTHONY J. SPADAVECCHIA
Name (printed)

Matrix Codes
S - soil
Other - specify(oil, etc.)
WW - wastewater
GW - groundwater
DW - drinking water
Air-A - ambient air
Air-SV - soil vapor

Volatiles		Semi-Vols.	Pest/PCB/Herb	Metals	Misc. Org.	Full Lists	Misc.
8260 full	TICs	8270 or 625	8082PCB	RCRA8	TPH GRO	Pri.Poll.	Corrosivity
624	Site Spec.	STARS list	8081Pest	PP13 list	TPH DRO	TCL Organics	Reactivity
STARS list	Nassau Co.	BN Only	8151Herb	TAL	CT ETPH	TAL Met/CN	Ignitability
BTEX	Suffolk Co.	Acids Only	CT RCP	CT15 list	NY 310-13	Full TCLP	Flash Point
MTBE	Ketones	PAH list	App. IX	TAGM list	TPH 1664	Full App. IX	Sieve Anal.
TCL list	Oxygenates	TAGM list	Site Spec.	NJDEP list	Air TO14A	Part 360-Routine	Heterotrophs
TAGM list	TCLP list	CT RCP list	SPLP or TCLP	Total	Air TO15	Part 360-Baseline	TOX
CT RCP list	524.2	TCL list	TCLP Pest	Dissolved	Air STARS	Part 360-Expanded No Dioxins Furans	BTU/lb.
Arom. only	502.2	NJDEP list	TCLP Herb	SPLP or TCLP	Air VPH	Part 360-Expanded Full List	Aquatic Tox.
Halog.only	NJDEP list	App. IX	Chlordane	Indiv. Metals	Air TICs	NYCDEP Sewer	TOC
App.IX list	SPLP or TCLP	TCLP BNA	608 Pest	LIST Below	Methane	NYSDEC Sewer	Asbestos
8021B list		SPLP or TCLP	608 PCB		Helium	TAGM	Silica

Sample Identification	Date/Time Sampled	Sample Matrix	Choose Analyses Needed from the Menu Above and Enter Below	Container Description(s)
MW-4 20180511	5-11-2018/0905	GW	TAL METALS	250 mL NITRIC ACID
MW-6 20180511	5-11-2018/1105	GW		
MW-5 20180511	5-11-2018/1145	GW		

Comments

Preservation Check those Applicable
Special Instructions
Field Filtered ☐
Lab to Filter ☐

4°C ___ Frozen ___ HCl ___ MeOH ___ HNO_3 ___ H_2SO_4 ___ NaOH ___
ZnAc ___ Ascorbic Acid ___ Other

Samples Relinquished By	Date/Time	Samples Received By	Date/Time
[signature]	5/14/18 10:00	[signature]	5-14-18 10:00
[signature]	5-14-18 1522	[signature]	5/14/18 1522
Samples Relinquished By	Date/Time	Samples Received in LAB by	Date/Time

Temperature on Receipt 3.3 °C

York Analytical Laboratories, Inc.
SDG: 18E0635
CLASS: METALS
METHOD: EPA 6010C

DATA PACKAGE COVER PAGE

EPA 6010C

Laboratory: York Analytical Laboratories, Inc. SDG: 18E0635

Client: PVE, LLC. Project: 560556

Client Sample Id:	Lab Sample Id:
MW-4 20180511	18E0635-01RE1
MW-6 20180511	18E0635-02RE1
MW-5 20180511	18E0635-03RE1

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed in the project narrative. Release of the data contained in this hardcopy data package and in computer-readable data submitted on diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the

Signature:  Name: Benjamin Gulizia

Date: 6/11/2018 Title: Laboratory Director

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

EPA 6010C

MW-4 20180511

Laboratory: York Analytical Laboratories, Inc.
SDG: 18E0635
Client: PVE, LLC.
Project: 560556
Matrix: Water
Batch: BE81107
Laboratory ID: BE81107-MS1
Preparation: EPA 3015A
Initial/Final: 45 mL / 50 mL

Source Sample Name: MW-4 20180511

COMPOUND	SPIKE ADDED (mg/L)	SAMPLE CONCENTRATION (mg/L)	MS CONCENTRATION (mg/L)	MS % REC. #	QC LIMITS REC.
Antimony	0.278	0.018	0.288	97.2	75 - 125
Arsenic	2.22	ND	2.10	94.3	75 - 125
Barium	2.22	0.119	2.32	99.2	75 - 125
Beryllium	0.0556	ND	0.057	102	75 - 125
Cadmium	0.0556	ND	0.055	98.8	75 - 125
Chromium	0.222	ND	0.241	108	75 - 125
Cobalt	0.556	ND	0.586	106	75 - 125
Copper	0.278	0.005	0.297	105	75 - 125
Iron	1.11	0.081	1.22	102	75 - 125
Lead	0.556	ND	0.545	98.2	75 - 125
Manganese	0.556	0.007	0.593	106	75 - 125
Nickel	0.556	ND	0.574	103	75 - 125
Selenium	2.22	0.011	1.90	85.1	75 - 125
Silver	0.0556	ND	0.063	113	75 - 125
Thallium	2.22	ND	2.22	99.7	75 - 125
Vanadium	0.556	ND	0.573	103	75 - 125
Zinc	0.556	ND	0.553	99.5	75 - 125

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

DUPLICATES

MW-4 20180511

EPA 6010C

Laboratory: York Analytical Laboratories, Inc.
SDG: 18E0635
Client: PVE, LLC.
Project: 560556
Matrix: Water
Laboratory ID: BE81107-DUP1
Batch: BE81107
Lab Source ID: 18E0635-01RE1
Preparation: EPA 3015A
Initial/Final: 45 mL / 50 mL
Source Sample Name: MW-4 20180511
% Solids:

ANALYTE	CONTROL LIMIT	SAMPLE CONCENTRATION (mg/L)	C	DUPLICATE CONCENTRATION (mg/L)	C	RPD %	Q	METHOD
Aluminum	20	ND		ND				EPA 6010C
Antimony	20	0.018		0.019		3.37		EPA 6010C
Arsenic	20	ND		ND				EPA 6010C
Barium	20	0.119		0.012		163	*	EPA 6010C
Beryllium	20	ND		ND				EPA 6010C
Cadmium	20	ND		ND				EPA 6010C
Calcium	20	19.3		19.1		0.907		EPA 6010C
Chromium	20	ND		ND				EPA 6010C
Cobalt	20	ND		ND				EPA 6010C
Copper	20	0.005		ND				EPA 6010C
Iron	20	0.081		0.094		14.7		EPA 6010C
Lead	20	ND		ND				EPA 6010C
Magnesium	20	3.18		3.15		0.970		EPA 6010C
Manganese	20	0.007		ND				EPA 6010C
Nickel	20	ND		ND				EPA 6010C
Potassium	20	0.277		0.198		33.4	*	EPA 6010C
Selenium	20	0.011		0.012		9.42		EPA 6010C
Silver	20	ND		ND				EPA 6010C
Sodium	20	4.70		4.70		0.0695		EPA 6010C
Thallium	20	ND		ND				EPA 6010C
Vanadium	20	ND		ND				EPA 6010C
Zinc	20	ND		ND				EPA 6010C

* Values outside of QC limits

FORM III

LCS / LCS DUPLICATE RECOVERY

EPA 6010C

Laboratory:	York Analytical Laboratories, Inc.	SDG:	18E0635
Client:	PVE, LLC.	Project:	560556
Matrix:	Water		
Batch:	BE81107	Laboratory ID:	BE81107-BS1
Preparation:	EPA 3015A	Initial/Final:	45 mL / 50 mL

COMPOUND	SPIKE ADDED (ug/mL)	LCS CONCENTRATION (ug/mL)	LCS % REC. #	QC LIMITS REC.
Aluminum	2.00	2.13	107	80 - 120
Antimony	0.250	0.267	107	80 - 120
Arsenic	2.00	1.91	95.5	80 - 120
Barium	2.00	2.12	106	80 - 120
Beryllium	0.0500	0.052	103	80 - 120
Cadmium	0.0500	0.050	99.7	80 - 120
Calcium	1.00	0.953	95.3	80 - 120
Chromium	0.200	0.212	106	80 - 120
Cobalt	0.500	0.531	106	80 - 120
Copper	0.250	0.269	108	80 - 120
Iron	1.00	1.05	105	80 - 120
Lead	0.500	0.498	99.6	80 - 120
Magnesium	1.00	1.06	106	80 - 120
Manganese	0.500	0.533	107	80 - 120
Nickel	0.500	0.518	104	80 - 120
Potassium	0.500	0.833	167 *	80 - 120
Selenium	2.00	1.77	88.5	80 - 120
Silver	0.0500	0.056	112	80 - 120
Sodium	1.00	1.04	104	80 - 120
Thallium	2.00	2.08	104	80 - 120
Vanadium	0.500	0.521	104	80 - 120
Zinc	0.500	0.493	98.6	80 - 120

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

SERIAL DILUTION

EPA 6010C

MW-4 20180511

Laboratory: York Analytical Laboratories, Inc.
SDG: 18E0635
Client: PVE, LLC.
Project: 560556
Matrix: Water
Laboratory ID: Y8E2221-SRD1
Sequence: Y8E2221
Lab Source ID: 18E0635-01RE1
Preparation: BE81107
Initial/Final: 45 / 50
Source Sample Name: MW-4 20180511
% Solids:

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	Method	QC Limits % Difference
Aluminum	ND		0.279				EPA 6010C	10
Antimony	ND		ND				EPA 6010C	10
Arsenic	ND		ND				EPA 6010C	10
Barium	0.119		0.125		4.75		EPA 6010C	10
Beryllium	ND		ND				EPA 6010C	10
Cadmium	ND		ND				EPA 6010C	10
Calcium	19.3		19.0		1.35		EPA 6010C	10
Chromium	ND		ND				EPA 6010C	10
Cobalt	ND		ND				EPA 6010C	10
Copper	ND		ND				EPA 6010C	10
Iron	ND		0.159		95.3 *		EPA 6010C	10
Lead	ND		ND				EPA 6010C	10
Magnesium	3.18		3.16		0.629		EPA 6010C	10
Manganese	ND		ND				EPA 6010C	10
Nickel	ND		ND				EPA 6010C	10
Potassium	ND		ND				EPA 6010C	10
Selenium	ND		ND				EPA 6010C	10
Silver	ND		ND				EPA 6010C	10
Sodium	4.70		4.77		1.40		EPA 6010C	10
Thallium	ND		ND				EPA 6010C	10
Vanadium	ND		ND				EPA 6010C	10
Zinc	ND		ND				EPA 6010C	10

* Values outside of QC limits

FORM IV **PREPARATION BATCH SUMMARY**

EPA 6010C

Laboratory: York Analytical Laboratories, Inc. SDG: 18E0635

Client: PVE, LLC. Project: 560556

Batch: BE81107 Batch Matrix: Water Preparation: EPA 3015A

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
MW-4 20180511	18E0635-01RE1	qbi052218aRE_1-015	05/21/18 18:24	From BE80846 by SY on 05/21/2018
MW-6 20180511	18E0635-02RE1	qbi052218aRE_1-018	05/21/18 18:24	From BE80846 by SY on 05/21/2018
MW-5 20180511	18E0635-03RE1	qbi052218aRE_1-019	05/21/18 18:24	From BE80846 by SY on 05/21/2018
Blank	BE81107-BLK1	qbi052218aRE_1-089	05/21/18 18:24	
LCS	BE81107-BS1	qbi052218aRE_1-014	05/21/18 18:24	
MW-4 20180511	BE81107-DUP1	qbi052218aRE_1-016	05/21/18 18:24	
MW-4 20180511	BE81107-MS1	qbi052218aRE_1-017	05/21/18 18:24	

FORM I

BLANKS

EPA 6010C

Laboratory: York Analytical Laboratories, Inc. SDG: 18E0635

Client: PVE, LLC.

Instrument ID: WinLabICP Project: 560556

Sequence: Y8E2221 Calibration: 05/22/18 1

Lab Sample ID	Analyte	Found	MRL	Units	C	Method
Y8E2221-ICB1	Aluminum	-0.018	0.050	ug/mL		EPA 6010C
	Antimony	-0.0008	0.005	ug/mL		EPA 6010C
	Arsenic	0.009	0.004	ug/mL	*	EPA 6010C
	Barium	0.0009	0.010	ug/mL		EPA 6010C
	Beryllium	0.00007	0.001	ug/mL		EPA 6010C
	Cadmium	0.0003	0.003	ug/mL		EPA 6010C
	Calcium	-0.065	0.050	ug/mL		EPA 6010C
	Chromium	0.0006	0.005	ug/mL		EPA 6010C
	Cobalt	0.0007	0.005	ug/mL		EPA 6010C
	Copper	0.0003	0.003	ug/mL		EPA 6010C
	Iron	-0.007	0.020	ug/mL		EPA 6010C
	Lead	-0.0003	0.005	ug/mL		EPA 6010C
	Magnesium	0.015	0.050	ug/mL		EPA 6010C
	Manganese	0.0003	0.005	ug/mL		EPA 6010C
	Nickel	-0.0004	0.005	ug/mL		EPA 6010C
	Potassium	-0.230	0.050	ug/mL		EPA 6010C
	Selenium	0.0007	0.010	ug/mL		EPA 6010C
	Silver	-0.0004	0.005	ug/mL		EPA 6010C
	Sodium	0.002	0.100	ug/mL		EPA 6010C
	Thallium	0.005	0.005	ug/mL	*	EPA 6010C
	Vanadium	0.0003	0.010	ug/mL		EPA 6010C
	Zinc	-0.004	0.015	ug/mL		EPA 6010C
Y8E2221-CCB1	Aluminum	0.013	0.050	ug/mL		EPA 6010C
	Antimony	-0.001	0.005	ug/mL		EPA 6010C
	Arsenic	-0.005	0.004	ug/mL		EPA 6010C
	Barium	0.0007	0.010	ug/mL		EPA 6010C
	Beryllium	-0.00003	0.001	ug/mL		EPA 6010C
	Cadmium	0.0002	0.003	ug/mL		EPA 6010C
	Calcium	-0.029	0.050	ug/mL		EPA 6010C
	Chromium	0.0001	0.005	ug/mL		EPA 6010C
	Cobalt	0.0001	0.005	ug/mL		EPA 6010C
	Copper	0.0004	0.003	ug/mL		EPA 6010C
	Iron	0.024	0.020	ug/mL	*	EPA 6010C

FORM I

BLANKS

EPA 6010C

Laboratory: York Analytical Laboratories, Inc. SDG: 18E0635

Client: PVE, LLC.

Instrument ID: WinLabICP Project: 560556

Sequence: Y8E2221 Calibration: 05/22/18 1

Lab Sample ID	Analyte	Found	MRL	Units	C	Method
Y8E2221-CCB1	Lead	-0.0002	0.005	ug/mL		EPA 6010C
	Magnesium	0.032	0.050	ug/mL		EPA 6010C
	Manganese	0.0002	0.005	ug/mL		EPA 6010C
	Nickel	0.0002	0.005	ug/mL		EPA 6010C
	Potassium	-0.161	0.050	ug/mL		EPA 6010C
	Selenium	0.004	0.010	ug/mL		EPA 6010C
	Silver	0.002	0.005	ug/mL		EPA 6010C
	Sodium	0.002	0.100	ug/mL		EPA 6010C
	Thallium	-0.007	0.005	ug/mL		EPA 6010C
	Vanadium	0.0002	0.010	ug/mL		EPA 6010C
	Zinc	-0.004	0.015	ug/mL		EPA 6010C
Y8E2221-CCB3	Aluminum	-0.005	0.050	ug/mL		EPA 6010C
	Antimony	-0.001	0.005	ug/mL		EPA 6010C
	Arsenic	0.011	0.004	ug/mL	*	EPA 6010C
	Barium	0.0008	0.010	ug/mL		EPA 6010C
	Beryllium	0.0001	0.001	ug/mL		EPA 6010C
	Cadmium	0.0005	0.003	ug/mL		EPA 6010C
	Calcium	-0.050	0.050	ug/mL		EPA 6010C
	Chromium	-0.0002	0.005	ug/mL		EPA 6010C
	Cobalt	0.0006	0.005	ug/mL		EPA 6010C
	Copper	0.0005	0.003	ug/mL		EPA 6010C
	Iron	-0.006	0.020	ug/mL		EPA 6010C
	Lead	-0.0002	0.005	ug/mL		EPA 6010C
	Magnesium	-0.007	0.050	ug/mL		EPA 6010C
	Manganese	0.0002	0.005	ug/mL		EPA 6010C
	Nickel	0.0007	0.005	ug/mL		EPA 6010C
	Potassium	-0.110	0.050	ug/mL		EPA 6010C
	Selenium	-0.00006	0.010	ug/mL		EPA 6010C
	Silver	0.0002	0.005	ug/mL		EPA 6010C
	Sodium	0.010	0.100	ug/mL		EPA 6010C
	Thallium	0.0004	0.005	ug/mL		EPA 6010C
	Vanadium	0.0002	0.010	ug/mL		EPA 6010C
	Zinc	-0.003	0.015	ug/mL		EPA 6010C

FORM I

BLANKS

EPA 6010C

Laboratory: York Analytical Laboratories, Inc.
SDG: 18E0635
Client: PVE, LLC.
Instrument ID: WinLabICP
Project: 560556
Sequence: Y8E2221
Calibration: 05/22/18 1

Lab Sample ID	Analyte	Found	MRL	Units	C	Method
Y8E2221-CCB5	Aluminum	-0.009	0.050	ug/mL		EPA 6010C
	Antimony	-0.005	0.005	ug/mL		EPA 6010C
	Arsenic	0.012	0.004	ug/mL	*	EPA 6010C
	Barium	0.0006	0.010	ug/mL		EPA 6010C
	Beryllium	0.0003	0.001	ug/mL		EPA 6010C
	Cadmium	0.0004	0.003	ug/mL		EPA 6010C
	Calcium	-0.057	0.050	ug/mL		EPA 6010C
	Chromium	0.0002	0.005	ug/mL		EPA 6010C
	Cobalt	0.0008	0.005	ug/mL		EPA 6010C
	Copper	-0.0006	0.003	ug/mL		EPA 6010C
	Iron	0.009	0.020	ug/mL		EPA 6010C
	Lead	0.0002	0.005	ug/mL		EPA 6010C
	Magnesium	0.014	0.050	ug/mL		EPA 6010C
	Manganese	0.0002	0.005	ug/mL		EPA 6010C
	Nickel	0.005	0.005	ug/mL		EPA 6010C
	Potassium	-0.153	0.050	ug/mL		EPA 6010C
	Selenium	-0.001	0.010	ug/mL		EPA 6010C
	Silver	0.0007	0.005	ug/mL		EPA 6010C
	Sodium	0.052	0.100	ug/mL		EPA 6010C
	Thallium	0.002	0.005	ug/mL		EPA 6010C
	Vanadium	0.0005	0.010	ug/mL		EPA 6010C
	Zinc	-0.003	0.015	ug/mL		EPA 6010C

FORM I

BLANKS

EPA 6010C

Laboratory: York Analytical Laboratories, Inc. SDG: 18E0635

Client: PVE, LLC.

Instrument ID: WinLabICP Project: 560556

Sequence: Y8F1123 Calibration: 05/22/18 1

Lab Sample ID	Analyte	Found	MRL	Units	C	Method
Y8F1123-ICB1	Aluminum	-0.018	0.050	ug/mL		EPA 6010C
	Antimony	-0.0008	0.005	ug/mL		EPA 6010C
	Arsenic	0.009	0.004	ug/mL	*	EPA 6010C
	Barium	0.0009	0.010	ug/mL		EPA 6010C
	Beryllium	0.00007	0.001	ug/mL		EPA 6010C
	Cadmium	0.0003	0.003	ug/mL		EPA 6010C
	Calcium	-0.065	0.050	ug/mL		EPA 6010C
	Chromium	0.0006	0.005	ug/mL		EPA 6010C
	Cobalt	0.0007	0.005	ug/mL		EPA 6010C
	Copper	0.0003	0.003	ug/mL		EPA 6010C
	Iron	-0.007	0.020	ug/mL		EPA 6010C
	Lead	-0.0003	0.005	ug/mL		EPA 6010C
	Magnesium	0.015	0.050	ug/mL		EPA 6010C
	Manganese	0.0003	0.005	ug/mL		EPA 6010C
	Nickel	-0.0004	0.005	ug/mL		EPA 6010C
	Potassium	-0.230	0.050	ug/mL		EPA 6010C
	Selenium	0.0007	0.010	ug/mL		EPA 6010C
	Silver	-0.0004	0.005	ug/mL		EPA 6010C
	Sodium	0.002	0.100	ug/mL		EPA 6010C
	Thallium	0.005	0.005	ug/mL	*	EPA 6010C
	Vanadium	0.0003	0.010	ug/mL		EPA 6010C
	Zinc	-0.004	0.015	ug/mL		EPA 6010C
Y8F1123-CCB1	Aluminum	0.013	0.050	ug/mL		EPA 6010C
	Antimony	-0.001	0.005	ug/mL		EPA 6010C
	Arsenic	-0.005	0.004	ug/mL		EPA 6010C
	Barium	0.0007	0.010	ug/mL		EPA 6010C
	Beryllium	-0.00003	0.001	ug/mL		EPA 6010C
	Cadmium	0.0002	0.003	ug/mL		EPA 6010C
	Calcium	-0.029	0.050	ug/mL		EPA 6010C
	Chromium	0.0001	0.005	ug/mL		EPA 6010C
	Cobalt	0.0001	0.005	ug/mL		EPA 6010C
	Copper	0.0004	0.003	ug/mL		EPA 6010C
	Iron	0.024	0.020	ug/mL	*	EPA 6010C

FORM I

BLANKS

EPA 6010C

Laboratory: York Analytical Laboratories, Inc.
SDG: 18E0635
Client: PVE, LLC.
Instrument ID: WinLabICP
Project: 560556
Sequence: Y8F1123
Calibration: 05/22/18 1

Lab Sample ID	Analyte	Found	MRL	Units	C	Method
Y8F1123-CCB1	Lead	-0.0002	0.005	ug/mL		EPA 6010C
	Magnesium	0.032	0.050	ug/mL		EPA 6010C
	Manganese	0.0002	0.005	ug/mL		EPA 6010C
	Nickel	0.0002	0.005	ug/mL		EPA 6010C
	Potassium	-0.161	0.050	ug/mL		EPA 6010C
	Selenium	0.004	0.010	ug/mL		EPA 6010C
	Silver	0.002	0.005	ug/mL		EPA 6010C
	Sodium	0.002	0.100	ug/mL		EPA 6010C
	Thallium	-0.007	0.005	ug/mL		EPA 6010C
	Vanadium	0.0002	0.010	ug/mL		EPA 6010C
	Zinc	-0.004	0.015	ug/mL		EPA 6010C
Y8F1123-CCBB	Aluminum	0.006	0.050	ug/mL		EPA 6010C
	Antimony	-0.003	0.005	ug/mL		EPA 6010C
	Arsenic	-0.003	0.004	ug/mL		EPA 6010C
	Barium	0.0008	0.010	ug/mL		EPA 6010C
	Beryllium	0.0001	0.001	ug/mL		EPA 6010C
	Cadmium	0.0002	0.003	ug/mL		EPA 6010C
	Calcium	-0.061	0.050	ug/mL		EPA 6010C
	Chromium	0.0003	0.005	ug/mL		EPA 6010C
	Cobalt	0.0007	0.005	ug/mL		EPA 6010C
	Copper	0.0002	0.003	ug/mL		EPA 6010C
	Iron	0.013	0.020	ug/mL		EPA 6010C
	Lead	-0.001	0.005	ug/mL		EPA 6010C
	Magnesium	0.022	0.050	ug/mL		EPA 6010C
	Manganese	0.0004	0.005	ug/mL		EPA 6010C
	Nickel	0.0006	0.005	ug/mL		EPA 6010C
	Potassium	-0.146	0.050	ug/mL		EPA 6010C
	Selenium	0.007	0.010	ug/mL		EPA 6010C
	Silver	0.0002	0.005	ug/mL		EPA 6010C
	Sodium	-0.015	0.100	ug/mL		EPA 6010C
	Thallium	0.004	0.005	ug/mL		EPA 6010C
	Vanadium	0.0007	0.010	ug/mL		EPA 6010C
	Zinc	-0.003	0.015	ug/mL		EPA 6010C

FORM I

BLANKS

EPA 6010C

Laboratory: York Analytical Laboratories, Inc. SDG: 18E0635

Client: PVE, LLC.

Instrument ID: WinLabICP Project: 560556

Sequence: Y8F1123 Calibration: 05/22/18 1

Lab Sample ID	Analyte	Found	MRL	Units	C	Method
BE81107-BLK1	Aluminum	-0.035	0.056	mg/L		EPA 6010C
	Antimony	-0.004	0.006	mg/L		EPA 6010C
	Arsenic	0.009	0.011	mg/L		EPA 6010C
	Barium	0.00005	0.011	mg/L		EPA 6010C
	Beryllium	0.0002	0.001	mg/L		EPA 6010C
	Cadmium	0.0004	0.003	mg/L		EPA 6010C
	Calcium	-0.118	0.056	mg/L		EPA 6010C
	Chromium	0.0003	0.006	mg/L		EPA 6010C
	Cobalt	0.0003	0.006	mg/L		EPA 6010C
	Copper	-0.0004	0.003	mg/L		EPA 6010C
	Iron	0.006	0.022	mg/L		EPA 6010C
	Lead	-0.0006	0.006	mg/L		EPA 6010C
	Magnesium	0.008	0.056	mg/L		EPA 6010C
	Manganese	0.0001	0.006	mg/L		EPA 6010C
	Nickel	0.003	0.006	mg/L		EPA 6010C
	Potassium	-0.142	0.056	mg/L		EPA 6010C
	Selenium	-0.002	0.011	mg/L		EPA 6010C
	Silver	-0.0001	0.006	mg/L		EPA 6010C
	Sodium	0.220	0.111	mg/L	*	EPA 6010C
	Thallium	-0.00009	0.006	mg/L		EPA 6010C
	Vanadium	-0.0002	0.011	mg/L		EPA 6010C
	Zinc	-0.007	0.017	mg/L		EPA 6010C
Y8F1123-CCBD	Aluminum	0.007	0.050	ug/mL		EPA 6010C
	Antimony	-0.003	0.005	ug/mL		EPA 6010C
	Arsenic	0.017	0.004	ug/mL	*	EPA 6010C
	Barium	0.0007	0.010	ug/mL		EPA 6010C
	Beryllium	0.0002	0.001	ug/mL		EPA 6010C
	Cadmium	0.0005	0.003	ug/mL		EPA 6010C
	Calcium	-0.060	0.050	ug/mL		EPA 6010C
	Chromium	-0.0002	0.005	ug/mL		EPA 6010C
	Cobalt	0.001	0.005	ug/mL		EPA 6010C
	Copper	-0.0003	0.003	ug/mL		EPA 6010C
	Iron	0.009	0.020	ug/mL		EPA 6010C

FORM I

BLANKS

EPA 6010C

Laboratory: York Analytical Laboratories, Inc.
SDG: 18E0635
Client: PVE, LLC.
Instrument ID: WinLabICP
Project: 560556
Sequence: Y8F1123
Calibration: 05/22/18 1

Lab Sample ID	Analyte	Found	MRL	Units	C	Method
Y8F1123-CCBD	Lead	-0.0006	0.005	ug/mL		EPA 6010C
	Magnesium	0.020	0.050	ug/mL		EPA 6010C
	Manganese	0.0002	0.005	ug/mL		EPA 6010C
	Nickel	0.007	0.005	ug/mL	*	EPA 6010C
	Potassium	-0.111	0.050	ug/mL		EPA 6010C
	Selenium	-0.010	0.010	ug/mL		EPA 6010C
	Silver	-0.0004	0.005	ug/mL		EPA 6010C
	Sodium	0.065	0.100	ug/mL		EPA 6010C
	Thallium	0.004	0.005	ug/mL		EPA 6010C
	Vanadium	0.0002	0.010	ug/mL		EPA 6010C
	Zinc	-0.003	0.015	ug/mL		EPA 6010C

FORM V

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 6010C

Laboratory:	York Analytical Laboratories, Inc.	SDG:	18E0635
Client:	PVE, LLC.	Project:	560556
Sequence:	Y8E2221	Instrument:	WinLabICP
Matrix:	Water	Calibration:	UNASSIGNED

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Initial Cal Check	Y8E2221-ICV1	qbi052218aRE_1-001	05/22/18 11:46
Initial Cal Blank	Y8E2221-ICB1	qbi052218aRE_1-003	05/22/18 11:51
Instrument RL Check	Y8E2221-CRL1	qbi052218aRE_1-004	05/22/18 11:53
Interference Check A	Y8E2221-IFA1	qbi052218aRE_1-007	05/22/18 12:00
Interference Check B	Y8E2221-IFB1	qbi052218aRE_1-008	05/22/18 12:02
Calibration Check	Y8E2221-CCV1	qbi052218aRE_1-009	05/22/18 12:03
Calibration Blank	Y8E2221-CCB1	qbi052218aRE_1-010	05/22/18 12:06
LCS	BE81107-BS1	qbi052218aRE_1-014	05/22/18 12:15
MW-4 20180511	18E0635-01RE1	qbi052218aRE_1-015	05/22/18 12:17
MW-4 20180511	BE81107-DUP1	qbi052218aRE_1-016	05/22/18 12:20
MW-4 20180511	BE81107-MS1	qbi052218aRE_1-017	05/22/18 12:22
MW-6 20180511	18E0635-02RE1	qbi052218aRE_1-018	05/22/18 12:24
MW-5 20180511	18E0635-03RE1	qbi052218aRE_1-019	05/22/18 12:26
Calibration Check	Y8E2221-CCV3	qbi052218aRE_1-023	05/22/18 12:35
Calibration Blank	Y8E2221-CCB3	qbi052218aRE_1-024	05/22/18 12:37
MW-4 20180511	Y8E2221-SRD1	qbi052218aRE_1-027	05/22/18 12:44
Calibration Check	Y8E2221-CCV5	qbi052218aRE_1-037	05/22/18 13:06
Calibration Blank	Y8E2221-CCB5	qbi052218aRE_1-038	05/22/18 13:08

FORM V

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 6010C

Laboratory:	York Analytical Laboratories, Inc.	SDG:	18E0635
Client:	PVE, LLC.	Project:	560556
Sequence:	Y8F1123	Instrument:	WinLabICP
Matrix:	Water	Calibration:	UNASSIGNED

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Initial Cal Check	Y8F1123-ICV1	qbi052218aRE_1-001	05/22/18 11:46
Initial Cal Blank	Y8F1123-ICB1	qbi052218aRE_1-003	05/22/18 11:51
Instrument RL Check	Y8F1123-CRL1	qbi052218aRE_1-004	05/22/18 11:53
Interference Check A	Y8F1123-IFA1	qbi052218aRE_1-007	05/22/18 12:00
Interference Check B	Y8F1123-IFB1	qbi052218aRE_1-008	05/22/18 12:02
Calibration Check	Y8F1123-CCV1	qbi052218aRE_1-009	05/22/18 12:03
Calibration Blank	Y8F1123-CCB1	qbi052218aRE_1-010	05/22/18 12:06
Calibration Check	Y8F1123-CCVB	qbi052218aRE_1-079	05/22/18 14:35
Calibration Blank	Y8F1123-CCBB	qbi052218aRE_1-080	05/22/18 14:38
Blank	BE81107-BLK1	qbi052218aRE_1-089	05/22/18 14:58
Calibration Check	Y8F1123-CCVD	qbi052218aRE_1-090	05/22/18 15:01
Calibration Blank	Y8F1123-CCBD	qbi052218aRE_1-091	05/22/18 15:03

HOLDING TIME SUMMARY

EPA 6010C

Laboratory: York Analytical Laboratories, Inc. SDG: 18E0635

Client: PVE, LLC. Project: 560556

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
MW-4 20180511	05/11/18 09:05	05/14/18 15:22	05/21/18 18:24	10.39	180.00	05/22/18 12:17	11.13	180.00	
MW-6 20180511	05/11/18 11:05	05/14/18 15:22	05/21/18 18:24	10.30	180.00	05/22/18 12:24	11.06	180.00	
MW-5 20180511	05/11/18 11:45	05/14/18 15:22	05/21/18 18:24	10.28	180.00	05/22/18 12:26	11.03	180.00	

METHOD DETECTION AND REPORTING LIMITS

EPA 6010C

Laboratory: York Analytical Laboratories, Inc. **SDG:** 18E0635

Client: PVE, LLC. **Project:** 560556

Matrix: Water **Instrument:** WinLabICP

Analyte	LOD	LOQ	Units
Aluminum	0.050	0.050	mg/L
Antimony	0.005	0.005	mg/L
Arsenic	0.004	0.004	mg/L
Barium	0.010	0.010	mg/L
Beryllium	0.001	0.001	mg/L
Cadmium	0.003	0.003	mg/L
Calcium	0.050	0.050	mg/L
Chromium	0.005	0.005	mg/L
Cobalt	0.005	0.005	mg/L
Copper	0.003	0.003	mg/L
Iron	0.020	0.020	mg/L
Lead	0.005	0.005	mg/L
Magnesium	0.050	0.050	mg/L
Manganese	0.005	0.005	mg/L
Nickel	0.005	0.005	mg/L
Potassium	0.050	0.050	mg/L
Selenium	0.010	0.010	mg/L
Silver	0.005	0.005	mg/L
Sodium	0.100	0.100	mg/L
Thallium	0.005	0.005	mg/L
Vanadium	0.010	0.010	mg/L
Zinc	0.015	0.015	mg/L

FORM I **INORGANIC ANALYSIS DATA SHEET**

EPA 6010C

MW-4 20180511

Laboratory: York Analytical Laboratories, Inc. SDG: 18E0635

Client: PVE, LLC. Project: 560556

Matrix: Water Laboratory ID: 18E0635-01RE1 File ID: qbi052218aRE_1-015

Sampled: 05/11/18 09:05 Prepared: 05/21/18 18:24 Analyzed: 05/22/18 12:17

Solids: 0.00 Preparation: EPA 3015A Initial/Final: 45 mL / 50 mL

Batch: BE81107 Sequence: Y8E2221 Calibration: 05/22/18 1 Instrument: WinLabICP

CAS NO.	Analyte	Concentration (mg/L)	Dilution Factor	Q	Method
7429-90-5	Aluminum	0.056	1	U	EPA 6010C
7440-36-0	Antimony	0.018	1		EPA 6010C
7440-38-2	Arsenic	0.011	1	U	EPA 6010C
7440-39-3	Barium	0.119	1		EPA 6010C
7440-41-7	Beryllium	0.001	1	U	EPA 6010C
7440-43-9	Cadmium	0.003	1	U	EPA 6010C
7440-70-2	Calcium	19.3	1		EPA 6010C
7440-47-3	Chromium	0.006	1	U	EPA 6010C
7440-48-4	Cobalt	0.006	1	U	EPA 6010C
7440-50-8	Copper	0.005	1		EPA 6010C
7439-89-6	Iron	0.081	1		EPA 6010C
7439-92-1	Lead	0.006	1	U	EPA 6010C
7439-95-4	Magnesium	3.18	1		EPA 6010C
7439-96-5	Manganese	0.007	1		EPA 6010C
7440-02-0	Nickel	0.006	1	U	EPA 6010C
7440-09-7	Potassium	0.277	1		EPA 6010C
7782-49-2	Selenium	0.011	1		EPA 6010C
7440-22-4	Silver	0.006	1	U	EPA 6010C
7440-23-5	Sodium	4.70	1	B	EPA 6010C
7440-28-0	Thallium	0.006	1	U	EPA 6010C
7440-62-2	Vanadium	0.011	1	U	EPA 6010C
7440-66-6	Zinc	0.017	1	U	EPA 6010C

FORM I **INORGANIC ANALYSIS DATA SHEET**

EPA 6010C

MW-6 20180511

Laboratory: York Analytical Laboratories, Inc. SDG: 18E0635

Client: PVE, LLC. Project: 560556

Matrix: Water Laboratory ID: 18E0635-02RE1 File ID: qbi052218aRE_1-018

Sampled: 05/11/18 11:05 Prepared: 05/21/18 18:24 Analyzed: 05/22/18 12:24

Solids: 0.00 Preparation: EPA 3015A Initial/Final: 45 mL / 50 mL

Batch: BE81107 Sequence: Y8E2221 Calibration: 05/22/18 1 Instrument: WinLabICP

CAS NO.	Analyte	Concentration (mg/L)	Dilution Factor	Q	Method
7429-90-5	Aluminum	0.302	1		EPA 6010C
7440-36-0	Antimony	0.010	1		EPA 6010C
7440-38-2	Arsenic	0.011	1	U	EPA 6010C
7440-39-3	Barium	0.082	1		EPA 6010C
7440-41-7	Beryllium	0.001	1	U	EPA 6010C
7440-43-9	Cadmium	0.003	1	U	EPA 6010C
7440-70-2	Calcium	68.7	1		EPA 6010C
7440-47-3	Chromium	0.006	1	U	EPA 6010C
7440-48-4	Cobalt	0.006	1	U	EPA 6010C
7440-50-8	Copper	0.006	1		EPA 6010C
7439-89-6	Iron	0.530	1		EPA 6010C
7439-92-1	Lead	0.006	1	U	EPA 6010C
7439-95-4	Magnesium	23.5	1		EPA 6010C
7439-96-5	Manganese	0.098	1		EPA 6010C
7440-02-0	Nickel	0.006	1	U	EPA 6010C
7440-09-7	Potassium	2.55	1		EPA 6010C
7782-49-2	Selenium	0.041	1		EPA 6010C
7440-22-4	Silver	0.006	1	U	EPA 6010C
7440-23-5	Sodium	20.3	1	B	EPA 6010C
7440-28-0	Thallium	0.006	1	U	EPA 6010C
7440-62-2	Vanadium	0.011	1	U	EPA 6010C
7440-66-6	Zinc	0.017	1	U	EPA 6010C

FORM I **INORGANIC ANALYSIS DATA SHEET**

EPA 6010C

MW-5 20180511

Laboratory: York Analytical Laboratories, Inc. SDG: 18E0635

Client: PVE, LLC. Project: 560556

Matrix: Water Laboratory ID: 18E0635-03RE1 File ID: qbi052218aRE_1-019

Sampled: 05/11/18 11:45 Prepared: 05/21/18 18:24 Analyzed: 05/22/18 12:26

Solids: 0.00 Preparation: EPA 3015A Initial/Final: 45 mL / 50 mL

Batch: BE81107 Sequence: Y8E2221 Calibration: 05/22/18 1 Instrument: WinLabICP

CAS NO.	Analyte	Concentration (mg/L)	Dilution Factor	Q	Method
7429-90-5	Aluminum	0.056	1	U	EPA 6010C
7440-36-0	Antimony	0.011	1		EPA 6010C
7440-38-2	Arsenic	0.011	1	U	EPA 6010C
7440-39-3	Barium	0.105	1		EPA 6010C
7440-41-7	Beryllium	0.001	1	U	EPA 6010C
7440-43-9	Cadmium	0.003	1	U	EPA 6010C
7440-70-2	Calcium	125	1		EPA 6010C
7440-47-3	Chromium	0.006	1	U	EPA 6010C
7440-48-4	Cobalt	0.006	1	U	EPA 6010C
7440-50-8	Copper	0.005	1		EPA 6010C
7439-89-6	Iron	0.551	1		EPA 6010C
7439-92-1	Lead	0.006	1	U	EPA 6010C
7439-95-4	Magnesium	31.7	1		EPA 6010C
7439-96-5	Manganese	2.15	1		EPA 6010C
7440-02-0	Nickel	0.006	1	U	EPA 6010C
7440-09-7	Potassium	3.11	1		EPA 6010C
7782-49-2	Selenium	0.062	1		EPA 6010C
7440-22-4	Silver	0.006	1	U	EPA 6010C
7440-23-5	Sodium	13.5	1	B	EPA 6010C
7440-28-0	Thallium	0.006	1	U	EPA 6010C
7440-62-2	Vanadium	0.011	1	U	EPA 6010C
7440-66-6	Zinc	0.017	1	U	EPA 6010C

INITIAL AND CONTINUING CALIBRATION CHECK

EPA 6010C

Laboratory: York Analytical Laboratories, Inc.
SDG: 18E0635
Client: PVE, LLC.
Project: 560556
Instrument ID: WinLabICP
Calibration: 05/22/18
Control Limt: +/- 10.00%
Sequence: Y8E2221

Lab Sample ID	Analyte	True	Found	%R	Units	Method
Y8E2221-ICV1	Aluminum	10.0	10.8	108	ug/mL	EPA 6010C
	Antimony	0.250	0.262	105	ug/mL	EPA 6010C
	Arsenic	0.250	0.274	110	ug/mL	EPA 6010C
	Barium	10.0	10.5	105	ug/mL	EPA 6010C
	Beryllium	0.250	0.265	106	ug/mL	EPA 6010C
	Cadmium	0.125	0.130	104	ug/mL	EPA 6010C
	Calcium	25.0	26.1	104	ug/mL	EPA 6010C
	Chromium	1.00	1.08	108	ug/mL	EPA 6010C
	Cobalt	2.50	2.65	106	ug/mL	EPA 6010C
	Copper	1.25	1.33	106	ug/mL	EPA 6010C
	Iron	5.00	5.21	104	ug/mL	EPA 6010C
	Lead	0.250	0.264	106	ug/mL	EPA 6010C
	Magnesium	25.0	25.8	103	ug/mL	EPA 6010C
	Manganese	2.50	2.61	104	ug/mL	EPA 6010C
	Nickel	2.50	2.62	105	ug/mL	EPA 6010C
	Potassium	5.00	5.01	100	ug/mL	EPA 6010C
	Selenium	0.250	0.276	110	ug/mL	EPA 6010C
	Silver	1.25	1.34	107	ug/mL	EPA 6010C
	Sodium	25.0	26.2	105	ug/mL	EPA 6010C
	Thallium	0.250	0.252	101	ug/mL	EPA 6010C
	Vanadium	2.50	2.60	104	ug/mL	EPA 6010C
	Zinc	2.50	2.68	107	ug/mL	EPA 6010C
Y8E2221-CCV1	Aluminum	10.0	10.9	109	ug/mL	EPA 6010C
	Antimony	0.250	0.250	99.8	ug/mL	EPA 6010C
	Arsenic	0.500	0.510	102	ug/mL	EPA 6010C
	Barium	10.0	10.4	104	ug/mL	EPA 6010C
	Beryllium	0.250	0.259	104	ug/mL	EPA 6010C
	Cadmium	0.250	0.257	103	ug/mL	EPA 6010C
	Calcium	25.0	26.2	105	ug/mL	EPA 6010C
	Chromium	1.00	1.07	107	ug/mL	EPA 6010C
	Cobalt	2.50	2.63	105	ug/mL	EPA 6010C
	Copper	1.25	1.32	105	ug/mL	EPA 6010C
	Iron	5.00	5.28	106	ug/mL	EPA 6010C
	Lead	0.500	0.510	102	ug/mL	EPA 6010C
	Magnesium	25.0	26.1	104	ug/mL	EPA 6010C
	Manganese	2.50	2.60	104	ug/mL	EPA 6010C
	Nickel	2.50	2.61	104	ug/mL	EPA 6010C

INITIAL AND CONTINUING CALIBRATION CHECK

EPA 6010C

Laboratory: York Analytical Laboratories, Inc.
SDG: 18E0635
Client: PVE, LLC.
Project: 560556
Instrument ID: WinLabICP
Calibration: 05/22/18
Control Limt: +/- 10.00%
Sequence: Y8E2221

Lab Sample ID	Analyte	True	Found	%R	Units	Method
Y8E2221-CCV1	Potassium	5.00	5.21	104	ug/mL	EPA 6010C
	Selenium	0.500	0.486	97.2	ug/mL	EPA 6010C
	Silver	1.25	1.34	107	ug/mL	EPA 6010C
	Sodium	25.0	26.2	105	ug/mL	EPA 6010C
	Thallium	0.500	0.487	97.3	ug/mL	EPA 6010C
	Vanadium	2.50	2.59	103	ug/mL	EPA 6010C
	Zinc	2.50	2.66	106	ug/mL	EPA 6010C
Y8E2221-CCV3	Aluminum	10.0	10.8	108	ug/mL	EPA 6010C
	Antimony	0.250	0.246	98.3	ug/mL	EPA 6010C
	Arsenic	0.500	0.499	99.7	ug/mL	EPA 6010C
	Barium	10.0	10.1	101	ug/mL	EPA 6010C
	Beryllium	0.250	0.252	101	ug/mL	EPA 6010C
	Cadmium	0.250	0.245	98.0	ug/mL	EPA 6010C
	Calcium	25.0	25.3	101	ug/mL	EPA 6010C
	Chromium	1.00	1.05	105	ug/mL	EPA 6010C
	Cobalt	2.50	2.54	102	ug/mL	EPA 6010C
	Copper	1.25	1.30	104	ug/mL	EPA 6010C
	Iron	5.00	5.06	101	ug/mL	EPA 6010C
	Lead	0.500	0.491	98.2	ug/mL	EPA 6010C
	Magnesium	25.0	25.0	100	ug/mL	EPA 6010C
	Manganese	2.50	2.53	101	ug/mL	EPA 6010C
	Nickel	2.50	2.54	102	ug/mL	EPA 6010C
	Potassium	5.00	5.26	105	ug/mL	EPA 6010C
	Selenium	0.500	0.483	96.6	ug/mL	EPA 6010C
	Silver	1.25	1.32	105	ug/mL	EPA 6010C
	Sodium	25.0	26.1	104	ug/mL	EPA 6010C
	Thallium	0.500	0.478	95.6	ug/mL	EPA 6010C
	Vanadium	2.50	2.54	101	ug/mL	EPA 6010C
	Zinc	2.50	2.52	101	ug/mL	EPA 6010C
Y8E2221-CCV5	Aluminum	10.0	10.8	108	ug/mL	EPA 6010C
	Antimony	0.250	0.242	96.6	ug/mL	EPA 6010C
	Arsenic	0.500	0.502	100	ug/mL	EPA 6010C
	Barium	10.0	10.2	102	ug/mL	EPA 6010C
	Beryllium	0.250	0.258	103	ug/mL	EPA 6010C
	Cadmium	0.250	0.250	100	ug/mL	EPA 6010C
	Calcium	25.0	25.8	103	ug/mL	EPA 6010C
	Chromium	1.00	1.06	106	ug/mL	EPA 6010C

INITIAL AND CONTINUING CALIBRATION CHECK

EPA 6010C

Laboratory: York Analytical Laboratories, Inc.
SDG: 18E0635
Client: PVE, LLC.
Project: 560556
Instrument ID: WinLabICP
Calibration: 05/22/18
Control Limt: +/- 10.00%
Sequence: Y8E2221

Lab Sample ID	Analyte	True	Found	%R	Units	Method
Y8E2221-CCV5	Cobalt	2.50	2.59	104	ug/mL	EPA 6010C
	Copper	1.25	1.31	105	ug/mL	EPA 6010C
	Iron	5.00	5.12	102	ug/mL	EPA 6010C
	Lead	0.500	0.495	99.1	ug/mL	EPA 6010C
	Magnesium	25.0	25.3	101	ug/mL	EPA 6010C
	Manganese	2.50	2.57	103	ug/mL	EPA 6010C
	Nickel	2.50	2.57	103	ug/mL	EPA 6010C
	Potassium	5.00	4.90	98.1	ug/mL	EPA 6010C
	Selenium	0.500	0.489	97.9	ug/mL	EPA 6010C
	Silver	1.25	1.33	107	ug/mL	EPA 6010C
	Sodium	25.0	26.0	104	ug/mL	EPA 6010C
	Thallium	0.500	0.494	98.7	ug/mL	EPA 6010C
	Vanadium	2.50	2.57	103	ug/mL	EPA 6010C
	Zinc	2.50	2.59	104	ug/mL	EPA 6010C

* Values outside of QC limits

INITIAL AND CONTINUING CALIBRATION CHECK

EPA 6010C

Laboratory: York Analytical Laboratories, Inc.
SDG: 18E0635
Client: PVE, LLC.
Project: 560556
Instrument ID: WinLabICP
Calibration: 05/22/18
Control Limt: +/- 10.00%
Sequence: Y8F1123

Lab Sample ID	Analyte	True	Found	%R	Units	Method
Y8F1123-ICV1	Aluminum	10.0	10.8	108	ug/mL	EPA 6010C
	Antimony	0.250	0.262	105	ug/mL	EPA 6010C
	Arsenic	0.250	0.274	110	ug/mL	EPA 6010C
	Barium	10.0	10.5	105	ug/mL	EPA 6010C
	Beryllium	0.250	0.265	106	ug/mL	EPA 6010C
	Cadmium	0.125	0.130	104	ug/mL	EPA 6010C
	Calcium	25.0	26.1	104	ug/mL	EPA 6010C
	Chromium	1.00	1.08	108	ug/mL	EPA 6010C
	Cobalt	2.50	2.65	106	ug/mL	EPA 6010C
	Copper	1.25	1.33	106	ug/mL	EPA 6010C
	Iron	5.00	5.21	104	ug/mL	EPA 6010C
	Lead	0.250	0.264	106	ug/mL	EPA 6010C
	Magnesium	25.0	25.8	103	ug/mL	EPA 6010C
	Manganese	2.50	2.61	104	ug/mL	EPA 6010C
	Nickel	2.50	2.62	105	ug/mL	EPA 6010C
	Potassium	5.00	5.01	100	ug/mL	EPA 6010C
	Selenium	0.250	0.276	110	ug/mL	EPA 6010C
	Silver	1.25	1.34	107	ug/mL	EPA 6010C
	Sodium	25.0	26.2	105	ug/mL	EPA 6010C
	Thallium	0.250	0.252	101	ug/mL	EPA 6010C
	Vanadium	2.50	2.60	104	ug/mL	EPA 6010C
	Zinc	2.50	2.68	107	ug/mL	EPA 6010C
Y8F1123-CCV1	Aluminum	10.0	10.9	109	ug/mL	EPA 6010C
	Antimony	0.250	0.250	99.8	ug/mL	EPA 6010C
	Arsenic	0.500	0.510	102	ug/mL	EPA 6010C
	Barium	10.0	10.4	104	ug/mL	EPA 6010C
	Beryllium	0.250	0.259	104	ug/mL	EPA 6010C
	Cadmium	0.250	0.257	103	ug/mL	EPA 6010C
	Calcium	25.0	26.2	105	ug/mL	EPA 6010C
	Chromium	1.00	1.07	107	ug/mL	EPA 6010C
	Cobalt	2.50	2.63	105	ug/mL	EPA 6010C
	Copper	1.25	1.32	105	ug/mL	EPA 6010C
	Iron	5.00	5.28	106	ug/mL	EPA 6010C
	Lead	0.500	0.510	102	ug/mL	EPA 6010C
	Magnesium	25.0	26.1	104	ug/mL	EPA 6010C
	Manganese	2.50	2.60	104	ug/mL	EPA 6010C
	Nickel	2.50	2.61	104	ug/mL	EPA 6010C

INITIAL AND CONTINUING CALIBRATION CHECK

EPA 6010C

Laboratory: York Analytical Laboratories, Inc.
SDG: 18E0635
Client: PVE, LLC.
Project: 560556
Instrument ID: WinLabICP
Calibration: 05/22/18
Control Limt: +/- 10.00%
Sequence: Y8F1123

Lab Sample ID	Analyte	True	Found	%R		Units	Method
Y8F1123-CCV1	Potassium	5.00	5.21	104		ug/mL	EPA 6010C
	Selenium	0.500	0.486	97.2		ug/mL	EPA 6010C
	Silver	1.25	1.34	107		ug/mL	EPA 6010C
	Sodium	25.0	26.2	105		ug/mL	EPA 6010C
	Thallium	0.500	0.487	97.3		ug/mL	EPA 6010C
	Vanadium	2.50	2.59	103		ug/mL	EPA 6010C
	Zinc	2.50	2.66	106		ug/mL	EPA 6010C
Y8F1123-CCVB	Aluminum	10.0	11.1	111	*	ug/mL	EPA 6010C
	Antimony	0.250	0.244	97.4		ug/mL	EPA 6010C
	Arsenic	0.500	0.505	101		ug/mL	EPA 6010C
	Barium	10.0	10.1	101		ug/mL	EPA 6010C
	Beryllium	0.250	0.262	105		ug/mL	EPA 6010C
	Cadmium	0.250	0.248	99.1		ug/mL	EPA 6010C
	Calcium	25.0	26.0	104		ug/mL	EPA 6010C
	Chromium	1.00	1.06	106		ug/mL	EPA 6010C
	Cobalt	2.50	2.55	102		ug/mL	EPA 6010C
	Copper	1.25	1.31	105		ug/mL	EPA 6010C
	Iron	5.00	5.21	104		ug/mL	EPA 6010C
	Lead	0.500	0.499	99.8		ug/mL	EPA 6010C
	Magnesium	25.0	25.8	103		ug/mL	EPA 6010C
	Manganese	2.50	2.56	102		ug/mL	EPA 6010C
	Nickel	2.50	2.53	101		ug/mL	EPA 6010C
	Potassium	5.00	4.97	99.3		ug/mL	EPA 6010C
	Selenium	0.500	0.506	101		ug/mL	EPA 6010C
	Silver	1.25	1.33	106		ug/mL	EPA 6010C
	Sodium	25.0	25.9	104		ug/mL	EPA 6010C
	Thallium	0.500	0.511	102		ug/mL	EPA 6010C
	Vanadium	2.50	2.59	104		ug/mL	EPA 6010C
	Zinc	2.50	2.59	104		ug/mL	EPA 6010C
Y8F1123-CCVD	Aluminum	10.0	10.9	109		ug/mL	EPA 6010C
	Antimony	0.250	0.244	97.5		ug/mL	EPA 6010C
	Arsenic	0.500	0.511	102		ug/mL	EPA 6010C
	Barium	10.0	10.1	101		ug/mL	EPA 6010C
	Beryllium	0.250	0.260	104		ug/mL	EPA 6010C
	Cadmium	0.250	0.251	100		ug/mL	EPA 6010C
	Calcium	25.0	25.8	103		ug/mL	EPA 6010C
	Chromium	1.00	1.07	107		ug/mL	EPA 6010C

INITIAL AND CONTINUING CALIBRATION CHECK

EPA 6010C

Laboratory: York Analytical Laboratories, Inc.
SDG: 18E0635
Client: PVE, LLC.
Project: 560556
Instrument ID: WinLabICP
Calibration: 05/22/18
Control Limt: +/- 10.00%
Sequence: Y8F1123

Lab Sample ID	Analyte	True	Found	%R	Units	Method
Y8F1123-CCVD	Cobalt	2.50	2.58	103	ug/mL	EPA 6010C
	Copper	1.25	1.33	106	ug/mL	EPA 6010C
	Iron	5.00	5.14	103	ug/mL	EPA 6010C
	Lead	0.500	0.498	99.6	ug/mL	EPA 6010C
	Magnesium	25.0	25.6	103	ug/mL	EPA 6010C
	Manganese	2.50	2.55	102	ug/mL	EPA 6010C
	Nickel	2.50	2.55	102	ug/mL	EPA 6010C
	Potassium	5.00	4.88	97.5	ug/mL	EPA 6010C
	Selenium	0.500	0.489	97.8	ug/mL	EPA 6010C
	Silver	1.25	1.35	108	ug/mL	EPA 6010C
	Sodium	25.0	25.9	104	ug/mL	EPA 6010C
	Thallium	0.500	0.486	97.3	ug/mL	EPA 6010C
	Vanadium	2.50	2.58	103	ug/mL	EPA 6010C
	Zinc	2.50	2.62	105	ug/mL	EPA 6010C

* Values outside of QC limits

CRDL STANDARD

EPA 6010C

Laboratory: York Analytical Laboratories, Inc.
SDG: 18E0635
Client: PVE, LLC.
Project: 560556
Instrument ID: WinLabICP
Calibration: 05/22/18
Sequence: Y8E2221

Lab Sample ID	Analyte	True	Found	%R	Units	QC Limts
Y8E2221-CRL1	Antimony	0.0250	0.021	84.6	ug/mL	25 - 175
	Arsenic	0.0150	0.024	159	ug/mL	25 - 175
	Barium	0.0250	0.033	133	ug/mL	25 - 175
	Beryllium	0.000500	0.0006	127	ug/mL	25 - 175
	Cadmium	0.00300	0.003	114	ug/mL	25 - 175
	Chromium	0.00500	0.006	123	ug/mL	25 - 175
	Cobalt	0.00400	0.006	145	ug/mL	25 - 175
	Copper	0.0400	0.042	106	ug/mL	25 - 175
	Lead	0.00500	0.006	118	ug/mL	25 - 175
	Manganese	0.0100	0.012	118	ug/mL	25 - 175
	Nickel	0.0100	0.011	105	ug/mL	25 - 175
	Selenium	0.0250	0.020	80.7	ug/mL	25 - 175
	Silver	0.0100	0.012	119	ug/mL	25 - 175
	Thallium	0.0250	0.028	114	ug/mL	25 - 175
	Vanadium	0.0100	0.012	120	ug/mL	25 - 175
	Zinc	0.0250	0.035	138	ug/mL	25 - 175

* Values outside of QC limits

CRDL STANDARD

EPA 6010C

Laboratory: York Analytical Laboratories, Inc.
SDG: 18E0635
Client: PVE, LLC.
Project: 560556
Instrument ID: WinLabICP
Calibration: 05/22/18
Sequence: Y8F1123

Lab Sample ID	Analyte	True	Found	%R	Units	QC Limts
Y8F1123-CRL1	Antimony	0.0250	0.021	84.6	ug/mL	25 - 175
	Arsenic	0.0150	0.024	159	ug/mL	25 - 175
	Barium	0.0250	0.033	133	ug/mL	25 - 175
	Beryllium	0.000500	0.0006	127	ug/mL	25 - 175
	Cadmium	0.00300	0.003	114	ug/mL	25 - 175
	Chromium	0.00500	0.006	123	ug/mL	25 - 175
	Cobalt	0.00400	0.006	145	ug/mL	25 - 175
	Copper	0.0400	0.042	106	ug/mL	25 - 175
	Lead	0.00500	0.006	118	ug/mL	25 - 175
	Manganese	0.0100	0.012	118	ug/mL	25 - 175
	Nickel	0.0100	0.011	105	ug/mL	25 - 175
	Selenium	0.0250	0.020	80.7	ug/mL	25 - 175
	Silver	0.0100	0.012	119	ug/mL	25 - 175
	Thallium	0.0250	0.028	114	ug/mL	25 - 175
	Vanadium	0.0100	0.012	120	ug/mL	25 - 175
	Zinc	0.0250	0.035	138	ug/mL	25 - 175

* Values outside of QC limits

ICP INTERFERENCE CHECK SAMPLE

EPA 6010C

Laboratory: York Analytical Laboratories, Inc.
SDG: 18E0635
Client: PVE, LLC.
Project: 560556
Instrument ID: WinLabICP
Calibration: 05/22/18
Sequence: Y8E2221

Lab Sample ID	Analyte	True	Found	%R	Units
Y8E2221-IFA1	Antimony		0.00		ug/mL
	Arsenic		0.00		ug/mL
	Barium		0.00		ug/mL
	Beryllium		0.00		ug/mL
	Cadmium		0.00		ug/mL
	Chromium		0.00		ug/mL
	Cobalt		0.00		ug/mL
	Copper		0.00		ug/mL
	Lead		0.00		ug/mL
	Manganese		0.00		ug/mL
	Nickel		0.00		ug/mL
	Selenium		0.00		ug/mL
	Silver		0.00		ug/mL
	Thallium		0.00		ug/mL
	Vanadium		0.00		ug/mL
	Zinc		0.00		ug/mL
Y8E2221-IFB1	Aluminum	500	533.09	107	ug/mL
	Antimony	0.500	0.52	105	ug/mL
	Arsenic	0.500	0.53	106	ug/mL
	Barium	0.500	0.53	106	ug/mL
	Beryllium	0.500	0.52	105	ug/mL
	Cadmium	1.00	1.00	100	ug/mL
	Calcium	500	498.35	99.7	ug/mL
	Chromium	0.500	0.52	103	ug/mL
	Cobalt	0.500	0.51	102	ug/mL
	Copper	0.500	0.57	114	ug/mL
	Iron	200	198.69	99.3	ug/mL
	Lead	1.00	1.00	100	ug/mL
	Magnesium	500	504.21	101	ug/mL

ICP INTERFERENCE CHECK SAMPLE

EPA 6010C

Laboratory: York Analytical Laboratories, Inc.
SDG: 18E0635
Client: PVE, LLC.
Project: 560556
Instrument ID: WinLabICP
Calibration: 05/22/18
Sequence: Y8E2221

Lab Sample ID	Analyte	True	Found	%R	Units
Y8E2221-IFB1	Manganese	0.500	0.51	102	ug/mL
	Nickel	1.00	1.07	107	ug/mL
	Potassium		-0.11		ug/mL
	Selenium	0.500	0.49	98.2	ug/mL
	Silver	1.00	1.14	114	ug/mL
	Sodium		0.05		ug/mL
	Thallium	0.500	0.49	97.7	ug/mL
	Vanadium	0.500	0.51	103	ug/mL
	Zinc	1.00	1.03	103	ug/mL

* Values outside of QC limits

ICP INTERFERENCE CHECK SAMPLE

EPA 6010C

Laboratory: York Analytical Laboratories, Inc.
SDG: 18E0635
Client: PVE, LLC.
Project: 560556
Instrument ID: WinLabICP
Calibration: 05/22/18
Sequence: Y8F1123

Lab Sample ID	Analyte	True	Found	%R	Units
Y8F1123-IFA1	Antimony		0.00		ug/mL
	Arsenic		0.00		ug/mL
	Barium		0.00		ug/mL
	Beryllium		0.00		ug/mL
	Cadmium		0.00		ug/mL
	Chromium		0.00		ug/mL
	Cobalt		0.00		ug/mL
	Copper		0.00		ug/mL
	Lead		0.00		ug/mL
	Manganese		0.00		ug/mL
	Nickel		0.00		ug/mL
	Selenium		0.00		ug/mL
	Silver		0.00		ug/mL
	Thallium		0.00		ug/mL
	Vanadium		0.00		ug/mL
	Zinc		0.00		ug/mL
Y8F1123-IFB1	Aluminum	500	533.09	107	ug/mL
	Antimony	0.500	0.52	105	ug/mL
	Arsenic	0.500	0.53	106	ug/mL
	Barium	0.500	0.53	106	ug/mL
	Beryllium	0.500	0.52	105	ug/mL
	Cadmium	1.00	1.00	100	ug/mL
	Calcium	500	498.35	99.7	ug/mL
	Chromium	0.500	0.52	103	ug/mL
	Cobalt	0.500	0.51	102	ug/mL
	Copper	0.500	0.57	114	ug/mL
	Iron	200	198.69	99.3	ug/mL
	Lead	1.00	1.00	100	ug/mL
	Magnesium	500	504.21	101	ug/mL

ICP INTERFERENCE CHECK SAMPLE

EPA 6010C

Laboratory: York Analytical Laboratories, Inc.
SDG: 18E0635
Client: PVE, LLC.
Project: 560556
Instrument ID: WinLabICP
Calibration: 05/22/18
Sequence: Y8F1123

Lab Sample ID	Analyte	True	Found	%R	Units
Y8F1123-IFB1	Manganese	0.500	0.51	102	ug/mL
	Nickel	1.00	1.07	107	ug/mL
	Potassium		-0.11		ug/mL
	Selenium	0.500	0.49	98.2	ug/mL
	Silver	1.00	1.14	114	ug/mL
	Sodium		0.05		ug/mL
	Thallium	0.500	0.49	97.7	ug/mL
	Vanadium	0.500	0.51	103	ug/mL
	Zinc	1.00	1.03	103	ug/mL

* Values outside of QC limits

Metals Linear Dynamic Range

EPA 6010C

Laboratory: York Analytical Laboratories, Inc. SDG: 18E0635

Client: PVE, LLC. Project: 560556

Instrument: WinLabICP

CAS NO.	Analyte	Concentration mg/L
7429-90-5	Aluminum	2500
7440-36-0	Antimony	50
7440-38-2	Arsenic	250
7440-39-3	Barium	125
7440-41-7	Beryllium	12.5
7440-43-9	Cadmium	30
7440-70-2	Calcium	2500
7440-47-3	Chromium	50
7440-48-4	Cobalt	125
7440-50-8	Copper	62.5
7439-89-6	Iron	100
7439-92-1	Lead	150
7439-95-4	Magnesium	2500
7439-96-5	Manganese	75
7440-02-0	Nickel	125
7440-09-7	Potassium	250
7782-49-2	Selenium	100
7440-22-4	Silver	62.5
7440-23-5	Sodium	1250
7440-28-0	Thallium	125
7440-62-2	Vanadium	125
7440-66-6	Zinc	30

IEC File Name: IEC 052218A

IEC File Last Saved: 5/22/2018 1:22:40 PM
Printed On: 5/22/2018 1:23:11 PM

ICP Interelement Correction Factors EPA 6010C

Results Data Set Name: qbi030415
Method Name: METHOD FOR IE
Results Library: C:\pe\Mikew\Results\Results.md

Interfering Analytes

	Analytes	Al RADIAL	Ca RADIAL	Fe RADIAL	Mg RADIAL
1	**Ag 338.289**	0	0.011281	-0.04	0
2	**Al 308.215**	0	0.0245069	-0.0817898	0.0376104
3	**Al RADIAL**	**n/a**	0.0296996	-0.105128	0
4	**As 188.979**	0	0	0.27	0
7	**Ca 227.546**	-0.675005	0	-8.62387	-0.0625929
9	**Cd 226.502**	0	0	0.07	0
10	**Co 228.616**	0	0	-0.025	0
11	**Cr 267.716**	0	0	-0.015	0
12	**Cu 324.752**	0	0	-0.015	0
16	**Mg 279.077**	0	0	0.161547	0
17	**Mg RADIAL**	0	0	0.0994223	**n/a**
18	**Mn 257.610**	0	0	-0.065	0
19	**Na 330.237**	0	-0.983571	-4.63141	0
21	**Ni 232.003**	0	0	0.08	0
22	**Pb 220.353**	-0.129664	-0.0141428	0.1	0
23	**Sb 206.836**	0.000505	0	-0.07	0
24	**Se 196.026**	0	0	0.58	0
25	**Tl 190.801**	0	0	0.07	0
26	**V 292.402**	0	0	0.12	0
27	**Y 371.029**	9.77357	9.1591	24.475	8.93015
28	**Y RADIAL**	10.2987	9.68204	24.8989	9.399
29	**Zn 206.200**	0	0	-0.03	0

BENCHSHEETS

SDG: 18E0635

CLASS: METALS

METHOD: EPA 6010C

PREPARATION BENCH SHEET-AQUEOUS: BE81107

Prepared: **05/21/2018 18:24**

York Analytical Laboratories, Inc.

Printed: 5/24/2018 11:13:37AM

Matrix: Water **Preparation EPA 3015A** **(No Surrogate)** **ul**

Lab Number	Analysis	Initial (mL)	Final (mL)	Spike 1 ID	ul Spike 1	Spike 2 ID	ul Spike 2	Source ID	pH Data Initial	pH Data Acid	pH Data Basic	Decanted Y/N	Comments
18E0635-01RE1 A	Metals, TCLP RCR	45	50							NA			From BE80846 by SY on 05/21/2018
18E0635-01RE1 A	Metals, Target Anal	45	50							NA			From BE80846 by SY on 05/21/2018
18E0635-01RE1 A	Lead by EPA 6010	45	50							NA			From BE80846 by SY on 05/21/2018
18E0635-02RE1 A	Metals, Target Anal	45	50							NA			From BE80846 by SY on 05/21/2018
18E0635-03RE1 A	Metals, Target Anal	45	50							NA			From BE80846 by SY on 05/21/2018
18E0646-01RE1 E	Lead by EPA 6010	45	50							NA			From BE80846 by SY on 05/21/2018
18E0691-01RE1 A	Metals, TCLP RCR	45	50							NA			From BE80846 by SY on 05/21/2018
18E0695-01RE1 A	Metals, TCLP RCR	45	50							NA			From BE80846 by SY on 05/21/2018
BE81107-BLK1	QC	45	50							NA			
BE81107-BS1	QC	45	50	Y18C210	1					NA			
BE81107-DUP1	QC	45	50					18E0635-01RE1		NA			
BE81107-MS1	QC	45	50	Y18C209	500			18E0635-01RE1		NA			

From BE80846 on 5/21/2018 by SY

Reagents:

ID Number	Description	Lot Number	ID Number	Description	Lot Number

Preparation Performed by SY **Date:** 05/21/2018 18:24

Sample Information Detail Report
Document Name: 052218a

File Description
Sample Information File

Parameters Common to All Samples

Batch ID	qbi052218a
Analyst Name	BML
Volume Units	mL
Weight Units	g

Parameters That Vary By Sample

Sample No	A/S Location	Sample ID	Remarks
1	3	SEQ-ICV1	
2	402	SEQ-ICV2	
3	4	SEQ-ICB1	
4	5	SEQ-CRL1	
5	6	SEQ-CRL2	
6	403	SEQ-CRL3	
7	7	SEQ-IFA1	
8	8	SEQ-IFB1	
9	9	SEQ-CCV1	
10	4	SEQ-CCB1	
11	402	SEQ-CCV2	
12	1	SEQ-CCB2	
13	101	BE81107-BLK1	
14	102	BE81107-BS1	
15	103	18E0635-01	
16	104	BE81107-DUP1	
17	105	BE81107-MS1	
18	106	18E0635-02	
19	107	18E0635-03	
20	108	18E0646-01	
21	109	18E0691-01	
22	110	18E0695-01	
23	9	SEQ-CCV3	
24	4	SEQ-CCB3	
25	402	SEQ-CCV4	
26	1	SEQ-CCB4	
27	111	SEQ-SRD1	18E0635-01
28	112	BE81000-BLK1	
29	113	BE81000-SRM1	
30	114	BE81000-SRM2	
31	115	18E0750-01	
32	116	18E0753-01	
33	117	BE81122-BLK1	
34	118	BE81122-BS1	
35	119	18E0986-01	
36	120	BE81123-BLK1	
37	9	SEQ-CCV5	
38	4	SEQ-CCB5	
39	402	SEQ-CCV6	
40	1	SEQ-CCB6	
41	121	BE81123-BS1	
42	122	18E0740-01	
43	123	18E0740-02	
44	124	18E0740-03	
45	125	18E0740-04	
46	126	18E0768-01	
47	127	BE81068-BLK1	
48	128	BE81068-SRM1	
49	129	18E0893-01	
50	130	BE81001-BLK1	
51	9	SEQ-CCV7	
52	4	SEQ-CCB7	

53	402	SEQ-CCV8	
54	1	SEQ-CCB8	
55	131	BE81001-SRM1	
56	132	18E0868-10	
57	133	18E0868-11	
58	134	18E0868-12	
59	135	18E0873-01	
60	136	18E0873-02	
61	137	18E0873-03	
62	138	18E0873-04	
63	139	18E0873-05	
64	140	18E0873-06	
65	9	SEQ-CCV9	
66	4	SEQ-CCB9	
67	402	SEQ-CCVA	
68	1	SEQ-CCBA	
69	141	18E0873-07	
70	142	18E0873-08	
71	143	18E0873-09	
72	144	18E0873-10	
73	145	18E0873-11	
74	146	18E0873-12	
75	147	18E0873-13	
76	148	18E0873-14	
77	149	18E0873-15	
78	150	18E0873-16	
79	9	SEQ-CCVB	
80	4	SEQ-CCBB	
81	402	SEQ-CCVC	
82	1	SEQ-CCBC	
83	151	18E0873-17	
84	152	BE81073-BLK1	
85	153	BE81073-BS1	
86	154	18E0729-01	
87	155	18E0759-01	
88	156	18E0707-01RE1	10x
89	157	BE81107-BLK1	
90	9	SEQ-CCVD	
91	4	SEQ-CCBD	
92	402	SEQ-CCVE	
93	1	SEQ-CCBE	
94	5	SEQ-CRL3	
95	6	SEQ-CRL4	
96	402	SEQ-CRL3	
97	7	SEQ-IFA2	
98	8	SEQ-IFB2	
99	405	SEQ-HCV1	
100	1	BLANK	
101	1	BLANK	
102	10	SEQ-CCVF	
103	1	SEQ-CCBF	

Reprocessing Begun
Logged In Analyst: john Technique: ICP Continuous

Results Data Set (original): qbi052218a
Results Library (original): C:\pe\rqb\Results\Results 030218.mdb
Results Data Set (reprocessed): qbi052218aRE_1
Results Library (reprocessed): C:\pe\john\Results\Results 030218.mdb

Method Loaded
Method Name: TAL plus S_032218FAS Method Last Saved: 3/22/2018 3:17:22 PM
IEC File: IEC 030318A.iec MSF File:
Method Description: TAL METALS

Sequence No.: 1 Autosampler Location: 1
Sample ID: Calib Blank 1 Date Collected: 5/22/2018 11:39:58 AM
Analyst: Data Type: Reprocessed on 5/22/2018 3:42:02 PM
Logged In Analyst (Original) : rqb
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:

Mean Data: Calib Blank 1

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Y 371.029	16694823.4	163658.26	0.98%	5.000	mg/L
Y RADIAL	237082.6	1602.40	0.68%	5.000	mg/L
As 188.979†	20.9	4.84	23.16%	[0.00]	mg/L
Tl 190.801†	-41.9	6.33	15.09%	[0.00]	mg/L
Se 196.026†	47.6	7.93	16.68%	[0.00]	mg/L
Zn 206.200†	241.8	2.79	1.15%	[0.00]	mg/L
Sb 206.836†	79.6	6.17	7.75%	[0.00]	mg/L
Pb 220.353†	137.7	10.54	7.66%	[0.00]	mg/L
Cd 226.502†	-372.9	13.23	3.55%	[0.00]	mg/L
Co 228.616†	-154.5	14.30	9.25%	[0.00]	mg/L
Ni 232.003†	-1108.5	18.01	1.62%	[0.00]	mg/L
Ba 233.527†	-20.6	13.46	65.20%	[0.00]	mg/L
Mn 257.610†	597.4	73.50	12.30%	[0.00]	mg/L
Cr 267.716†	527.2	29.12	5.52%	[0.00]	mg/L
Fe 273.955†	155.6	86.67	55.69%	[0.00]	mg/L
Mg 279.077†	133.9	18.42	13.76%	[0.00]	mg/L
V 292.402†	-257.7	63.55	24.66%	[0.00]	mg/L
Al 308.215†	10596.7	91.11	0.86%	[0.00]	mg/L
Be 313.107†	-12631.8	251.40	1.99%	[0.00]	mg/L
Cu 324.752†	2580.7	18.64	0.72%	[0.00]	mg/L
Ag 338.289†	77.3	149.46	193.36%	[0.00]	mg/L
Na 330.237†	412.4	30.10	7.30%	[0.00]	mg/L
Ca 227.546†	-512.9	13.51	2.63%	[0.00]	mg/L
Al RADIAL†	53.8	10.07	18.72%	[0.00]	mg/L
Fe RADIAL†	11.0	1.16	10.57%	[0.00]	mg/L
Ca RADIAL†	1569.8	15.43	0.98%	[0.00]	mg/L
K RADIAL†	1085.5	35.55	3.27%	[0.00]	mg/L
Mg RADIAL†	31.7	3.91	12.35%	[0.00]	mg/L
Na RADIAL†	143.1	26.06	18.20%	[0.00]	mg/L
S 180.669†	17.8	6.29	35.26%	[0.00]	mg/L

Sequence No.: 2
Sample ID: CAL STD 1
Analyst:
Logged In Analyst (Original) : rqb
Initial Sample Wt:
Dilution:

Autosampler Location: 2
Date Collected: 5/22/2018 11:42:20 AM
Data Type: Reprocessed on 5/22/2018 3:42:07 PM

Initial Sample Vol:
Sample Prep Vol:

Mean Data: CAL STD 1

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Y 371.029	15752899.3	83011.89	0.53%	4.718	mg/L
Y RADIAL	228300.9	1154.24	0.51%	4.815	mg/L
As 188.979†	1380.5	7.24	0.52%	[1.0000]	mg/L
Tl 190.801†	1310.6	1.09	0.08%	[1.0000]	mg/L
Se 196.026†	1781.9	10.76	0.60%	[1.0000]	mg/L
Zn 206.200†	160688.6	1867.34	1.16%	[5.0000]	mg/L
Sb 206.836†	1151.1	25.02	2.17%	[0.5000]	mg/L
Pb 220.353†	10504.4	64.79	0.62%	[1.0000]	mg/L
Cd 226.502†	62964.6	665.59	1.06%	[0.5000]	mg/L
Co 228.616†	169740.4	1800.53	1.06%	[5.0000]	mg/L
Ni 232.003†	84676.6	981.82	1.16%	[5.0000]	mg/L
Ba 233.527†	1425599.0	13594.48	0.95%	[20.0000]	mg/L
Mn 257.610†	3146841.2	32237.27	1.02%	[5.0000]	mg/L
Cr 267.716†	242274.2	2554.05	1.05%	[2.0000]	mg/L
Fe 273.955†	208160.9	2029.50	0.97%	[10.0000]	mg/L
Mg 279.077†	1035282.3	10264.99	0.99%	[50.0000]	mg/L
V 292.402†	943211.3	9715.86	1.03%	[5.0000]	mg/L
Al 308.215†	327796.0	3408.26	1.04%	[20.0000]	mg/L
Be 313.107†	1587279.0	13714.63	0.86%	[0.5000]	mg/L
Cu 324.752†	471842.5	5067.20	1.07%	[2.5000]	mg/L
Ag 338.289†	229678.8	2131.22	0.93%	[2.5000]	mg/L
Na 330.237†	27702.5	212.36	0.77%	[50.0000]	mg/L
Ca 227.546†	10495.1	61.80	0.59%	[50.0000]	mg/L
Al RADIAL†	19515.4	89.15	0.46%	[20.0000]	mg/L
Fe RADIAL†	3062.2	44.84	1.46%	[10.0000]	mg/L
Ca RADIAL†	166150.5	165.36	0.10%	[50.0000]	mg/L
K RADIAL†	5571.9	66.89	1.20%	[10.0000]	mg/L
Mg RADIAL†	17866.7	191.11	1.07%	[50.0000]	mg/L
Na RADIAL†	247779.2	745.68	0.30%	[50.0000]	mg/L

Sequence No.: 3
Sample ID: CAL STD 2
Analyst:
Logged In Analyst (Original) : rqb
Initial Sample Wt:
Dilution:

Autosampler Location: 401
Date Collected: 5/22/2018 11:44:38 AM
Data Type: Reprocessed on 5/22/2018 3:42:10 PM
Initial Sample Vol:
Sample Prep Vol:

Mean Data: CAL STD 2

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Y 371.029	16544601.3	122800.99	0.74%	4.955	mg/L
Y RADIAL	228943.7	2056.04	0.90%	4.828	mg/L
S 180.669†	3289.9	52.05	1.58%	[5.00]	mg/L

Sequence No.: 4
Sample ID: SEQ-ICV1
Analyst: BML
Logged In Analyst (Original) : rqb
Initial Sample Wt:
Dilution:

Autosampler Location: 3
Date Collected: 5/22/2018 11:46:19 AM
Data Type: Reprocessed on 5/22/2018 3:42:11 PM
Initial Sample Vol:
Sample Prep Vol:

Mean Data: SEQ-ICV1

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	15893058.0	4.760	mg/L	0.0642				1.35%
Y RADIAL	230961.6	4.871	mg/L	0.0660				1.36%
As 188.979†	380.2	0.2740	mg/L	0.00758	0.2740	mg/L	0.00758	2.77%
Tl 190.801†	330.7	0.2519	mg/L	0.00561	0.2519	mg/L	0.00561	2.23%
Se 196.026†	497.6	0.2762	mg/L	0.00703	0.2762	mg/L	0.00703	2.54%
Zn 206.200†	86034.9	2.677	mg/L	0.0518	2.677	mg/L	0.0518	1.93%
Sb 206.836†	601.7	0.2617	mg/L	0.00881	0.2617	mg/L	0.00881	3.36%
Pb 220.353†	2758.1	0.2638	mg/L	0.00248	0.2638	mg/L	0.00248	0.94%
Cd 226.502†	16456.1	0.1303	mg/L	0.00184	0.1303	mg/L	0.00184	1.41%
Co 228.616†	89863.5	2.647	mg/L	0.0568	2.647	mg/L	0.0568	2.15%
Ni 232.003†	44430.5	2.623	mg/L	0.0502	2.623	mg/L	0.0502	1.92%
Ba 233.527†	749986.1	10.52	mg/L	0.199	10.52	mg/L	0.199	1.89%
Mn 257.610†	1643935.6	2.612	mg/L	0.0537	2.612	mg/L	0.0537	2.06%
Cr 267.716†	131085.4	1.082	mg/L	0.0193	1.082	mg/L	0.0193	1.79%
Fe 273.955†	110774.0	5.322	mg/L	0.0992	5.322	mg/L	0.0992	1.86%
Mg 279.077†	539735.6	26.07	mg/L	0.515	26.07	mg/L	0.515	1.97%
V 292.402†	491470.5	2.605	mg/L	0.0590	2.605	mg/L	0.0590	2.26%
Al 308.215†	171221.9	10.45	mg/L	0.206	10.45	mg/L	0.206	1.97%
Be 313.107†	842607.6	0.26543	mg/L	0.006599	0.26543	mg/L	0.006599	2.49%
Cu 324.752†	250529.2	1.327	mg/L	0.0255	1.327	mg/L	0.0255	1.92%
Ag 338.289†	122677.7	1.335	mg/L	0.0255	1.335	mg/L	0.0255	1.91%
Na 330.237†	13700.5	24.78	mg/L	0.342	24.78	mg/L	0.342	1.38%
Ca 227.546†	5360.0	25.59	mg/L	0.252	25.59	mg/L	0.252	0.99%
Al RADIAL†	10509.7	10.77	mg/L	0.219	10.77	mg/L	0.219	2.04%
Fe RADIAL†	1595.2	5.209	mg/L	0.0911	5.209	mg/L	0.0911	1.75%
Ca RADIAL†	86602.2	26.06	mg/L	0.380	26.06	mg/L	0.380	1.46%
K RADIAL†	2789.9	5.007	mg/L	0.0794	5.007	mg/L	0.0794	1.59%
Mg RADIAL†	9230.3	25.83	mg/L	0.471	25.83	mg/L	0.471	1.82%
Na RADIAL†	129961.6	26.23	mg/L	0.397	26.23	mg/L	0.397	1.51%
S 180.669†	356.3	0.5415	mg/L	0.00886	0.5415	mg/L	0.00886	1.64%

Sequence No.: 6
Sample ID: SEQ-ICB1
Analyst: BML
Logged In Analyst (Original) : rqb
Initial Sample Wt:
Dilution:

Autosampler Location: 4
Date Collected: 5/22/2018 11:51:01 AM
Data Type: Reprocessed on 5/22/2018 3:42:15 PM
Initial Sample Vol:
Sample Prep Vol:

Mean Data: SEQ-ICB1

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	16725966.2	5.009	mg/L	0.0354				0.71%
Y RADIAL	236184.8	4.981	mg/L	0.0257				0.52%
As 188.979†	12.3	0.0089	mg/L	0.00304	0.0089	mg/L	0.00304	34.08%
Tl 190.801†	6.8	0.0052	mg/L	0.00454	0.0052	mg/L	0.00454	87.23%
Se 196.026†	1.2	0.0007	mg/L	0.00426	0.0007	mg/L	0.00426	624.74%
Zn 206.200†	-126.6	-0.0039	mg/L	0.00024	-0.0039	mg/L	0.00024	6.20%
Sb 206.836†	-1.9	-0.0008	mg/L	0.00071	-0.0008	mg/L	0.00071	84.31%
Pb 220.353†	-3.3	-0.0003	mg/L	0.00248	-0.0003	mg/L	0.00248	781.86%
Cd 226.502†	32.1	0.0003	mg/L	0.00004	0.0003	mg/L	0.00004	13.85%
Co 228.616†	22.4	0.0007	mg/L	0.00057	0.0007	mg/L	0.00057	87.23%
Ni 232.003†	-6.9	-0.0004	mg/L	0.00403	-0.0004	mg/L	0.00403	989.87%
Ba 233.527†	65.4	0.0009	mg/L	0.00009	0.0009	mg/L	0.00009	10.15%
Mn 257.610†	163.1	0.0003	mg/L	0.00010	0.0003	mg/L	0.00010	37.83%
Cr 267.716†	68.7	0.0006	mg/L	0.00026	0.0006	mg/L	0.00026	45.32%
Fe 273.955†	-22.8	-0.0011	mg/L	0.00073	-0.0011	mg/L	0.00073	66.63%
Mg 279.077†	148.7	0.0072	mg/L	0.00336	0.0072	mg/L	0.00336	46.77%
V 292.402†	49.0	0.0003	mg/L	0.00010	0.0003	mg/L	0.00010	37.05%
Al 308.215†	-240.6	-0.0147	mg/L	0.00801	-0.0147	mg/L	0.00801	54.53%
Be 313.107†	228.0	0.00007	mg/L	0.000025	0.00007	mg/L	0.000025	34.18%
Cu 324.752†	58.3	0.0003	mg/L	0.00067	0.0003	mg/L	0.00067	218.23%
Ag 338.289†	-36.1	-0.0004	mg/L	0.00101	-0.0004	mg/L	0.00101	256.83%
Na 330.237†	26.2	0.0472	mg/L	0.05411	0.0472	mg/L	0.05411	114.54%
Ca 227.546†	-6.4	-0.0305	mg/L	0.04107	-0.0305	mg/L	0.04107	134.76%
Al RADIAL†	-17.7	-0.0182	mg/L	0.00868	-0.0182	mg/L	0.00868	47.74%
Fe RADIAL†	-2.1	-0.0069	mg/L	0.00252	-0.0069	mg/L	0.00252	36.27%
Ca RADIAL†	-216.2	-0.0651	mg/L	0.00545	-0.0651	mg/L	0.00545	8.37%
K RADIAL†	-128.2	-0.2301	mg/L	0.04756	-0.2301	mg/L	0.04756	20.67%
Mg RADIAL†	5.4	0.0152	mg/L	0.02344	0.0152	mg/L	0.02344	153.77%
Na RADIAL†	8.8	0.0018	mg/L	0.01878	0.0018	mg/L	0.01878	>999.9%
S 180.669†	-8.6	-0.0131	mg/L	0.00575	-0.0131	mg/L	0.00575	44.03%

Sequence No.: 7
Sample ID: SEQ-CRL1
Analyst: BML
Logged In Analyst (Original) : rqb
Initial Sample Wt:
Dilution:

Autosampler Location: 5
Date Collected: 5/22/2018 11:53:18 AM
Data Type: Reprocessed on 5/22/2018 3:42:17 PM
Initial Sample Vol:
Sample Prep Vol:

Mean Data: SEQ-CRL1

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	16539658.6	4.954	mg/L	0.0065				0.13%
Y RADIAL	234398.5	4.943	mg/L	0.0247				0.50%
As 188.979†	33.2	0.0239	mg/L	0.00535	0.0239	mg/L	0.00535	22.41%
Tl 190.801†	37.4	0.0285	mg/L	0.00365	0.0285	mg/L	0.00365	12.81%
Se 196.026†	36.5	0.0202	mg/L	0.00486	0.0202	mg/L	0.00486	24.06%
Zn 206.200†	1110.9	0.0346	mg/L	0.00056	0.0346	mg/L	0.00056	1.63%
Sb 206.836†	48.6	0.0211	mg/L	0.00057	0.0211	mg/L	0.00057	2.68%
Pb 220.353†	61.8	0.0059	mg/L	0.00133	0.0059	mg/L	0.00133	22.44%
Cd 226.502†	434.3	0.0034	mg/L	0.00005	0.0034	mg/L	0.00005	1.53%
Co 228.616†	195.9	0.0058	mg/L	0.00029	0.0058	mg/L	0.00029	5.06%
Ni 232.003†	178.9	0.0105	mg/L	0.00207	0.0105	mg/L	0.00207	19.67%
Ba 233.527†	2370.0	0.0332	mg/L	0.00032	0.0332	mg/L	0.00032	0.97%
Mn 257.610†	7392.8	0.0118	mg/L	0.00001	0.0118	mg/L	0.00001	0.10%
Cr 267.716†	745.7	0.0062	mg/L	0.00054	0.0062	mg/L	0.00054	8.68%
Fe 273.955†	11223.0	0.5392	mg/L	0.00413	0.5392	mg/L	0.00413	0.77%
Mg 279.077†	11521.6	0.5564	mg/L	0.00370	0.5564	mg/L	0.00370	0.67%
V 292.402†	2270.2	0.0120	mg/L	0.00028	0.0120	mg/L	0.00028	2.38%
Al 308.215†	8364.4	0.5103	mg/L	0.01333	0.5103	mg/L	0.01333	2.61%
Be 313.107†	2019.7	0.00064	mg/L	0.000107	0.00064	mg/L	0.000107	16.75%
Cu 324.752†	7991.6	0.0424	mg/L	0.00116	0.0424	mg/L	0.00116	2.73%
Ag 338.289†	1088.0	0.0119	mg/L	0.00162	0.0119	mg/L	0.00162	13.70%
Na 330.237†	299.3	0.5434	mg/L	0.14329	0.5434	mg/L	0.14329	26.37%
Ca 227.546†	125.9	0.6046	mg/L	0.08746	0.6046	mg/L	0.08746	14.46%
Al RADIAL†	533.9	0.5472	mg/L	0.03337	0.5472	mg/L	0.03337	6.10%
Fe RADIAL†	162.1	0.5294	mg/L	0.00809	0.5294	mg/L	0.00809	1.53%
Ca RADIAL†	2112.7	0.6358	mg/L	0.01039	0.6358	mg/L	0.01039	1.63%
K RADIAL†	275.4	0.4942	mg/L	0.12685	0.4942	mg/L	0.12685	25.67%
Mg RADIAL†	197.2	0.5519	mg/L	0.02846	0.5519	mg/L	0.02846	5.16%
Na RADIAL†	2549.6	0.5145	mg/L	0.01821	0.5145	mg/L	0.01821	3.54%
S 180.669†	2.3	0.0035	mg/L	0.01047	0.0035	mg/L	0.01047	302.81%

Sequence No.: 10
Sample ID: SEQ-IFA1
Analyst: BML
Logged In Analyst (Original) : rqb
Initial Sample Wt:
Dilution:

Autosampler Location: 7
Date Collected: 5/22/2018 12:00:05 PM
Data Type: Reprocessed on 5/22/2018 3:42:27 PM

Initial Sample Vol:
Sample Prep Vol:

Mean Data: SEQ-IFA1

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	14312823.7	4.287	mg/L	0.0122				0.28%
Y RADIAL	218458.7	4.607	mg/L	0.0375				0.81%
As 188.979†	74.1	0.0006	mg/L	0.00684	0.0006	mg/L	0.00684	>999.9%
Tl 190.801†	16.8	-0.0009	mg/L	0.01347	-0.0009	mg/L	0.01347	>999.9%
Se 196.026†	204.9	0.0008	mg/L	0.01263	0.0008	mg/L	0.01263	>999.9%
Zn 206.200†	-215.9	-0.0008	mg/L	0.00027	-0.0008	mg/L	0.00027	33.59%
Sb 206.836†	-29.4	0.0007	mg/L	0.00374	0.0007	mg/L	0.00374	508.71%
Pb 220.353†	-585.3	-0.0007	mg/L	0.00118	-0.0007	mg/L	0.00118	177.56%
Cd 226.502†	1686.0	-0.0004	mg/L	0.00013	-0.0004	mg/L	0.00013	34.17%
Co 228.616†	-184.4	-0.0005	mg/L	0.00093	-0.0005	mg/L	0.00093	182.79%
Ni 232.003†	269.0	0.0001	mg/L	0.00332	0.0001	mg/L	0.00332	>999.9%
Ba 233.527†	166.0	0.0023	mg/L	0.00019	0.0023	mg/L	0.00019	7.97%
Mn 257.610†	-8646.2	-0.0009	mg/L	0.00028	-0.0009	mg/L	0.00028	29.89%
Cr 267.716†	-328.9	0.0002	mg/L	0.00055	0.0002	mg/L	0.00055	232.75%
Fe 273.955†	4217659.5	202.6	mg/L	1.69	202.6	mg/L	1.69	0.83%
Mg 279.077†	11129647.0	537.5	mg/L	3.06	537.5	mg/L	3.06	0.57%
V 292.402†	4407.4	-0.0002	mg/L	0.00128	-0.0002	mg/L	0.00128	514.59%
Al 308.215†	9194611.5	561.0	mg/L	3.28	561.0	mg/L	3.28	0.59%
Be 313.107†	-1453.6	-0.00046	mg/L	0.000118	-0.00046	mg/L	0.000118	25.80%
Cu 324.752†	-722.8	-0.0009	mg/L	0.00036	-0.0009	mg/L	0.00036	41.18%
Ag 338.289†	-233.9	-0.0002	mg/L	0.00099	-0.0002	mg/L	0.00099	483.83%
Na 330.237†	-741.5	0.0551	mg/L	0.06217	0.0551	mg/L	0.06217	112.75%
Ca 227.546†	110487.3	528.5	mg/L	4.51	528.5	mg/L	4.51	0.85%
Al RADIAL†	510228.5	522.9	mg/L	8.19	522.9	mg/L	8.19	1.57%
Fe RADIAL†	60256.5	196.8	mg/L	0.55	196.8	mg/L	0.55	0.28%
Ca RADIAL†	1628954.0	490.2	mg/L	7.58	490.2	mg/L	7.58	1.55%
K RADIAL†	7.3	0.0132	mg/L	0.13194	0.0132	mg/L	0.13194	>999.9%
Mg RADIAL†	178641.1	499.9	mg/L	1.71	499.9	mg/L	1.71	0.34%
Na RADIAL†	275.4	0.0556	mg/L	0.00207	0.0556	mg/L	0.00207	3.73%
S 180.669†	6390.6	9.712	mg/L	0.0760	9.712	mg/L	0.0760	0.78%

Sequence No.: 11
Sample ID: SEQ-IFB1
Analyst: BML
Logged In Analyst (Original) : rqb
Initial Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 5/22/2018 12:02:01 PM
Data Type: Reprocessed on 5/22/2018 3:42:29 PM

Initial Sample Vol:
Sample Prep Vol:

Mean Data: SEQ-IFB1

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	14329871.2	4.292	mg/L	0.0260				0.61%
Y RADIAL	219873.9	4.637	mg/L	0.0228				0.49%
As 188.979†	807.9	0.5315	mg/L	0.00508	0.5315	mg/L	0.00508	0.96%
Tl 190.801†	658.6	0.4886	mg/L	0.00717	0.4886	mg/L	0.00717	1.47%
Se 196.026†	1080.6	0.4912	mg/L	0.00675	0.4912	mg/L	0.00675	1.37%
Zn 206.200†	32945.9	1.031	mg/L	0.0085	1.031	mg/L	0.0085	0.83%
Sb 206.836†	1173.5	0.5234	mg/L	0.00435	0.5234	mg/L	0.00435	0.83%
Pb 220.353†	9915.6	1.000	mg/L	0.0070	1.000	mg/L	0.0070	0.70%
Cd 226.502†	128279.9	1.005	mg/L	0.0056	1.005	mg/L	0.0056	0.55%
Co 228.616†	17227.7	0.5124	mg/L	0.00352	0.5124	mg/L	0.00352	0.69%
Ni 232.003†	18443.6	1.073	mg/L	0.0045	1.073	mg/L	0.0045	0.42%
Ba 233.527†	37752.9	0.5296	mg/L	0.00230	0.5296	mg/L	0.00230	0.43%
Mn 257.610†	314277.0	0.5123	mg/L	0.00281	0.5123	mg/L	0.00281	0.55%
Cr 267.716†	62026.7	0.5150	mg/L	0.00196	0.5150	mg/L	0.00196	0.38%
Fe 273.955†	4256720.8	204.5	mg/L	0.92	204.5	mg/L	0.92	0.45%
Mg 279.077†	11261657.4	543.9	mg/L	0.61	543.9	mg/L	0.61	0.11%
V 292.402†	101590.2	0.5147	mg/L	0.00341	0.5147	mg/L	0.00341	0.66%
Al 308.215†	9346170.0	570.2	mg/L	0.50	570.2	mg/L	0.50	0.09%
Be 313.107†	1666172.8	0.52485	mg/L	0.001702	0.52485	mg/L	0.001702	0.32%
Cu 324.752†	107388.4	0.5720	mg/L	0.00200	0.5720	mg/L	0.00200	0.35%
Ag 338.289†	104311.2	1.138	mg/L	0.0054	1.138	mg/L	0.0054	0.48%
Na 330.237†	-397.6	0.6927	mg/L	0.07555	0.6927	mg/L	0.07555	10.91%
Ca 227.546†	111810.7	534.8	mg/L	0.52	534.8	mg/L	0.52	0.10%
Al RADIAL†	520165.0	533.1	mg/L	3.08	533.1	mg/L	3.08	0.58%
Fe RADIAL†	60841.9	198.7	mg/L	0.23	198.7	mg/L	0.23	0.12%
Ca RADIAL†	1656022.4	498.4	mg/L	0.34	498.4	mg/L	0.34	0.07%
K RADIAL†	-61.9	-0.1110	mg/L	0.17608	-0.1110	mg/L	0.17608	158.61%
Mg RADIAL†	180178.5	504.2	mg/L	1.23	504.2	mg/L	1.23	0.24%
Na RADIAL†	249.3	0.0503	mg/L	0.00228	0.0503	mg/L	0.00228	4.53%
S 180.669†	6432.2	9.776	mg/L	0.1301	9.776	mg/L	0.1301	1.33%

Sequence No.: 12
Sample ID: SEQ-CCV1
Analyst: BML
Logged In Analyst (Original) : rqb
Initial Sample Wt:
Dilution:

Autosampler Location: 9
Date Collected: 5/22/2018 12:03:56 PM
Data Type: Reprocessed on 5/22/2018 3:42:34 PM
Initial Sample Vol:
Sample Prep Vol:

Mean Data: SEQ-CCV1

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	16193595.3	4.850	mg/L	0.0314				0.65%
Y RADIAL	232722.6	4.908	mg/L	0.0360				0.73%
As 188.979†	705.6	0.5097	mg/L	0.00202	0.5097	mg/L	0.00202	0.40%
Tl 190.801†	638.4	0.4867	mg/L	0.00873	0.4867	mg/L	0.00873	1.79%
Se 196.026†	871.8	0.4862	mg/L	0.01313	0.4862	mg/L	0.01313	2.70%
Zn 206.200†	85388.8	2.657	mg/L	0.0398	2.657	mg/L	0.0398	1.50%
Sb 206.836†	573.6	0.2495	mg/L	0.00200	0.2495	mg/L	0.00200	0.80%
Pb 220.353†	5339.8	0.5096	mg/L	0.00351	0.5096	mg/L	0.00351	0.69%
Cd 226.502†	32450.8	0.2573	mg/L	0.00302	0.2573	mg/L	0.00302	1.17%
Co 228.616†	89361.2	2.632	mg/L	0.0357	2.632	mg/L	0.0357	1.36%
Ni 232.003†	44156.9	2.607	mg/L	0.0341	2.607	mg/L	0.0341	1.31%
Ba 233.527†	742436.6	10.42	mg/L	0.104	10.42	mg/L	0.104	1.00%
Mn 257.610†	1634725.3	2.598	mg/L	0.0270	2.598	mg/L	0.0270	1.04%
Cr 267.716†	129888.2	1.072	mg/L	0.0128	1.072	mg/L	0.0128	1.19%
Fe 273.955†	111345.3	5.349	mg/L	0.0699	5.349	mg/L	0.0699	1.31%
Mg 279.077†	538978.6	26.03	mg/L	0.221	26.03	mg/L	0.221	0.85%
V 292.402†	488196.6	2.587	mg/L	0.0132	2.587	mg/L	0.0132	0.51%
Al 308.215†	173182.4	10.57	mg/L	0.136	10.57	mg/L	0.136	1.29%
Be 313.107†	822544.6	0.25911	mg/L	0.001047	0.25911	mg/L	0.001047	0.40%
Cu 324.752†	248769.2	1.318	mg/L	0.0139	1.318	mg/L	0.0139	1.05%
Ag 338.289†	123024.3	1.339	mg/L	0.0118	1.339	mg/L	0.0118	0.88%
Na 330.237†	13825.5	25.00	mg/L	0.552	25.00	mg/L	0.552	2.21%
Ca 227.546†	5337.2	25.48	mg/L	0.121	25.48	mg/L	0.121	0.47%
Al RADIAL†	10645.6	10.91	mg/L	0.101	10.91	mg/L	0.101	0.92%
Fe RADIAL†	1617.0	5.280	mg/L	0.0644	5.280	mg/L	0.0644	1.22%
Ca RADIAL†	87183.9	26.24	mg/L	0.063	26.24	mg/L	0.063	0.24%
K RADIAL†	2903.4	5.211	mg/L	0.1146	5.211	mg/L	0.1146	2.20%
Mg RADIAL†	9327.8	26.10	mg/L	0.274	26.10	mg/L	0.274	1.05%
Na RADIAL†	130074.7	26.25	mg/L	0.011	26.25	mg/L	0.011	0.04%
S 180.669†	334.9	0.5090	mg/L	0.01363	0.5090	mg/L	0.01363	2.68%

Sequence No.: 13
Sample ID: SEQ-CCB1
Analyst: BML
Logged In Analyst (Original) : rqb
Initial Sample Wt:
Dilution:

Autosampler Location: 4
Date Collected: 5/22/2018 12:06:19 PM
Data Type: Reprocessed on 5/22/2018 3:42:37 PM

Initial Sample Vol:
Sample Prep Vol:

Mean Data: SEQ-CCB1

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	16713255.4	5.006	mg/L	0.0157				0.31%
Y RADIAL	238422.4	5.028	mg/L	0.0600				1.19%
As 188.979†	-7.5	-0.0054	mg/L	0.00653	-0.0054	mg/L	0.00653	120.64%
Tl 190.801†	-9.0	-0.0069	mg/L	0.00355	-0.0069	mg/L	0.00355	51.46%
Se 196.026†	6.5	0.0036	mg/L	0.00652	0.0036	mg/L	0.00652	179.81%
Zn 206.200†	-123.3	-0.0038	mg/L	0.00026	-0.0038	mg/L	0.00026	6.72%
Sb 206.836†	-2.5	-0.0011	mg/L	0.00367	-0.0011	mg/L	0.00367	341.67%
Pb 220.353†	-1.6	-0.0002	mg/L	0.00017	-0.0002	mg/L	0.00017	107.35%
Cd 226.502†	19.8	0.0002	mg/L	0.00016	0.0002	mg/L	0.00016	99.92%
Co 228.616†	4.2	0.0001	mg/L	0.00036	0.0001	mg/L	0.00036	284.15%
Ni 232.003†	3.5	0.0002	mg/L	0.00550	0.0002	mg/L	0.00550	>999.9%
Ba 233.527†	52.9	0.0007	mg/L	0.00033	0.0007	mg/L	0.00033	44.32%
Mn 257.610†	133.8	0.0002	mg/L	0.00012	0.0002	mg/L	0.00012	57.46%
Cr 267.716†	15.0	0.0001	mg/L	0.00092	0.0001	mg/L	0.00092	745.75%
Fe 273.955†	252.1	0.0121	mg/L	0.00016	0.0121	mg/L	0.00016	1.29%
Mg 279.077†	769.8	0.0372	mg/L	0.00214	0.0372	mg/L	0.00214	5.75%
V 292.402†	32.0	0.0002	mg/L	0.00071	0.0002	mg/L	0.00071	426.01%
Al 308.215†	426.4	0.0260	mg/L	0.00250	0.0260	mg/L	0.00250	9.60%
Be 313.107†	-100.7	-0.00003	mg/L	0.000050	-0.00003	mg/L	0.000050	158.82%
Cu 324.752†	72.4	0.0004	mg/L	0.00055	0.0004	mg/L	0.00055	142.83%
Ag 338.289†	153.2	0.0017	mg/L	0.00154	0.0017	mg/L	0.00154	92.13%
Na 330.237†	36.0	0.0651	mg/L	0.17444	0.0651	mg/L	0.17444	267.80%
Ca 227.546†	-19.2	-0.0911	mg/L	0.06813	-0.0911	mg/L	0.06813	74.76%
Al RADIAL†	12.7	0.0130	mg/L	0.00521	0.0130	mg/L	0.00521	40.04%
Fe RADIAL†	7.2	0.0235	mg/L	0.00472	0.0235	mg/L	0.00472	20.10%
Ca RADIAL†	-96.2	-0.0289	mg/L	0.00994	-0.0289	mg/L	0.00994	34.34%
K RADIAL†	-89.8	-0.1611	mg/L	0.03952	-0.1611	mg/L	0.03952	24.53%
Mg RADIAL†	11.6	0.0323	mg/L	0.01825	0.0323	mg/L	0.01825	56.46%
Na RADIAL†	8.1	0.0016	mg/L	0.01400	0.0016	mg/L	0.01400	856.94%
S 180.669†	-0.9	-0.0013	mg/L	0.00214	-0.0013	mg/L	0.00214	158.81%

Sequence No.: 17
Sample ID: BE81107-BS1
Analyst: BML
Logged In Analyst (Original) : rqb
Initial Sample Wt:
Dilution:

Autosampler Location: 102
Date Collected: 5/22/2018 12:15:29 PM
Data Type: Reprocessed on 5/22/2018 3:42:46 PM

Initial Sample Vol:
Sample Prep Vol:

Mean Data: BE81107-BS1

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	16369207.4	4.902	mg/L	0.0393				0.80%
Y RADIAL	233036.1	4.915	mg/L	0.0752				1.53%
As 188.979†	2637.5	1.910	mg/L	0.0240	1.910	mg/L	0.0240	1.26%
Tl 190.801†	2724.4	2.079	mg/L	0.0325	2.079	mg/L	0.0325	1.57%
Se 196.026†	3153.7	1.769	mg/L	0.0288	1.769	mg/L	0.0288	1.63%
Zn 206.200†	15844.8	0.4931	mg/L	0.00571	0.4931	mg/L	0.00571	1.16%
Sb 206.836†	613.8	0.2667	mg/L	0.00136	0.2667	mg/L	0.00136	0.51%
Pb 220.353†	5231.2	0.4982	mg/L	0.00573	0.4982	mg/L	0.00573	1.15%
Cd 226.502†	6286.6	0.0498	mg/L	0.00074	0.0498	mg/L	0.00074	1.49%
Co 228.616†	18026.5	0.5310	mg/L	0.00653	0.5310	mg/L	0.00653	1.23%
Ni 232.003†	8767.5	0.5176	mg/L	0.00609	0.5176	mg/L	0.00609	1.18%
Ba 233.527†	150807.0	2.116	mg/L	0.0246	2.116	mg/L	0.0246	1.16%
Mn 257.610†	335685.0	0.5334	mg/L	0.00435	0.5334	mg/L	0.00435	0.82%
Cr 267.716†	25624.9	0.2116	mg/L	0.00248	0.2116	mg/L	0.00248	1.17%
Fe 273.955†	21915.6	1.053	mg/L	0.0074	1.053	mg/L	0.0074	0.70%
Mg 279.077†	21990.4	1.062	mg/L	0.0169	1.062	mg/L	0.0169	1.59%
V 292.402†	98312.2	0.5210	mg/L	0.00443	0.5210	mg/L	0.00443	0.85%
Al 308.215†	31368.5	1.914	mg/L	0.0226	1.914	mg/L	0.0226	1.18%
Be 313.107†	163803.6	0.05160	mg/L	0.000273	0.05160	mg/L	0.000273	0.53%
Cu 324.752†	50797.5	0.2692	mg/L	0.00288	0.2692	mg/L	0.00288	1.07%
Ag 338.289†	5141.2	0.0560	mg/L	0.00026	0.0560	mg/L	0.00026	0.46%
Na 330.237†	741.6	1.344	mg/L	0.1500	1.344	mg/L	0.1500	11.16%
Ca 227.546†	173.0	0.8346	mg/L	0.09503	0.8346	mg/L	0.09503	11.39%
Al RADIAL†	2078.7	2.130	mg/L	0.0596	2.130	mg/L	0.0596	2.80%
Fe RADIAL†	321.5	1.050	mg/L	0.0109	1.050	mg/L	0.0109	1.04%
Ca RADIAL†	3167.8	0.9533	mg/L	0.01865	0.9533	mg/L	0.01865	1.96%
K RADIAL†	464.3	0.8333	mg/L	0.05553	0.8333	mg/L	0.05553	6.66%
Mg RADIAL†	379.7	1.063	mg/L	0.0367	1.063	mg/L	0.0367	3.45%
Na RADIAL†	5171.0	1.043	mg/L	0.0136	1.043	mg/L	0.0136	1.31%
S 180.669†	19.0	0.0289	mg/L	0.00476	0.0289	mg/L	0.00476	16.50%

Sequence No.: 18 SAW 06/11/18
Sample ID: 18E0635-01RE1
Analyst: BML
Logged In Analyst (Original) : rqb
Initial Sample Wt:
Dilution:

Autosampler Location: 103
Date Collected: 5/22/2018 12:17:45 PM
Data Type: Reprocessed on 5/22/2018 3:42:49 PM

Initial Sample Vol:
Sample Prep Vol:

Mean Data: 18E0635-01RE1

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	16191295.2	4.849	mg/L	0.0162				0.33%
Y RADIAL	230035.8	4.851	mg/L	0.0594				1.23%
As 188.979†	3.6	0.0026	mg/L	0.00135	0.0026	mg/L	0.00135	52.09%
Tl 190.801†	-6.8	-0.0052	mg/L	0.00540	-0.0052	mg/L	0.00540	103.24%
Se 196.026†	18.1	0.0101	mg/L	0.00312	0.0101	mg/L	0.00312	30.76%
Zn 206.200†	228.5	0.0071	mg/L	0.00099	0.0071	mg/L	0.00099	13.90%
Sb 206.836†	37.6	0.0163	mg/L	0.00654	0.0163	mg/L	0.00654	39.99%
Pb 220.353†	31.1	0.0032	mg/L	0.00181	0.0032	mg/L	0.00181	56.41%
Cd 226.502†	78.9	0.0006	mg/L	0.00031	0.0006	mg/L	0.00031	49.43%
Co 228.616†	28.6	0.0008	mg/L	0.00071	0.0008	mg/L	0.00071	83.63%
Ni 232.003†	-63.9	-0.0038	mg/L	0.00413	-0.0038	mg/L	0.00413	109.27%
Ba 233.527†	7647.1	0.1073	mg/L	0.00573	0.1073	mg/L	0.00573	5.34%
Mn 257.610†	3970.7	0.0063	mg/L	0.00176	0.0063	mg/L	0.00176	27.94%
Cr 267.716†	355.5	0.0029	mg/L	0.00095	0.0029	mg/L	0.00095	32.20%
Fe 273.955†	1870.0	0.0898	mg/L	0.03308	0.0898	mg/L	0.03308	36.82%
Mg 279.077†	61780.7	2.984	mg/L	0.1667	2.984	mg/L	0.1667	5.59%
V 292.402†	278.1	0.0015	mg/L	0.00197	0.0015	mg/L	0.00197	134.43%
Al 308.215†	2873.0	0.1748	mg/L	0.16929	0.1748	mg/L	0.16929	96.87%
Be 313.107†	480.0	0.00015	mg/L	0.000259	0.00015	mg/L	0.000259	170.99%
Cu 324.752†	822.5	0.0044	mg/L	0.00096	0.0044	mg/L	0.00096	22.08%
Ag 338.289†	200.8	0.0020	mg/L	0.00101	0.0020	mg/L	0.00101	50.50%
Na 330.237†	1921.6	3.486	mg/L	0.1669	3.486	mg/L	0.1669	4.79%
Ca 227.546†	3318.0	15.81	mg/L	0.091	15.81	mg/L	0.091	0.57%
Al RADIAL†	39.8	0.0403	mg/L	0.00300	0.0403	mg/L	0.00300	7.44%
Fe RADIAL†	22.4	0.0731	mg/L	0.01714	0.0731	mg/L	0.01714	23.44%
Ca RADIAL†	57645.6	17.35	mg/L	0.058	17.35	mg/L	0.058	0.33%
K RADIAL†	139.0	0.2494	mg/L	0.12802	0.2494	mg/L	0.12802	51.33%
Mg RADIAL†	1022.3	2.861	mg/L	0.0442	2.861	mg/L	0.0442	1.55%
Na RADIAL†	20983.3	4.234	mg/L	0.0145	4.234	mg/L	0.0145	0.34%
S 180.669†	2424.3	3.684	mg/L	0.0149	3.684	mg/L	0.0149	0.41%

Sequence No.: 19
Sample ID: BE81107-DUP1
Analyst: BML
Logged In Analyst (Original) : rqb
Initial Sample Wt:
Dilution:

Autosampler Location: 104
Date Collected: 5/22/2018 12:20:00 PM
Data Type: Reprocessed on 5/22/2018 3:42:51 PM
Initial Sample Vol:
Sample Prep Vol:

Mean Data: BE81107-DUP1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	16173442.3	4.844	mg/L	0.0398				0.82%
Y RADIAL	230219.9	4.855	mg/L	0.0078				0.16%
As 188.979†	3.0	0.0022	mg/L	0.00517	0.0022	mg/L	0.00517	237.27%
Tl 190.801†	-2.7	-0.0020	mg/L	0.00730	-0.0020	mg/L	0.00730	358.36%
Se 196.026†	19.9	0.0111	mg/L	0.00384	0.0111	mg/L	0.00384	34.49%
Zn 206.200†	137.3	0.0043	mg/L	0.00029	0.0043	mg/L	0.00029	6.74%
Sb 206.836†	38.9	0.0169	mg/L	0.00185	0.0169	mg/L	0.00185	10.93%
Pb 220.353†	6.4	0.0009	mg/L	0.00117	0.0009	mg/L	0.00117	137.70%
Cd 226.502†	52.6	0.0004	mg/L	0.00026	0.0004	mg/L	0.00026	63.91%
Co 228.616†	-7.7	-0.0002	mg/L	0.00040	-0.0002	mg/L	0.00040	180.37%
Ni 232.003†	-116.4	-0.0069	mg/L	0.00070	-0.0069	mg/L	0.00070	10.19%
Ba 233.527†	779.1	0.0109	mg/L	0.00009	0.0109	mg/L	0.00009	0.78%
Mn 257.610†	3107.6	0.0049	mg/L	0.00016	0.0049	mg/L	0.00016	3.26%
Cr 267.716†	66.0	0.0005	mg/L	0.00041	0.0005	mg/L	0.00041	75.54%
Fe 273.955†	1593.4	0.0765	mg/L	0.00092	0.0765	mg/L	0.00092	1.20%
Mg 279.077†	58313.4	2.816	mg/L	0.0461	2.816	mg/L	0.0461	1.64%
V 292.402†	53.4	0.0003	mg/L	0.00027	0.0003	mg/L	0.00027	100.72%
Al 308.215†	754.3	0.0455	mg/L	0.01026	0.0455	mg/L	0.01026	22.54%
Be 313.107†	-93.9	-0.00003	mg/L	0.000096	-0.00003	mg/L	0.000096	322.86%
Cu 324.752†	396.3	0.0021	mg/L	0.00020	0.0021	mg/L	0.00020	9.53%
Ag 338.289†	27.6	0.0001	mg/L	0.00072	0.0001	mg/L	0.00072	653.97%
Na 330.237†	1902.8	3.452	mg/L	0.1450	3.452	mg/L	0.1450	4.20%
Ca 227.546†	3328.6	15.86	mg/L	0.126	15.86	mg/L	0.126	0.80%
Al RADIAL†	40.6	0.0411	mg/L	0.00160	0.0411	mg/L	0.00160	3.89%
Fe RADIAL†	25.9	0.0847	mg/L	0.01281	0.0847	mg/L	0.01281	15.13%
Ca RADIAL†	57125.0	17.19	mg/L	0.144	17.19	mg/L	0.144	0.84%
K RADIAL†	99.2	0.1781	mg/L	0.13021	0.1781	mg/L	0.13021	73.10%
Mg RADIAL†	1012.5	2.833	mg/L	0.0093	2.833	mg/L	0.0093	0.33%
Na RADIAL†	20968.7	4.231	mg/L	0.0153	4.231	mg/L	0.0153	0.36%
S 180.669†	2367.3	3.598	mg/L	0.0299	3.598	mg/L	0.0299	0.83%

Sequence No.: 20
Sample ID: BE81107-MS1
Analyst: BML
Logged In Analyst (Original) : rqb
Initial Sample Wt:
Dilution:

Autosampler Location: 105
Date Collected: 5/22/2018 12:22:15 PM
Data Type: Reprocessed on 5/22/2018 3:42:53 PM

Initial Sample Vol:
Sample Prep Vol:

Mean Data: BE81107-MS1

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	16208672.6	4.854	mg/L	0.0613				1.26%
Y RADIAL	233331.8	4.921	mg/L	0.0606				1.23%
As 188.979†	2604.3	1.886	mg/L	0.0154	1.886	mg/L	0.0154	0.82%
Tl 190.801†	2613.9	1.994	mg/L	0.0200	1.994	mg/L	0.0200	1.00%
Se 196.026†	3051.9	1.712	mg/L	0.0139	1.712	mg/L	0.0139	0.81%
Zn 206.200†	15990.9	0.4976	mg/L	0.00504	0.4976	mg/L	0.00504	1.01%
Sb 206.836†	596.9	0.2594	mg/L	0.00709	0.2594	mg/L	0.00709	2.73%
Pb 220.353†	5151.4	0.4908	mg/L	0.00567	0.4908	mg/L	0.00567	1.15%
Cd 226.502†	6227.6	0.0494	mg/L	0.00047	0.0494	mg/L	0.00047	0.96%
Co 228.616†	17916.4	0.5278	mg/L	0.00480	0.5278	mg/L	0.00480	0.91%
Ni 232.003†	8746.2	0.5164	mg/L	0.00689	0.5164	mg/L	0.00689	1.34%
Ba 233.527†	149003.5	2.090	mg/L	0.0257	2.090	mg/L	0.0257	1.23%
Mn 257.610†	336124.5	0.5341	mg/L	0.00712	0.5341	mg/L	0.00712	1.33%
Cr 267.716†	26229.0	0.2165	mg/L	0.00219	0.2165	mg/L	0.00219	1.01%
Fe 273.955†	23467.6	1.127	mg/L	0.0125	1.127	mg/L	0.0125	1.11%
Mg 279.077†	78593.7	3.796	mg/L	0.0507	3.796	mg/L	0.0507	1.34%
V 292.402†	97374.8	0.5161	mg/L	0.00656	0.5161	mg/L	0.00656	1.27%
Al 308.215†	32216.3	1.965	mg/L	0.0293	1.965	mg/L	0.0293	1.49%
Be 313.107†	162210.6	0.05110	mg/L	0.000538	0.05110	mg/L	0.000538	1.05%
Cu 324.752†	50442.9	0.2673	mg/L	0.00397	0.2673	mg/L	0.00397	1.49%
Ag 338.289†	5219.5	0.0567	mg/L	0.00112	0.0567	mg/L	0.00112	1.97%
Na 330.237†	2583.6	4.686	mg/L	0.0527	4.686	mg/L	0.0527	1.13%
Ca 227.546†	3477.1	16.58	mg/L	0.187	16.58	mg/L	0.187	1.13%
Al RADIAL†	2067.0	2.118	mg/L	0.0162	2.118	mg/L	0.0162	0.77%
Fe RADIAL†	334.9	1.094	mg/L	0.0031	1.094	mg/L	0.0031	0.29%
Ca RADIAL†	59463.9	17.89	mg/L	0.117	17.89	mg/L	0.117	0.65%
K RADIAL†	616.6	1.107	mg/L	0.0890	1.107	mg/L	0.0890	8.05%
Mg RADIAL†	1364.2	3.818	mg/L	0.0577	3.818	mg/L	0.0577	1.51%
Na RADIAL†	25546.3	5.155	mg/L	0.0353	5.155	mg/L	0.0353	0.69%
S 180.669†	2270.7	3.451	mg/L	0.0519	3.451	mg/L	0.0519	1.50%

Sequence No.: 21 SBW 06/11/18
Sample ID: 18E0635-02 RE1
Analyst: BML
Logged In Analyst (Original) : rqb
Initial Sample Wt:
Dilution:

Autosampler Location: 106
Date Collected: 5/22/2018 12:24:30 PM
Data Type: Reprocessed on 5/22/2018 3:42:57 PM

Initial Sample Vol:
Sample Prep Vol:

Mean Data: 18E0635-02 RE1

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	15828185.8	4.740	mg/L	0.0559				1.18%
Y RADIAL	230048.2	4.852	mg/L	0.0209				0.43%
As 188.979†	13.4	0.0096	mg/L	0.00249	0.0096	mg/L	0.00249	25.94%
Tl 190.801†	-6.8	-0.0052	mg/L	0.00186	-0.0052	mg/L	0.00186	35.50%
Se 196.026†	66.4	0.0370	mg/L	0.00216	0.0370	mg/L	0.00216	5.83%
Zn 206.200†	195.3	0.0061	mg/L	0.00048	0.0061	mg/L	0.00048	7.91%
Sb 206.836†	21.5	0.0094	mg/L	0.00381	0.0094	mg/L	0.00381	40.59%
Pb 220.353†	7.0	0.0015	mg/L	0.00177	0.0015	mg/L	0.00177	115.90%
Cd 226.502†	60.1	0.0004	mg/L	0.00005	0.0004	mg/L	0.00005	10.34%
Co 228.616†	11.6	0.0004	mg/L	0.00023	0.0004	mg/L	0.00023	64.89%
Ni 232.003†	-98.5	-0.0059	mg/L	0.00151	-0.0059	mg/L	0.00151	25.84%
Ba 233.527†	5278.9	0.0741	mg/L	0.00114	0.0741	mg/L	0.00114	1.54%
Mn 257.610†	55767.5	0.0886	mg/L	0.00038	0.0886	mg/L	0.00038	0.43%
Cr 267.716†	144.1	0.0012	mg/L	0.00029	0.0012	mg/L	0.00029	24.45%
Fe 273.955†	10205.9	0.4903	mg/L	0.00597	0.4903	mg/L	0.00597	1.22%
Mg 279.077†	452791.0	21.87	mg/L	0.087	21.87	mg/L	0.087	0.40%
V 292.402†	185.1	0.0009	mg/L	0.00022	0.0009	mg/L	0.00022	24.18%
Al 308.215†	4228.4	0.2557	mg/L	0.01303	0.2557	mg/L	0.01303	5.09%
Be 313.107†	329.5	0.00010	mg/L	0.000084	0.00010	mg/L	0.000084	81.23%
Cu 324.752†	1085.5	0.0058	mg/L	0.00024	0.0058	mg/L	0.00024	4.25%
Ag 338.289†	84.4	0.0002	mg/L	0.00048	0.0002	mg/L	0.00048	199.66%
Na 330.237†	8504.4	15.41	mg/L	0.158	15.41	mg/L	0.158	1.03%
Ca 227.546†	12475.5	59.44	mg/L	0.787	59.44	mg/L	0.787	1.32%
Al RADIAL†	266.8	0.2717	mg/L	0.02832	0.2717	mg/L	0.02832	10.42%
Fe RADIAL†	146.1	0.4771	mg/L	0.00683	0.4771	mg/L	0.00683	1.43%
Ca RADIAL†	205458.8	61.83	mg/L	0.284	61.83	mg/L	0.284	0.46%
K RADIAL†	1279.0	2.295	mg/L	0.0263	2.295	mg/L	0.0263	1.15%
Mg RADIAL†	7562.5	21.16	mg/L	0.068	21.16	mg/L	0.068	0.32%
Na RADIAL†	90455.7	18.25	mg/L	0.099	18.25	mg/L	0.099	0.54%
S 180.669†	6555.8	9.963	mg/L	0.1125	9.963	mg/L	0.1125	1.13%

Sequence No.: 22 SBW 06/11/18 Autosampler Location: 107
Sample ID: 18E0635-03 RE1 Date Collected: 5/22/2018 12:26:46 PM
Analyst: BML Data Type: Reprocessed on 5/22/2018 3:43:01 PM
Logged In Analyst (Original) : rqb
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:

Mean Data: 18E0635-03 RE1

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	15740699.1	4.714	mg/L	0.0855				1.81%
Y RADIAL	231218.0	4.876	mg/L	0.0376				0.77%
As 188.979†	8.6	0.0061	mg/L	0.00474	0.0061	mg/L	0.00474	77.38%
Tl 190.801†	-1.5	-0.0012	mg/L	0.00587	-0.0012	mg/L	0.00587	487.82%
Se 196.026†	100.3	0.0560	mg/L	0.00720	0.0560	mg/L	0.00720	12.85%
Zn 206.200†	144.6	0.0045	mg/L	0.00043	0.0045	mg/L	0.00043	9.48%
Sb 206.836†	22.8	0.0099	mg/L	0.00536	0.0099	mg/L	0.00536	54.01%
Pb 220.353†	-19.9	-0.0003	mg/L	0.00142	-0.0003	mg/L	0.00142	412.05%
Cd 226.502†	66.2	0.0005	mg/L	0.00007	0.0005	mg/L	0.00007	15.19%
Co 228.616†	31.1	0.0009	mg/L	0.00045	0.0009	mg/L	0.00045	48.63%
Ni 232.003†	-67.8	-0.0040	mg/L	0.00243	-0.0040	mg/L	0.00243	60.09%
Ba 233.527†	6715.3	0.0942	mg/L	0.00215	0.0942	mg/L	0.00215	2.28%
Mn 257.610†	1220118.7	1.939	mg/L	0.0398	1.939	mg/L	0.0398	2.05%
Cr 267.716†	173.6	0.0014	mg/L	0.00030	0.0014	mg/L	0.00030	20.94%
Fe 273.955†	10772.9	0.5175	mg/L	0.01036	0.5175	mg/L	0.01036	2.00%
Mg 279.077†	615652.6	29.73	mg/L	0.576	29.73	mg/L	0.576	1.94%
V 292.402†	-39.4	-0.0003	mg/L	0.00041	-0.0003	mg/L	0.00041	151.87%
Al 308.215†	128.5	0.0040	mg/L	0.00784	0.0040	mg/L	0.00784	193.84%
Be 313.107†	287.7	0.00009	mg/L	0.000083	0.00009	mg/L	0.000083	91.88%
Cu 324.752†	792.7	0.0042	mg/L	0.00093	0.0042	mg/L	0.00093	22.21%
Ag 338.289†	191.1	0.0008	mg/L	0.00063	0.0008	mg/L	0.00063	76.13%
Na 330.237†	5671.8	10.35	mg/L	0.310	10.35	mg/L	0.310	2.99%
Ca 227.546†	22220.3	105.9	mg/L	2.50	105.9	mg/L	2.50	2.36%
Al RADIAL†	-2.2	-0.0056	mg/L	0.01627	-0.0056	mg/L	0.01627	290.75%
Fe RADIAL†	152.0	0.4962	mg/L	0.01183	0.4962	mg/L	0.01183	2.38%
Ca RADIAL†	374960.3	112.8	mg/L	0.98	112.8	mg/L	0.98	0.87%
K RADIAL†	1562.0	2.803	mg/L	0.1389	2.803	mg/L	0.1389	4.96%
Mg RADIAL†	10196.9	28.54	mg/L	0.386	28.54	mg/L	0.386	1.35%
Na RADIAL†	60407.2	12.19	mg/L	0.126	12.19	mg/L	0.126	1.03%
S 180.669†	4910.9	7.464	mg/L	0.1272	7.464	mg/L	0.1272	1.70%

Sequence No.: 26
Sample ID: SEQ-CCV3
Analyst: BML
Logged In Analyst (Original) : rqb
Initial Sample Wt:
Dilution:

Autosampler Location: 9
Date Collected: 5/22/2018 12:35:31 PM
Data Type: Reprocessed on 5/22/2018 3:43:14 PM

Initial Sample Vol:
Sample Prep Vol:

Mean Data: SEQ-CCV3

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	16227669.4	4.860	mg/L	0.0096				0.20%
Y RADIAL	235829.2	4.974	mg/L	0.0425				0.86%
As 188.979†	690.4	0.4987	mg/L	0.00368	0.4987	mg/L	0.00368	0.74%
Tl 190.801†	627.2	0.4782	mg/L	0.01173	0.4782	mg/L	0.01173	2.45%
Se 196.026†	866.0	0.4830	mg/L	0.00605	0.4830	mg/L	0.00605	1.25%
Zn 206.200†	80918.1	2.518	mg/L	0.0092	2.518	mg/L	0.0092	0.36%
Sb 206.836†	565.2	0.2459	mg/L	0.00104	0.2459	mg/L	0.00104	0.42%
Pb 220.353†	5146.0	0.4911	mg/L	0.00197	0.4911	mg/L	0.00197	0.40%
Cd 226.502†	30901.1	0.2450	mg/L	0.00141	0.2450	mg/L	0.00141	0.57%
Co 228.616†	86364.1	2.544	mg/L	0.0106	2.544	mg/L	0.0106	0.41%
Ni 232.003†	43073.1	2.543	mg/L	0.0137	2.543	mg/L	0.0137	0.54%
Ba 233.527†	720339.6	10.11	mg/L	0.084	10.11	mg/L	0.084	0.83%
Mn 257.610†	1594540.0	2.534	mg/L	0.0197	2.534	mg/L	0.0197	0.78%
Cr 267.716†	126656.3	1.046	mg/L	0.0038	1.046	mg/L	0.0038	0.36%
Fe 273.955†	107378.3	5.158	mg/L	0.0137	5.158	mg/L	0.0137	0.26%
Mg 279.077†	516232.8	24.93	mg/L	0.184	24.93	mg/L	0.184	0.74%
V 292.402†	478421.3	2.536	mg/L	0.0177	2.536	mg/L	0.0177	0.70%
Al 308.215†	168433.8	10.28	mg/L	0.015	10.28	mg/L	0.015	0.15%
Be 313.107†	799765.6	0.25193	mg/L	0.001775	0.25193	mg/L	0.001775	0.70%
Cu 324.752†	245865.0	1.303	mg/L	0.0030	1.303	mg/L	0.0030	0.23%
Ag 338.289†	121137.0	1.318	mg/L	0.0034	1.318	mg/L	0.0034	0.25%
Na 330.237†	13573.8	24.55	mg/L	0.130	24.55	mg/L	0.130	0.53%
Ca 227.546†	5291.9	25.26	mg/L	0.105	25.26	mg/L	0.105	0.42%
Al RADIAL†	10544.2	10.81	mg/L	0.052	10.81	mg/L	0.052	0.48%
Fe RADIAL†	1550.3	5.063	mg/L	0.0738	5.063	mg/L	0.0738	1.46%
Ca RADIAL†	84053.7	25.29	mg/L	0.084	25.29	mg/L	0.084	0.33%
K RADIAL†	2928.4	5.256	mg/L	0.1230	5.256	mg/L	0.1230	2.34%
Mg RADIAL†	8936.8	25.01	mg/L	0.146	25.01	mg/L	0.146	0.58%
Na RADIAL†	129339.1	26.10	mg/L	0.168	26.10	mg/L	0.168	0.64%
S 180.669†	336.8	0.5118	mg/L	0.01142	0.5118	mg/L	0.01142	2.23%

Sequence No.: 27
Sample ID: SEQ-CCB3
Analyst: BML
Logged In Analyst (Original) : rqb
Initial Sample Wt:
Dilution:

Autosampler Location: 4
Date Collected: 5/22/2018 12:37:56 PM
Data Type: Reprocessed on 5/22/2018 3:43:17 PM

Initial Sample Vol:
Sample Prep Vol:

Mean Data: SEQ-CCB3

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	16867691.7	5.052	mg/L	0.0162				0.32%
Y RADIAL	239409.1	5.049	mg/L	0.0470				0.93%
As 188.979†	14.5	0.0105	mg/L	0.00175	0.0105	mg/L	0.00175	16.58%
Tl 190.801†	0.5	0.0004	mg/L	0.00403	0.0004	mg/L	0.00403	997.63%
Se 196.026†	-0.1	-0.0001	mg/L	0.00810	-0.0001	mg/L	0.00810	>999.9%
Zn 206.200†	-109.9	-0.0034	mg/L	0.00024	-0.0034	mg/L	0.00024	6.93%
Sb 206.836†	-3.4	-0.0015	mg/L	0.00234	-0.0015	mg/L	0.00234	160.18%
Pb 220.353†	-1.7	-0.0002	mg/L	0.00188	-0.0002	mg/L	0.00188	>999.9%
Cd 226.502†	67.8	0.0005	mg/L	0.00027	0.0005	mg/L	0.00027	50.81%
Co 228.616†	19.4	0.0006	mg/L	0.00027	0.0006	mg/L	0.00027	46.90%
Ni 232.003†	11.8	0.0007	mg/L	0.00021	0.0007	mg/L	0.00021	29.63%
Ba 233.527†	58.0	0.0008	mg/L	0.00006	0.0008	mg/L	0.00006	7.42%
Mn 257.610†	136.9	0.0002	mg/L	0.00004	0.0002	mg/L	0.00004	18.50%
Cr 267.716†	-21.9	-0.0002	mg/L	0.00053	-0.0002	mg/L	0.00053	294.69%
Fe 273.955†	5.5	0.0003	mg/L	0.00049	0.0003	mg/L	0.00049	187.00%
Mg 279.077†	87.6	0.0042	mg/L	0.00224	0.0042	mg/L	0.00224	52.99%
V 292.402†	39.1	0.0002	mg/L	0.00036	0.0002	mg/L	0.00036	175.13%
Al 308.215†	-114.9	-0.0070	mg/L	0.00317	-0.0070	mg/L	0.00317	45.21%
Be 313.107†	307.2	0.00010	mg/L	0.000037	0.00010	mg/L	0.000037	37.98%
Cu 324.752†	100.6	0.0005	mg/L	0.00090	0.0005	mg/L	0.00090	169.70%
Ag 338.289†	14.9	0.0002	mg/L	0.00085	0.0002	mg/L	0.00085	523.15%
Na 330.237†	-17.9	-0.0324	mg/L	0.08821	-0.0324	mg/L	0.08821	271.96%
Ca 227.546†	30.6	0.1458	mg/L	0.05635	0.1458	mg/L	0.05635	38.64%
Al RADIAL†	-4.7	-0.0048	mg/L	0.00645	-0.0048	mg/L	0.00645	133.30%
Fe RADIAL†	-1.7	-0.0056	mg/L	0.00364	-0.0056	mg/L	0.00364	64.52%
Ca RADIAL†	-166.4	-0.0501	mg/L	0.00612	-0.0501	mg/L	0.00612	12.21%
K RADIAL†	-61.3	-0.1100	mg/L	0.07848	-0.1100	mg/L	0.07848	71.38%
Mg RADIAL†	-2.6	-0.0072	mg/L	0.01694	-0.0072	mg/L	0.01694	234.67%
Na RADIAL†	47.1	0.0095	mg/L	0.00656	0.0095	mg/L	0.00656	68.96%
S 180.669†	-10.6	-0.0161	mg/L	0.00625	-0.0161	mg/L	0.00625	38.82%

Sequence No.: 30
Sample ID: SEQ-SRD1
Analyst: BML
Logged In Analyst (Original) : rqb
Initial Sample Wt:
Dilution:

Autosampler Location: 111
Date Collected: 5/22/2018 12:44:47 PM
Data Type: Reprocessed on 5/22/2018 3:43:27 PM

Initial Sample Vol:
Sample Prep Vol:

Mean Data: SEQ-SRD1

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	16715289.9	5.006	mg/L	0.0519				1.04%
Y RADIAL	240241.1	5.067	mg/L	0.0373				0.74%
As 188.979†	-13.5	-0.0098	mg/L	0.00356	-0.0098	mg/L	0.00356	36.21%
Tl 190.801†	1.8	0.0014	mg/L	0.00775	0.0014	mg/L	0.00775	574.35%
Se 196.026†	7.6	0.0043	mg/L	0.00326	0.0043	mg/L	0.00326	76.28%
Zn 206.200†	18.0	0.0006	mg/L	0.00025	0.0006	mg/L	0.00025	44.85%
Sb 206.836†	-7.0	-0.0030	mg/L	0.00291	-0.0030	mg/L	0.00291	96.19%
Pb 220.353†	1.6	0.0002	mg/L	0.00188	0.0002	mg/L	0.00188	922.05%
Cd 226.502†	30.6	0.0002	mg/L	0.00019	0.0002	mg/L	0.00019	79.14%
Co 228.616†	9.5	0.0003	mg/L	0.00040	0.0003	mg/L	0.00040	142.07%
Ni 232.003†	12.3	0.0007	mg/L	0.00293	0.0007	mg/L	0.00293	403.07%
Ba 233.527†	1602.1	0.0225	mg/L	0.00030	0.0225	mg/L	0.00030	1.34%
Mn 257.610†	698.7	0.0011	mg/L	0.00014	0.0011	mg/L	0.00014	12.27%
Cr 267.716†	102.0	0.0008	mg/L	0.00033	0.0008	mg/L	0.00033	39.25%
Fe 273.955†	360.7	0.0173	mg/L	0.00091	0.0173	mg/L	0.00091	5.23%
Mg 279.077†	12512.4	0.6043	mg/L	0.00812	0.6043	mg/L	0.00812	1.34%
V 292.402†	32.2	0.0002	mg/L	0.00039	0.0002	mg/L	0.00039	235.75%
Al 308.215†	977.0	0.0595	mg/L	0.00703	0.0595	mg/L	0.00703	11.81%
Be 313.107†	-24.0	-0.00001	mg/L	0.000096	-0.00001	mg/L	0.000096	>999.9%
Cu 324.752†	128.9	0.0007	mg/L	0.00032	0.0007	mg/L	0.00032	46.42%
Ag 338.289†	81.4	0.0008	mg/L	0.00049	0.0008	mg/L	0.00049	57.53%
Na 330.237†	318.9	0.5791	mg/L	0.03999	0.5791	mg/L	0.03999	6.91%
Ca 227.546†	685.3	3.265	mg/L	0.0882	3.265	mg/L	0.0882	2.70%
Al RADIAL†	49.0	0.0502	mg/L	0.01249	0.0502	mg/L	0.01249	24.91%
Fe RADIAL†	8.7	0.0286	mg/L	0.01827	0.0286	mg/L	0.01827	63.96%
Ca RADIAL†	11373.0	3.422	mg/L	0.0279	3.422	mg/L	0.0279	0.81%
K RADIAL†	-59.8	-0.1074	mg/L	0.09304	-0.1074	mg/L	0.09304	86.65%
Mg RADIAL†	203.2	0.5686	mg/L	0.02492	0.5686	mg/L	0.02492	4.38%
Na RADIAL†	4255.2	0.8587	mg/L	0.00974	0.8587	mg/L	0.00974	1.13%
S 180.669†	533.0	0.8101	mg/L	0.00815	0.8101	mg/L	0.00815	1.01%

Sequence No.: 40
Sample ID: SEQ-CCV5
Analyst: BML
Logged In Analyst (Original) : rqb
Initial Sample Wt:
Dilution:

Autosampler Location: 9
Date Collected: 5/22/2018 1:06:34 PM
Data Type: Reprocessed on 5/22/2018 3:43:57 PM

Initial Sample Vol:
Sample Prep Vol:

Mean Data: SEQ-CCV5

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	16285626.6	4.877	mg/L	0.0472				0.97%
Y RADIAL	237189.2	5.002	mg/L	0.0195				0.39%
As 188.979†	695.3	0.5023	mg/L	0.00571	0.5023	mg/L	0.00571	1.14%
Tl 190.801†	647.5	0.4936	mg/L	0.00634	0.4936	mg/L	0.00634	1.28%
Se 196.026†	877.2	0.4893	mg/L	0.00913	0.4893	mg/L	0.00913	1.87%
Zn 206.200†	83184.2	2.589	mg/L	0.0257	2.589	mg/L	0.0257	0.99%
Sb 206.836†	555.3	0.2416	mg/L	0.00635	0.2416	mg/L	0.00635	2.63%
Pb 220.353†	5189.7	0.4953	mg/L	0.00291	0.4953	mg/L	0.00291	0.59%
Cd 226.502†	31544.9	0.2501	mg/L	0.00226	0.2501	mg/L	0.00226	0.90%
Co 228.616†	87895.8	2.589	mg/L	0.0223	2.589	mg/L	0.0223	0.86%
Ni 232.003†	43588.5	2.573	mg/L	0.0203	2.573	mg/L	0.0203	0.79%
Ba 233.527†	727274.8	10.20	mg/L	0.163	10.20	mg/L	0.163	1.59%
Mn 257.610†	1614374.7	2.565	mg/L	0.0376	2.565	mg/L	0.0376	1.47%
Cr 267.716†	128745.2	1.063	mg/L	0.0105	1.063	mg/L	0.0105	0.99%
Fe 273.955†	109600.6	5.265	mg/L	0.0476	5.265	mg/L	0.0476	0.90%
Mg 279.077†	527005.5	25.45	mg/L	0.379	25.45	mg/L	0.379	1.49%
V 292.402†	485320.6	2.572	mg/L	0.0379	2.572	mg/L	0.0379	1.47%
Al 308.215†	170822.0	10.42	mg/L	0.090	10.42	mg/L	0.090	0.86%
Be 313.107†	819035.2	0.25800	mg/L	0.003837	0.25800	mg/L	0.003837	1.49%
Cu 324.752†	248141.1	1.315	mg/L	0.0109	1.315	mg/L	0.0109	0.83%
Ag 338.289†	122408.8	1.332	mg/L	0.0124	1.332	mg/L	0.0124	0.93%
Na 330.237†	13821.8	25.00	mg/L	0.075	25.00	mg/L	0.075	0.30%
Ca 227.546†	5277.8	25.20	mg/L	0.206	25.20	mg/L	0.206	0.82%
Al RADIAL†	10576.0	10.84	mg/L	0.023	10.84	mg/L	0.023	0.21%
Fe RADIAL†	1567.2	5.118	mg/L	0.0062	5.118	mg/L	0.0062	0.12%
Ca RADIAL†	85742.0	25.80	mg/L	0.095	25.80	mg/L	0.095	0.37%
K RADIAL†	2732.5	4.904	mg/L	0.1422	4.904	mg/L	0.1422	2.90%
Mg RADIAL†	9042.4	25.30	mg/L	0.084	25.30	mg/L	0.084	0.33%
Na RADIAL†	128965.4	26.02	mg/L	0.029	26.02	mg/L	0.029	0.11%
S 180.669†	348.8	0.5300	mg/L	0.00678	0.5300	mg/L	0.00678	1.28%

Sequence No.: 41
Sample ID: SEQ-CCB5
Analyst: BML
Logged In Analyst (Original) : rqb
Initial Sample Wt:
Dilution:

Autosampler Location: 4
Date Collected: 5/22/2018 1:08:59 PM
Data Type: Reprocessed on 5/22/2018 3:44:02 PM

Initial Sample Vol:
Sample Prep Vol:

Mean Data: SEQ-CCB5

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	17058910.0	5.109	mg/L	0.0238				0.47%
Y RADIAL	242676.7	5.118	mg/L	0.0467				0.91%
As 188.979†	16.8	0.0121	mg/L	0.00338	0.0121	mg/L	0.00338	27.79%
Tl 190.801†	2.9	0.0022	mg/L	0.00647	0.0022	mg/L	0.00647	288.35%
Se 196.026†	-2.5	-0.0014	mg/L	0.00797	-0.0014	mg/L	0.00797	555.17%
Zn 206.200†	-103.3	-0.0032	mg/L	0.00015	-0.0032	mg/L	0.00015	4.81%
Sb 206.836†	-11.1	-0.0048	mg/L	0.00490	-0.0048	mg/L	0.00490	101.87%
Pb 220.353†	2.2	0.0002	mg/L	0.00058	0.0002	mg/L	0.00058	282.21%
Cd 226.502†	44.5	0.0004	mg/L	0.00010	0.0004	mg/L	0.00010	27.14%
Co 228.616†	25.8	0.0008	mg/L	0.00052	0.0008	mg/L	0.00052	67.77%
Ni 232.003†	83.8	0.0050	mg/L	0.00275	0.0050	mg/L	0.00275	55.60%
Ba 233.527†	42.6	0.0006	mg/L	0.00006	0.0006	mg/L	0.00006	9.59%
Mn 257.610†	123.8	0.0002	mg/L	0.00011	0.0002	mg/L	0.00011	53.40%
Cr 267.716†	20.2	0.0002	mg/L	0.00027	0.0002	mg/L	0.00027	160.53%
Fe 273.955†	21.7	0.0010	mg/L	0.00088	0.0010	mg/L	0.00088	84.38%
Mg 279.077†	90.5	0.0044	mg/L	0.00203	0.0044	mg/L	0.00203	46.44%
V 292.402†	100.3	0.0005	mg/L	0.00062	0.0005	mg/L	0.00062	117.00%
Al 308.215†	-367.2	-0.0224	mg/L	0.00679	-0.0224	mg/L	0.00679	30.30%
Be 313.107†	937.2	0.00030	mg/L	0.000053	0.00030	mg/L	0.000053	17.99%
Cu 324.752†	-121.0	-0.0006	mg/L	0.00052	-0.0006	mg/L	0.00052	80.61%
Ag 338.289†	65.2	0.0007	mg/L	0.00121	0.0007	mg/L	0.00121	169.52%
Na 330.237†	-29.1	-0.0525	mg/L	0.06377	-0.0525	mg/L	0.06377	121.54%
Ca 227.546†	18.5	0.0882	mg/L	0.07640	0.0882	mg/L	0.07640	86.66%
Al RADIAL†	-9.1	-0.0094	mg/L	0.00734	-0.0094	mg/L	0.00734	78.39%
Fe RADIAL†	2.6	0.0086	mg/L	0.00917	0.0086	mg/L	0.00917	107.10%
Ca RADIAL†	-190.0	-0.0572	mg/L	0.00902	-0.0572	mg/L	0.00902	15.78%
K RADIAL†	-85.5	-0.1535	mg/L	0.14775	-0.1535	mg/L	0.14775	96.27%
Mg RADIAL†	5.0	0.0139	mg/L	0.03540	0.0139	mg/L	0.03540	253.82%
Na RADIAL†	258.3	0.0521	mg/L	0.01902	0.0521	mg/L	0.01902	36.48%
S 180.669†	-6.9	-0.0105	mg/L	0.00602	-0.0105	mg/L	0.00602	57.56%

Sequence No.: 82
Sample ID: SEQ-CCVB
Analyst: BML
Logged In Analyst (Original) : rqb
Initial Sample Wt:
Dilution:

Autosampler Location: 9
Date Collected: 5/22/2018 2:35:59 PM
Data Type: Reprocessed on 5/22/2018 3:45:55 PM

Initial Sample Vol:
Sample Prep Vol:

Mean Data: SEQ-CCVB

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	16340419.0	4.894	mg/L	0.0268				0.55%
Y RADIAL	236051.2	4.978	mg/L	0.0542				1.09%
As 188.979†	699.5	0.5053	mg/L	0.00556	0.5053	mg/L	0.00556	1.10%
Tl 190.801†	669.7	0.5106	mg/L	0.00364	0.5106	mg/L	0.00364	0.71%
Se 196.026†	907.0	0.5060	mg/L	0.00285	0.5060	mg/L	0.00285	0.56%
Zn 206.200†	83306.4	2.592	mg/L	0.0158	2.592	mg/L	0.0158	0.61%
Sb 206.836†	559.8	0.2435	mg/L	0.00433	0.2435	mg/L	0.00433	1.78%
Pb 220.353†	5226.2	0.4988	mg/L	0.00381	0.4988	mg/L	0.00381	0.76%
Cd 226.502†	31248.1	0.2478	mg/L	0.00096	0.2478	mg/L	0.00096	0.39%
Co 228.616†	86644.0	2.552	mg/L	0.0121	2.552	mg/L	0.0121	0.47%
Ni 232.003†	42876.1	2.531	mg/L	0.0224	2.531	mg/L	0.0224	0.88%
Ba 233.527†	721955.2	10.13	mg/L	0.077	10.13	mg/L	0.077	0.76%
Mn 257.610†	1608831.6	2.557	mg/L	0.0178	2.557	mg/L	0.0178	0.70%
Cr 267.716†	127944.0	1.056	mg/L	0.0035	1.056	mg/L	0.0035	0.33%
Fe 273.955†	109245.6	5.248	mg/L	0.0159	5.248	mg/L	0.0159	0.30%
Mg 279.077†	533736.8	25.78	mg/L	0.176	25.78	mg/L	0.176	0.68%
V 292.402†	489197.7	2.593	mg/L	0.0178	2.593	mg/L	0.0178	0.69%
Al 308.215†	170542.4	10.40	mg/L	0.035	10.40	mg/L	0.035	0.34%
Be 313.107†	830659.5	0.26166	mg/L	0.001768	0.26166	mg/L	0.001768	0.68%
Cu 324.752†	247158.3	1.310	mg/L	0.0046	1.310	mg/L	0.0046	0.35%
Ag 338.289†	122228.8	1.330	mg/L	0.0036	1.330	mg/L	0.0036	0.27%
Na 330.237†	13754.2	24.87	mg/L	0.185	24.87	mg/L	0.185	0.74%
Ca 227.546†	5205.0	24.85	mg/L	0.227	24.85	mg/L	0.227	0.91%
Al RADIAL†	10823.2	11.09	mg/L	0.092	11.09	mg/L	0.092	0.83%
Fe RADIAL†	1596.4	5.213	mg/L	0.0413	5.213	mg/L	0.0413	0.79%
Ca RADIAL†	86359.6	25.99	mg/L	0.065	25.99	mg/L	0.065	0.25%
K RADIAL†	2767.7	4.967	mg/L	0.1591	4.967	mg/L	0.1591	3.20%
Mg RADIAL†	9208.9	25.77	mg/L	0.308	25.77	mg/L	0.308	1.20%
Na RADIAL†	128248.8	25.88	mg/L	0.099	25.88	mg/L	0.099	0.38%
S 180.669†	360.2	0.5475	mg/L	0.01218	0.5475	mg/L	0.01218	2.22%

Sequence No.: 83
Sample ID: SEQ-CCBB
Analyst: BML
Logged In Analyst (Original) : rqb
Initial Sample Wt:
Dilution:

Autosampler Location: 4
Date Collected: 5/22/2018 2:38:23 PM
Data Type: Reprocessed on 5/22/2018 3:45:58 PM
Initial Sample Vol:
Sample Prep Vol:

Mean Data: SEQ-CCBB

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	16984198.0	5.087	mg/L	0.0319				0.63%
Y RADIAL	244860.8	5.164	mg/L	0.0737				1.43%
As 188.979†	-3.9	-0.0028	mg/L	0.00771	-0.0028	mg/L	0.00771	273.86%
Tl 190.801†	5.0	0.0038	mg/L	0.00099	0.0038	mg/L	0.00099	25.77%
Se 196.026†	11.6	0.0065	mg/L	0.00399	0.0065	mg/L	0.00399	61.18%
Zn 206.200†	-104.7	-0.0033	mg/L	0.00016	-0.0033	mg/L	0.00016	4.88%
Sb 206.836†	-6.5	-0.0028	mg/L	0.00178	-0.0028	mg/L	0.00178	63.43%
Pb 220.353†	-14.3	-0.0014	mg/L	0.00150	-0.0014	mg/L	0.00150	110.11%
Cd 226.502†	22.1	0.0002	mg/L	0.00023	0.0002	mg/L	0.00023	133.80%
Co 228.616†	24.3	0.0007	mg/L	0.00019	0.0007	mg/L	0.00019	27.28%
Ni 232.003†	9.5	0.0006	mg/L	0.00285	0.0006	mg/L	0.00285	510.61%
Ba 233.527†	55.3	0.0008	mg/L	0.00017	0.0008	mg/L	0.00017	22.33%
Mn 257.610†	258.8	0.0004	mg/L	0.00011	0.0004	mg/L	0.00011	27.44%
Cr 267.716†	39.3	0.0003	mg/L	0.00030	0.0003	mg/L	0.00030	92.99%
Fe 273.955†	299.9	0.0144	mg/L	0.00120	0.0144	mg/L	0.00120	8.31%
Mg 279.077†	119.7	0.0058	mg/L	0.00275	0.0058	mg/L	0.00275	47.64%
V 292.402†	131.1	0.0007	mg/L	0.00074	0.0007	mg/L	0.00074	107.24%
Al 308.215†	1.9	0.0001	mg/L	0.00426	0.0001	mg/L	0.00426	>999.9%
Be 313.107†	397.7	0.00013	mg/L	0.000093	0.00013	mg/L	0.000093	74.17%
Cu 324.752†	38.2	0.0002	mg/L	0.00035	0.0002	mg/L	0.00035	173.16%
Ag 338.289†	17.0	0.0002	mg/L	0.00189	0.0002	mg/L	0.00189	>999.9%
Na 330.237†	-21.6	-0.0391	mg/L	0.07973	-0.0391	mg/L	0.07973	204.14%
Ca 227.546†	-3.9	-0.0182	mg/L	0.04339	-0.0182	mg/L	0.04339	237.97%
Al RADIAL†	5.6	0.0057	mg/L	0.03270	0.0057	mg/L	0.03270	572.08%
Fe RADIAL†	3.9	0.0128	mg/L	0.00597	0.0128	mg/L	0.00597	46.45%
Ca RADIAL†	-202.1	-0.0608	mg/L	0.00614	-0.0608	mg/L	0.00614	10.09%
K RADIAL†	-81.5	-0.1462	mg/L	0.09270	-0.1462	mg/L	0.09270	63.41%
Mg RADIAL†	7.9	0.0222	mg/L	0.01476	0.0222	mg/L	0.01476	66.51%
Na RADIAL†	-72.3	-0.0146	mg/L	0.00273	-0.0146	mg/L	0.00273	18.68%
S 180.669†	-3.4	-0.0051	mg/L	0.00939	-0.0051	mg/L	0.00939	183.62%

Sequence No.: 92
Sample ID: BE81107-BLK1
Analyst: BML
Logged In Analyst (Original) : rqb
Initial Sample Wt:
Dilution:

Autosampler Location: 157
Date Collected: 5/22/2018 2:58:55 PM
Data Type: Reprocessed on 5/22/2018 3:46:23 PM

Initial Sample Vol:
Sample Prep Vol:

Mean Data: BE81107-BLK1

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	16914998.6	5.066	mg/L	0.0551				1.09%
Y RADIAL	244514.7	5.157	mg/L	0.0249				0.48%
As 188.979†	11.6	0.0084	mg/L	0.01165	0.0084	mg/L	0.01165	139.13%
Tl 190.801†	-0.1	-0.0001	mg/L	0.00439	-0.0001	mg/L	0.00439	>999.9%
Se 196.026†	-3.7	-0.0021	mg/L	0.00712	-0.0021	mg/L	0.00712	347.17%
Zn 206.200†	-213.7	-0.0066	mg/L	0.00030	-0.0066	mg/L	0.00030	4.47%
Sb 206.836†	-8.7	-0.0038	mg/L	0.00369	-0.0038	mg/L	0.00369	98.08%
Pb 220.353†	-5.5	-0.0005	mg/L	0.00161	-0.0005	mg/L	0.00161	302.56%
Cd 226.502†	40.4	0.0003	mg/L	0.00010	0.0003	mg/L	0.00010	31.70%
Co 228.616†	10.0	0.0003	mg/L	0.00012	0.0003	mg/L	0.00012	39.50%
Ni 232.003†	40.6	0.0024	mg/L	0.00112	0.0024	mg/L	0.00112	46.83%
Ba 233.527†	3.4	0.0000	mg/L	0.00005	0.0000	mg/L	0.00005	112.00%
Mn 257.610†	76.4	0.0001	mg/L	0.00004	0.0001	mg/L	0.00004	30.96%
Cr 267.716†	31.3	0.0003	mg/L	0.00055	0.0003	mg/L	0.00055	214.61%
Fe 273.955†	128.0	0.0061	mg/L	0.00061	0.0061	mg/L	0.00061	9.96%
Mg 279.077†	131.2	0.0063	mg/L	0.00300	0.0063	mg/L	0.00300	47.41%
V 292.402†	-28.1	-0.0001	mg/L	0.00038	-0.0001	mg/L	0.00038	254.00%
Al 308.215†	-609.4	-0.0372	mg/L	0.00932	-0.0372	mg/L	0.00932	25.08%
Be 313.107†	611.3	0.00019	mg/L	0.000052	0.00019	mg/L	0.000052	26.99%
Cu 324.752†	-63.5	-0.0003	mg/L	0.00048	-0.0003	mg/L	0.00048	142.11%
Ag 338.289†	-11.4	-0.0001	mg/L	0.00173	-0.0001	mg/L	0.00173	>999.9%
Na 330.237†	70.4	0.1271	mg/L	0.17616	0.1271	mg/L	0.17616	138.64%
Ca 227.546†	-3.0	-0.0140	mg/L	0.06480	-0.0140	mg/L	0.06480	461.51%
Al RADIAL†	-30.4	-0.0311	mg/L	0.01854	-0.0311	mg/L	0.01854	59.54%
Fe RADIAL†	1.8	0.0057	mg/L	0.01014	0.0057	mg/L	0.01014	176.91%
Ca RADIAL†	-352.6	-0.1061	mg/L	0.00423	-0.1061	mg/L	0.00423	3.99%
K RADIAL†	-71.3	-0.1280	mg/L	0.09792	-0.1280	mg/L	0.09792	76.52%
Mg RADIAL†	2.5	0.0069	mg/L	0.01685	0.0069	mg/L	0.01685	245.58%
Na RADIAL†	982.5	0.1983	mg/L	0.00247	0.1983	mg/L	0.00247	1.24%
S 180.669†	-1.7	-0.0026	mg/L	0.00753	-0.0026	mg/L	0.00753	285.07%

Sequence No.: 93
Sample ID: SEQ-CCVD
Analyst: BML
Logged In Analyst (Original) : rqb
Initial Sample Wt:
Dilution:

Autosampler Location: 9
Date Collected: 5/22/2018 3:01:10 PM
Data Type: Reprocessed on 5/22/2018 3:46:26 PM

Initial Sample Vol:
Sample Prep Vol:

Mean Data: SEQ-CCVD

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Y 371.029	16267486.3	4.872	mg/L	0.1349				2.77%
Y RADIAL	237690.9	5.013	mg/L	0.0689				1.37%
As 188.979†	708.0	0.5115	mg/L	0.01779	0.5115	mg/L	0.01779	3.48%
Tl 190.801†	638.0	0.4864	mg/L	0.01489	0.4864	mg/L	0.01489	3.06%
Se 196.026†	876.3	0.4888	mg/L	0.01034	0.4888	mg/L	0.01034	2.12%
Zn 206.200†	84290.6	2.623	mg/L	0.0771	2.623	mg/L	0.0771	2.94%
Sb 206.836†	560.3	0.2437	mg/L	0.01194	0.2437	mg/L	0.01194	4.90%
Pb 220.353†	5218.5	0.4981	mg/L	0.01472	0.4981	mg/L	0.01472	2.95%
Cd 226.502†	31620.7	0.2507	mg/L	0.00725	0.2507	mg/L	0.00725	2.89%
Co 228.616†	87467.8	2.577	mg/L	0.0802	2.577	mg/L	0.0802	3.11%
Ni 232.003†	43272.4	2.555	mg/L	0.0805	2.555	mg/L	0.0805	3.15%
Ba 233.527†	721409.5	10.12	mg/L	0.317	10.12	mg/L	0.317	3.13%
Mn 257.610†	1606468.2	2.553	mg/L	0.0842	2.553	mg/L	0.0842	3.30%
Cr 267.716†	129210.9	1.067	mg/L	0.0305	1.067	mg/L	0.0305	2.86%
Fe 273.955†	109778.4	5.274	mg/L	0.1621	5.274	mg/L	0.1621	3.07%
Mg 279.077†	532376.5	25.71	mg/L	0.800	25.71	mg/L	0.800	3.11%
V 292.402†	487034.3	2.581	mg/L	0.0783	2.581	mg/L	0.0783	3.03%
Al 308.215†	172181.1	10.50	mg/L	0.329	10.50	mg/L	0.329	3.13%
Be 313.107†	825649.3	0.26008	mg/L	0.007232	0.26008	mg/L	0.007232	2.78%
Cu 324.752†	250193.6	1.326	mg/L	0.0386	1.326	mg/L	0.0386	2.91%
Ag 338.289†	124046.6	1.350	mg/L	0.0380	1.350	mg/L	0.0380	2.82%
Na 330.237†	13909.6	25.15	mg/L	0.757	25.15	mg/L	0.757	3.01%
Ca 227.546†	5225.4	24.95	mg/L	0.676	24.95	mg/L	0.676	2.71%
Al RADIAL†	10650.7	10.91	mg/L	0.145	10.91	mg/L	0.145	1.33%
Fe RADIAL†	1573.8	5.139	mg/L	0.0739	5.139	mg/L	0.0739	1.44%
Ca RADIAL†	85887.8	25.85	mg/L	0.058	25.85	mg/L	0.058	0.23%
K RADIAL†	2717.6	4.877	mg/L	0.0190	4.877	mg/L	0.0190	0.39%
Mg RADIAL†	9165.8	25.65	mg/L	0.271	25.65	mg/L	0.271	1.06%
Na RADIAL†	128282.3	25.89	mg/L	0.038	25.89	mg/L	0.038	0.15%
S 180.669†	336.2	0.5109	mg/L	0.02858	0.5109	mg/L	0.02858	5.59%

Sequence No.: 94
Sample ID: SEQ-CCBD
Analyst: BML
Logged In Analyst (Original) : rqb
Initial Sample Wt:
Dilution:

Autosampler Location: 4
Date Collected: 5/22/2018 3:03:35 PM
Data Type: Reprocessed on 5/22/2018 3:46:31 PM
Initial Sample Vol:
Sample Prep Vol:

Mean Data: SEQ-CCBD

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Y 371.029	17183716.6	5.146	mg/L	0.0110				0.21%
Y RADIAL	244054.9	5.147	mg/L	0.0229				0.44%
As 188.979†	24.1	0.0175	mg/L	0.00426	0.0175	mg/L	0.00426	24.38%
Tl 190.801†	5.5	0.0042	mg/L	0.00356	0.0042	mg/L	0.00356	84.92%
Se 196.026†	-18.4	-0.0104	mg/L	0.00478	-0.0104	mg/L	0.00478	46.18%
Zn 206.200†	-105.9	-0.0033	mg/L	0.00031	-0.0033	mg/L	0.00031	9.39%
Sb 206.836†	-6.7	-0.0029	mg/L	0.00618	-0.0029	mg/L	0.00618	212.53%
Pb 220.353†	-6.4	-0.0006	mg/L	0.00104	-0.0006	mg/L	0.00104	169.37%
Cd 226.502†	57.9	0.0005	mg/L	0.00004	0.0005	mg/L	0.00004	9.62%
Co 228.616†	33.0	0.0010	mg/L	0.00009	0.0010	mg/L	0.00009	9.75%
Ni 232.003†	119.6	0.0071	mg/L	0.00165	0.0071	mg/L	0.00165	23.39%
Ba 233.527†	50.9	0.0007	mg/L	0.00017	0.0007	mg/L	0.00017	23.20%
Mn 257.610†	109.2	0.0002	mg/L	0.00006	0.0002	mg/L	0.00006	33.06%
Cr 267.716†	-28.4	-0.0002	mg/L	0.00019	-0.0002	mg/L	0.00019	81.70%
Fe 273.955†	-6.2	-0.0003	mg/L	0.00028	-0.0003	mg/L	0.00028	93.87%
Mg 279.077†	91.3	0.0044	mg/L	0.00125	0.0044	mg/L	0.00125	28.33%
V 292.402†	38.5	0.0002	mg/L	0.00032	0.0002	mg/L	0.00032	159.84%
Al 308.215†	-417.0	-0.0254	mg/L	0.00247	-0.0254	mg/L	0.00247	9.71%
Be 313.107†	660.5	0.00021	mg/L	0.000053	0.00021	mg/L	0.000053	25.25%
Cu 324.752†	-52.9	-0.0003	mg/L	0.00055	-0.0003	mg/L	0.00055	197.73%
Ag 338.289†	-35.2	-0.0004	mg/L	0.00033	-0.0004	mg/L	0.00033	87.58%
Na 330.237†	24.6	0.0444	mg/L	0.08076	0.0444	mg/L	0.08076	181.98%
Ca 227.546†	8.7	0.0417	mg/L	0.04596	0.0417	mg/L	0.04596	110.31%
Al RADIAL†	7.2	0.0073	mg/L	0.00629	0.0073	mg/L	0.00629	85.72%
Fe RADIAL†	2.8	0.0091	mg/L	0.01622	0.0091	mg/L	0.01622	178.49%
Ca RADIAL†	-199.6	-0.0601	mg/L	0.00744	-0.0601	mg/L	0.00744	12.39%
K RADIAL†	-62.0	-0.1112	mg/L	0.05751	-0.1112	mg/L	0.05751	51.71%
Mg RADIAL†	7.2	0.0200	mg/L	0.01389	0.0200	mg/L	0.01389	69.30%
Na RADIAL†	319.9	0.0646	mg/L	0.00918	0.0646	mg/L	0.00918	14.22%
S 180.669†	-9.9	-0.0150	mg/L	0.00755	-0.0150	mg/L	0.00755	50.27%

York Analytical Laboratories, Inc.
SDG: 18E0635
CLASS: HG
METHOD: EPA 7473

DATA PACKAGE COVER PAGE

EPA 7473

Laboratory: York Analytical Laboratories, Inc. SDG: 18E0635

Client: PVE, LLC. Project: 560556

Client Sample Id:	Lab Sample Id:
MW-4 20180511	18E0635-01
MW-6 20180511	18E0635-02
MW-5 20180511	18E0635-03

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed in the project narrative. Release of the data contained in this hardcopy data package and in computer-readable data submitted on diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the

Signature:  Name: Benjamin Gulizia

Date: 5/24/2018 Title: Laboratory Director

FORM I **INORGANIC ANALYSIS DATA SHEET**

EPA 7473

MW-4 20180511

Laboratory: York Analytical Laboratories, Inc. SDG: 18E0635

Client: PVE, LLC. Project: 560556

Matrix: Water Laboratory ID: 18E0635-01 File ID: QBHGDMA80-01 051518A-019

Sampled: 05/11/18 09:05 Prepared: 05/15/18 09:54 Analyzed: 05/15/18 13:41

Solids: 0.00 Preparation: EPA 7473 water Initial/Final: 0.25 mL / 0.25 mL

Batch: BE80773 Sequence: Y8E1533 Calibration: 05/15/18 1 Instrument: DMA 80-01

CAS NO.	Analyte	Concentration (mg/L)	Dilution Factor	Q	Method
7439-97-6	Mercury	0.00020	1	U	EPA 7473

FORM I **INORGANIC ANALYSIS DATA SHEET**

EPA 7473

MW-6 20180511

Laboratory: York Analytical Laboratories, Inc. SDG: 18E0635

Client: PVE, LLC. Project: 560556

Matrix: Water Laboratory ID: 18E0635-02 File ID: QBHGDMA80-01 051518A-020

Sampled: 05/11/18 11:05 Prepared: 05/15/18 09:54 Analyzed: 05/15/18 13:52

Solids: 0.00 Preparation: EPA 7473 water Initial/Final: 0.25 mL / 0.25 mL

Batch: BE80773 Sequence: Y8E1533 Calibration: 05/15/18 1 Instrument: DMA 80-01

CAS NO.	Analyte	Concentration (mg/L)	Dilution Factor	Q	Method
7439-97-6	Mercury	0.00020	1	U	EPA 7473

FORM I **INORGANIC ANALYSIS DATA SHEET**

EPA 7473

MW-5 20180511

Laboratory: York Analytical Laboratories, Inc. SDG: 18E0635

Client: PVE, LLC. Project: 560556

Matrix: Water Laboratory ID: 18E0635-03 File ID: QBHGDMA80-01 051518A-021

Sampled: 05/11/18 11:45 Prepared: 05/15/18 09:54 Analyzed: 05/15/18 14:03

Solids: 0.00 Preparation: EPA 7473 water Initial/Final: 0.25 mL / 0.25 mL

Batch: BE80773 Sequence: Y8E1533 Calibration: 05/15/18 1 Instrument: DMA 80-01

CAS NO.	Analyte	Concentration (mg/L)	Dilution Factor	Q	Method
7439-97-6	Mercury	0.00020	1	U	EPA 7473

FORM I

METHOD BLANK DATA SHEET

EPA 7473

Laboratory:	York Analytical Laboratories, Inc.		SDG:	18E0635	
Client:	PVE, LLC.		Project:	560556	
Matrix:	Water	Laboratory ID:	BE80773-BLK1	File ID:	QBHGDMA80-01 051518A-004
Prepared:	05/15/18 09:54	Preparation:	EPA 7473 water	Initial/Final:	0.25 mL / 0.25 mL
Analyzed:	05/15/18 10:13	Instrument:	DMA 80-01		
Batch:	BE80773	Sequence:	Y8E1533	Calibration:	UNASSIGNED

CAS NO.	COMPOUND	CONC. (mg/L)	Q
7439-97-6	Mercury	0.00020	U

STANDARD REFERENCE MATERIAL RECOVERY

EPA 7473

Laboratory: York Analytical Laboratories, Inc.
SDG: 18E0635
Client: PVE, LLC.
Project: 560556
Matrix: Water
Batch: BE80773
Laboratory ID: BE80773-SRM1
Preparation: EPA 7473 water
Initial/Final: 0.1 mL / 0.1 mL

ANALYTE	TRUE (mg/L)	FOUND (mg/L)	SRM % REC.	QC LIMITS REC.
Mercury	0.0100	0.00936	93.6	70 - 130

* Values outside of QC limits

METHOD DETECTION AND REPORTING LIMITS

EPA 7473

Laboratory: York Analytical Laboratories, Inc. **SDG:** 18E0635

Client: PVE, LLC. **Project:** 560556

Matrix: Water **Instrument:** DMA 80-01

Analyte	LOD	LOQ	Units
Mercury	0.00020	0.00020	mg/L

FORM IV **PREPARATION BATCH SUMMARY**

EPA 7473

Laboratory: York Analytical Laboratories, Inc. SDG: 18E0635

Client: PVE, LLC. Project: 560556

Batch: BE80773 Batch Matrix: Water Preparation: EPA 7473 water

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
MW-4 20180511	18E0635-01	HGDMA80-01 051518A-	05/15/18 09:54	
MW-6 20180511	18E0635-02	HGDMA80-01 051518A-	05/15/18 09:54	
MW-5 20180511	18E0635-03	HGDMA80-01 051518A-	05/15/18 09:54	
Blank	BE80773-BLK1	HGDMA80-01 051518A-	05/15/18 09:54	
Reference	BE80773-SRM1	HGDMA80-01 051518A-	05/15/18 09:54	

FORM V

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 7473

Laboratory:	York Analytical Laboratories, Inc.	SDG:	18E0635
Client:	PVE, LLC.	Project:	560556
Sequence:	Y8E1533	Instrument:	DMA 80-01
Matrix:	Water	Calibration:	UNASSIGNED

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Calibration Check	Y8E1533-CCV1	QBHGDMA80-01 051518A-002	05/15/18 09:42
Calibration Blank	Y8E1533-CCB1	QBHGDMA80-01 051518A-003	05/15/18 10:04
Blank	BE80773-BLK1	QBHGDMA80-01 051518A-004	05/15/18 10:13
Reference	BE80773-SRM1	QBHGDMA80-01 051518A-005	05/15/18 10:56
Calibration Check	Y8E1533-CCV2	QBHGDMA80-01 051518A-013	05/15/18 12:35
Calibration Blank	Y8E1533-CCB2	QBHGDMA80-01 051518A-014	05/15/18 12:45
MW-4 20180511	18E0635-01	QBHGDMA80-01 051518A-019	05/15/18 13:41
MW-6 20180511	18E0635-02	QBHGDMA80-01 051518A-020	05/15/18 13:52
MW-5 20180511	18E0635-03	QBHGDMA80-01 051518A-021	05/15/18 14:03
Calibration Check	Y8E1533-CCV3	QBHGDMA80-01 051518A-025	05/15/18 15:32
Calibration Blank	Y8E1533-CCB3	QBHGDMA80-01 051518A-026	05/15/18 15:40
Calibration Check	Y8E1533-CCV4	QBHGDMA80-01 051518A-033	05/15/18 17:00
Calibration Blank	Y8E1533-CCB4	QBHGDMA80-01 051518A-034	05/15/18 17:10

CONTINUING CALIBRATION CHECK

EPA 7473

Laboratory: York Analytical Laboratories, Inc.
SDG: 18E0635
Client: PVE, LLC.
Project: 560556
Instrument ID: DMA 80-01
Calibration: 05/15/18
Control Limt: +/- %
Sequence: Y8E1533

Lab Sample ID	Analyte	True	Found	%R	Units	Method
Y8E1533-CCV1	Mercury	0.0100	0.00971	97.1	mg/L	EPA 7473
Y8E1533-CCV2	Mercury	0.0100	0.00911	91.1	mg/L	EPA 7473
Y8E1533-CCV3	Mercury	0.0100	0.00950	95.0	mg/L	EPA 7473
Y8E1533-CCV4	Mercury	0.0100	0.00902	90.2	mg/L	EPA 7473

* Values outside of QC limits

FORM I **BLANKS**

EPA 7473

Laboratory: York Analytical Laboratories, Inc. SDG: 18E0635

Client: PVE, LLC.

Instrument ID: DMA 80-01 Project: 560556

Sequence: Y8E1533 Calibration: 05/15/18 1

Lab Sample ID	Analyte	Found	MRL	Units	C	Method
Y8E1533-CCB1	Mercury	0.00012	0.00020	mg/L		EPA 7473
BE80773-BLK1	Mercury	0.00011	0.00020	mg/L		EPA 7473
Y8E1533-CCB2	Mercury	0.00012	0.00020	mg/L		EPA 7473
Y8E1533-CCB3	Mercury	0.00012	0.00020	mg/L		EPA 7473
Y8E1533-CCB4	Mercury	0.00011	0.00020	mg/L		EPA 7473

BENCHSHEETS

SDG: 18E0635

CLASS: HG

METHOD: EPA 7473

PREPARATION BENCH SHEET-AQUEOUS: BE80773

Prepared: **05/15/2018 09:54**

York Analytical Laboratories, Inc.

Printed: 5/24/2018 11:13:03AM

Matrix: Water **Preparation EPA 7473 water** **(No Surrogate)** **ul**

Lab Number	Analysis	Initial (mL)	Final (mL)	Spike 1 ID	ul Spike 1	Spike 2 ID	ul Spike 2	Source ID	pH Data Initial	pH Data Acid	pH Data Basic	Decanted Y/N	Comments
18E0524-09 J	Mercury by 7473	0.25	0.25										
18E0548-02 E	Mercury by 7473	0.25	0.25										4 day firm
18E0597-01 H	Mercury by 7473	0.25	0.25										4 day firm
18E0627-02 I	Mercury by 7473	0.25	0.25										Use for total water
18E0635-01 A	Mercury by 7473	0.25	0.25										
18E0635-02 A	Mercury by 7473	0.25	0.25										
18E0635-03 A	Mercury by 7473	0.25	0.25										
18E0702-01 J	Mercury by 7473	0.25	0.25										Use for total water
18E0702-02 J	Mercury by 7473	0.25	0.25										Use for total water
18E0702-03 J	Mercury by 7473	0.25	0.25										Use for total water
18E0702-05 J	Mercury by 7473	0.25	0.25										Use for total water
18E0702-06 J	Mercury by 7473	0.25	0.25										Use for total water
18E0702-07 J	Mercury by 7473	0.25	0.25										Use for total water
18E0702-08 J	Mercury by 7473	0.25	0.25										Use for total water
BE80773-BLK1	QC	0.25	0.25										
BE80773-DUP1	QC	0.25	0.25					18E0702-08					
BE80773-MS1	QC	0.25	0.25	Y18C036	125			18E0702-08					
BE80773-SRM1	QC	0.1	0.1	Y18C033	100								

Reagents:

ID Number	Description	Lot Number	ID Number	Description	Lot Number

Preparation Performed by SY **Date:** 05/15/2018 09:54

Pos Nr	Samplename Remak	Weight	U	Creation Date	State	Height	Hg [ng]	Concentr. [µg/kg]	Cal-Factor	Calibration file Date	Method file Date
1 1	mb	0.2500	g	15.05.2018 09:28:54	✓	0.0003	0.0263	0.1054	1.0000	DMA80_01_ICAL_LLAQ_ 032018a.c80 20.03.2018 13:24:53	aq samples.m80 15.11.2013
2 2	SEQ-CCV1	0.1000	g	15.05.2018 09:41:39	✓	0.0459	0.9708	9.7084	1.0000	DMA80_01_ICAL_LLAQ_ 032018a.c80 20.03.2018 13:24:53	aq samples.m80 15.11.2013
3 3	SEQ-CCB1	0.2500	g	15.05.2018 10:05:19	✓	0.0005	0.0300	0.1201	1.0000	DMA80_01_ICAL_LLAQ_ 032018a.c80 20.03.2018 13:24:53	aq samples.m80 15.11.2013
4 4	BE80773-BLK1	0.2500	g	15.05.2018 10:05:32	✓	0.0004	0.0279	0.1115	1.0000	DMA80_01_ICAL_LLAQ_ 032018a.c80 20.03.2018 13:24:53	aq samples.m80 15.11.2013
5 5	BE80773-SRM1	0.1000	g	15.05.2018 10:56:17	✓	0.0442	0.9364	9.3644	1.0000	DMA80_01_ICAL_LLAQ_ 032018a.c80 20.03.2018 13:24:53	aq samples.m80 15.11.2013
6 6	18E0524-09	0.2500	g	15.05.2018 11:17:45	✓	0.0032	0.0853	0.3411	1.0000	DMA80_01_ICAL_LLAQ_ 032018a.c80 20.03.2018 13:24:53	aq samples.m80 15.11.2013
7 7	18E0548-02	0.2500	g	15.05.2018 11:17:48	✓	0.0021	0.0642	0.2566	1.0000	DMA80_01_ICAL_LLAQ_ 032018a.c80 20.03.2018 13:24:53	aq samples.m80 15.11.2013
8 8	18E0597-01	0.2500	g	15.05.2018 11:17:51	✓	0.0038	0.0990	0.3959	1.0000	DMA80_01_ICAL_LLAQ_ 032018a.c80 20.03.2018 13:24:53	aq samples.m80 15.11.2013
9 9	18E0627-02	0.2500	g	15.05.2018 11:17:53	✓	0.0022	0.0659	0.2635	1.0000	DMA80_01_ICAL_LLAQ_ 032018a.c80 20.03.2018 13:24:53	aq samples.m80 15.11.2013
10 10	18E0635-01	0.2500	g	15.05.2018 11:18:00	✓	0.0017	0.0548	0.2194	1.0000	DMA80_01_ICAL_LLAQ_ 032018a.c80 20.03.2018 13:24:53	aq samples.m80 15.11.2013
11 11	18E0635-02	0.2500	g	15.05.2018 11:18:06	✓	0.0020	0.0619	0.2476	1.0000	DMA80_01_ICAL_LLAQ_ 032018a.c80 20.03.2018 13:24:53	aq samples.m80 15.11.2013
12 12	18E0635-03	0.2500	g	15.05.2018 11:18:09	✓	0.0015	0.0512	0.2048	1.0000	DMA80_01_ICAL_LLAQ_ 032018a.c80 20.03.2018 13:24:53	aq samples.m80 15.11.2013
13 13	SEQ-CCV2	0.1000	g	15.05.2018 12:35:28	✓	0.0430	0.9106	9.1055	1.0000	DMA80_01_ICAL_LLAQ_ 032018a.c80 20.03.2018 13:24:53	aq samples.m80 15.11.2013
14 14	SEQ-CCB2	0.2500	g	15.05.2018 12:35:31	✓	0.0005	0.0299	0.1198	1.0000	DMA80_01_ICAL_LLAQ_ 032018a.c80 20.03.2018 13:24:53	aq samples.m80 15.11.2013
15 15	18E0524-09 Rerun	0.2500	g	15.05.2018 12:37:34	✓	0.0015	0.0507	0.2028	1.0000	DMA80_01_ICAL_LLAQ_ 032018a.c80 20.03.2018 13:24:53	aq samples.m80 15.11.2013
16 16	18E0548-02 Rerun	0.2500	g	15.05.2018 12:37:41	✓	0.0008	0.0368	0.1474	1.0000	DMA80_01_ICAL_LLAQ_ 032018a.c80 20.03.2018 13:24:53	aq samples.m80 15.11.2013
17 17	18E0597-01 Rerun	0.2500	g	15.05.2018 12:37:44	✓	0.0029	0.0804	0.3217	1.0000	DMA80_01_ICAL_LLAQ_ 032018a.c80 20.03.2018 13:24:53	aq samples.m80 15.11.2013
18 18	18E0627-02 Rerun	0.2500	g	15.05.2018 12:37:46	✓	0.0009	0.0376	0.1505	1.0000	DMA80_01_ICAL_LLAQ_ 032018a.c80 20.03.2018 13:24:53	aq samples.m80 15.11.2013
19 19	18E0635-01 Rerun	0.2500	g	15.05.2018 12:37:49	✓	0.0007	0.0341	0.1364	1.0000	DMA80_01_ICAL_LLAQ_ 032018a.c80 20.03.2018 13:24:53	aq samples.m80 15.11.2013
20 20	18E0635-02 Rerun	0.2500	g	15.05.2018 12:37:52	✓	0.0004	0.0279	0.1115	1.0000	DMA80_01_ICAL_LLAQ_ 032018a.c80 20.03.2018 13:24:53	aq samples.m80 15.11.2013
21 21	18E0635-03 Rerun	0.2500	g	15.05.2018 12:37:55	✓	0.0006	0.0328	0.1313	1.0000	DMA80_01_ICAL_LLAQ_ 032018a.c80 20.03.2018 13:24:53	aq samples.m80 15.11.2013
22 22	18E0702-01	0.2500	g	15.05.2018 14:56:51	✓	0.0006	0.0326	0.1303	1.0000	DMA80_01_ICAL_LLAQ_ 032018a.c80 20.03.2018 13:24:53	aq samples.m80 15.11.2013

Pos Nr	Samplename Remak	Weight	U	Creation Date	State	Height	Hg [ng]	Concentr. [µg/kg]	Cal-Factor	Calibration file Date	Method file Date
23 23	18E0702-02	0.2500	g	15.05.2018 14:56:55	✓	0.0009	0.0375	0.1498	1.0000	DMA80_01_ICAL_LLAQ_ 032018a.c80 20.03.2018 13:24:53	aq samples.m80 15.11.2013
24 24	18E0702-03	0.2500	g	15.05.2018 14:57:00	✓	0.0007	0.0332	0.1329	1.0000	DMA80_01_ICAL_LLAQ_ 032018a.c80 20.03.2018 13:24:53	aq samples.m80 15.11.2013
25 25	SEQ-CCV3	0.1000	g	15.05.2018 15:31:49	✓	0.0449	0.9504	9.5039	1.0000	DMA80_01_ICAL_LLAQ_ 032018a.c80 20.03.2018 13:24:53	aq samples.m80 15.11.2013
26 26	SEQ-CCB3	0.2500	g	15.05.2018 15:31:52	✓	0.0005	0.0308	0.1230	1.0000	DMA80_01_ICAL_LLAQ_ 032018a.c80 20.03.2018 13:24:53	aq samples.m80 15.11.2013
27 27	18E0702-05	0.2500	g	15.05.2018 15:55:51	✓	0.0013	0.0475	0.1901	1.0000	DMA80_01_ICAL_LLAQ_ 032018a.c80 20.03.2018 13:24:53	aq samples.m80 15.11.2013
28 28	18E0702-06	0.2500	g	15.05.2018 15:55:54	✓	0.0010	0.0399	0.1595	1.0000	DMA80_01_ICAL_LLAQ_ 032018a.c80 20.03.2018 13:24:53	aq samples.m80 15.11.2013
29 29	18E0702-07	0.2500	g	15.05.2018 15:55:57	✓	0.0011	0.0415	0.1660	1.0000	DMA80_01_ICAL_LLAQ_ 032018a.c80 20.03.2018 13:24:53	aq samples.m80 15.11.2013
30 30	18E0702-08	0.2500	g	15.05.2018 15:55:59	✓	0.0011	0.0421	0.1684	1.0000	DMA80_01_ICAL_LLAQ_ 032018a.c80 20.03.2018 13:24:53	aq samples.m80 15.11.2013
31 31	BE80773-DUP1	0.2500	g	15.05.2018 15:56:02	✓	0.0006	0.0321	0.1285	1.0000	DMA80_01_ICAL_LLAQ_ 032018a.c80 20.03.2018 13:24:53	aq samples.m80 15.11.2013
32 32	BE80773-MS1	0.1250	g	15.05.2018 16:46:59	✓	0.0530	1.1183	8.9461	1.0000	DMA80_01_ICAL_LLAQ_ 032018a.c80 20.03.2018 13:24:53	aq samples.m80 15.11.2013
33 33	SEQ-CCV4	0.1000	g	15.05.2018 17:00:38	✓	0.0425	0.9018	9.0181	1.0000	DMA80_01_ICAL_LLAQ_ 032018a.c80 20.03.2018 13:24:53	aq samples.m80 15.11.2013
34 34	SEQ-CCB4	0.2500	g	15.05.2018 17:00:41	✓	0.0004	0.0269	0.1077	1.0000	DMA80_01_ICAL_LLAQ_ 032018a.c80 20.03.2018 13:24:53	aq samples.m80 15.11.2013

Sample listing "QBHgDMA80-01 032018A_ICALAQ.d80"

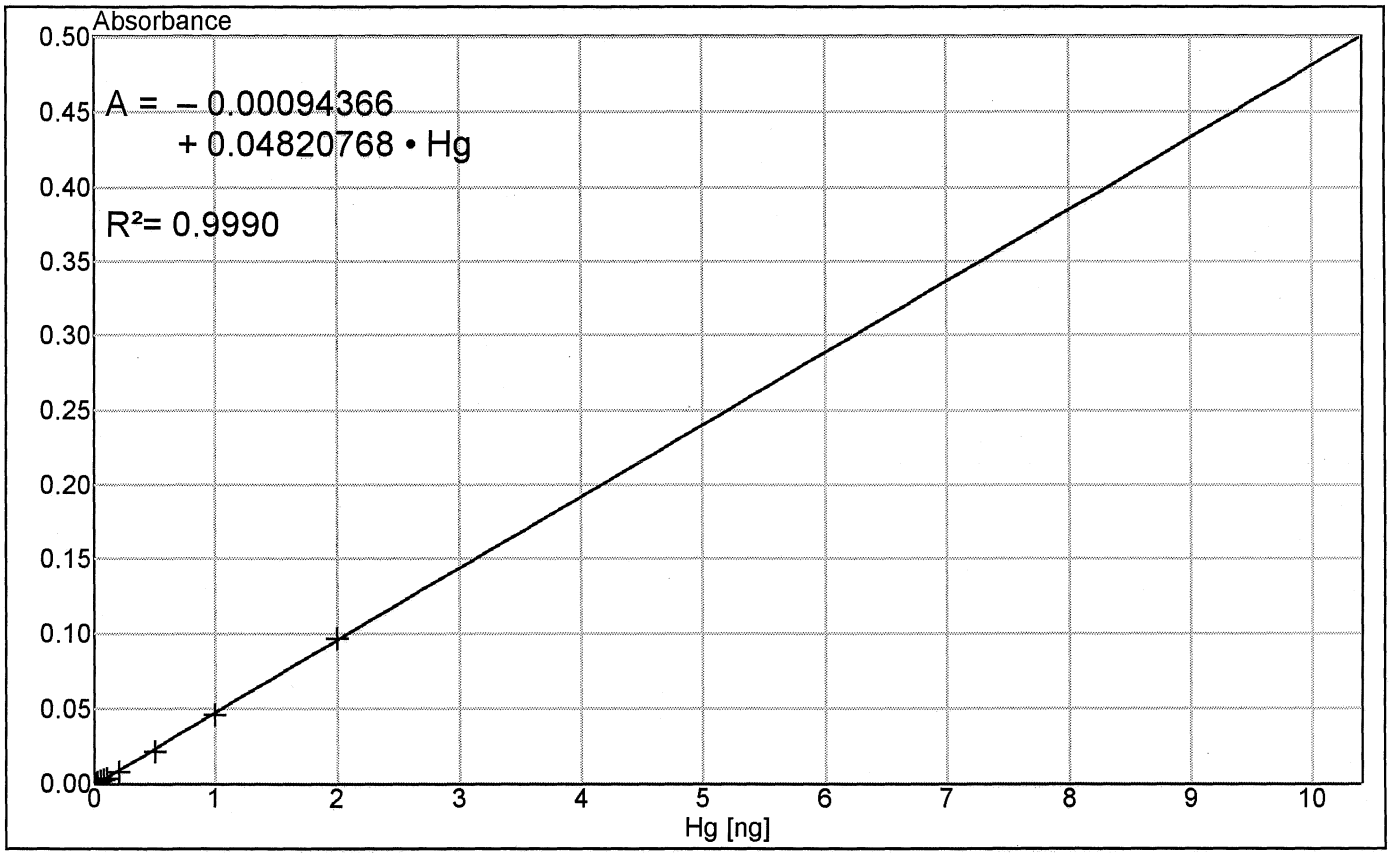
Created by "Administrator"
20.03.2018 14:09:12

Pos Nr.	Samplename Remark	Amount Date	State Date	Height	Hg [ng]	Concentr. [µg/kg]	Σ	Cal- Factor
1 (1)	0.00 ng	0.2500 g 20.03.18 10:39	✔ C 20.03.18 11:44	0.0002	0.0000	0.0001		1.0000
2 (2)	0.025 ng	0.0250 g 20.03.18 10:39	✔ C 20.03.18 11:52	0.0013	0.0250	1.0000		1.0000
3 (3)	0.050 ng	0.0500 g 20.03.18 10:39	✔ C 20.03.18 12:03	0.0019	0.0500	1.0000		1.0000
4 (4)	0.075 ng	0.0750 g 20.03.18 10:39	✔ C 20.03.18 12:14	0.0029	0.0750	1.0000		1.0000
5 (5)	0.100ng	0.1000 g 20.03.18 10:40	✔ C 20.03.18 12:25	0.0036	0.1000	1.0000		1.0000
6 (6)	0.200 ng	0.2000 g 20.03.18 10:40	✔ C 20.03.18 12:36	0.0078	0.2000	1.0000		1.0000
7 (7)	0.500 ng	0.5000 g 20.03.18 10:40	✔ C 20.03.18 12:47	0.0218	0.5000	1.0000		1.0000
8 (8)	1.00 ng	0.1000 g 20.03.18 10:41	✔ C 20.03.18 12:59	0.0459	1.0000	10.0000		1.0000
9 (9)	2.00 ng	0.2000 g 20.03.18 10:41	✔ C 20.03.18 13:10	0.0966	2.0000	10.0000		1.0000
10 (10)	mb	0.2500 g 20.03.18 12:25	✔ 20.03.18 13:25	0.0008	0.0352	0.1410		1.0000
10 (11)	SWQ-ICV1	0.1000 g 20.03.18 12:37	✔ 20.03.18 13:37	0.0508	1.0728	10.7280		1.0000
10 (12)	SRM STD	0.1000 g 20.03.18 12:47	✔ 20.03.18 13:47	0.0426	0.9028	9.0276		1.0000
11 (13)	MB	0.2500 g 20.03.18 12:57	✔ 20.03.18 13:57	0.0003	0.0259	0.1036		1.0000

Calibration data "DMA80_01_ICAL_LLAQ_ 032018a.c80"

Created by "Administrator" at 20.03.2018 13:24:53

Cell 0

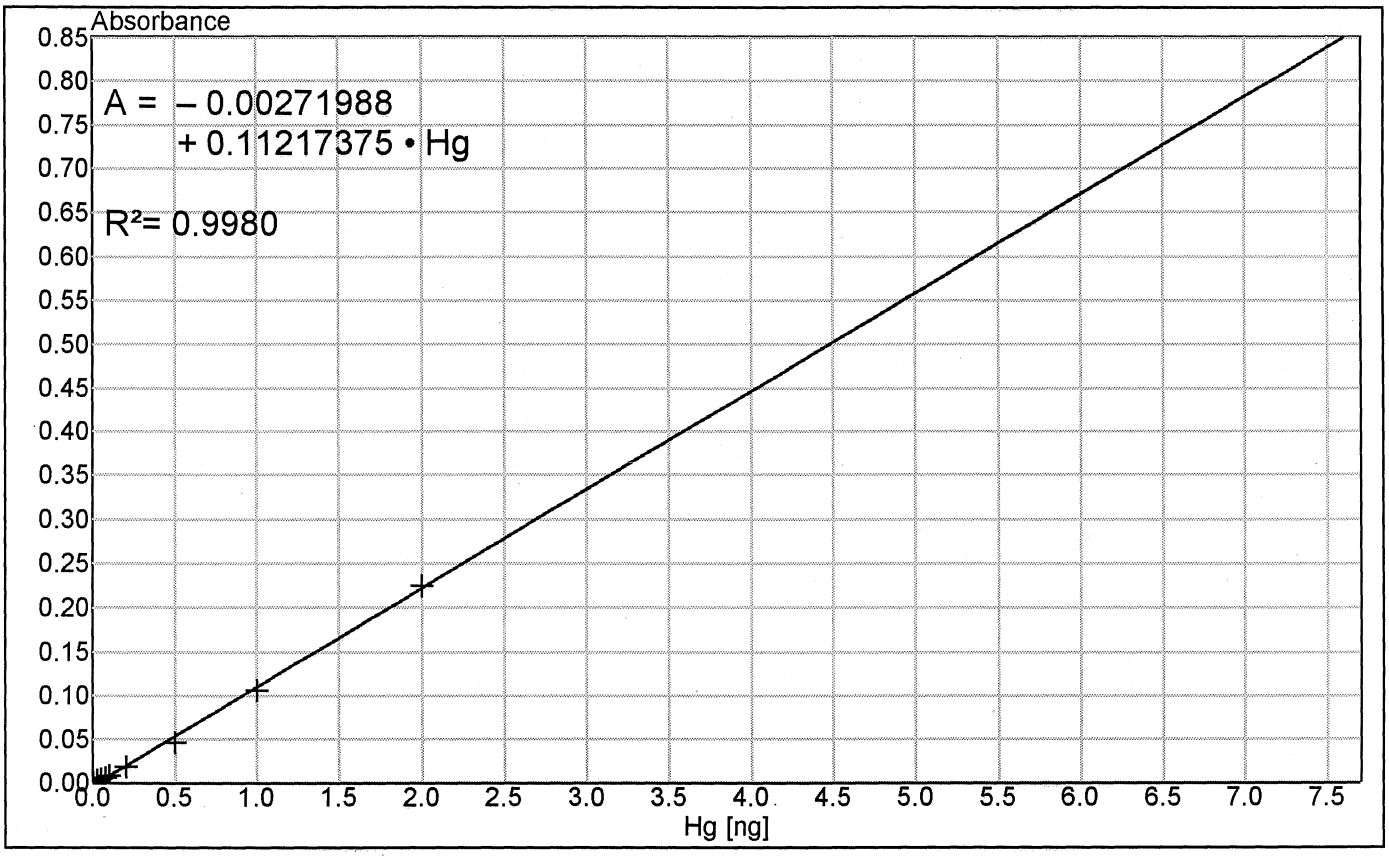


Nr.		Hg [ng]	Height ^	Error ⊿E [%]	Date	Remarks
1	✔	0.0000	0.0002	0.0011	20.03.2018 10:53:03	
2	✔	0.0250	0.0013	0.0010	20.03.2018 11:04:00	
3	✔	0.0500	0.0019	0.0005	20.03.2018 11:15:08	
4	✔	0.0750	0.0029	0.0002	20.03.2018 11:26:17	
5	✔	0.1000	0.0036	-0.0003	20.03.2018 11:37:25	
6	✔	0.2000	0.0078	-0.0009	20.03.2018 11:48:32	
7	✔	0.5000	0.0218	-0.0014	20.03.2018 11:59:41	
8	✔	1.0000	0.0459	-0.0013	20.03.2018 12:10:53	
9	✔	2.0000	0.0966	0.0011	20.03.2018 12:22:02	

Calibration data "DMA80_01_ICAL_LLAQ_ 032018a.c80"

Created by "Administrator" at 20.03.2018 13:24:53

Cell 1



Nr.		Hg [ng]	Height ^	Error ⊿E [%]	Date	Remarks
1	✔	0.0000	0.0002	0.0029	20.03.2018 10:53:03	
2	✔	0.0250	0.0030	0.0029	20.03.2018 11:04:00	
3	✔	0.0500	0.0044	0.0015	20.03.2018 11:15:08	
4	✔	0.0750	0.0062	0.0005	20.03.2018 11:26:17	
5	✔	0.1000	0.0087	0.0002	20.03.2018 11:37:25	
6	✔	0.2000	0.0184	-0.0014	20.03.2018 11:48:32	
7	✔	0.5000	0.0466	-0.0068	20.03.2018 11:59:41	
8	✔	1.0000	0.1063	-0.0032	20.03.2018 12:10:53	
9	✔	2.0000	0.2250	0.0033	20.03.2018 12:22:02	

DATA USABILITY SUMMARY REPORT

PREMIER ENVIRONMENTAL SERVICES, INC.

DATA VALIDATION REPORT

CLIENT PROJECT ID: 560556

INORGANIC ANALYSES
IN AQUEOUS SAMPLES
USEPA METHODS 6010C/7473

YORK ANALYTICAL LABORATORIES
STRATFORD, CT

LAB REPORT NUMBER:
18E0635

July, 2018

Prepared for
PVE, LLC
Poughkeepsie, New York

Prepared by
Premier Environmental Services
2815 Covered Bridge Road
Merrick, New York 11566
(516)223-9761

NYS DEC Data Usability Summary Report

DATA VALIDATION FOR:	**Total Analyte List (TAL) Metals (inc. Mercury)**
SITE:	**Client ID: 560556**
CONTRACT LAB:	**York Analytical Laboratories, Inc. Stratford, Ct**
LAB REPORT:	**18E0635**
REVIEWER:	**Renee Cohen**
DATE REVIEW COMPLETED:	**June, 2018**
MATRIX:	**Aqueous**

The Chain of Custody (COC) documentation associated with this data set listed three (3) groundwater samples. The samples in this data set were collected May 11, 2018 and delivered to York Analytical Laboratories located in Stratford, CT. The samples were received at the laboratory on May 14, 2018.

The data evaluation of the TAL Metal set was performed according to the guidelines noted in the "National Functional Guidelines for Inorganic Data Review", January 2010 and the NYSDEC ASP. A Data Usability Summary Report (DUSR) has been prepared in accordance with the guidelines of the Division of Environmental Remediation.

Several factors should be noted for all persons using this data. Persons using this data should be aware that no result is guaranteed to be accurate even if it has passed all QC tests. The main purpose of this review is to appropriately qualify outliers and to determine whether the results presented meet the specific site/project criteria for data quality and data use.

Table 1 of this report contains a cross reference between the Field Sample ID's and the Laboratory Sample ID's. Appendix A of this Data Usability Summary Report (DUSR) contains a summary of the data qualifiers that may be used in the report. Appendix B contains the qualified data result pages. Appendix C contains the Chain of Custody (COC) documents associated with this data set.

Three (3) groundwater/aqueous samples were marked on the COC documents to be analyzed for TAL Metals (inc. Mercury). This is the data review associated with the TAL Metal Analyses.

DATA USABILITY SUMMARY REPORT (DUSR)
Inorganic Data Assessment

1. OVERVIEW

Three (3) aqueous samples were collected May 11, 2018 and delivered to York Analytical Laboratories located in Stratford, CT. The samples were received at the laboratory on May 14, 2018. The samples were reported in laboratory report 18E0635. Table 1 of this report lists each of the field sample ID's with a cross reference to the laboratory sample ID. The samples were analyzed for the parameters listed on the COC documents. A full deliverable data report was provided with these sample results.

2. HOLDING TIME

The amount of an analyte in a sample can change with time due to chemical instability, degradation, volatilization, etc. If the specified holding time is exceeded, the data may not be valid. Metals with the exception of Mercury, is required to be digested and analyzed within 180 days of Verified Time of Sample Receipt (VTSR). Mercury samples are to be digested and analyzed within 26 days of VTSR.

Three (3) groundwater were analyzed for the TAL Metal analyses. The ICP Metals were prepared in one (1) batch on May 21, 2018 and analyzed on May 22, 2015. The ICP digestion and analysis was performed within the method holding time.

Three (3) groundwater samples were analyzed for the Total Mercury analyses. The samples were prepared in one sample batch on May 15, 2018 and analyzed for Mercury on May 15, 2015. These Mercury digestion and analyses were performed within the method holding time.

3. CALIBRATION ANALYSIS

Inductively Coupled Plasma (ICP) was utilized for these analyses. The ICP was calibrated using the calibration standards required by the manufacturer. An initial calibration verification (ICV) standard is then analyzed to verify instrument calibration. One (1) continuing calibration standard was analyzed after each ten (10) field samples. One (1) ICP analytical sequence is associated with this data set. The samples associated with this data set were analyzed for ICP metals on May 22, 2018. The laboratory reported provided raw data for this sequence to review. The ICV standard associated with this data set met QC criteria. The CCV standards associated with this data set met QC criteria.

Mercury analyses were performed in one (1) analytical sequence. The samples associated with this data set were analyzed on May 15, 2015. The laboratory reported provided raw data for this sequence to review. Review of the raw data to the results reported on the summary forms was performed. QC criteria were met in the data associated with this data set.

4. ICP CRDL STANDARD

The Reporting Limit (RL) standard is used for the verification of instrument linearity at the Reporting Limit (RL). The CRDL standard control limits specified in the data validation guidelines are 70%-130% recovery. If the CRDL standard falls outside of the control limits, associated data less than or equal to the 10X the CRDL are qualified estimated (J or UJ) or rejected (R) depending on the recovery of the CRDL standard and the concentration of the analyte in the sample. When the CRDL standard exceeds the control limit, indicating a high bias samples are qualified estimated (J or UJ).

The laboratory analyzed one (1) Reporting Limit Standard at the start and end of the ICP analytical sequence. The laboratory did not provide recovery limits for this QC analysis. This validator applied limits of 70-130% of the True Value to review each target analyte. The percent recovery of target analytes met QC criteria in these standard analyses.

5. ICP INTERFERENCE CHECK STANDARD

The Interference Check Standard (ICS) is used to verify the laboratory interelement and background correction factors of the ICP. Two solutions comprise the ICS A and ICS AB. Solution A consists of the interferent metals while solution AB is the group of target analytes and the interferents metals. An ICS analysis consists of analyzing both solutions consecutively for all wavelengths used for each analyte reported by ICP. The ICP ICS standards are to be analyzed at the beginning and end of each analytical run. The results are to fall within control limits of +/-20% of the true value.

The laboratory analyzed one (1) ICSA and one (1) ICSAB standard with each of the ICP analytical sequences. These QC samples are used to verify the laboratories interelement and background correction factors of the ICP. The recovery of all target analytes met QC criteria in the analytical sequence associated with this data set.

6. MATRIX SPIKE (MS) ANALYSIS

The spike sample analysis provides information about the effect of the sample matrix upon the digestion and measurement methodology. The spike control limits are 75%-125% when the sample concentration is less than four (4) times the spike added. If the matrix spike recoveries fall in the range of 30%-74%, the sample results are may be biased low and are qualified as estimated (J or UJ). If the matrix spike recoveries fall in the range of 126%-200%, sample results may be biased high. Positive results are qualified estimated (J). If the spike recovery is greater than 125% and the reported sample result is less than the IDL the data point is acceptable for use. If the matrix spike recovery is greater than 200%, the associated sample data are unusable and are rejected (R). If matrix spike results are less than 30%, the associated non-detect results are qualified unusable and rejected (R), and the results reported above the IDL are qualified estimated (J).

Site specific sample MW-4 was prepared and analyzed as the ICP site-specific matrix spike (MS) analysis in this data set. Seventeen (17) target analytes were reported. Percent recovery (%) of reported target analytes met QC criteria.

7. POST DIGESTION SPIKE ANALYSIS

The post digestion spike sample analysis provides additional information about the effect of the sample matrix upon the digestion and measurement methodology. The post digestion spike is performed for each analyte that the pre-digestion spike recovery falls outside the 75-125% control limit.

Post digestion spike analysis was not reported with this data set. Sample data was not qualified based on this anomaly.

8. DUPLICATE SAMPLE ANALYSIS

The laboratory duplicate sample analysis is used to evaluate the laboratory precision of the method for each analyte. If the duplicate sample analysis results for a particular analyte fall outside the control windows of 20% RPD or +/- CRDL, whichever is appropriate depending upon the concentration of the sample, the associated sample results are qualified "J" estimated.

Duplicate sample analysis was performed on sample MW-4. The full target analyte was reported in this duplicate sample duplicate analysis. The RPD (%) of Barium and Potassium were reported above QC limit in the duplicate sample analysis. Barium and Potassium have been estimated "J"/"UJ" qualified in sample MW-4.

Qualified data result pages are located in Appendix B of this report.

9. ICP SERIAL DILUTION

The serial dilution analysis indicates whether significant physical or chemical interferences exist due to the sample matrix. If the concentration of any analyte in the original sample is greater than 50 times the instrument detection limit (IDL), an analysis of a 5-fold dilution samples must yield results which have a percent difference (%D) of less than or equal to 10 with the original sample results. If the %D of the serial dilution exceeds the 10% (and is not greater than 100%) for a particular analyte, all the associated sample results are qualified estimated (J).

The laboratory reported ICP serial dilution on sample MW-4. Iron RPD (%) in the serial dilution analysis was reported above QC limit. Iron has been estimated "J" qualified in each of the samples reported in this data set.

Qualified data result pages are located in Appendix B of this report.

DATA USABILITY SUMMARY REPORT (DUSR)
Inorganic Data Assessment

10. BLANKS

Blank analyses are assessed to determine the existence and magnitude of contamination problems. The criteria for the evaluation of blanks applies to all blanks, including but not limited to reagent blanks, method blanks and field blanks. The responsibility for action in the case of an unsuitable blank result depends upon the circumstances and the origin of the blank itself. If the problem with any blank exists, then all associated data must be carefully evaluated to determine whether there is inherent variability in the data for that case, or the problem is an isolated occurrence not affecting other data.

The laboratory provided a summary report form for the method blank associated with each of the preparation batches. The ICP and ICPMS preparation blank was free from contamination of target analytes above the reporting limit. The laboratory provided summary forms to report all ICB and CCB analyses. The ICB/CCB sample analyses were free from contamination of target analytes.

The Mercury preparation blank was free from contamination of all target analytes above the reporting limit. The laboratory provided summary forms to report all ICB and CCB analyses. The ICB/CCB sample analyses were free from contamination of Mercury.

11. LABORATORY CONTROL SAMPLE ANALYSIS (LCS)

The laboratory control sample (LCS) analysis provides information about the efficiency of the laboratory digestion procedure. If the recovery of any analyte is outside the established control limits, then laboratory performance and method accuracy are in question. Professional judgment is used to determine of data should be qualified or rejected.

One (1) Laboratory Control Sample (LCS) is associated with this data set. The ICP LCS sample was fortified with the reported target analytes. Recovery limits (80-120%) were reported for each target analyte. The recovery of these target analytes with the exception of Potassium (167%) met QC criteria in the ICP analysis. Potassium has been estimated "J" qualified in each of the samples reported in this data set.

12. INSTRUMENT QC DATA

The laboratory provided a summary of the associated ICP Instrument Verification data. The information provided was performed in the required time frame.

13. COMPOUND IDENTIFICATION

Three (3) groundwater samples were analyzed for Target Analyte List (TAL) of Metals. The samples were analyzed in accordance with USEPA Method 6010C/7473. The ICP and Mercury sample analyses were performed without dilution. Sample results are reported in ug/l.

14. FIELD DUPLICATE SAMPLE ANALYSIS

Field duplicate samples are collected and analyzed as an indication of overall precision. These results are expected to have more variability than laboratory duplicate samples. Soil samples have more variability than aqueous samples due to the non-homogeneity of the soil.

Field duplicate sample analysis is not associated with this data set.

DATA USABILITY SUMMARY REPORT (DUSR)
Inorganic Data Assessment

15. SYSTEM PERFORMANCE AND OVERALL ASSESSMENT

This data set included the reporting of three (3) monitoring well samples. These samples were analyzed for the TAL metals in accordance with USEPA Method 6010C and Mercury in accordance with USEPA Method 7473 as specified by the COC documents that accompanied the samples to the laboratory. Target analyte results are reported in ug/l. Each of the sample digestates was analyzed and reported from dilution factor of 1.

The sample data are acceptable for use with the noted data qualifiers.

Qualified data result pages are located in Appendix B of this report.

TABLE 1

CLIENT SAMPLE ID	LABORATORY SAMPLE ID
MW-4 20180511	18E0635-01
MW-6 20180511	18E0635-02
MW-5 20180511	18E0635-03

APPENDIX A

DATA QUALIFIER DEFINITIONS

U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

J - The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.

N - The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification."

NJ - The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.

UJ - The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.

R - The sample results are unreliable/unusable. The presence or absence of the analyte cannot be verified.

APPENDIX B

FORM I **INORGANIC ANALYSIS DATA SHEET**

EPA 6010C

MW-4 20180511

Laboratory: York Analytical Laboratories, Inc. SDG: 18E0635

Client: PVE, LLC. Project: 560556

Matrix: Water Laboratory ID: 18E0635-01RE1 File ID: qbi052218aRE_1-015

Sampled: 05/11/18 09:05 Prepared: 05/21/18 18:24 Analyzed: 05/22/18 12:17

Solids: 0.00 Preparation: EPA 3015A Initial/Final: 45 mL / 50 mL

Batch: BE81107 Sequence: Y8E2221 Calibration: 05/22/18 1 Instrument: WinLabICP

CAS NO.	Analyte	Concentration (mg/L)	Dilution Factor	Q	Method
7429-90-5	Aluminum	0.056	1	U	EPA 6010C
7440-36-0	Antimony	0.018	1		EPA 6010C
7440-38-2	Arsenic	0.011	1	U	EPA 6010C
7440-39-3	Barium	0.119 J	1		EPA 6010C
7440-41-7	Beryllium	0.001	1	U	EPA 6010C
7440-43-9	Cadmium	0.003	1	U	EPA 6010C
7440-70-2	Calcium	19.3	1		EPA 6010C
7440-47-3	Chromium	0.006	1	U	EPA 6010C
7440-48-4	Cobalt	0.006	1	U	EPA 6010C
7440-50-8	Copper	0.005	1		EPA 6010C
7439-89-6	Iron	0.081 J	1		EPA 6010C
7439-92-1	Lead	0.006	1	U	EPA 6010C
7439-95-4	Magnesium	3.18	1		EPA 6010C
7439-96-5	Manganese	0.007	1		EPA 6010C
7440-02-0	Nickel	0.006	1	U	EPA 6010C
7440-09-7	Potassium	0.277 J	1		EPA 6010C
7782-49-2	Selenium	0.011	1		EPA 6010C
7440-22-4	Silver	0.006	1	U	EPA 6010C
7440-23-5	Sodium	4.70	1	B	EPA 6010C
7440-28-0	Thallium	0.006	1	U	EPA 6010C
7440-62-2	Vanadium	0.011	1	U	EPA 6010C
7440-66-6	Zinc	0.017	1	U	EPA 6010C

FORM I **INORGANIC ANALYSIS DATA SHEET**

EPA 6010C

MW-6 20180511

Laboratory: York Analytical Laboratories, Inc. SDG: 18E0635

Client: PVE, LLC. Project: 560556

Matrix: Water Laboratory ID: 18E0635-02RE1 File ID: qbi052218aRE_1-018

Sampled: 05/11/18 11:05 Prepared: 05/21/18 18:24 Analyzed: 05/22/18 12:24

Solids: 0.00 Preparation: EPA 3015A Initial/Final: 45 mL / 50 mL

Batch: BE81107 Sequence: Y8E2221 Calibration: 05/22/18 1 Instrument: WinLabICP

CAS NO.	Analyte	Concentration (mg/L)	Dilution Factor	Q	Method
7429-90-5	Aluminum	0.302	1		EPA 6010C
7440-36-0	Antimony	0.010	1		EPA 6010C
7440-38-2	Arsenic	0.011	1	U	EPA 6010C
7440-39-3	Barium	0.082	1		EPA 6010C
7440-41-7	Beryllium	0.001	1	U	EPA 6010C
7440-43-9	Cadmium	0.003	1	U	EPA 6010C
7440-70-2	Calcium	68.7	1		EPA 6010C
7440-47-3	Chromium	0.006	1	U	EPA 6010C
7440-48-4	Cobalt	0.006	1	U	EPA 6010C
7440-50-8	Copper	0.006	1		EPA 6010C
7439-89-6	Iron	0.530	1		EPA 6010C
7439-92-1	Lead	0.006 J	1	U	EPA 6010C
7439-95-4	Magnesium	23.5	1		EPA 6010C
7439-96-5	Manganese	0.098	1		EPA 6010C
7440-02-0	Nickel	0.006	1	U	EPA 6010C
7440-09-7	Potassium	2.55 J	1		EPA 6010C
7782-49-2	Selenium	0.041	1		EPA 6010C
7440-22-4	Silver	0.006	1	U	EPA 6010C
7440-23-5	Sodium	20.3	1	B	EPA 6010C
7440-28-0	Thallium	0.006	1	U	EPA 6010C
7440-62-2	Vanadium	0.011	1	U	EPA 6010C
7440-66-6	Zinc	0.017	1	U	EPA 6010C

FORM I **INORGANIC ANALYSIS DATA SHEET**

EPA 6010C

MW-5 20180511

Laboratory: York Analytical Laboratories, Inc. SDG: 18E0635

Client: PVE, LLC. Project: 560556

Matrix: Water Laboratory ID: 18E0635-03RE1 File ID: qbi052218aRE_1-019

Sampled: 05/11/18 11:45 Prepared: 05/21/18 18:24 Analyzed: 05/22/18 12:26

Solids: 0.00 Preparation: EPA 3015A Initial/Final: 45 mL / 50 mL

Batch: BE81107 Sequence: Y8E2221 Calibration: 05/22/18 1 Instrument: WinLabICP

CAS NO.	Analyte	Concentration (mg/L)	Dilution Factor	Q	Method
7429-90-5	Aluminum	0.056	1	U	EPA 6010C
7440-36-0	Antimony	0.011	1		EPA 6010C
7440-38-2	Arsenic	0.011	1	U	EPA 6010C
7440-39-3	Barium	0.105	1		EPA 6010C
7440-41-7	Beryllium	0.001	1	U	EPA 6010C
7440-43-9	Cadmium	0.003	1	U	EPA 6010C
7440-70-2	Calcium	125	1		EPA 6010C
7440-47-3	Chromium	0.006	1	U	EPA 6010C
7440-48-4	Cobalt	0.006	1	U	EPA 6010C
7440-50-8	Copper	0.005	1		EPA 6010C
7439-89-6	Iron	0.551 J	1		EPA 6010C
7439-92-1	Lead	0.006	1	U	EPA 6010C
7439-95-4	Magnesium	31.7	1		EPA 6010C
7439-96-5	Manganese	2.15	1		EPA 6010C
7440-02-0	Nickel	0.006	1	U	EPA 6010C
7440-09-7	Potassium	3.11 J	1		EPA 6010C
7782-49-2	Selenium	0.062	1		EPA 6010C
7440-22-4	Silver	0.006	1	U	EPA 6010C
7440-23-5	Sodium	13.5	1	B	EPA 6010C
7440-28-0	Thallium	0.006	1	U	EPA 6010C
7440-62-2	Vanadium	0.011	1	U	EPA 6010C
7440-66-6	Zinc	0.017	1	U	EPA 6010C

FORM I **INORGANIC ANALYSIS DATA SHEET**

EPA 7473

MW-4 20180511

Laboratory: York Analytical Laboratories, Inc. SDG: 18E0635

Client: PVE, LLC. Project: 560556

Matrix: Water Laboratory ID: 18E0635-01 File ID: QBHGDMA80-01 051518A-019

Sampled: 05/11/18 09:05 Prepared: 05/15/18 09:54 Analyzed: 05/15/18 13:41

Solids: 0.00 Preparation: EPA 7473 water Initial/Final: 0.25 mL / 0.25 mL

Batch: BE80773 Sequence: Y8E1533 Calibration: 05/15/18 1 Instrument: DMA 80-01

CAS NO.	Analyte	Concentration (mg/L)	Dilution Factor	Q	Method
7439-97-6	Mercury	0.00020	1	U	EPA 7473

noquals applied RC

FORM I **INORGANIC ANALYSIS DATA SHEET**

EPA 7473

MW-6 20180511

Laboratory: York Analytical Laboratories, Inc. SDG: 18E0635

Client: PVE, LLC. Project: 560556

Matrix: Water Laboratory ID: 18E0635-02 File ID: QBHGDMA80-01 051518A-020

Sampled: 05/11/18 11:05 Prepared: 05/15/18 09:54 Analyzed: 05/15/18 13:52

Solids: 0.00 Preparation: EPA 7473 water Initial/Final: 0.25 mL / 0.25 mL

Batch: BE80773 Sequence: Y8E1533 Calibration: 05/15/18 1 Instrument: DMA 80-01

CAS NO.	Analyte	Concentration (mg/L)	Dilution Factor	Q	Method
7439-97-6	Mercury	0.00020	1	U	EPA 7473

no quals applied

FORM I **INORGANIC ANALYSIS DATA SHEET**

EPA 7473

MW-5 20180511

Laboratory: York Analytical Laboratories, Inc. SDG: 18E0635

Client: PVE, LLC. Project: 560556

Matrix: Water Laboratory ID: 18E0635-03 File ID: QBHGDMA80-01 051518A-021

Sampled: 05/11/18 11:45 Prepared: 05/15/18 09:54 Analyzed: 05/15/18 14:03

Solids: 0.00 Preparation: EPA 7473 water Initial/Final: 0.25 mL / 0.25 mL

Batch: BE80773 Sequence: Y8E1533 Calibration: 05/15/18 1 Instrument: DMA 80-01

CAS NO.	Analyte	Concentration (mg/L)	Dilution Factor	Q	Method
7439-97-6	Mercury	0.00020	1	U	EPA 7473

no quals applied
RC

APPENDIX C

YORK ANALYTICAL LABORATORIES
120 RESEARCH DR.
STRATFORD, CT 06615
(203) 325-1371
FAX (203) 357-0166

Field Chain-of-Custody Record

NOTE: York's Std. Terms & Conditions are listed on the back side of this document.
This document serves as your written authorization to York to proceed with the analyses requested and your signature binds you to York's Std. Terms & Conditions.

York Project No. 18E0635

YOUR Information	Report To:	Invoice To:
Company: PVE, LLC	Company: SAME	Company: SAME
Address: 48 SPRINGTIDE AVE. POUGHKEEPSIE, N.Y. 12603	Address:	Address:
Phone No. 845-454-2544	Phone No.	Phone No.
Contact Person: ANTHONY SPADAVECCHIA	Attention: CONOR TARBELL	Attention: TARA ALVARADO
E-Mail Address: ASPADAVECCHIA@PVE-LLC.COM	E-Mail Address: CTARBELL@PVE-LLC.COM	E-Mail Address: TALVARADO@PVE-LLC.COM

YOUR Project ID: 560556

Purchase Order No.:

Samples from: CT ___ NY X NJ ___

Turn-Around Time

- RUSH - Same Day ☐
- RUSH - Next Day ☐
- RUSH - Two Day ☐
- RUSH - Three Day ☐
- RUSH - Four Day ☐
- Standard(5-7 Days) ☒

Report Type

- Summary Report X
- Summary w/ QA Summary ___
- CT RCP Package ___
- CTRCP DQA/DUE Pkg ___
- NY ASP A Package ___
- NY ASP B Package X
- NJDEP Red. Deliv. ___

Electronic Data Deliverables (EDD)

- Simple Excel ___
- NYSDEC EQuIS X
- EQuIS (std) ___
- EZ-EDD (EQuIS) ___
- NJDEP SRP HazSite EDD ___
- GIS/KEY (std) ___
- Other ___
- **York Regulatory Comparison**
- **Excel Spreadsheet**

Compare to the following Regs. (please fill in):

Print Clearly and Legibly. All Information must be complete. Samples will NOT be logged in and the turn-around time clock will not begin until any questions by York are resolved.

Samples Collected/Authorized By (Signature)

ANTHONY J. SPADAVECCHIA
Name (printed)

Matrix Codes
S - soil
Other - specify(oil, etc.)
WW - wastewater
GW - groundwater
DW - drinking water
Air-A - ambient air
Air-SV - soil vapor

Volatiles		Semi-Vols.	Pest/PCB/Herb	Metals	Misc. Org.	Full Lists	Misc.
8260 full	TICs	8270 or 625	8082PCB	RCRA8	TPH GRO	Pri.Poll.	Corrosivity
624	Site Spec.	STARS list	8081Pest	PP13 list	TPH DRO	TCL Organics	Reactivity
STARS list	Nassau Co.	BN Only	8151Herb	TAL	CT ETPH	TAL Met/CN	Ignitability
BTEX	Suffolk Co.	Acids Only	CT RCP	CT15 list	NY 310-13	Full TCLP	Flash Point
MTBE	Ketones	PAH list	App. IX	TAGM list	TPH 1664	Full App. IX	Sieve Anal.
TCL list	Oxygenates	TAGM list	Site Spec.	NJDEP list	Air TO14A	Part 360-Routine	Heterotrophs
TAGM list	TCLP list	CT RCP list	SPLP or TCLP	Total	Air TO15	Part 360-Baseline	TOX
CT RCP list	524.2	TCL list	TCLP Pest	Dissolved	Air STARS	Part 360-Expanded Two Dioxin Forms	BTU/lb.
Arom. only	502.2	NJDEP list	TCLP Herb	SPLP or TCLP	Air VPH	Part 360-Expanded Full List	Aquatic Tox.
Halog.only	NJDEP list	App. IX	Chlordane	Indiv. Metals	Air TICs	NYCDEP Sewer	TOC
App.IX list	SPLP or TCLP	TCLP BNA	608 Pest	LIST Below	Methane	NYSDEC Sewer	Asbestos
8021B list		SPLP or TCLP	608 PCB		Helium	TAGM	Silica

Sample Identification	Date/Time Sampled	Sample Matrix	Choose Analyses Needed from the Menu Above and Enter Below	Container Description(s)
MW-4 20180511	5-11-2018/0905	GW	TAL METALS	250 mL NITRIC ACID
MW-6 20180511	5-11-2018/1105	GW		
MW-5 20180511	5-11-2018/1145	GW		

Page 20 of

Comments

Preservation Check those Applicable
4°C ___ Frozen ___ HCl ___ MeOH ___ HNO_3 ___ H_2SO_4 ___ NaOH ___
ZnAc ___ Ascorbic Acid ___ Other ___

Special Instructions
Field Filtered ☐
Lab to Filter ☐

Samples Relinquished By	Date/Time	Samples Received By	Date/Time
[signature]	5/14/18 10:01	[signature]	5-14-18 10:01
[signature]	5-14-18 1522	[signature]	5/14/18 1522

Samples Relinquished By / Samples Received in LAB by

Temperature on Receipt 3.3 °C

APPENDIX C
IC/EC CERTIFICATION FORM

Enclosure 1

Certification Instructions

I. Verification of Site Details (Box 1 and Box 2):

Answer the three questions in the Verification of Site Details Section. The Owner and/or Qualified Environmental Professional (QEP) may include handwritten changes and/or other supporting documentation, as necessary.

II. Certification of Institutional Controls/ Engineering Controls (IC/ECs) (Boxes 3, 4, and 5)

1. Review the listed IC/ECs, confirming that all existing controls are listed, and that all existing controls are still applicable. If there is a control that is no longer applicable the Owner / Remedial Party should petition the Department separately to request approval to remove the control.

2. In Box 5, complete certifications for all Plan components, as applicable, by checking the corresponding checkbox.

3. If you cannot certify "YES" for each Control listed in Box 3 & Box 4, sign and date the form in Box 5. Attach supporting documentation that explains why the **Certification** cannot be rendered, as well as a plan of proposed corrective measures, and an associated schedule for completing the corrective measures. Note that this **Certification** form must be submitted even if an IC or EC cannot be certified; however, the certification process will not be considered complete until corrective action is completed.

If the Department concurs with the explanation, the proposed corrective measures, and the proposed schedule, a letter authorizing the implementation of those corrective measures will be issued by the Department's Project Manager. Once the corrective measures are complete, a new Periodic Review Report (with IC/EC Certification) must be submitted within 45 days to the Department. If the Department has any questions or concerns regarding the PRR and/or completion of the IC/EC Certification, the Project Manager will contact you.

III. IC/EC Certification by Signature (Box 6 and Box 7):

If you certified "YES" for each Control, please complete and sign the IC/EC Certifications page as follows:

- For the Institutional Controls on the use of the property, the certification statement in Box 6 shall be completed and may be made by the property owner or designated representative.

- For the Engineering Controls, the certification statement in Box 7 must be completed by a Professional Engineer or Qualified Environmental Professional, as noted on the form.

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. 3-36-002

Site Name: F&T Darrigo Property

Site Address: 84 Lakeside Road Zip Code: 12550
City/Town: Newburgh
County: Orange
Site Acreage: 8

Reporting Period: 2016 to 2018

	YES	NO
1. Is the information above correct? **YES** 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? **NO**		
3. Has there been any change of use at the site during this Reporting Period (see 6NYCRR 375-1.11(d))? **NO**		
4. Have any federal, state, and/or local permits (e.g., building, discharge) been issued for or at the property during this Reporting Period? **NO**		

If you answered YES to questions 2 thru 4, include documentation or evidence that documentation has been previously submitted with this certification form.

	YES	NO
5. Is the site currently undergoing development? **NO**		

Box 2

	YES	NO
6. Is the current site use consistent with the use(s) listed below? **YES**		
7. Are all ICs/ECs in place and functioning as designed? **YES**		

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

6-11-18
Date

SITE NO. 3-36-002 **Box 3**

Institutional Controls

- Compliance with the Deed Restriction and the SMP by the Grantor and the Grantor's successors and assigns;
- Compliance with the Deed Restriction and the SMP by the Grantor and the Grantor's successors and assigns;
- All Engineering Controls must be maintained as specified in the SMP;
- All Engineering Controls on the Controlled Property must be inspected at a frequency and in a manner defined in the SMP;
- Groundwater monitoring must be performed as defined in the SMP;
- Data and information pertinent to Site Management of the Controlled Property must be reported at the frequency and in a manner defined in the SMP;
- Data and information pertinent to Site Management of the Controlled Property must be reported at the frequency and in a manner defined in the SMP.

Engineering Controls **Box 4**

- Soil Cover
- Site Fence

Periodic Review Report (PRR) Certification Statements **Box 5**

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

6-11-2018
Date

IC CERTIFICATIONS
SITE NO. 3-36-002

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 CHRISTOPHER BROWN at PVE, LLC 48 SPRINGSIDE AVENUE POUGHKEEPSIE, NY 12603
print name print business address

am certifying as DESIGNATED REPRESENTATIVE (Owner or Remedial Party)

for the Site named in the Site Details Section of this form.

Signature of Owner, Remedial Party, or Designated Representative Rendering Certification

6-11-2018
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 CHRISTOPHER BROWN at PVE, LLC 48 SPRINGSIDE AVENUE POUGHKEEPSIE, N.Y. 12603

print name | print business address

am certifying as a Qualified Environmental Professional for the FT DARRIGO SITE

(Owner or Remedial Party)

Signature of, for the Owner or Remedial Party, Rendering Certification

Stamp (Required for PE): X

Date: 6-11-2018

Enclosure 3
Periodic Review Report (PRR) General Guidance

I. Executive Summary: (1/2-page or less)
   A. Provide a brief summary of site, nature and extent of contamination, and remedial history.
   B. Effectiveness of the Remedial Program - Provide overall conclusions regarding;
      1. progress made during the reporting period toward meeting the remedial objectives for the site
      2. the ultimate ability of the remedial program to achieve the remedial objectives for the site.
   C. Compliance
      1. Identify any areas of non-compliance regarding the major elements of the Site Management Plan (SMP, i.e., the Institutional/Engineering Control (IC/EC) Plan, the Monitoring Plan, and the Operation & Maintenance (O&M) Plan).
      2. Propose steps to be taken and a schedule to correct any areas of non-compliance.
   D. Recommendations
      1. recommend whether any changes to the SMP are needed
      2. recommend any changes to the frequency for submittal of PRRs (increase, decrease)
      3. recommend whether the requirements for discontinuing site management have been met.

II. Site Overview (one page or less)
   A. Describe the site location, boundaries (figure), significant features, surrounding area, and the nature and extent of contamination prior to site remediation.
   B. Describe the chronology of the main features of the remedial program for the site, the components of the selected remedy, cleanup goals, site closure criteria, and any significant changes to the selected remedy that have been made since remedy selection.

III. Evaluate Remedy Performance, Effectiveness, and Protectiveness
   Using tables, graphs, charts and bulleted text to the extent practicable, describe the effectiveness of the remedy in achieving the remedial goals for the site. Base findings, recommendations, and conclusions on objective data. Evaluations and should be presented simply and concisely.

IV. IC/EC Plan Compliance Report (if applicable)
   A. IC/EC Requirements and Compliance
      1. Describe each control, its objective, and how performance of the control is evaluated.
      2. Summarize the status of each goal (whether it is fully in place and its effectiveness).
      3. Corrective Measures: describe steps proposed to address any deficiencies in ICECs.
      4. Conclusions and recommendations for changes.
   B. IC/EC Certification
      1. The certification must be complete (even if there are IC/EC deficiencies), and certified by the appropriate party as set forth in a Department-approved certification form(s).

V. Monitoring Plan Compliance Report (if applicable)
   A. Components of the Monitoring Plan (tabular presentations preferred) - Describe the requirements of the monitoring plan by media (i.e., soil, groundwater, sediment, etc.) and by any remedial technologies being used at the site.
   B. Summary of Monitoring Completed During Reporting Period - Describe the monitoring tasks actually completed during this PRR reporting period. Tables and/or figures should be used to show all data.
   C. Comparisons with Remedial Objectives - Compare the results of all monitoring with the remedial objectives for the site. Include trend analyses where possible.
   D. Monitoring Deficiencies - Describe any ways in which monitoring did not fully comply with the monitoring plan.
   E. Conclusions and Recommendations for Changes - Provide overall conclusions regarding the monitoring completed and the resulting evaluations regarding remedial effectiveness.

VI. Operation & Maintenance (O&M) Plan Compliance Report (if applicable)
   A. Components of O&M Plan - Describe the requirements of the O&M plan including required activities, frequencies, recordkeeping, etc.
   B. Summary of O&M Completed During Reporting Period - Describe the O&M tasks actually completed during this PRR reporting period.
   C. Evaluation of Remedial Systems - Based upon the results of the O&M activities completed, evaluated the ability of each component of the remedy subject to O&M requirements to perform as

designed/expected.

D. O&M Deficiencies - Identify any deficiencies in complying with the O&M plan during this PRR reporting period.

E. Conclusions and Recommendations for Improvements - Provide an overall conclusion regarding O&M for the site and identify any suggested improvements requiring changes in the O&M Plan.

VII. Overall PRR Conclusions and Recommendations

A. Compliance with SMP - For each component of the SMP (i.e., IC/EC, monitoring, O&M), summarize;

1. whether all requirements of each plan were met during the reporting period
2. any requirements not met
3. proposed plans and a schedule for coming into full compliance.

B. Performance and Effectiveness of the Remedy - Based upon your evaluation of the components of the SMP, form conclusions about the performance of each component and the ability of the remedy to achieve the remedial objectives for the site.

C. Future PRR Submittals

1. Recommend, with supporting justification, whether the frequency of the submittal of PRRs should be changed (either increased or decreased).
2. If the requirements for site closure have been achieved, contact the Departments Project Manager for the site to determine what, if any, additional documentation is needed to support a decision to discontinue site management.

VIII. Additional Guidance

Additional guidance regarding the preparation and submittal of an acceptable PRR can be obtained from the Departments Project Manager for the site.

APPENDIX D
NYSDEC LETTER REQUEST TO REDUCE FREQUENCY OF GROUNDWATER MONITORING

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Division of Environmental Remediation, Remedial Bureau C
625 Broadway, 11th Floor, Albany, NY 12233-7014
P: (518) 402-9662 I F: (518) 402-9679
www.dec.ny.gov

July 1, 2016

Mr. Christopher B. Brown, CPG
PVE Sheffler, LLC
48 Springside Avenue
Poughkeepsie, NY 12603

RE: Letter Request to Reduce Frequency of Groundwater Monitoring and Periodic Review Report; F&T Darrigo Site; PVE Sheffler File #560556; NYSDEC Site #336002

Dear Mr. Brown:

The New York State Department of Environmental Conservation (the Department) has reviewed your request to reduce the frequency of groundwater monitoring and submission of Periodic Review Reports for the F&T Darrigo site, NYSDEC Site #336002, submitted on May 24, 2016. Based on the information provided with your request, the Department has determined that groundwater monitoring, site inspection, and Periodic Review Report submission on the schedule of once every three years satisfies the requirements of an effective Site Management Plan, and hereby approves your request.

As discussed in our conversation on May 24, 2016, please provide to the Department an updated Site Management Plan, the most recent un-submitted Periodic Review Reports, and a draft Final Engineering Report for review. Should you have any questions, please feel free to contact me at alexandra.servis@dec.ny.gov, or by phone at 518-402-9809.

Sincerely,

Lexy Servis
Engineering Geologist
Remedial Bureau C
Division of Environmental Remediation

ec: A. Omorogbe
A. Mason
D2