

**Former Jameco Industries Site**  
**WYANDANCH, SUFFOLK COUNTY, NEW YORK**

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**Periodic Review Report**

**NYSDEC Site Number: #1-52-006**

**Linzer Corporation**  
248 Wyandanch Avenue  
West Babylon, New York

**Prepared by:**  
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**JUNE 2018**



# **TABLE OF CONTENTS**

<b>1.0</b>	<b>EXECUTIVE SUMMARY .....</b>	<b>1</b>
<b>2.0</b>	<b>SITE OVERVIEW .....</b>	<b>3</b>
<b>3.0</b>	<b>REMEDY PERFORMANCE, EFFECTIVENESS AND PROTECTIVENESS .....</b>	<b>5</b>
<b>4.0</b>	<b>IC/EC PLAN COMPLIANCE REPORT .....</b>	<b>6</b>
<b>5.0</b>	<b>MONITORING PLAN COMPLIANCE REPORT .....</b>	<b>8</b>
<b>6.0</b>	<b>OVERALL CONCLUSIONS AND RECOMMENDATIONS.....</b>	<b>9</b>
<b>7.0</b>	<b>WARRANTY .....</b>	<b>10</b>

## **FIGURES**

- Figure 1: Site Locus
- Figure 2: Site Plan of Remediation Areas & Sample Locations

## **TABLES**

- Table 1: Ground Water Monitoring Plan
- Table 2: Summary of Groundwater Analytical Data: Polycyclic Aromatic Hydrocarbons (PAHs)
- Table 3: Summary of Groundwater Analytical Data: Total Metals:

## **ATTACHMENTS**

- Attachment 1: Periodic Review Report Certification Statement and IC/EC Certification Forms
- Attachment 2: Inspection Photographs, IE/EC Inspection Forms, and April 23, 2018 Monitoring Well Purge Data Evaluation
- Attachment 3: Laboratory Certificate of Analysis



## PERIODIC REVIEW REPORT

### 1.0 EXECUTIVE SUMMARY

Goldman Environmental Consultants, Inc. (GEC) of Braintree, Massachusetts - retained by the Linzer Corporation - prepared the following Periodic Review Report (PRR) for 248 Wyandanch Avenue, Wyandanch, New York ("Site"). A PRR is required for sites in active Site management with the New York State Department of Environmental Conservation (NYSDEC) as promulgated in Section 6.3(b) of DER-10 and covers the reporting period of May 31, 2017 to May 31, 2018 and reports on Site specific management requirements as described in the Site Management Plan (SMP), dated July 27, 2009, prepared by GEC and approved by the NYSDEC, and addendum to the SMP requested and approved by the NYSDEC on March 31, 2016. Annual groundwater monitoring is conducted during the spring. Semi-annual Site inspections are conducted in the spring and fall.

GEC is also recommending/requesting that IC/EC inspections be conducted at a reduced frequency – to take place annually in April of each year in conjunction with groundwater monitoring.

#### *Summary*

The Site (#1-52-006) consists of approximately 9.35 +/- acres and located in a mixed industrial/commercial/residential area. The Site is improved with a single-story concrete block building surrounded by paved and unpaved areas. The Site Locus is included as Figure 1 and the Site Plan is included as Figure 2. The Site is currently owned and occupied by Linzer Products, Inc. (Linzer), a manufacturer of painting products and has occupied the Site since early 1999. Prior to 1999, Jameco Industries (Jameco) occupied the property. Jameco used the Site to manufacture plumbing fixtures; some manufacturing included plating parts with chrome and nickel.

Environmental investigations have identified five discreet Areas of Concern (AOC) on the Site. Elevated concentrations of metals and volatile organic compounds (VOCs) from plating activities and process wastewater discharges were measured across several portions of the Site in areas identified as AOC-1, AOC-2, AOC-3, and AOC-5. Polycyclic Aromatic Hydrocarbons (PAHs) from a release of cutting oil were detected in the northern portion of the Site identified as AOC-4.

Remedial activities - completed in January 2008 - are summarized in the August 2011 Final Engineering Report, prepared by GEC. Activities included; the closure of the concrete leaching pool structures, the removal of contaminated soils, in-situ stabilization of metals in soil, and the implementation of Institutional Controls / Engineered Controls (IC/EC) as described in an Environmental Easement prepared for the Site - executed by the current owner, Linzer. In accordance with the SMP (dated July 27, 2009) and the Soil Management Plan (dated January 22, 2009), the remedial program includes long-term groundwater monitoring and the inspection of the five AOCs.



### ***Effectiveness of the Remedial Program***

The remedial program has proven effective in fulfillment of remedial goals outlined in the SMP. Currently, only slightly elevated concentrations of nickel exceed the NYSDEC Class GA Groundwater Standard (Class-GA) at the Site. Analytical results for the semiannual sampling events (conducted in April 2018) indicate steady state conditions for monitored parameters since remedial activities were completed in 2006. Refer to Table 1 for the April 2018 groundwater sampling plan. Relative to the monitoring of the effectiveness of the remedial program only minor modifications were made, which was to exclude sampling of MW-19 for PAHs due to the presence of a measurable thickness of light non-aqueous phase liquid (LNAPL). Groundwater samples were submitted to Contest Laboratories of Longmeadow, Massachusetts (Laboratory ID: 10899) for analysis. Refer to Attachment 3 for the laboratory certification of analysis and Tables 2 and 3 for a summary of polycyclic aromatic hydrocarbons (PAHs) and total metals results, respectively.

During the 2017/2018 monitoring period, GEC noted no significant change in the concentration of metals found in groundwater. The nickel concentration detected at MW-5R (1.6 µg/L) was higher than what was detected in May of 2017, but remains within the historical range and lower than the 3.64 µg/L detected in April of 2016. All other metal concentrations were within historical range and similar to detections reported in the previous PRR.

As reported historically, detected concentrations of nickel at MW-2, MW-4, MW-5R and MW-12 exceeded the Class-GA standard in samples collected during the recent monitoring event conducted on April 23, 2018.

No reported concentrations of PAHs exceeded Class-GA standards or laboratory detection limits.

### ***Compliance***

No compliance issues were found with the groundwater sampling program, SMP, or the IC/EC described in the Environmental Easement. On January 23, 2012, the NYSDEC notified Linzer that all remediation work required at the Jameco Site is completed. The Site was subsequently reclassified as a Class 4 Environmental Site. Watts (the previous PRP) addressed the “existing OHM condition” and fulfilled its obligation required in the Purchase and Sale agreement with Linzer. Under the Environmental Easement that Linzer entered into with NYSDEC on August 2, 2012, Linzer assumed all of the remaining obligations under the NYSDEC-approved Site Management Plan. In a letter, dated May 16, 2012, Linzer consented to the responsibility of the remaining periodic inspections, monitoring and reporting as outlined in the SMP.

### ***Recommendations***

Linzer should continue monitoring the effectiveness of the remedial program at the currently approved frequency with the following modification:

IC/EC inspections should be conducted at a reduced frequency – to take place annually in April in conjunction with groundwater monitoring.



## 2.0 SITE OVERVIEW

The Site, located in the Suffolk County, New York, is identified as Block 02 and Lots 73.1 and 37.6 on the Suffolk County Tax Map, Parcel Numbers District 0100, Section 82.00. The 9.35 ± acre (Parcels 1 and 3) Site is located within a mixed industrial/commercial/residential area bounded by Wyandanch Avenue to the north, Rockland Avenue to the east, Mount Avenue to the west-southwest, and residential properties to the south-southeast. Refer to Figure 2 for a site plan depicting the boundaries of the Site.

Environmental investigations have identified five discreet AOCs on the Site and are as follows;

- AOC - 1 - located to the east-southeast of the building directly east of the current loading dock area - contained a seepage lagoon where four heavy metals (chromium, nickel, copper and zinc) were released to the environment at levels exceeding relevant standards, criteria, and guidance in soil. All four metals were also detected in groundwater downgradient of AOC-1; however, only nickel was detected above relevant standards, criteria, and guidance.
- AOC – 2 – located within the former Jameco building near the center of the building - was formerly a degreasing area. Elevated concentrations of VOCs (i.e., trichloroethene (TCE), 1,2-dichloroethene (1,2-DCE) and tetrachloroethene (PCE)) were detected above relevant standards, criteria, and guidance in soil and groundwater in this area.
- AOC – 3 - a square area extending southward from the southern property line - was the former location of forty-eight leaching chambers that received treated process water. A release to the environment of four heavy metals (chromium, nickel, copper and zinc) occurred to the soil during the leaching process. Moderate to elevated concentrations of metals above relevant standards, criteria, and guidance were detected in soils in this area. Low to moderate concentrations of metals above relevant standards, criteria, and guidance were also detected in groundwater within the former leaching pool area.
- AOC – 4 - located beneath and in front of the Site building's north side - is where machine cutting oil was released to a leaching pool system. As a result, both soil and groundwater in the area were impacted by the presence of LNAPL and PAHs.
- AOC – 5 - located within the former Jameco building near the center of the building - was a former a metal plating shop. Four metals (chromium, nickel, copper and zinc) were detected in soil at concentrations exceeding relevant standards, criteria, and guidance. In groundwater, chromium, copper, and zinc were detected at concentrations above relevant standards, criteria, and guidance.

Refer to Figure 2 for a site plan for the location of all five AOCs.



In December 1983, NYSDEC listed the Site as a Class 2a site. In May 1992 the NYSDEC reclassified the Site to Class 2 - however, after petitioning by Jameco Industries, Inc. the Site was reclassified to Class 4 in February 1993. Following additional investigations, the Site was reclassified back to Class 2 in February 1996. The NYSDEC issued a Record of Decision (ROD) for the Site dated March 2003. Amendments were added to the ROD based on the results of supplemental subsurface investigations conducted in accordance with a *Work Plan for Soil and Groundwater Sampling and Analysis* dated June 2003. The results of the subsurface investigation are documented in a *Draft Final Pre-Remedial Design / Remedial Action Soil and Groundwater Sampling Work Plan* dated May 2004. On May 11, 2005, NYSDEC issued a ROD Amendment letter outlining proposed amendments to the selected alternative remedies for the affected areas.

In August 2005, a Remedial Design Plan, summarizing the steps necessary to implement the proposed Amended ROD, was submitted. In March 2006 the final ROD Amendment was issued. ROD activities commenced in the fall of 2006. Chemical injections were completed on November 6, 2006. The replacement of monitoring wells MW-3 and MW-4 were completed on April 29, 2008. The Final Engineering Report, dated August 29, 2011, summarized site remedies conducted at the Site in accordance with the ROD.

The NYSDEC approved the Final Engineering Report on September 14, 2011. On January 23, 2012, the NYSDEC changed the Site classification from Class 2 to Class 4. Among the reasons the NYSDEC cited for this change were that the remedy has been constructed consistent with the ROD Amendment and the requisite institutional controls, in the form of an environmental easement were in place.

As stated in the Amended ROD the Remedial Action Objectives (RAOs) were to eliminate or mitigate all significant threats to public health and/or the environment.

The remediation goals for the Site were to eliminate or reduce to the extent practicable;

- Exposures of persons at or around the site to metals and PAHs in soil and groundwater, and
- The release of contaminants from soil into groundwater that may create exceedances of ambient groundwater quality standards.

The remediation goals for the Site also included attaining, to the extent practicable, and with changes authorized by NYSDEC staff:

- Ambient Class GA groundwater quality standards; and
- The soil cleanup objectives specified in Technical and Administrative Guidance Memorandum (TAGM) #4046.

As part of the Amended ROD, groundwater monitoring is required. The SMP dated July 27, 2009 and submitted to NYSDEC, describes the post-remedial groundwater monitoring plan, a reporting schedule and appropriate institutional controls.



According to the groundwater sampling plan, samples are collected from wells identified in Table 1 and analyzed for the listed analytes. Sampling was conducted quarterly for the first year after initiation of remediation and then semi-annually for the next four years. The year of quarterly sampling was completed on September 11, 2008; the semi-annual monitoring began in March 2009 and has continued until on April 2015. GEC, on behalf of Linzer, requested a change in the groundwater monitoring frequency to an annual event instead of a semi-annual event. Approval for this change was granted on March 31, 2016. This report summarizes the annual sampling conducted during April 2017 and semi-annual inspection of the IC/ECs conducted in October 2016 and April 2017.

According to the Amended ROD, an environmental easement was implemented and a soil management plan developed to ensure safety if contaminated soils were disturbed during any future subsurface construction activities. The easement was recorded by the Suffolk County Clerk's Office on August 2, 2010.

The SMP was issued to the NYSDEC and approved on August 12, 2009. According to the plan, the NYSDEC would be notified of construction or development activities that may disturb existing subsurface contamination. A periodic certification, prepared by a professional engineer or environmental professional acceptable to NYSDEC, would also be submitted certifying that institutional controls and engineering controls remain effective. Periodic certification must be provided until the NYSDEC notifies in writing that this certification is no longer required. Please refer to the Periodic Review Report Certification Statement and IC/EC Certification form in Attachment 1.

### **3.0 REMEDY PERFORMANCE, EFFECTIVENESS AND PROTECTIVENESS**

IC/ECs established for the Site include the maintenance of a protective soil cover system over each AOC and a prohibition against development of groundwater as a source of potable or process water without treatment. These controls have been implemented to reduce exposures of persons at or around the Site to metals and PAHs in soil and groundwater.

During the April 2018 monitoring event, groundwater samples were collected for dissolved chromium, nickel, and/or copper from monitoring wells MW-2, MW-3, MW-4, MW-5R, MW-10, MW-12, and MW-26R, and for PAHS from monitoring wells MW-20, MW-21 and MW-23.

Laboratory analytical results are used to evaluate the effectiveness of the remedial program.

GEC did not collect a groundwater sample from MW-19 for PAHs during this monitoring period due to the presence of 0.04 feet of LNAPL within the well. The product thickness was measured with an oil water interface probe.

The selected remedies to reduce or eliminate the release of contaminants from soil into groundwater are effective at remediating nickel, copper, chromium, zinc, and PAHs. Refer to Table 2 and 3 for a summary of the analytical results for PAHs and metals, respectively.

- The concentration of nickel in five of seven groundwater samples (MW-2, MW-4,



MW-5R and MW-12) analyzed exceeded Class-GA standard, but were all within post-remedial historical ranges.

- Low to non-detect concentrations of copper were reported for two of three groundwater samples (MW-12 and MW-26R) analyzed and are within the historical ranges. No reported concentration exceeded Class-GA standard.
- Chromium was not detected above laboratory detection limits in three groundwater samples analyzed.
- Monitoring wells MW-19, MW-20, MW-21 and MW-23 are listed to be sampled for PAHs. These wells are located within AOC-4, on the north side of the Site building. MW-19 was not sampled due to the presence of 0.04 feet of LNAPL as measured with an oil/water interface probe. The LNAPL observed at MW-19 does not appear to be a significant continuing source of PAHs within AOC-4, which is consistent with previous sampling results. No PAHs were detected in groundwater at concentrations above laboratory detection limits, which are slightly increased from previous reported detection limits, some of which are above Class-GA standards.

#### **4.0 IC/EC PLAN COMPLIANCE REPORT**

##### ***Institutional Controls***

Institutional Controls at the Site were established to prevent exposure of persons at or around the Site to metals and PAHs in groundwater by prohibiting the use of groundwater as a source of potable or process water without appropriate water quality treatment. An Environmental Easement has been recorded on the property Deed with additional restrictions imposed to ensure safety if residual contaminated soils were to be disturbed. The Environmental Easement requires a soil management plan if and when excavation activities take place on Site in any of the AOCs. A Soil Management Plan was submitted as an attachment in the approved SMP. The SMP was approved by the NYSDEC in a letter dated August 12, 2009. The Soil Management Plan describes what is required during any future excavation work within the AOCs. Linzer is required to provide annual certification to NYSDEC certifying that the institutional and engineering controls are still in place and effective.

The performance of the institutional controls is evaluated by visual inspections and interviews with on-Site representatives. Interviews consist of asking the current owner about any future plans to utilize groundwater water at the Site or if any excavations were conducted and/or are planned to be conducted within an AOC.

##### ***Engineering Controls***

Engineering controls consisting of soil cover systems placed over contaminated soil/fill remaining on Site were established to prevent exposure of persons at or around the Site to metals and PAHs in soil. Figure 2 shows the five AOCs and the form of engineering control at each AOC. The cover system is different in each of the AOCs and is comprised of one or more of the following:



- clean backfill,
- bituminous concrete (“asphalt”) pavement; and/or,
- concrete foundation slabs of buildings.

Performance for each type of soil cover system is evaluated by conducting a visual inspection to evaluate the integrity and completeness of the cover over each AOC.

#### ***Status of IC/EC Objectives***

GEC visited the site on November 18, 2017 and April 23, 2018 to inspect Site conditions and collect groundwater samples (April 2018 only). Please refer to photographs taken during the November 2017 and the April 2018 inspection, in Attachment 2. The institutional and engineered controls described above are fully in place and were effective at fulfilling the objective to prevent exposure of persons at or around the Site to metals and PAHs in soil and groundwater.

- AOC-1 is completely covered by the bituminous concrete pavement adjacent to the loading docks.
- AOC-2 and AOC-5 are completely within the existing Site building and covered by the concrete foundation slab.
- AOC-3 is covered by approximately 5 feet of clean backfill (0 to 5 feet deep) and 6 feet of excavated soil reused for backfill (6 to 11 feet deep). Approximately 6 to 12 inches of compacted crushed concrete and Recycled Concrete Aggregate (RCA) blend is located at the surface.
- AOC-4 is about 75 percent located beneath the building concrete foundation slab, and about 25 percent located in front of the building and covered with approximately 8 to 10 feet of clean backfill soils, including a vegetative cover (grass) at the surface.
- According to an interview with Linzer personnel, there are plans for expansion of a Site building. GEC has reviewed plans for the expansion and no impacts to any AOC are expected. Work is planned to expand the Site building to the east away from AOC-1. There may be pavement encroachment onto AOC-1, but now there are no plans to remove pavement from this area leading to potential exposure to metals contaminated soil. GEC and Linzer are in regular communication on the status of this project, which is currently in permitting.

#### ***Corrective Measures***

No corrective measures are needed at this time.

#### ***Conclusions and Recommendations***

Current Site conditions comply with the provisions of the IC/EC Plan.

Linzer should continue with the monitoring events at the approved frequency.



GEC is recommending/requesting that IC/EC inspections be conducted at a reduced frequency – to take place annually in April in conjunction with groundwater monitoring. Linzer is forthcoming and pro-actively consults GEC with proposed plans for any improvements to the Site that may disturb the sub-surface within or outside of the AOCs in accordance with the recorded environmental easement.

## **5.0 MONITORING PLAN COMPLIANCE REPORT**

### ***Groundwater Monitoring Plan Components***

Historically there were a total of 24 groundwater monitoring wells on Site; however, a subset of 11 monitoring wells is included in the current Monitoring Plan that was initiated in June 2012.

The Monitoring Plan stipulates that, prior to collection of groundwater samples the groundwater level in each well shall be measured and recorded. Groundwater samples are to be collected with the low-flow sampling method. Laboratory analysis includes total chromium, copper, and nickel via USEPA Method 6010/7000s and/or PAHs via USEPA Method 8270C. Samples must be submitted to a certified New York state laboratory under proper chain-of-custody documentation. Please refer to Table 1 attached for a summary of the groundwater monitoring plan.

### ***Monitoring Completed During Reporting Period***

Since the submittal of the last PRR in June 2017 one round of long-term groundwater monitoring has been conducted during April 2018. A total of 11 monitoring wells were to be sampled for metals or PAHs as shown in Table 1. Due to the presence of LNAPL at MW-19 a total of 10 monitoring wells were sampled in April 2018.

Prior to groundwater sampling, the groundwater level in each well was measured and recorded. Peristaltic pumps with polyethylene tubing were used to purge and sample monitoring wells. Groundwater samples were collected using the USEPA Region II “Groundwater Sampling Procedure – Low Stress (low flow) Purging and Sampling (March 16, 1998) and field parameters monitored included: dissolved oxygen, pH, temperature, specific conductance, ORP, and turbidity. Laboratory analysis included total chromium, copper and nickel via USEPA Method 6010 or PAHs via USEPA Method 8270C. Samples were submitted to Contest Laboratories of Longmeadow, Massachusetts a New York State certified laboratory under proper chain-of-custody documentation. A copy of the analytical reports and chains-of-custody are included in Attachment 3.

### ***Comparison with Remedial Objectives***

The remediation goal for the Site is to attain, to the extent practicable, ambient Class GA groundwater quality standards. Overall, metal concentrations are consistent compared to historical data.

Four (MW-2, MW-4, MW-5R, and MW-12) of the seven monitoring wells sampled for nickel exceeded the Class-GA standard.

No Class-GA standard was exceeded for copper or chromium. Chromium was not detected at



concentrations exceeding laboratory reporting limits. Copper was detected in two of three samples at low concentrations. Please refer to Table 3 for a summary of analytical data for metals.

Monitoring wells MW-19, MW-20, MW-21 and MW-23 are listed to be sampled for PAHs. These wells are located within AOC-4, on the north side of the Site building. MW-19 was not sampled due to the presence of 0.04 feet of LNAPL as measured with an oil/water interface probe. The LNAPL observed at MW-19 does not appear to be a significant continuing source of PAHs within AOC-4, which is consistent with previous sampling results. No PAHs were detected in groundwater at concentrations above laboratory detection limits, which are slightly elevated from previous reported detection limits, some of which are above the Class-GA standards.

Please refer to Table 2 for a summary of PAHs analytical data.

#### ***Changes made to Groundwater Monitoring Component of Site Management Plan***

Monitoring during this reporting period complied with the change previously proposed to the NYSDEC in GEC's December 2009 Annual Monitoring Report that made recommendations to eliminate some monitoring wells from the annual sampling. During long-term groundwater monitoring it became evident that some individual wells no longer exceeded Class-GA standards for one or more analyses. Therefore, GEC reduced the groundwater monitoring scope by eliminating sampling of MW-3, MW-5R, MW-7, MW-10, MW-11, MW-12, MW-16, MW-17, and MW-26R for PAH analysis. In addition, metal analyses were reduced to total chromium, copper and nickel only in MW-10, MW-12 and MW-26R, and nickel only in MW-2, MW-3, MW-4 and MW-5R. The PRR submitted for the June 2015 to May 2016 monitoring period discussed the reasoning behind reducing the monitoring frequency from semi-annually to an annual event. GEC received oral approval from the NYSDEC after submitting this PRR and official approval in the form of a Site Management Addendum letter dated March 31, 2016 (included in the June 2017 PRR).

## **6.0 OVERALL CONCLUSIONS AND RECOMMENDATIONS**

### ***SMP Compliance***

The IC/EC established in the Environmental Easement prevents exposure of persons at or around the Site to metals and PAHs in soil and groundwater. All requirements of the IC/EC and Environmental Easement were met during the reporting period. Site inspections to verify the effectiveness of the IC/EC will continue.

Long-term groundwater monitoring was established in the SMP to determine if cleanup goals for groundwater could be achieved. The monitoring plan was modified in GEC's December 2009 Annual Monitoring Report based on years of data which showed clean groundwater in certain monitoring wells. GEC has modified the sampling plan in 2016 to go from semiannual sampling to annual sampling with NYSDEC authorization.

### ***Performance and Effectiveness of the Remedy***

The IC/EC established in the Environmental Easement have been effective in achieving the



remedial objective to eliminate exposures of persons at or around the Site to metals and PAHs in soil and groundwater. Currently the groundwater data have shown that the other remedial objectives have been or will likely be obtained over time: to reduce the release of contaminants from soil into groundwater that may create exceedances of ambient groundwater quality standards; to meet ambient Class GA Groundwater Standards; and to meet soil cleanup objectives specified in Technical and Administrative Guidance Memorandum (TAGM) #4046.

Continued annual groundwater monitoring is sufficient to evaluate the variability of total chromium, copper, and nickel concentrations in groundwater. The LNAPL that is present historically in MW-19 does not appear to be contributing to groundwater contamination as the recent analytical results suggest. Continued monitoring of PAHs in AOC-4 at a reduced frequency is sufficient to evaluate the presence or absence of LNAPL.

The current remedy has significantly improved water quality. GEC will continue to monitor its effectiveness.

#### ***PRR Submittal Schedule***

The frequency of PRR submittals is not expected to change. The next PRR will be due 12 months from the submittal deadline of this report, or June 30, 2019. The frequency of sampling and Site inspections shall be conducted annually – assuming NYSDEC approval of modifying the inspection frequency from semi-annual to an annual event.

## **7.0 WARRANTY**


The conclusions and recommendations contained in this report are based on the information available to GEC as of the date of this document. The conclusions and recommendations may require revision if future regulatory changes occur. GEC provides no warranties on information provided by third parties and contained herein. Data compiled was in accordance with GEC's existing procedures and consistent with the NYSDEC regulations, and should not be construed beyond its limitations. Any interpretations or use of this report other than those expressed herein are not warranted.

The use, partial use, or duplication of this report without the written consent of Goldman Environmental Consultants, Inc., and the Linzer Corporation is strictly prohibited.

Respectfully submitted,

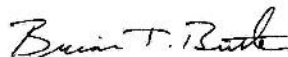
**Goldman Environmental Consultants, Inc.**

Prepared By:

A handwritten signature in blue ink, appearing to read "M. Bradley", is written over a light blue rectangular background.

Michael Bradley  
Environmental Scientist

Approved By:

A handwritten signature in blue ink, appearing to read "Brian T. Butler", is written in blue ink.

Brian T. Butler, PG  
Senior Vice President, Operations

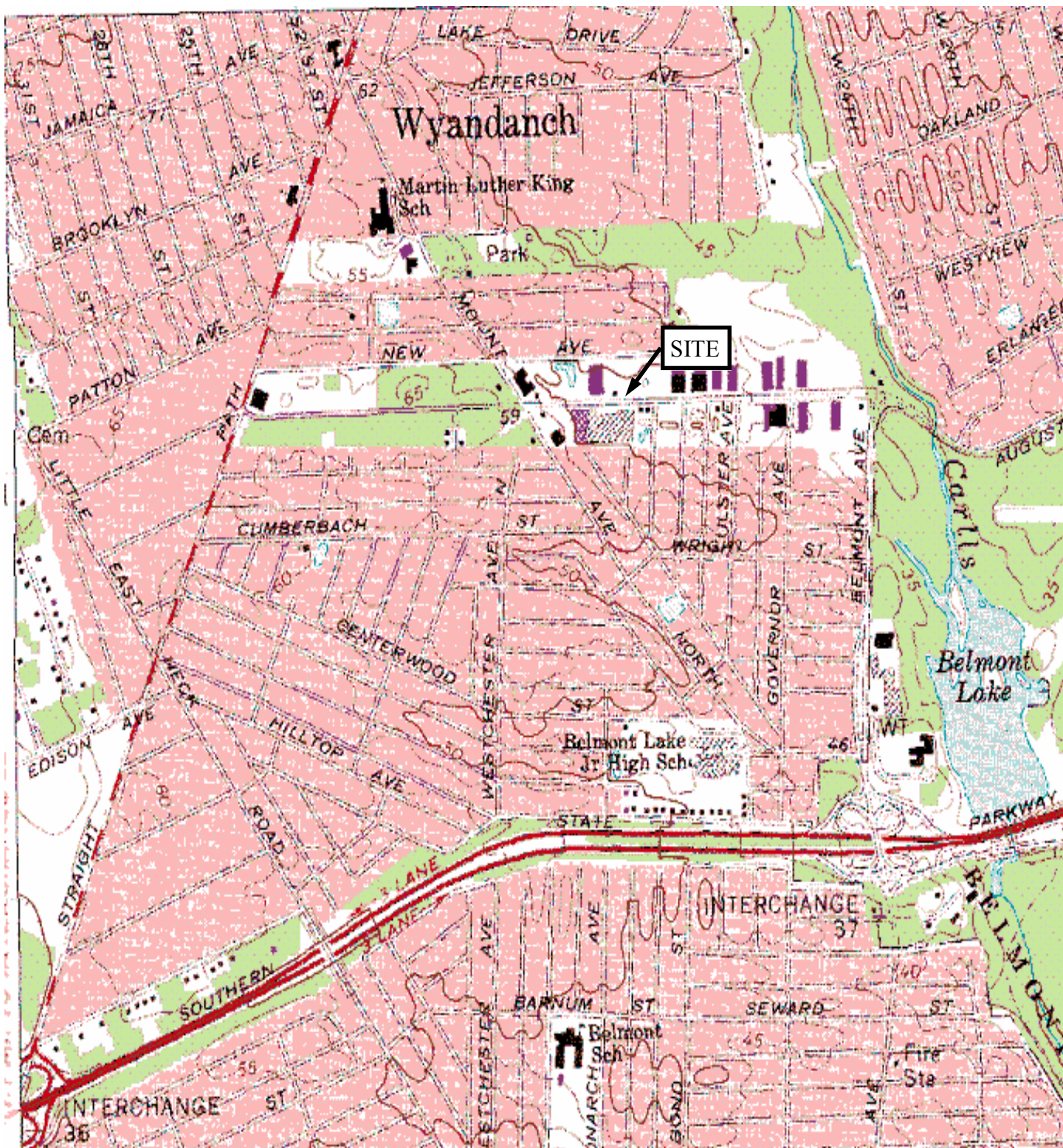






## FIGURES





USGS 7.5 Minute Topographic

Bay Shore  
New York, Quadrangle



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### SITE LOCUS

248 Wyandanch Avenue  
Wyandanch, New York

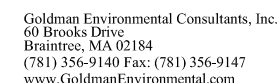
GEC Project #: 444-5010

### Figure 1

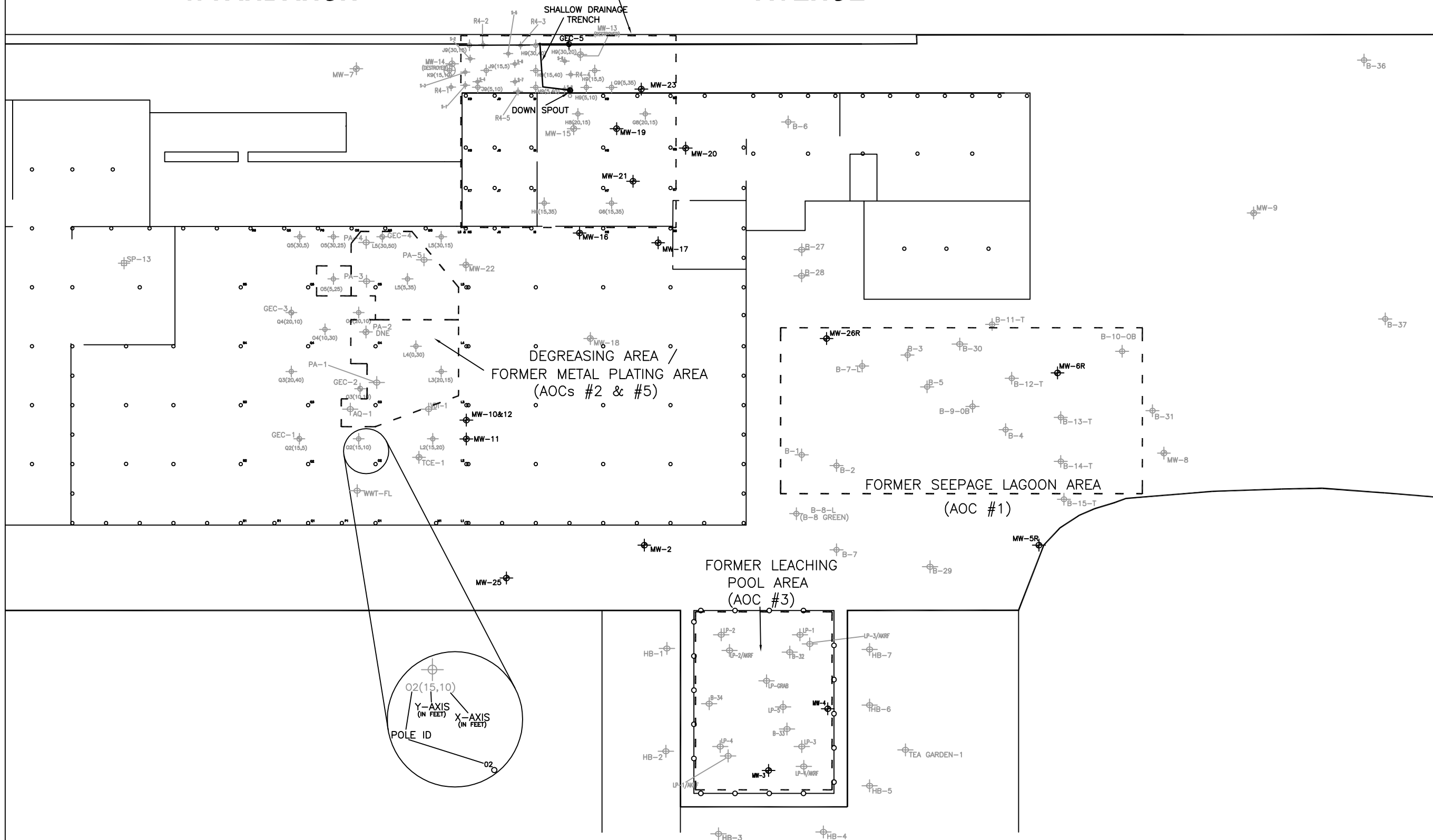
Scale  
1 : 25,000












CUTTING OIL RELEASE AREA  
(AOC #4)

***AVENUE***

### Legend

-  Site Boundary  
 Areas of Concern  
 Monitoring Well  
 Boring Location  
 Support Column

## Special Notes

- 1.) This drawing is a graphical representation only and should not be used as a survey.
- 2.) Basemap taken from Suffolk County Tax Map Dist. 100 Sect. 82 Block 2 Lot 73.1.
- 3.) Support Columns based on plan by John Schimenti P.C. Architect, A.I.A. number 8864, A1, dated 1-12-99.
- 4.) MW-10 Deep well (97') next to MW-12 shallow well (15').

## Revisions

[illegible]

### Scale

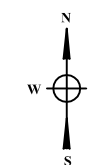


1 : 30'

### Site Plan of Remediation Areas & Sample Locations

at  
Former Jameco Facility  
248 Wyandanch Avenue  
Wyandanch, New York

**Watts**  
GEC Project Number 444-408H



2

Figure No.



## **TABLES**



**TABLE 1:  
GROUNDWATER MONITORING PLAN**

248 Wyandanch, Ave  
West Babylon, New York

Monitoring Well	Associated AOC	Screen Depth	Chromium, Copper, Nickel (6010C)	Nickel (6010C)	Semi-VOCs (8270C)
MW-2	AOC-2	6-16		X	
MW-3	AOC-3	10-20		X	
MW-4	AOC-3	10-20		X	
MW-5R	AOC-1	6-16		X	
MW-10	AOC-2 and 5	87-97	X		
MW-12	AOC-2 and 5	5-15	X		
MW-19	AOC-4	5-25			X
MW-20	AOC-4	5-25			X
MW-21	AOC-4	5-25			X
MW-23	AOC-4	2-20			X
MW-26R	AOC-1 and 4	10-20	X		
MS			X		X
MS-DUP			X		X
<b>Total</b>			<b>5</b>	<b>4</b>	<b>6</b>



TABLE 2  
SUMMARY OF GROUNDWATER ANALYTICAL DATA:  
POLYCYCLIC AROMATIC HYDROCARBONS (PAHs)  
248 Wyandanch Avenue, Wyandanch, New York  
(unit, parts per billion [ppb] µg/L)

Sample Identification	Sample Date	Analytical Method	Acenaphthene SQL		Anthracene SQL		Benzo (a) anthracene SQL		Benzyl alcohol SQL	4-Chloroaniline SQL	Chrysene SQL		3,3-Dichloro benzidine SQL	2,4-Dichlorophenol SQL	Di-n-butyl phthalate SQL		
MW-2	12/4/2007	8270	ND	5	ND	5	ND	5			ND	5		ND	5		
MW-3 (AOC #3)	1/25/2007	8270	ND	10	ND	5	ND	5	ND	ND	ND	5	ND	ND	5	ND	5
	12/4/2007***	Well not sampled, destroyed during soil excavation															
	4/16/2008***	Well destroyed during soil remediation, to be replaced.															
	9/11/2008***	8270M(SIM)	ND	0.5	ND	0.5	ND	0.1	ND	ND	0.02	ND	NA	---	ND	0.02	
	9/28/2009***	8270C	ND	0.93	ND	0.84	ND	1.03	ND	ND	0.95	ND	ND	0.98	ND	0.95	
MW-4 (AOC #3)	12/4/2007***	8270	ND	5	ND	5	ND	5	ND	ND	5	ND	ND	5	ND	5	
	4/16/2008***	Well destroyed during soil remediation, to be replaced.															
	3/30/2009***	8270	ND	1.02	ND	0.84	ND	1.03	ND	ND	0.95	ND	ND	0.98	ND	0.95	
MW-5R (AOC #1)	12/15/2003	8270	ND	5	ND	5	ND	5	ND	ND	5	ND	ND	5	ND	5	
	4/6/2006	8270	ND	0.30	ND	0.20	ND	0.05	ND	ND	0.20	ND	ND	1	ND	0.20	
MW-10 (AOC # 2/5)	1/29/2007***	8270	ND	5	ND	5	ND	5	ND	ND	5	ND	13	5	ND	5	
	12/4/2007***	8270	ND	5	ND	5	ND	5	ND	ND	5	ND	ND	5	ND	5	
	4/16/2008***	8270	ND	5	ND	5	ND	5	ND	ND	5	ND	ND	5	ND	5	
	9/11/2008***	8270M(SIM)	ND	0.5	ND	0.5	ND	0.1	ND	ND	0.02	ND	NA	---	ND	0.02	
	3/30/2009***	8270	ND	1.02	ND	0.84	ND	1.03	ND	ND	0.95	ND	ND	0.98	ND	0.95	
	9/28/2009***	8270C	ND	1.13	ND	0.93	ND	1.14	ND	ND	1.06	ND	ND	1.09	ND	1.06	
	1/24/2007***	8270	ND	5	ND	5	ND	5	ND	ND	5	ND	ND	5	ND	5	
	4/16/2008***	8270	ND	5	ND	5	ND	5	ND	ND	5	ND	ND	5	ND	5	
	9/11/2008***	Sample container broken in transit to laboratory															
	3/30/2009***	8270	ND	1.02	ND	0.84	ND	1.03	ND	ND	0.95	ND	ND	0.98	ND	0.95	
	9/28/2009***	8270C	ND	1.07	ND	0.88	ND	1.08	ND	ND	1.00	ND	ND	1.03	ND	1.00	
MW-11 (AOC # 2/5)	1/29/2007***	8270	ND	5	ND	5	ND	5	ND	ND	5	ND	ND	5	ND	5	
	12/4/2007***	8270	ND	5	ND	5	ND	5	ND	ND	5	ND	ND	5	ND	5	
	4/16/2008***	8270	ND	5	ND	5	ND	5	ND	ND	5	ND	ND	5	ND	5	
	9/11/2008***	8270M(SIM)	ND	0.5	ND	0.5	ND	0.1	ND	ND	0.02	ND	NA	---	ND	0.02	
	3/30/2009***	8270	ND	1.02	ND	0.84	ND	1.03	ND	ND	0.95	ND	ND	0.98	ND	0.95	
	9/28/2009***	8270C	ND	1.02	ND	0.84	ND	1.03	ND	ND	0.95	ND	ND	0.98	ND	0.95	
MW-12 (AOC # 2/5)	1/24/2007***	8270	ND	5	ND	5	ND	5	ND	ND	5	ND	ND	5	ND	5	
	4/16/2008***	8270	ND	5	ND	5	ND	5	ND	ND	5	ND	ND	5	ND	5	
	9/11/2008***	8270M(SIM)	ND	0.5	ND	0.5	ND	0.1	ND	ND	0.02	ND	NA	---	ND	0.02	
	3/30/2009***	8270	ND	1.02	ND	0.84	ND	1.03	ND	ND	0.95	ND	ND	0.98	ND	0.95	
	9/28/2009***	8270C	ND	1.13	ND	0.93	ND	1.14	ND	ND	1.06	ND	ND	1.09	ND	1.06	
MW-16 (AOC #4)	4/6/1999	8270	ND	10	ND	10	ND	10	ND	ND	10	ND	ND	10	ND	10	
	12/15/2003	8270	ND	5	ND	5	ND	5	ND	ND	5	ND	ND	5	ND	5	
	4/6/2006	8270	ND	0.3	ND	0.2	ND	0.05	ND	ND	0.2	ND	ND	1	ND	0.2	
	1/25/2007***	8270	ND	5	ND	5	ND	5	ND	ND	5	ND	ND	5	ND	5	
	12/4/2007***	8270	ND	5	ND	5	ND	5	ND	ND	5	ND	ND	5	ND	5	
	4/16/2008***	8270	ND	5	ND	5	ND	5	ND	ND	5	ND	ND	5	ND	5	
	9/11/2008***	Sample container broken in transit to laboratory						---		ND		---		---		---	
	3/30/2009***	8270	ND	1.02	ND	0.84	ND	1.03	ND	ND	0.95	ND	ND	0.98	ND	0.95	
	9/28/2009***	8270C	ND	1.02	ND	0.84	ND	1.03	ND	ND	0.95	ND	ND	0.98	ND	0.95	
Standard and Guidance Values			20.0		NV		NV		NV	5.0	NV		5.0	0.3	50		



TABLE 2  
SUMMARY OF GROUNDWATER ANALYTICAL DATA:  
POLYCYCLIC AROMATIC HYDROCARBONS (PAHs)  
248 Wyandanch Avenue, Wyandanch, New York  
(unit, parts per billion [ppb] µg/L)

Sample Identification	Sample Date	Analytical Method	Diethyl phthalate	SQL	Fluoranthene	SQL	Fluorene	SQL	2-Methyl naphthalene	SQL	Naphthalene	SQL	3-Nitroaniline	SQL	4-Nitroaniline	SQL	Phenanthrene	SQL	Pyrene	SQL	Pyridine	SQL	bis (2-Ethylhexyl) phthalate	SQL
MW-2	12/4/2007	8270			ND	5	ND	5	ND	5	ND	5					ND	5	ND	5				
MW-3 (AOC #3)	1/25/2007	8270			ND	5	ND	5	ND	5	ND	5	ND		ND		ND	5	ND	5	ND		ND	5
	12/4/2007***	Well not sampled																						
	4/16/2008***	Well destroyed																						
	9/11/2008***	8270M(SIM)	NS		ND	0.5	ND	0.5	ND	0.5	ND	0.5	ND		ND		ND	0.5	ND	0.5	ND		ND	0.5
MW-4 (AOC #3)	9/28/2009***	8270C	ND	1.07	ND	0.86	ND	0.91	ND	0.82	ND	0.87	ND		ND		ND	0.90	ND	1.0	ND		ND	1.0
	12/4/2007***	8270	ND	5	ND	5	ND	5	ND	5	ND	5	ND		ND		ND	5	ND	5	ND		ND	5
	4/16/2008***	Well destroyed																						
	3/30/2009***	8270	ND	1.07	ND	0.86	ND	0.91	ND	0.82	ND	0.87	ND		ND		ND	0.90	ND	1.01	ND		ND	1.01
MW-5R (AOC #1)	12/15/2003	8270			ND	5	ND	5	ND	5	ND	5	ND		ND		ND	5	ND	5	ND		ND	5
	4/6/2006	8270			ND	0.5	ND	1	ND	1	ND	1	ND		ND		ND	0.1	ND	1	ND		ND	1
	1/29/2007***	8270			ND	5	ND	5	ND	5	ND	5	ND		ND		ND	5	ND	5	ND		ND	5
	12/4/2007***	8270	ND	5	ND	5	ND	5	ND	5	ND	5	ND		ND		ND	5	ND	5	ND		ND	5
MW-10 (AOC # 2/5)	4/16/2008***	8270	ND	5	ND	5	ND	5	ND	5	ND	5	ND		ND		ND	5	ND	5	ND		ND	5
	9/11/2008***	8270M(SIM)	NS		ND	0.5	ND	0.5	ND	0.5	ND	0.5	ND		ND		ND	0.5	ND	0.5	ND		ND	0.5
	3/30/2009***	8270	ND	1.07	ND	0.86	ND	0.91	ND	0.82	ND	0.87	ND		ND		ND	0.90	ND	1.01	ND		ND	1.01
	9/28/2009***	8270C	ND	1.19	ND	0.96	ND	1.01	ND	0.91	ND	0.97	ND		ND		ND	1.00	ND	1.12	ND		ND	1.12
	1/24/2007***	8270			ND	5	ND	5	ND	5	ND	5	ND		ND		ND	5	ND	5	ND		ND	5
	4/16/2008***	8270	ND	5	ND	5	ND	5	ND	5	ND	5	ND		ND		ND	5	ND	5	ND		ND	5
	9/11/2008***	Sample contained																						
	3/30/2009***	8270	ND	1.07	ND	0.86	ND	0.91	ND	0.82	ND	0.87	ND		ND		ND	0.90	ND	1.01	ND		ND	1.01
	9/28/2009***	8270C	1.23	1.13	ND	0.91	ND	0.96	ND	0.86	ND	0.92	ND		ND		ND	0.95	ND	1.06	ND		ND	1.06
	MW-11 (AOC # 2/5)	1/29/2007***	8270			ND	5	ND	5	ND	5	ND	5	ND		ND		ND	5	ND	5	ND		ND
12/4/2007***		8270	ND	5	ND	5	ND	5	ND	5	ND	5	ND		ND		ND	5	ND	5	ND		ND	5
4/16/2008***		8270	ND	5	ND	5	ND	5	ND	5	ND	5	ND		ND		ND	5	ND	5	ND		ND	5
9/11/2008***		8270M(SIM)	NS		ND	0.5	ND	0.5	ND	0.5	ND	0.5	ND		ND		ND	0.5	ND	0.5	ND		ND	0.5
3/30/2009***		8270	ND	1.07	ND	0.86	ND	0.91	ND	0.82	ND	0.87	ND		ND		ND	0.90	ND	1.01	ND		ND	1.01
MW-12 (AOC # 2/5)	9/28/2009***	8270C	ND	1.07	ND	0.86	ND	0.91	ND	0.82	ND	0.87	ND		ND		ND	0.90	ND	1.01	ND		ND	1.01
	1/24/2007***	8270			ND	5	ND	5	ND	5	ND	5	ND		ND		ND	5	ND	5	ND		ND	5
	4/16/2008***	8270	ND	5	ND	5	ND	5	ND	5	ND	5	ND		ND		ND	5	ND	5	ND		ND	5
	9/11/2008***	8270M(SIM)	NS		ND	0.5	ND	0.5	ND	0.5	ND	0.5	ND		ND		ND	0.5	ND	0.5	ND		ND	0.5
	3/30/2009***	8270	ND	1.07	ND	0.86	ND	0.91	ND	0.82	ND	0.87	ND		ND		ND	0.90	ND	1.01	ND		ND	1.01
MW-16 (AOC #4)	9/28/2009***	8270C	ND	1.19	ND	0.96	ND	1.01	ND	0.91	ND	0.97	ND		ND		ND	1.00	ND	1.12	ND		ND	1.12
	4/6/1999	8270			ND	10	ND	10	ND	10	ND	10	ND		ND		ND	10	ND	10	ND		ND	10
	12/15/2003	8270			ND	5	ND	5	ND	5	ND	5	ND		ND		ND	5	ND	5	ND		ND	5
	4/6/2006	8270			ND	0.5	ND	1	ND	1	ND	1	ND		ND		ND	0.1	ND	1	ND		ND	1
	1/25/2007***	8270			ND	5	ND	5	ND	5	ND	5	ND		ND		ND	5	ND	5	ND		ND	5
	12/4/2007***	8270	ND	5	ND	5	ND	5	ND	5	ND	5	ND		ND		ND	5	ND	5	ND		ND	5
	4/16/2008***	8270	ND	5	ND	5	ND	5	ND	5	ND	5	ND		ND		ND	5	ND	5	ND		ND	5
	9/11/2008***	Sample contained	---		---		---		---		---		ND		ND		---		---		ND		---	
	3/30/2009***	8270	ND	1.07	ND	0.86	ND	0.91	ND	0.82	ND	0.87	ND		ND		ND	0.90	ND	1.01	ND		ND	1.01
9/28/2009***	8270C	ND	1.07	ND	0.86	ND	0.91	ND	0.82	ND	0.87	ND		ND		ND	0.90	ND	1.01	ND		ND	1.01	
Standard and Guidance Values			NV		NV		NV		NV		10		5.0		5.0		NV		NV		NV		5.0	



TABLE 2  
SUMMARY OF GROUNDWATER ANALYTICAL DATA:  
POLYCYCLIC AROMATIC HYDROCARBONS (PAHs)  
248 Wyandanch Avenue, Wyandanch, New York  
(unit, parts per billion [ppb] µg/L)

Sample Identification	Sample Date	Analytical Method	Acenaphthene		Anthracene		Benzo (a) anthracene		Benzyl alcohol	4-Chloroaniline		Chrysene	3,3-Dichloro benzidine		2,4-Dichlorophenol		Di-n-butyl phthalate	
			SQL	SQL	SQL	SQL	SQL	SQL		SQL	SQL		SQL	SQL	SQL	SQL	SQL	SQL
MW-17 (AOC #4)	4/6/1999	8270	ND	10	ND	10	ND	10	ND	ND	ND	ND	10	ND	ND	10	ND	10
	12/15/2003	8270	ND	5	ND	5	ND	5	ND	ND	ND	ND	5	ND	5	ND	5	5
	1/25/2007***	8270	ND	5	ND	5	ND	5	ND	ND	ND	ND	5	ND	5	ND	5	5
	12/4/2007***	8270	ND	5	ND	5	ND	5	ND	ND	ND	ND	5	ND	5	ND	5	5
	4/16/2008***	8270	ND	5	ND	5	ND	5	ND	ND	ND	ND	5	ND	5	ND	5	5
	9/11/2008***	Sample container broken in transit to laboratory																
	3/30/2009***	8270	ND	1.02	ND	0.84	ND	1.03	ND	ND	0.95	ND	ND	0.98	ND	0.95	ND	0.95
	9/28/2009***	8270C	ND	1.02	ND	0.84	ND	1.03	ND	ND	0.95	ND	ND	0.98	ND	0.98	ND	0.95
MW-19 (AOC #4)	3/24/2010***	8270C	ND	1.02	ND	0.84	ND	1.03	ND	ND	0.95	ND	ND	0.98	ND	0.97	ND	0.97
	3/23/2011***	8270C	ND	1.02	ND	0.84	ND	1.03	ND	ND	0.95	ND	ND	0.98	ND	76.6	B	0.97
	4/21/2015 ***	8270D	ND	0.96	ND	1.10	ND	1.20	ND	0.51	0.52	ND	1.25	ND	1.66	ND	1.49	J 1.35
	4/20/2016***	Well was not sampled due to the detection of 0.03' of LNAPL																
	4/10/2017***	Well was not sampled due to the detection of 0.01' of LNAPL																
	4/23/2018***	Well was not sampled due to the detection of 0.01' of LNAPL																
	4/6/2006	8270	ND	0.3	ND	0.2	ND	0.05	ND	ND	0.2	ND	ND	1	ND	ND	ND	ND
MW-20 (AOC #4)	1/25/2007***	8270	ND	5	ND	5	ND	5	ND	ND	5	ND	ND	5	ND	5	ND	5
	4/16/2008***	8270	ND	5	ND	5	ND	5	ND	ND	5	ND	ND	5	ND	5	ND	5
	9/11/2008***	Well was not sampled.																
	3/30/2009***	8270	ND	1.02	ND	0.84	ND	1.03	ND	ND	0.95	ND	ND	0.98	ND	0.97	ND	0.97
	9/28/2009***	8270C	ND	1.02	ND	0.84	ND	1.03	ND	ND	0.95	ND	ND	0.98	ND	0.97	ND	0.97
	3/24/2010***	8270C	ND	1.02	ND	0.84	ND	1.03	ND	ND	0.95	ND	ND	0.98	ND	0.97	ND	0.97
	3/23/2011***	8270C	ND	1.02	ND	0.84	ND	1.03	ND	ND	0.95	ND	ND	0.98	ND	75.4	B	0.97
	9/21/2011***	8270C	ND	1.13	ND	0.93	ND	1.14	ND	0.53	0.52	ND	1.06	ND	1.09	ND	1.08	1.08
	4/2/2012***	8270C	ND	1.02	ND	0.84	ND	1.03	ND	0.48	0.47	ND	0.95	ND	0.68	ND	0.97	0.97
	9/18/2012***	8270C	ND	1.02	ND	0.84	ND	1.03	ND	0.48	0.47	ND	0.95	ND	0.68	ND	0.97	0.97
	3/27/2013***	8270C	ND	0.77	ND	0.88	ND	0.96	ND	0.41	0.42	ND	1.00	ND	1.33	ND	0.72	1.08
	9/17/2013***	8270D	ND	0.77	ND	0.88	ND	0.96	ND	0.41	0.42	ND	1.00	ND	1.33	ND	0.72	1.08
	3/11/2014***	8270C	ND	0.77	ND	0.88	ND	0.96	ND	0.41	0.42	ND	1.00	ND	1.33	ND	0.72	1.08
	4/20/2016***	Well was not sampled due to a damaged road box																
	4/10/2017***	8270D	ND	0.77	ND	0.88	ND	0.96	ND	0.41	0.42	ND	1.00	ND	1.33	ND	0.72	9.06 B 1.08
	4/23/2018***	8270D	ND	5.0	ND	5.0	ND	5.0	NR	ND	10	ND	5.0	ND	10	ND	10	10
MW-21 (ACO #4)	4/6/1999	8270	ND	10	ND	10	ND	10	ND	ND	10	ND	ND	10	ND	10	ND	10
	4/6/2006	8270	ND	0.29	ND	0.19	ND	0	ND	ND	0	ND	ND	1	ND	ND	ND	ND
	1/25/2007***	8270	ND	5	ND	5	ND	5	ND	ND	5	ND	ND	5	ND	5	ND	5
	12/4/2007***	8270	ND	5	ND	5	ND	5	ND	ND	5	ND	ND	5	ND	5	ND	5
	4/16/2008***	8270	ND	5	ND	5	ND	5	ND	ND	5	ND	ND	5	ND	5	ND	5
	9/11/2008***	8270M(SIM)	ND	0.5	ND	0.5	ND	0.1	ND	ND	0.03	0.02	ND	NA	- - -	ND	ND	ND
	3/30/2009***	8270	ND	1.02	ND	0.84	ND	1.03	ND	ND	0.95	ND	ND	0.98	ND	0.97	ND	0.97
	9/28/2009***	8270C	ND	1.02	ND	0.84	ND	1.03	ND	ND	0.95	ND	ND	0.98	ND	0.97	ND	0.97
	3/24/2010***	8270C	ND	1.02	ND	0.84	ND	1.03	ND	ND	0.95	ND	ND	0.98	ND	0.97	ND	0.97
	3/23/2011***	8270C	ND	1.02	ND	0.84	ND	1.03	ND	ND	0.95	ND	ND	0.98	ND	70.1	B	0.97
	9/21/2011***	8270C	ND	1.13	ND	0.93	ND	1.14	5.31	0.53	21.80	0.52	ND	1.06	2.18	0.76	ND	1.08
	4/2/2012***	8270C	ND	1.02	ND	0.84	ND	1.03	ND	0.48	0.47	ND	0.95	ND	0.68	ND	0.97	0.97
	9/18/2012***	8270C	ND	1.02	ND	0.84	ND	1.03	ND	0.48	0.47	ND	0.95	ND	0.68	ND	0.97	0.97
	3/27/2013***	8270C	ND	0.77	ND	0.88	ND	0.96	ND	0.41	0.42	ND	1.00	ND	1.33	ND	0.72	1.08
	9/17/2013***	8270D	ND	0.77	ND	0.88	ND	0.96	ND	0.41	0.42	ND	1.00	ND	1.33	ND	0.72	1.08
	3/11/2014***	8270C	ND	0.77	ND	0.88	ND	0.96	ND	0.41	0.42	ND	1.00	ND	1.33	ND	0.72	1.08
	9/17/2014***	8270D	ND	0.86	ND	0.98	ND	0.91	ND	0.46	0.47	ND	1.11	ND	1.48	ND	1.79	1.20
	4/21/2015***	8270D	ND	0.96	ND	1.10	ND	1.20	ND	0.51	0.52	ND	1.25	ND	1.66	ND	0.90	1.35
	4/20/2016	8270D	ND	3.85	ND	4.40	ND	4.80	ND	2.05	2.10	ND	5.00	ND	6.65	ND	3.65	5.40
	4/10/2017***	8270D	ND	0.77	ND	0.88	ND	0.96	ND	0.41	0.42	ND	1.00	ND	1.33	ND	0.72	8.42 B 1.08
	4/23/2018***	8270D	ND	5.1	ND	5.1	ND	5.1	NR	ND	10	ND	5.1	ND	10	ND	10	10



TABLE 2  
SUMMARY OF GROUNDWATER ANALYTICAL DATA:  
POLYCYCLIC AROMATIC HYDROCARBONS (PAHs)  
248 Wyandanch Avenue, Wyandanch, New York  
(unit, parts per billion [ppb] µg/L)

Sample Identification	Sample Date	Analytical Method	Diethyl phthalate	SQL	Fluoranthene	SQL	Fluorene	SQL	2-Methyl naphthalene	SQL	Naphthalene	SQL	3-Nitroaniline	SQL	4-Nitroaniline	SQL	Phenanthrene	SQL	Pyrene	SQL	Pyridine	SQL	bis (2-Ethylhexyl) phthalate	SQL
MW-17 (AOC #4)	4/6/1999	8270			ND	10	ND	10	ND	10	ND	10	ND		ND		ND	10	ND	10	ND		ND	10
	12/15/2003	8270			ND	5	ND	5	ND	5	ND	5	ND		ND		ND	5	ND	5	ND		ND	5
	1/25/2007***	8270			ND	5	ND	5	ND	5	ND	5	ND		ND		ND	5	ND	5	ND		ND	5
	12/4/2007***	8270	ND	5	ND	5	ND	5	ND	5	ND	5	ND		ND		ND	5	ND	5	ND		ND	5
	4/16/2008***	8270	ND	5	ND	5	ND	5	ND	5	ND	5	ND		ND		ND	5	ND	5	ND		ND	5
	9/11/2008***	Sample contain																						
	3/30/2009***	8270	ND	1.07	ND	0.86	ND	0.91	ND	0.82	ND	0.87	ND		ND		ND	0.90	ND	1.01	ND		ND	1.01
9/28/2009***	8270C	ND	1.07	ND	0.86	ND	0.81	ND	0.82	ND	0.87	ND		ND		ND	0.90	ND	1.01	ND		ND	1.01	
MW-19 (AOC #4)	3/24/2010***	8270C	ND	1.07	ND	0.86	ND	0.91	ND	0.82	ND	0.87	ND		ND		ND	0.90	ND	1.01	ND		ND	1.44
	3/23/2011***	8270C	ND	1.07	ND	0.86	ND	0.91	5.22	B 0.82	4.09	B 0.87	ND		ND		ND	0.90	ND	1.01	ND		5.75	B 1.44
	4/21/2015 ***	8270D	ND	1.25	ND	1.20	ND	1.02	ND	0.93	ND	0.98	ND	0.43	ND	0.65	ND	1.19	ND	1.06	ND	0.46	ND	1.58
	4/20/2016***	Well was not s																						
	4/10/2017***	Well was not s																						
	4/23/2018***	Well was not s																						
MW-20 (AOC #4)	4/6/2006	8270			ND	0.50	ND	1	ND	1	ND	1	ND		ND		ND	0.1	ND	1	ND		ND	
	1/25/2007***	8270			ND	5	ND	5	ND	5	ND	5	ND		ND		ND	5	ND	5	ND		ND	
	4/16/2008***	8270	ND	5	ND	5	ND	5	ND	5	ND	5	ND		ND		ND	5	ND	5	ND		ND	
	9/11/2008***	Well was not																						
	3/30/2009***	8270	ND	1.07	ND	0.86	ND	0.91	ND	0.82	ND	0.87	ND		ND		ND	0.90	ND	1.01	ND		ND	1.44
	9/28/2009***	8270C	1.17	1.07	ND	0.86	ND	0.91	ND	0.82	ND	0.87	ND		ND		ND	0.90	ND	1.01	ND		ND	1.44
	3/24/2010***	8270C	ND	1.07	ND	0.86	ND	0.91	ND	0.82	ND	0.87	ND		ND		ND	0.90	ND	1.01	ND		ND	1.44
	3/23/2011***	8270C	ND	1.07	ND	0.86	ND	0.91	5.54	B 0.82	4.94	B 0.87	ND		ND		ND	0.90	ND	1.01	ND		5.61	B 1.44
	9/21/2011***	8270C	ND	1.19	ND	0.96	ND	1.01	ND	0.91	ND	0.97	ND	0.67	ND	1.19	ND	1.00	ND	1.12	ND	0.41	ND	1.60
	4/2/2012***	8270C	ND	1.07	ND	0.86	ND	0.91	ND	0.82	ND	0.87	ND	0.60	ND	1.07	ND	0.90	ND	1.01	ND	0.37	ND	1.44
	9/18/2012***	8270C	ND	1.07	ND	0.86	ND	0.91	ND	0.82	ND	0.87	ND	0.60	ND	1.07	ND	0.90	ND	1.01	ND	0.37	ND	1.44
	3/27/2013***	8270C	ND	1.00	ND	0.96	ND	0.82	ND	0.74	ND	0.78	ND	0.34	ND	0.52	ND	0.95	ND	0.85	ND	0.37	ND	1.26
	9/17/2013***	8270D	ND	1.00	ND	0.96	ND	0.82	ND	0.74	ND	0.78	ND	0.34	ND	0.52	ND	0.95	ND	0.85	ND	0.37	ND	1.26
	3/11/2014***	8270C	ND	1.00	ND	0.96	ND	0.82	ND	0.74	ND	0.78	ND	0.34	ND	0.52	ND	0.95	ND	0.85	ND	0.37	ND	1.26
	4/20/2016***	Well was not s																						
	4/10/2017***	8270D	ND	1.00	ND	0.96	ND	0.82	ND	0.74	ND	0.78	ND	0.34	ND	0.52	ND	0.95	ND	0.85	ND	0.37	ND	1.26
	4/23/2018***	8270D	ND	10	ND	5.0	ND	5.0	ND	5.0	ND	5.0	ND	5.0	ND	10	ND	5.0	ND	5.0	ND	5.0	ND	10
MW-21 (ACO #4)	4/6/1999	8270			ND	10	ND	10	ND	10	ND	10	ND		ND		ND	10	ND	10	ND		ND	
	4/6/2006	8270			ND	0	ND	0.95	ND	1	ND	1	ND		ND		ND	0	ND	1	ND		ND	
	1/25/2007***	8270			ND	5	ND	5	ND	5	ND	5	ND		ND		ND	5	ND	5	ND		ND	
	12/4/2007***	8270	ND	5	ND	5	ND	5	ND	5	ND	5	ND		ND		ND	5	ND	5	ND		ND	
	4/16/2008***	8270	ND	5	ND	5	ND	5	ND	5	ND	5	ND		ND		ND	5	ND	5	ND		ND	
	9/11/2008***	8270M(SIM)	NS		ND	0.5	ND	0.5	ND	0.5	ND	0.5	ND		ND		ND	0.5	ND	0.5	ND		ND	
	3/30/2009***	8270	ND	1.07	ND	0.86	ND	0.91	ND	0.82	ND	0.87	ND		ND		ND	0.90	ND	1.01	ND		ND	1.44
	9/28/2009***	8270C	ND	1.02	ND	0.86	ND	0.91	ND	0.82	ND	0.87	ND		ND		ND	0.90	ND	1.01	ND		ND	1.44
	3/24/2010***	8270C	ND	1.02	ND	0.86	ND	0.91	ND	0.82	ND	0.87	ND		ND		ND	0.90	ND	1.01	ND		ND	1.44
	3/23/2011***	8270C	ND	1.07	ND	0.86	ND	0.91	5.00	B 0.82	3.41	B 0.87	ND		ND		ND	0.90	ND	1.01	ND		5.57	B 1.44
	9/21/2011***	8270C	ND	1.19	ND	0.96	ND	1.01	ND	0.91	ND	0.97	15.10	0.67	2.65	1.19	ND	1.00	ND	1.12	8.47	0.41	2.58	1.60
	4/2/2012***	8270C	ND	1.07	ND	0.86	ND	0.91	ND	0.82	ND	0.87	ND	0.60	ND	1.07	ND	0.90	ND	1.01	ND	0.37	ND	1.44
	9/18/2012***	8270C	ND	1.07	ND	0.86	ND	0.91	ND	0.82	ND	0.87	ND	0.60	ND	1.07	ND	0.90	ND	1.01	ND	0.37	ND	1.44
	3/27/2013***	8270C	ND	1.00	ND	0.96	ND	0.82	ND	0.74	ND	0.78	ND	0.34	ND	0.52	ND	0.95	ND	0.85	ND	0.37	ND	1.26
	9/17/2013***	8270D	ND	1.00	ND	0.96	ND	0.82	ND	0.74	ND	0.78	ND	0.34	ND	0.52	ND	0.95	ND	0.85	ND	0.37	ND	1.26
	3/11/2014***	8270C	ND	1.00	ND	0.96	ND	0.82	ND	0.74	ND	0.78	ND	0.34	ND	0.52	ND	0.95	ND	0.85	ND	0.37	ND	1.26
	9/17/2014***	8270D	ND	1.11	ND	1.07	ND	0.91	ND	0.82	ND	0.87	ND	0.54	ND	0.58	ND	1.06	ND	0.94	ND	0.41	ND	1.40
	4/21/2015***	8270D	ND	1.25	ND	1.20	ND	1.02	ND	0.93	ND	0.98	ND	0.43	ND	0.65	ND	1.19	ND	1.06	ND	0.46	ND	1.58
	4/20/2016	8270D	ND	5.00	ND	5.80	ND	4.10	ND	3.70	ND	3.90	ND	1.70	ND	2.60	ND	4.75	ND	4.25	ND	1.85	ND	6.30
	4/10/2017***	8270D	ND	1.00	ND	0.96	ND	0.82	ND	0.74	ND	0.78	ND	0.34	ND	0.52	ND	0.95	ND	0.85	ND	0.37	ND	1.26
	4/23/2018***	8270D	ND	10	ND	5.1	ND	5.1	ND	5.1	ND	5.1	ND	5.1	ND	10	ND	5.1	ND	5.1	ND	5.1	ND	10



TABLE 2  
SUMMARY OF GROUNDWATER ANALYTICAL DATA:  
POLYCYCLIC AROMATIC HYDROCARBONS (PAHs)  
248 Wyandanch Avenue, Wyandanch, New York  
(unit, parts per billion [ppb] µg/L)

Sample Identification	Sample Date	Analytical Method	Acenaphthene SQL	Anthracene SQL	Benzo (a) anthracene SQL	Benzyl alcohol SQL	4-Chloroaniline SQL	Chrysene SQL	3,3-Dichloro benzidine SQL	2,4-Dichlorophenol SQL	Di-n-butyl phthalate SQL
MW-23 (AOC #4)	4/6/1999	8270	ND 10	ND 10	ND 10	ND	ND	ND 10	ND	ND 10	ND
	12/15/2003	8270	ND 5	ND 5	ND 5	ND	ND	ND 5	ND	ND 5	ND
	4/6/2006	8270	ND 0.3	ND 0.2	ND 0.5	ND	ND	ND 0.2	ND	ND 1	ND
	1/25/2007***	8270	ND 5	ND 5	ND 5	ND	ND	ND 5	ND	ND 5	ND
	12/4/2007***	8270	ND 5	ND 5	ND 5	ND	ND	ND 5	ND	ND 5	ND
	4/16/2008***	8270	ND 5	ND 5	ND 5	ND	ND	ND 5	ND	ND 5	ND
	9/11/2008***	8270M(SIM)	ND 0.5	ND 0.5	ND 0.1	ND	ND	0.02	ND	NA - - -	ND
	3/30/2009***	8270	ND 1.02	ND 0.84	ND 1.03	ND	ND	0.95	ND	ND 0.98	ND 0.97
	9/28/2009***	8270C	ND 1.02	ND 0.84	ND 1.03	ND	ND	0.95	ND	ND 0.98	ND 0.97
	3/24/2010***	8270C	ND 1.02	ND 0.84	ND 1.03	ND	ND	0.95	ND	ND 0.98	ND 0.97
	3/23/2011***	8270C	ND 1.02	ND 0.84	ND 1.03	ND	ND	0.95	ND	ND 0.98	80.3 B 0.97
	9/21/2011***	8270C	ND 1.13	ND 0.93	ND 1.14	ND 0.53	ND 0.52	ND 1.06	ND 0.76	ND 1.09	ND 1.08
	4/2/2012***	8270C	ND 1.02	ND 0.84	ND 1.03	ND 0.48	ND 0.47	ND 0.95	ND 0.68	ND 0.98	ND 0.97
	9/18/2012***	8270C	ND 1.02	ND 0.84	ND 1.03	ND 0.48	ND 0.47	ND 0.95	ND 0.68	ND 0.98	ND 0.97
	3/27/2013***	8270C	ND 0.77	ND 0.88	ND 0.96	ND 0.41	ND 0.42	ND 1.00	ND 1.33	ND 0.72	ND 1.08
	9/17/2013***	8270D	ND 0.77	ND 0.88	ND 0.96	ND 0.41	ND 0.42	ND 1.00	ND 1.33	ND 0.72	ND 1.08
	3/11/2014***	8270C	ND 0.77	ND 0.88	ND 0.96	ND 0.41	ND 0.42	ND 1.00	ND 1.33	ND 0.72	ND 1.08
	9/17/2014***	8270D	ND 1.10	ND 1.26	ND 1.37	ND 0.59	ND 0.60	ND 1.43	ND 1.90	ND 1.03	ND 1.54
	4/21/2015***	8270D	ND 0.96	ND 1.10	ND 1.02	ND 0.51	ND 0.52	ND 1.25	ND 1.66	ND 0.90	2.74 1.35
	4/20/2016***	8270D	ND 3.85	ND 4.40	ND 4.80	ND 2.05	ND 2.10	ND 5.00	ND 6.65	ND 3.65	ND 5.40
	4/10/2017***	8270D	ND 0.77	ND 0.88	ND 0.96	ND 0.41	ND 0.42	ND 1.00	ND 1.33	ND 0.72	10.07 B 1.08
	4/23/2018***	8270D	ND 5.1	ND 5.1	ND 5.1	NR	ND 10	ND 5.1	ND 10	ND 10	ND 10
MW-26R (AOC #1)	12/15/2003	8270	ND 5	ND 5	ND 5	ND	ND	ND 5	ND	ND 5	ND 5
	4/6/2006	8270	ND 0.3	ND 0.2	ND 0.05	ND	ND	ND 0.2	ND	ND 1	ND 0.2
	1/25/2007***	8270	ND 5	ND 5	ND 5	ND	ND	ND 5	ND	ND 5	ND 5
	12/4/2007***	8270	ND 10	ND 10	ND 10	ND	ND	ND 10	ND	ND 10	ND 10
	4/16/2008***	8270	ND 5	ND 5	ND 5	ND	ND	ND 5	ND	ND 5	ND 5
	9/10/2008***	8270M(SIM)	ND 0.5	ND 0.5	ND 0.1	ND	ND	0.02	ND	NA - - -	ND 0.02
	3/30/2009***	8270	ND 1.02	ND 0.84	ND 1.03	ND	ND	0.95	ND	ND 0.98	ND 0.95
	9/28/2009***	8270C	ND 1.13	ND 0.93	ND 1.14	ND	ND	1.06	ND	ND 1.09	ND 1.06
GEC-5 <sup>+</sup> (AOC #4)	12/15/2003	8270	ND 5	ND 5	ND 5	ND	ND	ND 5	ND	ND 5	ND 5
	4/6/2006	8270	ND 0.3	ND 0.2	ND 0.05	ND	ND	ND 0.2	ND	ND 1	ND 0.2
	4/16/2008***	8270	ND 5	ND 5	ND 5	ND	ND	ND 5	ND	ND 5	ND 5
	9/11/2008***	Sample container broken in transit to laboratory				ND 1.03	ND	ND 0.95	ND	ND 0.98	ND 0.95
	3/30/2009***	8270	ND 1.02	ND 0.84	ND 1.14	ND	ND	1.06	ND	ND 1.09	ND 1.06
Standard and Guidance Values			20.0	NV	NV	NV	5.0	NV	5.0	0.3	50

Notes: 1) Ambient Water Quality Standards and Guidance Values provided in the New York State and Technical Operational Guidance Series (TOGS 1.1.1). For Class GA Groundwater, developed in support of 6 NYCRR Part 700-705 (current to Janaury 2018).  
<https://govt.westlaw.com/nycrr/Document/14ed90418ed1711d0a432a117e8ed9345?viewType=FullText&originationContext=document&transitionType=CategoryPageItem&contextData=tag.Default>  
2) Analytical data for method blank is grouped with appropriate laboratory sample batch. Dates provided for method blanks represent the data of laboratory analysis.  
3) Phenol was detected in sample MW-20 on 12/11/02 but not a significant amount, results is less than RL but greater than or equal to MDL  
4) Detections are likely a result of using spray paint to label wells during sampling on 9/21/11

SQL= Sample Quantitation Limit

GEC-5<sup>+</sup> = Replaces MW-7 in groundwater sampling plan. MW-7 previously paved over.

ND= Not Detected above SQL  
NV= No standard or guidance value available as of January 2018.  
J= Compound analyzed for and determined to be present in sample. Mass spectrum of c meets identification criteria for method. Concentration listed as estimated value, less contract required detection limit but greater than instrument detection limit.  
\*\*\* = Samples collected after completion of remedial action.  
NR= Not Reported

8270= USEPA Method 8270 B= The method blank associated with these samples contain



TABLE 2  
SUMMARY OF GROUNDWATER ANALYTICAL DATA:  
POLYCYCLIC AROMATIC HYDROCARBONS (PAHs)  
248 Wyandanch Avenue, Wyandanch, New York  
(unit, parts per billion [ppb] µg/L)

Sample Identification	Sample Date	Analytical Method	Diethyl phthalate	SQL	Fluoranthene	SQL	Fluorene	SQL	2-Methyl naphthalene	SQL	Naphthalene	SQL	3-Nitroaniline	SQL	4-Nitroaniline	SQL	Phenanthrene	SQL	Pyrene	SQL	Pyridine	SQL	bis (2-Ethylhexyl) phthalate	SQL
MW-23 (AOC #4)	4/6/1999	8270			ND	10	ND	10	ND	10	ND	10	ND		ND		ND	10	ND	10	ND		ND	
	12/15/2003	8270			ND	5	ND	5	ND	5	ND	5	ND		ND		ND	5	ND	5	ND		ND	
	4/6/2006	8270			ND	0.5	ND	1	ND	1	ND	1	ND		ND		ND	0.1	ND	1	ND		ND	
	1/25/2007***	8270			ND	5	ND	5	ND	5	ND	5	ND		ND		ND	5	ND	5	ND		ND	
	12/4/2007***	8270	ND	5	ND	5	ND	5	ND	5	ND	5	ND		ND		ND	5	ND	5	ND		ND	
	4/16/2008***	8270	ND	5	ND	5	ND	5	ND	5	ND	5	ND		ND		ND	5	ND	5	ND		ND	
	9/11/2008***	8270M(SIM)	NS		ND	0.5	ND	0.5	ND	0.5	ND	0.5	ND		ND		ND	0.5	ND	0.5	ND		ND	
	3/30/2009***	8270	ND	1.07	ND	0.86	ND	0.91	ND	0.82	ND	0.87	ND		ND		ND	0.90	ND	1.01	ND		ND	1.44
	9/28/2009***	8270C	1.23	1.07	ND	0.86	ND	0.91	ND	0.82	ND	0.87	ND		ND		ND	0.90	ND	1.01	ND		ND	1.44
	3/24/2010***	8270C	1.23	1.07	ND	0.86	ND	0.91	ND	0.82	ND	0.87	ND		ND		ND	0.90	ND	1.01	ND		ND	1.44
	3/23/2011***	8270C	ND	1.07	ND	0.86	ND	0.91	5.04	B 0.82	3.65	B 0.87	ND		ND		ND	0.90	ND	1.01	ND		5.76	B 1.44
	9/21/2011***	8270C	ND	1.19	ND	0.96	ND	1.01	0.96	J 0.91	1.37	BJ 0.97	ND	0.67	ND	1.19	ND	1.00	ND	1.12	ND	0.41	2.19	J 1.60
	4/2/2012***	8270C	ND	1.07	ND	0.86	ND	0.91	ND	0.82	ND	0.87	ND	0.60	ND	1.07	ND	0.90	ND	1.01	ND	0.37	ND	1.44
	9/18/2012***	8270C	ND	1.07	ND	0.86	ND	0.91	ND	0.82	ND	0.87	ND	0.60	ND	1.07	ND	0.90	ND	1.01	ND	0.37	ND	1.44
	3/27/2013***	8270C	ND	1.00	ND	0.96	ND	0.82	ND	0.74	ND	0.78	ND	0.34	ND	0.52	ND	0.95	ND	0.85	ND	0.37	ND	1.26
	9/17/2013***	8270D	ND	1.00	ND	0.96	ND	0.82	ND	0.74	ND	0.78	ND	0.34	ND	0.52	ND	0.95	ND	0.85	ND	0.37	ND	1.26
	3/11/2014***	8270C	ND	1.00	ND	0.96	ND	0.82	ND	0.74	ND	0.78	ND	0.34	ND	0.52	ND	0.95	ND	0.85	ND	0.37	ND	1.26
	9/17/2014***	8270D	ND	1.43	ND	1.37	ND	1.17	ND	1.06	ND	1.11	ND	0.49	ND	0.74	ND	1.36	ND	1.21	ND	0.53	ND	1.80
	4/21/2015***	8270D	ND	1.25	ND	1.20	ND	1.02	ND	0.93	ND	0.98	ND	0.43	ND	0.43	ND	1.19	ND	1.06	ND	0.46	ND	1.58
	4/20/2016***	8270D	ND	5.00	ND	5.80	ND	4.10	ND	3.70	ND	3.90	ND	1.70	ND	2.60	ND	4.75	ND	4.25	ND	1.85	ND	6.30
	4/10/2017***	8270D	ND	1.00	ND	0.96	ND	0.82	ND	0.74	ND	0.78	ND	0.34	ND	0.52	ND	0.95	ND	0.85	ND	0.37	ND	1.26
	4/23/2018***	8270D	ND	10	ND	5.1	ND	5.1	ND	5.1	ND	5.1	ND	5.1	ND	10	ND	5.1	ND	5.1	ND	5.1	ND	10
MW-26R (AOC #1)	12/15/2003	8270			ND	5	ND	5	ND	5	ND	5	ND		ND		ND	5	ND	5	ND		ND	5
	4/6/2006	8270			ND	0.5	ND	1	ND	1	ND	1	ND		ND		ND	0.1	ND	1	ND		ND	1
	1/25/2007***	8270			ND	5	ND	5	ND	5	ND	5	ND		ND		ND	5	ND	5	ND		ND	5
	12/4/2007***	8270	ND	10	ND	10	ND	10	ND	10	ND	10	ND		ND		ND	10	ND	10	ND		ND	10
	4/16/2008***	8270	ND	5	ND	5	ND	5	ND	5	ND	5	ND		ND		ND	5	ND	5	ND		ND	5
	9/10/2008***	8270M(SIM)	NS		ND	0.5	ND	0.5	ND	0.5	ND	0.5	ND		ND		ND	0.5	ND	0.5	ND		ND	0.5
	3/30/2009***	8270	ND	1.07	ND	0.86	ND	0.91	ND	0.82	ND	0.87	ND		ND		ND	0.90	ND	1.01	ND		ND	1.01
	9/28/2009***	8270C	ND	1.19	ND	0.96	ND	1.01	ND	0.91	ND	0.97	ND		ND		ND	1.00	ND	1.12	ND		ND	1.12
GEC-5 <sup>+</sup> (AOC #4)	12/15/2003	8270			ND	5	ND	5	ND	5	ND	5	ND		ND		ND	5	ND	5	ND		ND	5
	4/6/2006	8270			ND	0.5	ND	1	ND	1	ND	1	ND		ND		ND	0.1	ND	1	ND		ND	1
	4/16/2008***	8270	ND	5	ND	5	ND	5	ND	5	ND	5	ND		ND		ND	5	ND	5	ND		ND	5
	9/11/2008***	Sample contain																						
	3/30/2009***	8270	ND	1.07	ND	0.86	ND	0.91	ND	0.82	ND	0.87	ND		ND		ND	0.90	ND	1.01	ND		ND	1.01
	9/28/2009***	8270C	ND	1.19	ND	0.96	ND	1.01	ND	0.91	ND	0.97	ND		ND		ND	1.00	ND	1.12	ND		ND	1.12
Standard and Guidance Values			NV		NV		NV		NV		10		5.0		5.0		NV		NV		NV		5.0	

- Notes:
- 1) Ambient Water Quality Standard  
State and Technical Operational  
Groundwater, developed in support of  
<https://gov.westlaw.com/mycor/Document/4ed90418cd125> than
  - 2) Analytical data for method blank  
batch. Dates provided for method
  - 3) Phenol was detected in sample A  
results is less than RL but greater
  - 4) Detections are likely a result of compounds detected at an unknown concentration

SQL= Sample Quantitation Limit  
GEC-5<sup>+</sup> = Replaces MW-7 in groundwater



TABLE 3 SUMMARY OF GROUNDWATER ANALYTICAL DATA: TOTAL METALS 248 Wyandanch Avenue Wyandanch, New York (unit, parts per million [ppm], mg/L)										
Sample Identification	Sample Date	Analytical Method	Chromium	SQL	Copper	SQL	Nickel	SQL	Zinc	SQL
MW-2 (AOC #2/5)	5/23/1994	NG	9.12	--	3.16	--	4.49	--	0.747	--
	1/27/1995	NG	4	--	3.8	--	5.7	--	0.70	--
	11/18/1998	3010/6010	NS	--	0.231	--	10.6	--	0.263	* --
	11/15/2000	NG	0.2560	--	NA	--	NA	--	NA	--
	12/11/2002	6010/7470/7196	0.389	--	0.292	0.010	1.4	0.010	0.048	B 0.05
	12/15/2003	200.7/6010	ND	--	0.0197	0.0005	NA	--	0.015	0.01
	4/5/2006	6010	0.017	0.005	0.0623	0.005	NA	--	0.042	0.01
	4/5/2006	6010	0.010	0.005	NA	--	NA	--	NA	--
	1/24/2007***	6010B	ND	0.010	0.088	0.025	0.44	0.04	ND	0.2
	12/4/2007***	200.7	ND	0.05	ND	0.05	0.30	0.05	ND	0.05
	4/16/2008***	200.7	ND	0.05	ND	0.05	0.30	0.05	ND	0.05
	9/10/2008***	200.7	ND	0.001	0.024	0.001	0.20	0.001	0.119	0.002
	3/30/2009***	6010/200.7	ND	0.0016	ND	0.0029	0.15	0.0005	0.040	0.0044
	9/28/2009***	6010/200.7	ND	0.0016	ND	0.0026	0.14	0.0005	0.0044	0.0044
	3/24/2010***	6010/200.7	NA	--	NA	--	0.13	0.0017	NA	--
	3/23/2011***	6010/200.7	NA	--	NA	--	0.29	0.00072	NA	--
	9/21/2011***	6010/200.7	NA	--	NA	--	0.17	0.00072	NA	--
	4/2/2012***	6010/200.7	NA	--	NA	--	0.24	0.0014	NA	--
	9/18/2012***	6010/200.7	NA	--	NA	--	0.094	0.0014	NA	--
	3/27/2013***	6010/200.7	NA	--	NA	--	0.26	0.0014	NA	--
	9/17/2013***	6010C	NA	--	NA	--	0.28	0.0014	NA	--
	3/11/2014***\$	6010B	NA	--	NA	--	0.36	0.0014	NA	--
	9/17/2014***	6010C	NA	--	NA	--	0.23	0.0014	NA	--
	4/21/2015***	6010C	NA	--	NA	--	0.17	0.0014	NA	--
	4/20/2016***	6010C	NA	--	NA	--	0.27	0.0071	NA	--
	4/10/2017***	6010C	NA	--	NA	--	0.22	0.0071	NA	--
	4/23/2018***	6010C	NA	--	NA	--	0.35	0.010	NA	--
MW-3 (AOC #3)	5/23/1994	NG	0.139	--	0.597	--	1.75	--	0.109	--
	1/27/1995	NG	0.320	--	4.5	--	3.5	--	0.68	--
	11/17/1998	3010/6010	NA	--	0.13	--	0.195	--	0.0492	* --
	12/11/2002	6010/7470/7196	0.203	--	0.30	0.010	1.39	0.010	0.0956	0.05
	12/16/2003	200.7/6010	0.056	--	0.0837	0.0005	NA	--	0.071	0.01
	1/24/2007	6010B	ND	--	ND	0.025	ND	0.04	ND	0.2
	12/4/2007***	Well not sampled, destroyed during remediation								
	4/16/2008***	Well destroyed during soil remediation, to be replaced								
	9/10/2008***	200.7	0.05	0.001	0.094	0.001	0.225	0.001	0.053	0.002
	3/30/2009***	6010/200.7	ND	0.0016	0.0660	0.0029	0.13	0.0005	0.045	0.0044
	9/28/2009***	6010/200.7	0.013	0.0016	0.0710	0.0029	0.12	0.0005	0.030	0.0044
	3/24/2010***	6010/200.7	NA	--	NA	--	0.064	0.0017	NA	--
	3/23/2011***	6010/200.7	NA	--	NA	--	0.074	0.00072	NA	--
	9/21/2011***	6010/200.7	NA	--	NA	--	0.091	0.00072	NA	--
	4/2/2012***	6010/200.7	NA	--	NA	--	0.11	0.0014	NA	--
	9/18/2012	6010/200.7	NA	--	NA	--	0.065	0.0014	NA	--
	3/27/2013***	6010/200.7	NA	--	NA	--	0.074	0.0014	NA	--
	9/17/2013***	6010C	NA	--	NA	--	0.11	0.0014	NA	--
	3/11/2014***\$	6010B	NA	--	NA	--	0.080	0.0014	NA	--
	9/17/2014***	6010C	NA	--	NA	--	0.13	0.0014	NA	--
	4/21/2015***	6010C	NA	--	NA	--	0.049	0.0014	NA	--
	4/20/2016***	6010C	NA	--	NA	--	0.048	0.0071	NA	--
	4/10/2017***	6010C	NA	--	NA	--	0.15	0.0071	NA	--
	4/23/2018***	6010C	NA	--	NA	--	0.076	0.010	NA	--
MW-4 (AOC #3)	12/11/2002	6010/7470/7196	0.049	--	0.102	0.010	2.1	0.010	0.0561	0.05
	12/16/2003	200.7/6010	0.010	--	0.0769	0.0005	NA	--	0.151	0.01
	4/6/2006	6010	0.160	0.005	0.1040	0.005	NA	--	0.181	0.01
	4/6/2006	6010	0.150	0.005	NA	--	NA	--	NA	--
	1/24/2007	6010B	0.19	0.01	0.14	0.025	2.2	0.04	0.3	0.2
	12/4/2007***	200.7	0.08	0.05	0.14	0.05	1.65	0.05	0.26	0.05
	9/10/2008***	200.7	0.035	0.001	0.048	0.001	1.11	0.001	0.124	0.002
	3/30/2009***	6010/200.7	0.017	0.0016	ND	0.0029	0.62	0.0005	0.1300	0.0044
	9/28/2009***	6010/200.7	ND	0.0016	0.0410	0.0029	0.44	0.0005	0.0820	0.0044
	3/24/2010***	6010/200.7	NA	--	NA	--	0.50	0.0017	NA	--
	3/23/2011***	6010/200.7	NA	--	NA	--	0.65	0.00072	NA	--
	9/21/2011***	6010/200.7	NA	--	NA	--	0.92	0.00072	NA	--
	4/2/2012***	6010/200.7	NA	--	NA	--	0.31	0.0014	NA	--
	9/18/2013***	6010/200.7	NA	--	NA	--	0.41	0.0014	NA	--
	3/27/2013***	6010/200.7	NA	--	NA	--	0.37	0.0014	NA	--
	9/17/2013***	6010C	NA	--	NA	--	0.72	0.0014	NA	--
	3/11/2014***	6010B	NA	--	NA	--	0.42	0.0014	NA	--
	9/17/2014***	6010C	NA	--	NA	--	0.78	0.0014	NA	--
	4/21/2015***	6010C	NA	--	NA	--	0.45	0.0014	NA	--
	4/20/2016***	6010C	NA	--	NA	--	0.19	0.0071	NA	--
	4/10/2017***	6010C	NA	--	NA	--	0.21	0.0071	NA	--
	4/23/2018***	6010C	NA	--	NA	--	0.24	0.010	NA	--
MW-5R (AOC #1)	12/16/2003	200.7/6010	ND	--	0.0419	0.0005	NA	--	0.090	0.005
	4/6/2006	6010	0.009	0.005	0.1260	0.005	NA	--	0.1020	0.0100
	4/6/2006	6010	0.007	0.005	NA	--	NA	--	NA	--
	1/25/2007***	6010B	ND	0.01	1.4	0.025	0.14	0.04	ND	0.2
	12/4/2007***	200.7	ND	0.05	ND	0.05	0.19	0.05	0.21	0.05
	4/16/2008***	200.7	ND	0.05	ND	0.05	1.61	0.05	0.85	0.05
	9/10/2008***	200.7	0.0009	B 0.001	0.008	0.001	0.070	0.001	0.089	0.002
	3/30/2009***	6010/200.7	0.0170	0.0016	ND	0.0029	0.20	0.0005	0.1300	0.0044
	9/28/2009***	6010/200.7	ND	0.0016	ND	0.0029	0.16	0.0005	0.0700	0.0044
	3/24/2010***	6010/200.7	NA	--	NA	--	0.17	0.0017	NA	--
	3/23/2011***	6010/200.7	NA	--	NA	--	1.18	0.00072	NA	--
	9/21/2011***	6010/200.7	NA	--	NA	--	ND	0.00072	NA	--
	4/2/2012***	6010/200.7	NA	--	NA	--	0.22	0.0014	NA	--
	9/18/2012***	6010/200.7	NA	--	NA	--	0.20	0.0014	NA	--
	3/27/2013***	6010/200.7	NA	--	NA	--	4.95	0.0014	NA	--
	9/17/2013***	6010C	NA	--	NA	--	0.38	0.0014	NA	--
	3/11/2014***	6010B	NA	--	NA	--	0.78	0.0014	NA	--
	9/17/2014***	6010C	NA	--	NA	--	0.73	0.0014	NA	--
	4/21/2015***	6010C	NA	--	NA	--	0.57	0.0014	NA	--
	4/20/2016***	6010C	NA	--	NA	--	3.64	0.0014	NA	--
	4/10/2017***	6010C	NA	--	NA	--	0.77	0.0014	NA	--
	4/23/2018***	6010C	NA	--	NA	--	1.6	0.0100	NA	--
MW-6R (AOC #1)	12/16/2003	200.7/6010	ND	--	0.0076	0.0005	NA	--	0.106	0.005
	4/6/2006	6010	0.043	0.005	0.0329	0.005	NA	--	0.053	0.010
	4/6/2006	6010	0.023	0.005	NA	--	NA	--	NA	--
	1/24/2007***	6010B	ND	0.01	ND	0.025	ND	0.04	ND	0.2
	12/4/2007***	200.7	ND	0.05	ND	0.05	ND	0.05	ND	0.05
	4/16/2008***	200.7	ND	0.05	ND	0.05	ND	0.05	0.05	0.05
	9/10/2008***	200.7	ND	0.001	0.005	0.001	0.014	0.001	0.018	0.002
	3/30/2009***	6010/200.7	0.0079	0.0016	ND	0.0029	0.032	0.0005	0.063	0.0044
	9/28/2009***	6010/200.7	ND	0.0016	ND	0.0029	ND	0.0005	0.017	0.0044
NYSDEC Class GA Groundwater Standard			0.05		0.4		0.1		2.0	

Notes:

NS= Not Sampled

SQL= Sample Quantitation Limit

NA= Not Analyzed

ND= Not detected above SQL

NG = Analytical Method not provided by previous consultant

Methods = Standard USEPA Methods

GEC-5<sup>†</sup> = Replaces MW-7 in groundwater sampling plan. MW-7 previously paved over.

B= Analyte is found in the blanks as well as the sample.

\*\*\* = Sample collected after completion of remedial actions

-- = Sample quantitation limits not provided or not available.

E= Detected concentration exceeds calibration curve range.

T= Analysis by EcoTest due to short holding time

\*= Duplicate analysis not within control limit.

**Bold=** Exceeds Standard



TABLE 3 SUMMARY OF GROUNDWATER ANALYTICAL DATA: TOTAL METALS 248 Wyandanch Avenue Wyandanch, New York (unit, parts per million [ppm], mg/L)										
Sample Identification	Sample Date	Analytical Method	Chromium		Copper		Nickel		Zinc	
				SQL		SQL		SQL		SQL
MW-10 (AOC #2/5)	1/24/2007***	6010B	ND	0.01	ND	0.025	ND	0.04	ND	0.2
	4/16/2008***	200.7	ND	0.05	ND	0.05	ND	0.05	ND	0.05
	9/10/2008***	200.7	0.030	0.001	0.017	0.001	0.011	0.001	0.022	0.002
	3/30/2009***	6010/200.7	<b>0.11</b>	0.0016	ND	0.0029	<b>0.12</b>	0.0005	0.16	0.0044
	9/28/2009***	6010/200.7	ND	0.0016	0.037	0.0029	ND	0.0005	0.018	0.0044
	3/24/2010***	6010/200.7	0.008	0.0010	0.013	0.0031	0.0096	0.0017	NA	--
	3/23/2011***	6010/200.7	ND	0.0016	ND	0.0029	0.017	0.00072	NA	--
	9/26/2011***	6010/200.7	0.0062	0.0016	0.0091	0.0029	0.0046	0.00072	NA	--
	4/2/2012***	6010/200.7	0.024	0.0012	0.021	0.0034	0.0088	0.0014	NA	--
	9/18/2012***	6010/200.7	<b>0.26</b>	0.0012	<b>0.49</b>	0.0034	0.069	0.0014	NA	--
	3/27/2013***	6010/200.7	0.018	0.0012	0.010	0.0034	0.012	0.0014	NA	--
	9/17/2013***	6010C	0.0054	0.0012	0.0066	0.0034	0.0055	0.0014	NA	--
	3/11/2014***\$	6010B	0.0023	0.0012	0.0077	0.0034	0.0065	0.0014	NA	--
	9/17/2014***	6010C	ND	0.0012	0.025	0.0034	0.0020	0.0014	NA	--
	4/21/2015***	6010C	0.012	0.0012	0.031	0.0034	0.0058	0.0014	NA	--
	4/20/2016***	6010C	ND	0.0034	0.070	0.0031	0.019	0.0071	NA	--
	4/10/2017***	6010C	0.0058	0.0034	ND	0.0031	0.011	0.0071	NA	--
	4/23/2018***	6010C	ND	0.010	ND	0.010	ND	0.010	NA	--
MW-11 (AOC #2/5)	7/6/1994	NG	0.08	--	<b>0.22</b>	--	0.07	--	0.23	--
	11/17/1998	3010/6010	NS	# --	0.0105	B --	ND	0.0060	ND	* 0.017
	12/15/2003	200.7/6010	0.015	--	0.0071	0.00050	NA	--	0.014	0.005
	4/5/2006	6010	<b>0.620</b>	0.005	0.0592	0.00500	NA	--	0.030	0.010
	4/5/2006	6010	<b>0.420</b>	0.005	NA	--	NA	--	NA	--
	1/25/2007***	6010B	0.04	0.01	ND	0.025	ND	0.04	ND	0.2
	12/4/2007***	200.7	<b>0.14</b>	0.05	ND	0.05	ND	0.05	ND	0.05
	4/16/2008***	200.7	ND	0.05	ND	0.05	ND	0.05	ND	0.05
	9/10/2008***	200.7	0.032	0.001	0.011	0.001	0.0040	0.001	0.0090	0.002
	3/30/2009***	6010/200.7	0.044	0.0016	ND	0.0029	0.0380	0.0005	0.0560	0.0044
	9/28/2009***	6010/200.7	0.02	0.0016	ND	0.0029	ND	0.0005	ND	0.0044
MW-12 (AOC #2/5)	5/23/1994	NG	NS	--	NS	--	NS	--	NS	--
	7/6/1994	NG	ND	--	ND	--	ND	--	0.06	--
	1/27/1995	NG	<b>18.00</b>	--	<b>21</b>	--	<b>21</b>	--	<b>5.60</b>	--
	11/17/1998	3010/6010	NS	--	<b>5.31</b>	--	<b>7.07</b>	--	0.859	* --
	12/15/2003	200.7/6010	0.007	--	<b>0.5300</b>	0.0005	NA	--	0.289	0.005
	4/5/2006	6010	0.047	0.005	0.0224	0.005	NA	--	0.059	0.010
	4/5/2006	6010	0.040	0.005	NA	--	NA	--	NA	--
	1/25/2007***	6010B	ND	0.01	<b>0.44</b>	0.025	<b>0.29</b>	0.04	ND	0.2
	4/16/2008***	200.7	ND	0.05	0.13	0.05	0.09	0.05	ND	0.05
	9/10/2008***	200.7	ND	0.001	0.079	0.001	0.073	0.001	0.022	0.002
	3/30/2009***	6010/200.7	ND	0.002	<b>0.20</b>	0.003	<b>0.24</b>	0.0005	0.11	0.004
	9/28/2009***	6010/200.7	ND	0.0016	0.16	0.0029	0.085	0.0005	0.086	0.0044
	3/23/2011***	6010/200.7	0.014	0.0016	<b>0.22</b>	0.0029	<b>0.20</b>	0.00072	NA	--
	9/21/2011***	6010/200.7	0.026	0.0016	<b>0.43</b>	0.0029	<b>0.71</b>	0.00072	NA	--
	4/2/2012***	6010/200.7	0.045	0.0012	<b>0.83</b>	0.0034	<b>1.73</b>	0.0014	NA	--
	9/18/2012***	6010/200.7	0.013	0.0012	<b>0.60</b>	0.0034	<b>0.42</b>	0.0014	NA	--
	3/27/2013***	6010/200.7	0.023	0.0012	<b>0.32</b>	0.0034	<b>0.99</b>	0.0014	NA	--
	9/17/2013***	6010C	<b>0.0630</b>	0.0012	<b>0.44</b>	0.0034	<b>0.46</b>	0.0014	NA	--
	3/11/2014***\$	6010B	0.013	0.0055	0.087	0.0034	<b>0.39</b>	0.0014	NA	--
	9/17/2014***	6010C	0.015	0.0012	<b>0.46</b>	0.0034	<b>0.72</b>	0.0014	NA	--
	4/21/2015***	6010C	0.019	0.0012	<b>0.98</b>	0.0034	<b>0.30</b>	0.0014	NA	--
	4/20/2016***	6010C	0.014	0.0034	<b>0.51</b>	0.0031	<b>1.97</b>	0.0071	NA	--
	4/10/2017***	6010C	0.017	0.0034	<b>0.24</b>	0.0031	<b>0.67</b>	0.0071	NA	--
	4/23/2018***	6010C	ND	0.010	0.099	0.010	<b>0.40</b>	0.010	NA	--
MW-26R (AOC #1 and 4)	12/15/2003	200.7/601	ND	--	0.0018	0.00050	NA	--	0.019	0.005
	4/6/2006	3010/6010	0.018	0.005	0.040	0.01	NA	--	0.0740	0.010
	4/6/2006	6010	0.017	0.005	NA	--	NA	--	NA	--
	1/24/2007***	6010B	ND	0.01	ND	0.025	ND	0.04	ND	0.2
	12/4/2007***	200.7	ND	0.05	ND	0.05	ND	0.05	ND	0.05
	4/16/2008***	200.7	ND	0.05	ND	0.05	ND	0.05	ND	0.05
	9/10/2008***	200.7	ND	0.001	0.005	0.001	ND	0.001	0.006	0.002
	3/30/2009***	6010/200.7	0.095	0.0016	ND	0.0029	0.12	0.0005	0.17	0.0044
	9/28/2009***	6010/200.7	ND	0.0016	0.038	0.0029	ND	0.0005	0.0087	0.0044
	3/24/2010***	6010/200.7	0.0048	0.0010	0.072	0.0031	0.0061	0.0017	NA	--
	3/23/2011***	6010/200.7	ND	0.0016	0.060	0.0029	0.0062	0.0007	NA	--
	9/21/2011***	6010/200.7	ND	U 0.0016	0.0053	0.0029	ND	U 0.00072	NA	--
	4/2/2012***	6010/200.7	0.0025	0.0012	0.02	0.0034	0.0019	0.0014	NA	--
	9/18/2012***	6010/200.7	0.0014	0.0012	<b>0.60</b>	0.0034	<b>0.42</b>	0.0014	NA	--
	3/27/2013***	6010/200.7	<b>0.3500</b>	0.0020	<b>0.70</b>	0.0056	<b>0.80</b>	0.0024	NA	--
	9/17/2013***	6010C	0.0033	0.0012	0.021	0.0034	ND	0.0014	NA	--
	3/11/2014***\$	6010B	0.0055	0.0012	ND	0.0022	0.0022	0.0014	NA	--
	9/17/2014***	6010C	0.0054	0.0012	0.066	0.0034	0.0021	0.0014	NA	--
	4/21/2015***	6010C	ND	0.0012	0.030	0.0034	0.0077	0.0014	NA	--
	4/20/2016***	6010C	ND	0.0034	0.076	0.0031	0.015	0.0071	NA	--
	4/10/2017***	6010C	0.0058	0.0034	0.040	0.0031	0.014	0.0071	NA	--
	4/23/2018***	6010C	ND	# 0.010	0.032	0.010	ND	0.010	NA	--
GEC-5 <sup>+</sup> (AOC #4)	4/16/2008***	200.7	ND	0.05	ND	0.05	ND	0.05	ND	0.05
	9/10/2008***	200.7	ND	0.001	0.0008	B 0.001	ND	0.001	0.003	0.002
	3/30/2009***	6010/200.7	ND	0.0016	ND	0.003	ND	0.0005	0.0170	0.0044
	9/29/2009***	6010/200.7	ND	0.0016	ND	0.0029	ND	0.0005	ND	0.0044
NYSDEC Class GA Groundwater Standard			0.05		0.2		0.1		2.0	

Notes:

NS= Not Sampled  
SQL= Sample Quantitation Limit  
NA= Not Analyzed  
ND= Not detected above SQL  
NG = Analytical Method not provided by previous consultant  
Methods = Standard USEPA Methods  
GEC-5<sup>+</sup> = Replaces MW-7 in groundwater sampling plan. MW-7 previously paved over.

B= Analyte is found in the blanks as well as the sample.  
\*\*\* = Sample collected after completion of remedial actions  
- - = Sample quantitation limits not provided or not available.  
E= Detected concentration exceeds calibration curve range.  
T= Analysis by EcoTest due to short holding time  
\*= Duplicate analysis not within control limit.  
**Bold=** Exceeds Standard

\$= In March 2014 these samples were field filtered with a 0.45µm filter prior to collection in error



## **ATTACHMENT 1**

Periodic Review Report Certification Statement and IC/EC Certification Forms



## 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)

1.1.1. 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**



<b>Site No.</b> 152006	<b>Site Details</b>	<b>Box 1</b>
<b>Site Name</b> Jameco Industries, Inc.		
Site Address: 248 Wyandanch Avenue      Zip Code: 11798		
City/Town: Wyandanch		
County: Suffolk		
Site Acreage: 9.4		
Reporting Period: May 31, 2017 to May 31, 2018		
		YES      NO
1. Is the information above correct?	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>
3. Has there been any change of use at the site during this Reporting Period (see 6NYCRR 375-1.11(d))?	<input type="checkbox"/>	<input type="checkbox"/>
4. Have any federal, state, and/or local permits (e.g., building, discharge) been issued for or at the property during this Reporting Period?	<input type="checkbox"/>	<input type="checkbox"/>
<b>If you answered YES to questions 2 thru 4, include documentation or evidence that documentation has been previously submitted with this certification form.</b>		
5. Is the site currently undergoing development?	<input type="checkbox"/>	<input type="checkbox"/>

	<b>Box 2</b>
	YES      NO
6. Is the current site use consistent with the use(s) listed below? Industrial	<input type="checkbox"/> <input type="checkbox"/>
7. Are all ICs/ECs in place and functioning as designed?	<input type="checkbox"/> <input type="checkbox"/>

**IF THE ANSWER TO EITHER QUESTION 6 OR 7 IS NO, sign and date below and DO NOT COMPLETE THE REST OF THIS FORM. Otherwise continue.**

**A Corrective Measures Work Plan must be submitted along with this form to address these issues.**

\_\_\_\_\_  
Signature of Owner, Remedial Party or Designated Representative

\_\_\_\_\_  
Date



**Description of Institutional Controls**

<u>Parcel</u>	<u>Owner</u>	<u>Institutional Control</u>
82-2-37.6	Linzer Products Corp.	Site Management Plan Ground Water Use Restriction Soil Management Plan Landuse Restriction Monitoring Plan O&M Plan IC/EC Plan

An environmental easement is in place which restricts land use, restricts the use of on-site groundwater and provides for the implementation of the Department approved site management plan.

82-2-73.1	Linzer Products Corp.	Ground Water Use Restriction Soil Management Plan Landuse Restriction Monitoring Plan Site Management Plan IC/EC Plan
-----------	-----------------------	--------------------------------------------------------------------------------------------------------------------------------------

An environmental easement is in place which restricts land use, restricts the use of on-site groundwater and provides for the implementation of the Department approved site management plan.

**Description of Engineering Controls**

<u>Parcel</u>	<u>Engineering Control</u>
82-2-37.6	Cover System Fencing/Access Control

Subsurface soils which were contaminated with metals from discharges of plating solutions were excavated and disposed of off-site at a permitted disposal facility. Those areas were backfilled with certified clean fill material. Residual metals in subsurface soil were treated in-situ via solidification/stabilization. Residual SVOCs in soil and groundwater were treated in-situ via chemical oxidation. Access to the site is restricted by perimeter fencing.

82-2-73.1	Cover System Fencing/Access Control
-----------	----------------------------------------

Subsurface soils which were contaminated with metals from discharges of plating solutions were excavated and disposed of off-site at a permitted disposal facility. Those areas were backfilled with certified clean fill material. Residual metals in subsurface soil were treated in-situ via solidification/stabilization. Residual SVOCs in soil and groundwater were treated in-situ via chemical oxidation. Access to the site is restricted by perimeter fencing.



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

1. I certify by checking "YES" below that:

a) the Periodic Review report and all attachments were prepared under the direction of, and reviewed by, the party making the certification;

b) to the best of my knowledge and belief, the work and conclusions described in this certification are in accordance with the requirements of the site remedial program, and generally accepted engineering practices; and the information presented is accurate and complete.

YES NO

☐ ☐

2. If this site has an IC/EC Plan (or equivalent as required in the Decision Document), for each Institutional or Engineering control listed in Boxes 3 and/or 4, I certify by checking "YES" below that all of the following statements are true:

(a) the Institutional Control and/or Engineering Control(s) employed at this site is unchanged since the date that the Control was put in-place, or was last approved by the Department;

(b) nothing has occurred that would impair the ability of such Control, to protect public health and the environment;

(c) access to the site will continue to be provided to the Department, to evaluate the remedy, including access to evaluate the continued maintenance of this Control;

(d) nothing has occurred that would constitute a violation or failure to comply with the Site Management Plan for this Control; and

(e) if a financial assurance mechanism is required by the oversight document for the site, the mechanism remains valid and sufficient for its intended purpose established in the document.

YES NO

☐ ☐

**IF THE ANSWER TO QUESTION 2 IS NO, sign and date below and  
DO NOT COMPLETE THE REST OF THIS FORM. Otherwise continue.**

**A Corrective Measures Work Plan must be submitted along with this form to address these issues.**

\_\_\_\_\_  
Signature of Owner, Remedial Party or Designated Representative

\_\_\_\_\_  
Date



IC CERTIFICATIONS  
SITE NO. 152006

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 LEONARD ZICHLIN at LINZER PRODUCTS CORP  
248 WYANDANCH AVE, WEST BABYLON, NY  
print name print business address

am certifying as OWNER (Owner or Remedial Party)

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

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

\_\_\_\_\_  
Date



IC/EC CERTIFICATIONS

Box 7

Professional Engineer 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.

Matthew E. Hackman

at

97 Asylum Road, Warwick, RI

print name

print business address

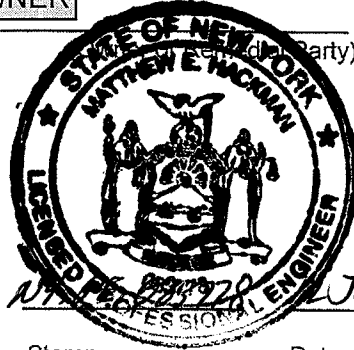
am certifying as a Professional Engineer for the

OWNER

Party)



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



Stamp  
(Required for PE)

Date



**ATTACHMENT 2:**

Inspection Photographs, IE/EC Inspection Forms, and April 23, 2018 Monitoring Well Purge Data  
Evaluation



**Former Jameco Facility  
Site Inspection Photos: 10-18-2017**

**Photo 1:** (10-18-2017) AOC 3. View looking west from southwest corner of AOC-1.



**Photo 1**



**Former Jameco Facility  
Site Inspection Photos: 10-18-2017**

**Photo 2:** (10-18-2017) AOC 1. Taken from south side of AOC 1 looking north.



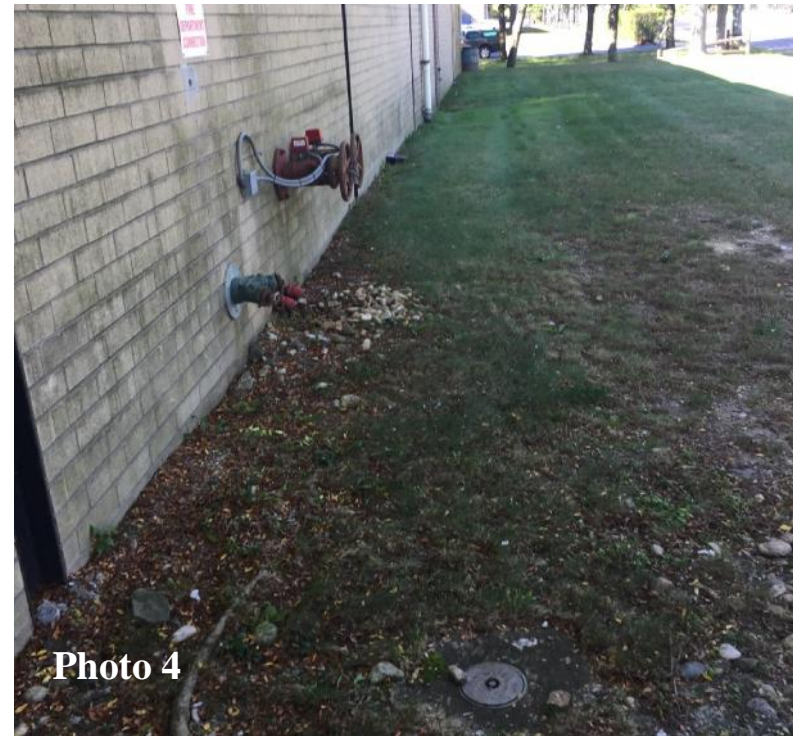


**Former Jameco Facility  
Site Inspection Photos: 10-18-2017**

**Photo 3** (10-18-2017) AOC 4. Interior portion of AOC 4 located in Warehouse area. Looking west.



**Photo 4:** (10-18-2017) AOC 4. Exterior portion of AOC 4. On north side of Site building. Looking west.





**Former Jameco Facility  
Site Inspection Photos: 10-18-2017**



**Photo 5:** (10-18-2017) AOC 2&5. View from southeast corner of AOC 2 and 5. Production area to north.



**Semi-annual Site Inspection**  
**And Groundwater Sampling**  
**Former Jameco Facility, Wyandanch, NY**

Inspector 1: Andrew Foley \_\_\_\_\_  
Inspector 2: \_\_\_\_\_

Dates on Site: 10-18-2017  
Start time: \_\_\_\_\_ Finish time: \_\_\_\_\_

**Groundwater Sampling**

**-Site Management plan has been amended to include only one annual round of groundwater monitoring. The NYSDEC had officially approved this change in a letter dated 3-31-2016. GEC received verbal approval to make this change during the summer of 2015. Groundwater monitoring will take place in April annually.**

**Site Inspection**

Each AOC to be inspected is briefly described below but GEC inspectors should refer to the Nelson & Pope survey plan of the Site for accurate AOC locations.

**AOC-1**, parking area east of loading dock

Date and time of inspection 10-18-2017

Condition of surface integrity. No changes - OK

Any observed apparent subsurface work in AOC? NO

If yes, describe. \_\_\_\_\_

Any work proposed or anticipated by plant personnel? None planned in this area.

Describe Work is in the permitting process to expand the building to the east. New pavement may be laid on top of a small portion of AOC-1, but no subsurface work is expected.

**AOCs-2&5**, Plant interior enclosed by columns P6, L6K6, L2 and Q2

Date and time of inspection 10-18-2017

Condition of surface integrity. No changes - OK

Any observed apparent subsurface work in AOC? NO

If yes, describe. \_\_\_\_\_

Any work proposed or anticipated by plant personnel? None planned in this area.

Describe \_\_\_\_\_



**AOC-4**, Area of plant including stockroom and outside lawn out to sidewalk.

Date and time of inspection 10-18-2017

Condition of surface integrity. No changes - OK

---

Any observed apparent subsurface work in AOC? NO

If yes, describe. \_\_\_\_\_

---

Any work proposed or anticipated by plant personnel? None planned in this area.

Describe \_\_\_\_\_

---

**AOC-3**, Square parcel extending south of south property line and enclosed by chainlink fence.

Date and time of inspection 10-18-2017

Condition of surface integrity. No changes - OK

---

Any observed apparent subsurface work in AOC? NO

If yes, describe. \_\_\_\_\_

---

Any work proposed or anticipated by plant personnel? None planned in this area.

Describe \_\_\_\_\_

---

### **Interviews:**

Briefly discuss with knowledgeable plant personnel (**Len Zichlin** (comptroller)).

Describe below.

Subsurface construction or utility work: Possible plans to expand Site building to east – not affecting any AOC

Exploration for or use of groundwater under property for process or potable purposes:

None Planned

---

Anticipated subsurface work within soil or groundwater beneath Site property: Possible plans to expand Site building to east – not affecting any AOC



**Former Jameco Facility  
Site Inspection Photos: 4-23-2018**

**Photo 1:** (4-23-2018) AOC 3. View looking west from southwest corner of AOC-1.





**Former Jameco Facility  
Site Inspection Photos: 4-23-2018**

**Photo 2:** (4-23-2018) AOC 1. Taken from south side of AOC 1 looking north.



Photo 2



**Former Jameco Facility  
Site Inspection Photos: 4-23-2018**

**Photo 3** (4-23-2018) AOC 4. Interior portion of AOC 4 located in Warehouse area. Looking west.



**Photo 3**

**Photo 4:** (4-23-2018) AOC 4. Exterior portion of AOC 4. On north side of Site building. Looking west.



**Photo 4**



**Former Jameco Facility  
Site Inspection Photos: 4-23-2018**



**Photo 5:** (4-23-2018) AOC 2&5. View from south side of AOC 2 and 5. Production area to north.



**Semi-annual Site Inspection**  
**And Groundwater Sampling**  
**Former Jameco Facility, Wyandanch, NY**

Inspector 1: Andrew Foley \_\_\_\_\_  
Inspector 2: \_\_\_\_\_

Dates on Site: 4-23-2018  
Start time: \_\_\_\_\_ Finish time: \_\_\_\_\_

**Groundwater Sampling**

See attached for information regarding groundwater sampling

**Site Inspection**

Each AOC to be inspected is briefly described below but GEC inspectors should refer to the Nelson & Pope survey plan of the Site for accurate AOC locations.

**AOC-1**, parking area east of loading dock

Date and time of inspection 4-23-2018

Condition of surface integrity. No changes - OK

Any observed apparent subsurface work in AOC? NO

If yes, describe. \_\_\_\_\_

Any work proposed or anticipated by plant personnel? None planned in this area.

Describe Work is in the permitting process to expand the building to the east. New pavement may be laid on top of a small portion of AOC-1, but no subsurface work is expected.

**AOCs-2&5**, Plant interior enclosed by columns P6, L6K6, L2 and Q2

Date and time of inspection 4/23/2018

Condition of surface integrity. No changes - OK

Any observed apparent subsurface work in AOC? NO

If yes, describe. \_\_\_\_\_

Any work proposed or anticipated by plant personnel? None planned in this area.

Describe \_\_\_\_\_

**AOC-4**, Area of plant including stockroom and outside lawn out to sidewalk.

Date and time of inspection 4-23-2018

Condition of surface integrity. No changes - OK



Any observed apparent subsurface work in AOC? NO

If yes, describe. \_\_\_\_\_  
\_\_\_\_\_

Any work proposed or anticipated by plant personnel? None planned in this area.

Describe \_\_\_\_\_  
\_\_\_\_\_

**AOC-3**, Square parcel extending south of south property line and enclosed by chainlink fence.

Date and time of inspection 4-23-2018

Condition of surface integrity. No changes - OK

Any observed apparent subsurface work in AOC? NO

If yes, describe. \_\_\_\_\_  
\_\_\_\_\_

Any work proposed or anticipated by plant personnel? None planned in this area.

Describe \_\_\_\_\_  
\_\_\_\_\_

### **Interviews:**

Briefly discuss with knowledgeable plant personnel (**Len Zichlin** (comptroller)).

Describe below.

Subsurface construction or utility work: Possible plans to expand Site building to east – not affecting any AOC

Exploration for or use of groundwater under property for process or potable purposes:

None Planned

Anticipated subsurface work within soil or groundwater beneath Site property: Possible plans to expand Site building to east – not affecting any AOC



**Monitoring Well Purge Data Evaluation**  
**Annual GW Sampling 4-23,24-2018**  
Former Jameco Facility  
West Babylon, New York

<b>MW-2</b> DTW = 8.71'						
Start Purge @ 1335						
<b>Time</b>	<b>Temp</b> (°C)	<b>Specific Conductivity</b> us/cm	<b>Dissolved Oxygen</b> (mg/L)	<b>pH</b>	<b>ORP</b>	<b>Turbidity</b> (NTU)
1344	14.95	250	0.22	6.6	85	
1348	14.89	249	0.18	6.59	74	
1353	14.92	250	0.15	6.58	62	
1357	14.92	249	0.15	6.57	60	
1400	14.97	249	0.14	6.57	58	2.55
0% 0% -7% 0% -3%						
Collect Sample @ 1403 DTW at end of sampling= Not Measured						
For Total Nickel						
No odor or sheen						
<b>MW-3</b> DTW=11.53						
Start Purge @ 1220						
<b>Time</b>	<b>Temp</b> (°C)	<b>Specific Conductivity</b> us/cm	<b>Dissolved Oxygen</b> (mg/L)	<b>pH</b>	<b>ORP</b>	<b>Turbidity</b> (NTU)
1230	10.08	129	4.20	6.36	108	
1233	10.17	127	4.08	6.43	106	
1237	10.21	129	4.01	6.47	105	
1243	10.4	125	3.89	6.48	108	
1247	10.34	123	3.84	6.47	105	
1250	10.35	125	3.83	6.46	105	3.98
1% 200% -1% -1% 0%						
Collect Sample @ 1253 DTW at end of sampling= Not Measured						
For Total Nickel 1,4-Dioxane						
No odor or sheen						
<b>MW-4</b> DTW=9.74						
Start Purge @ 1210						
<b>Time</b>	<b>Temp</b> (°C)	<b>Specific Conductivity</b> us/cm	<b>Dissolved Oxygen</b> (mg/L)	<b>pH</b>	<b>ORP</b>	<b>Turbidity</b> (NTU)
1217	9.2	144	1.3	6.67	111	
1221	9.23	136	2.21	6.7	112	
1224	9.25	137	1.91	6.74	112	
1227	9.29	134	1.69	6.79	111	
1231	9.66	134	1.5	6.9	98	
1234	9.88	134	1.42	6.87	96	
1237	9.74	134	1.41	6.86	94.2	1.03
1% 0% 1% 0% 2%						
Collect Sample @ 1240 DTW at end of sampling= Not Measured						
For Total Nickel						
No odor or sheen						
<b>MW-SR</b> DTW =8.01						
Start Purge @ 1048						
<b>Time</b>	<b>Temp</b> (°C)	<b>Specific Conductivity</b> us/cm	<b>Dissolved Oxygen</b> (mg/L)	<b>pH</b>	<b>ORP</b>	<b>Turbidity</b> (NTU)
1100	10.47	600	2	5.93		
1103	10.44	589	1.98	5.85		
1106	10.42	583	1.99	5.83		
1109	10.44	578	1.99	5.81		
1112	10.38	582	2.02	5.8		
1115	10.31	585	2.07	5.79		
1118	10.25	587	2.11	5.77		
1121	10.4	585	1.96	5.77	120	
1124	10.28	580	1.95	5.77	121	1.88
-1% -1% -1% 0% 1%						
Collect Sample @ 1130 DTW at end of sampling= Not Measured						
For Total Nickel						
No odor or sheen						

**EPA Low flow stabilization**  
Turbidity <5NTU or 10%  
DO <0.5 mg/L or 10%  
Specific Conductivity **3%**  
Temp 3%  
pH 0.1  
ORP +10milivolts

**GEC SOP**  
3 consecutive readings within 20% for all parameters



## West Babylon, New York

<b>MW-10 (deep)</b>		DTW =8.57'		4/23/2018		
Start Purge @ 1702						
Time	Temp (°C)	Specific Conductivity us/cm	Dissolved Oxygen (mg/L)	pH	ORP	Turbidity (NTU)
1712	15.87	271	0.08	5.83	43	
1715	18.85	271	0.08	5.88	41	
1718	15.82	271	0.07	5.89	39	
1721	15.8	271	0.07	5.89	37	
1724	15.81	271	0.07	5.90	34	1.53
	0%	0%	0%	0%	-9%	
Collect Sample @ 1740 DTW at end of sampling= not measured For Total Copper, Chromium and Nickel						
Water clear w/ no sheen or distinctive odor						
<b>MW-12 (shallow)</b>		DTW =8.47'		4/23/2018		
Start Purge @ 1702						
Time	Temp (°C)	Specific Conductivity us/cm	Dissolved Oxygen (mg/L)	pH	ORP	Turbidity (NTU)
1712	16.89	226	0.35	6.09	67	
1715	16.9	224	0.37	6.07	67	
1718	16.92	225	0.41	6.06	68	
1721	16.91	224	0.38	6.05	69	
1724	16.92	223	0.4	6	72	5
	0%	0%	5%	-1%	4%	
Collect Sample @ 1733 DTW at end of sampling= Not Measured For Total Copper, Chromium and Nickel MS and MSD						
No sheen or odor detected						
<b>MW-19</b>		LNAPL Thickness = 0.04'		4/23/2018		
Not sampled due to the presence of LNAPL						
<b>MW-20</b>		DTW =8.57'		4/24/2018		
Start Purge @ 0604						
Time	Temp (°C)	Specific Conductivity us/cm	Dissolved Oxygen (mg/L)	pH	ORP	Turbidity (NTU)
0614	15.55	278	1.61	5.43	213	NA
0619	14.17	269	1.41	5.4	216	
0622	15.23	277	1.21	5.51	211	
0625	14.59	278	1.17	5.63	204	
0628	14.18	278	1.12	5.52	212	1.02
	-3%	0%	-4%	-2%	4%	
Collect Sample @ 0630 DTW at end of sampling= Not Measured For PAHs (8270C)						
Water clear w/ no sheen or distinctive odor						
<b>MW-21</b>		DTW =NA		4/24/2018		
Start Purge @ 0603						
Time	Temp (°C)	Specific Conductivity us/cm	Dissolved Oxygen (mg/L)	pH	ORP	Turbidity (NTU)
0613	15.03	669	0.57	5.94	106	NA
0617	15.10	675	0.43	5.96	103	
0620	15.11	672	0.38	5.97	102	
0623	15.11	667	0.34	5.98	96	
0626	15.11	658	0.32	5.99	84	1.41
	0%	-1%	-6%	0%	-14%	
Collect Sample @ 0633 DTW at end of sampling= Not measured For PAHs (8270C)						
Water clear w/ no sheen or distinctive odor						



## West Babylon, New York

<b>MW-23</b>		DTW = 8.54		<b>4/23/2018</b>		
Start Purge @ 1553						
<b>Time</b>	<b>Temp (°C)</b>	<b>Specific Conductivity us/cm</b>	<b>Dissolved Oxygen (mg/L)</b>	<b>pH</b>	<b>ORP</b>	<b>Turbidity (NTU)</b>
1545	10.65	174	0.20	4.8	178	
1550	10.65	187	0.22	4.87	181	
1553	10.62	187	0.20	4.87	184	
1553	10.61	188	0.17	4.87	188	
1559	10.57	188	0.18	4.86	191	6.45
	0%	0%	6%	0%	2%	
Collect Sample @ 1643 DTW at end of sampling= Not measured						
For PAHs (8270C) and 1,4 Dioxane Low Level						
MS and MS Dup for 8270C and 1,4-Dioxane						
purge 1.5 G						
Water clear w/ no sheen or distinctive odor						
<b>MW-26R</b>		DTW =8.87		<b>4/23/2018</b>		
Start Purge @ 1421						
<b>Time</b>	<b>Temp (°C)</b>	<b>Specific Conductivity us/cm</b>	<b>Dissolved Oxygen (mg/L)</b>	<b>pH</b>	<b>ORP</b>	<b>Turbidity (NTU)</b>
1430	13.45	513	0.99	6.17	59	
1434	13.48	507	0.92	6.17	59	
1437	13.4	510	0.82	6.18	57	
1440	13.46	541	0.76	6.19	57	
1443	13.38	529	0.69	6.19	57	4.46
	-1%	-2%	-10%	0%	0%	
Collect Sample @ 1448 DTW at end of sampling= Not measured						
For Nickel, Copper and Chormium						
Water clear w/ no sheen or distinctive odor						



**ATTACHMENT 3**

Laboratory Certificate of Analysis



May 9, 2018

Mike Bradley  
Goldman Environmental  
60 Brooks Drive  
Braintree, MA 02184

Project Location: W. Babylon, NY  
Client Job Number:  
Project Number: 1744-Linzer  
Laboratory Work Order Number: 18D1212

Enclosed are results of analyses for samples received by the laboratory on April 25, 2018. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, reading "Jessica Hoffman", is displayed on a light blue rectangular background.

Jessica L. Hoffman  
Project Manager



## Table of Contents

Sample Summary	4
Case Narrative	5
Sample Results	9
18D1212-01	9
18D1212-02	10
18D1212-03	13
18D1212-04	14
18D1212-05	17
18D1212-06	19
18D1212-07	20
18D1212-08	22
18D1212-09	24
18D1212-10	27
18D1212-11	28
18D1212-12	29
Sample Preparation Information	30
QC Data	31
Semivolatile Organic Compounds by GC/MS	31
B202110	31
1,4-Dioxane by isotope dilution GC/MS	36
B201844	36
B202067	36
Miscellaneous Organic Analyses	37
B201871	37
Metals Analyses (Dissolved)	39



## Table of Contents (continued)

B201857	39
Flag/Qualifier Summary	40
Certifications	41
Chain of Custody/Sample Receipt	44



39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

Goldman Environmental  
60 Brooks Drive  
Braintree, MA 02184  
ATTN: Mike Bradley

REPORT DATE: 5/9/2018

PURCHASE ORDER NUMBER: 1744-7090

PROJECT NUMBER: 1744-Linzer

# ANALYTICAL SUMMARY

WORK ORDER NUMBER: 18D1212

The results of analyses performed on the following samples submitted to the CON-TEST Analytical Laboratory are found in this report.

PROJECT LOCATION: W. Babylon, NY

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
MW-2	18D1212-01	Ground Water		SW-846 6010C-D	
MW-3	18D1212-02	Ground Water		SOP 434-PFAAS	
				SW-846 6010C-D	
				SW-846 8270D	
MW-4	18D1212-03	Ground Water		SW-846 6010C-D	
MW-5R	18D1212-04	Ground Water		SOP 434-PFAAS	
				SW-846 6010C-D	
				SW-846 8270D	
MW-10	18D1212-05	Ground Water		SW-846 6010C-D	
				SW-846 8270D	
MW-12	18D1212-06	Ground Water		SW-846 6010C-D	
MW-20	18D1212-07	Ground Water		SW-846 8270D	
MW-21	18D1212-08	Ground Water		SW-846 8270D	
MW-23	18D1212-09	Ground Water		SW-846 8270D	
MW-26R	18D1212-10	Ground Water		SW-846 6010C-D	
Equipment Blank	18D1212-11	Equipment Blank Water		SOP 434-PFAAS	
Field Dup	18D1212-12	Ground Water		SOP 434-PFAAS	



#### **CASE NARRATIVE SUMMARY**

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.



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**SOP 434-PFAAS****Qualifications:****L-01**

Laboratory fortified blank /laboratory control sample recovery outside of control limits. Data validation is not affected since all results are "not detected" for all samples in this batch for this compound and bias is on the high side.

**Analyte & Samples(s) Qualified:****8:2 Fluorotelomersulfonate (8:2 F1**

B201871-BS1

**L-05**

Laboratory fortified blank/laboratory control sample recovery is outside of control limits. Reported value for this compound is likely to be biased on the high side.

**Analyte & Samples(s) Qualified:****6:2 Fluorotelomersulfonate (6:2 F1**

B201871-BS1

**MS-11**

Matrix spike recovery outside of control limits. Possibility of sample matrix effects that lead to a high bias for reported result or non-homogeneous sample aliquots cannot be eliminated.

**Analyte & Samples(s) Qualified:****6:2 Fluorotelomersulfonate (6:2 F1**

B201871-MS2, B201871-MSD2

**Perfluoroheptanesulfonic acid (PF1**

B201871-MSD2

**Perfluorohexanoic acid (PFHxA)**

B201871-MS2, B201871-MSD2

**Perfluorooctanesulfonic acid (PFO**

B201871-MS2, B201871-MSD2

**MS-15**

Matrix spike and matrix spike duplicate recoveries are outside of control limits. Data validation is not affected since results for this compound in this sample are "not detected", and recovery bias is on the high side.

**Analyte & Samples(s) Qualified:****NEtFOSAA**

B201871-MS2

**Perfluorodecanesulfonic acid (PFD**

B201871-MSD2

**Perfluorododecanoic acid (PFDoA)**

B201871-MS2, B201871-MSD2

**Perfluorooctanesulfonamide (FOS:**

B201871-MS2, B201871-MSD2

**Perfluorotetradecanoic acid (PFTA**

B201871-MS2, B201871-MSD2

**Perfluorotridecanoic acid (PFTrD:**

B201871-MS2, B201871-MSD2

**Perfluoroundecanoic acid (PFUnA)**

B201871-MS2, B201871-MSD2

**MS-22**

Either matrix spike or MS duplicate is outside of control limits, but the other is within limits. RPD between the two MS/MSD results is within method specified criteria.

**Analyte & Samples(s) Qualified:****8:2 Fluorotelomersulfonate (8:2 F1**

B201871-MSD2

**Perfluorobutanoic acid (PFBA)**

B201871-MS2

**MS-23**

Either matrix spike or MS duplicate is outside of control limits, but the other is within limits. RPD between the two MS/MSD results is outside of the method specified criteria. Reduced precision anticipated for any reported result for this compound.

**Analyte & Samples(s) Qualified:****NEtFOSAA**

B201871-MSD2

**Perfluorohexanesulfonic acid (PFH**

B201871-MSD2



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**S-26**

Surrogate outside of control limits.

**Analyte & Samples(s) Qualified:****d5-NEtFOSAA**B201871-BS1

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**V-06**

Continuing calibration did not meet method specifications and was biased on the high side for this compound. Reported result is estimated.

**Analyte & Samples(s) Qualified:****6:2 Fluorotelomersulfonate (6:2 FT**S022942-CCV2

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**V-17**

Internal standard area &lt;50% of associated calibration standard internal standard area. Reanalysis yielded similar internal standard non-conformance.

**Analyte & Samples(s) Qualified:****13C-PFOS**

18D1212-11[Equipment Blank]

**SW-846 8270D****Qualifications:**

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**L-07**

Either laboratory fortified blank/laboratory control sample or duplicate recovery is outside of control limits, but the other is within limits. RPD between the two LFB/LCS results is within method specified criteria.

**Analyte & Samples(s) Qualified:****1,4-Dioxane**B201844-BSD1

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**L-07A**

Either laboratory fortified blank/laboratory control sample or duplicate recovery is outside of control limits, but the other is within limits. RPD outside of control limits. Reduced precision anticipated for any reported result for this compound.

**Analyte & Samples(s) Qualified:****Benzidine**B202110-BS1

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**R-05**

Laboratory fortified blank duplicate RPD is outside of control limits. Reduced precision is anticipated for any reported value for this compound.

**Analyte & Samples(s) Qualified:****Benzidine**18D1212-07[MW-20], 18D1212-08[MW-21], 18D1212-09[MW-23], B202110-BLK1, B202110-BSD1

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**S-23**

Surrogate recovery outside of control limits in BS/MS spiked sample, all reported analytes are within control criteria, data not significantly affected.

**Analyte & Samples(s) Qualified:****1,4-Dioxane-d8**B201844-MSD2

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**S-26**

Surrogate outside of control limits.

**Analyte & Samples(s) Qualified:****1,4-Dioxane-d8**B201844-BS1, B201844-BSD1

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**V-04**

Initial calibration did not meet method specifications. Compound was calibrated using a response factor where %RSD is outside of method specified criteria. Reported result is estimated.

**Analyte & Samples(s) Qualified:****Benzidine**18D1212-07[MW-20], 18D1212-08[MW-21], 18D1212-09[MW-23], B202110-BLK1, B202110-BS1

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**V-05**

Continuing calibration did not meet method specifications and was biased on the low side for this compound. Reported result is estimated.

**Analyte & Samples(s) Qualified:****Benzidine**

18D1212-07[MW-20], 18D1212-08[MW-21], 18D1212-09[MW-23], B202110-BLK1, B202110-BS1, B202110-BSD1

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**V-16**

Response factor is less than method specified minimum acceptable value. Reduced precision and accuracy may be associated with reported result.

**Analyte & Samples(s) Qualified:****Pentachloronitrobenzene**

18D1212-07[MW-20], 18D1212-08[MW-21], 18D1212-09[MW-23], B202110-BLK1, B202110-BS1, B202110-BSD1

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**V-19**

Initial calibration did not meet method specifications. Compound was calibrated using linear regression with correlation coefficient <0.99. Reported result is estimated.

**Analyte & Samples(s) Qualified:****2,4-Dinitrophenol**

18D1212-07[MW-20], 18D1212-08[MW-21], 18D1212-09[MW-23], B202110-BLK1, B202110-BS1, B202110-BSD1

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**V-34**

Initial calibration verification (ICV) did not meet method specifications and was biased on the low side for this compound. Reported result is estimated.

**Analyte & Samples(s) Qualified:****4-Chloroaniline**

18D1212-07[MW-20], 18D1212-08[MW-21], 18D1212-09[MW-23], B202110-BLK1

**SW-846 6010C/D SW-846 6020A/B**

For NC, Metals methods SW-846 6010D and SW-846 6020B are followed, and for all other states methods SW-846 6010C and SW-846 6020A are followed.

The results of analyses reported only relate to samples submitted to the Con-Test Analytical Laboratory for testing.

I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.



Lisa A. Worthington  
Project Manager



39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

Project Location: W. Babylon, NY

Sample Description:

Work Order: 18D1212

Date Received: 4/25/2018

Field Sample #: MW-2

Sampled: 4/23/2018 14:03

Sample ID: 18D1212-01

Sample Matrix: Ground Water

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**Metals Analyses (Dissolved)**

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Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Nickel	0.35	0.010	mg/L	1		SW-846 6010C-D	4/26/18	4/27/18 16:07	QNW



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Project Location: W. Babylon, NY

Sample Description:

Work Order: 18D1212

Date Received: 4/25/2018

Field Sample #: MW-3

Sampled: 4/23/2018 12:53

Sample ID: 18D1212-02

Sample Matrix: Ground Water

## 1,4-Dioxane by isotope dilution GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
1,4-Dioxane	ND	0.20	µg/L	1		SW-846 8270D	4/26/18	4/30/18 17:14	IMR
Surrogates	% Recovery	Recovery Limits			Flag/Qual				
1,4-Dioxane-d8	29.2	15-110						4/30/18 17:14	



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Project Location: W. Babylon, NY

Sample Description:

Work Order: 18D1212

Date Received: 4/25/2018

Field Sample #: MW-3

Sampled: 4/23/2018 12:53

Sample ID: 18D1212-02

Sample Matrix: Ground Water

### Miscellaneous Organic Analyses

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanesulfonic acid (PFBS)	2.4	2.0	ng/L	1		SOP 434-PFAAS	4/30/18	5/8/18 20:10	KAF
Perfluorohexanoic acid (PFHxA)	3.1	2.0	ng/L	1		SOP 434-PFAAS	4/30/18	5/8/18 20:10	KAF
Perfluoroheptanoic acid (PFHpA)	2.1	2.0	ng/L	1		SOP 434-PFAAS	4/30/18	5/8/18 20:10	KAF
Perfluorobutanoic acid (PFBA)	ND	3.0	ng/L	1		SOP 434-PFAAS	4/30/18	5/8/18 20:10	KAF
Perfluorodecanesulfonic acid (PFDS)	ND	3.0	ng/L	1		SOP 434-PFAAS	4/30/18	5/8/18 20:10	KAF
Perfluoroheptanesulfonic acid (PFHpS)	3.2	3.0	ng/L	1		SOP 434-PFAAS	4/30/18	5/8/18 20:10	KAF
Perfluorooctanesulfonamide (FOSA)	ND	3.0	ng/L	1		SOP 434-PFAAS	4/30/18	5/8/18 20:10	KAF
Perfluoropentanoic acid (PFPeA)	4.3	3.0	ng/L	1		SOP 434-PFAAS	4/30/18	5/8/18 20:10	KAF
6:2 Fluorotelomersulfonate (6:2 FTS)	ND	3.0	ng/L	1		SOP 434-PFAAS	4/30/18	5/8/18 20:10	KAF
8:2 Fluorotelomersulfonate (8:2 FTS)	ND	3.0	ng/L	1		SOP 434-PFAAS	4/30/18	5/8/18 20:10	KAF
Perfluorohexanesulfonic acid (PFHxS)	ND	2.0	ng/L	1		SOP 434-PFAAS	4/30/18	5/8/18 20:10	KAF
Perfluorooctanoic acid (PFOA)	4.6	2.0	ng/L	1		SOP 434-PFAAS	4/30/18	5/8/18 20:10	KAF
Perfluorooctanesulfonic acid (PFOS)	89	2.0	ng/L	1		SOP 434-PFAAS	4/30/18	5/8/18 20:10	KAF
Perfluorononanoic acid (PFNA)	ND	2.0	ng/L	1		SOP 434-PFAAS	4/30/18	5/8/18 20:10	KAF
Perfluorodecanoic acid (PFDA)	ND	2.0	ng/L	1		SOP 434-PFAAS	4/30/18	5/8/18 20:10	KAF
NMeFOSAA	ND	2.0	ng/L	1		SOP 434-PFAAS	4/30/18	5/8/18 20:10	KAF
Perfluoroundecanoic acid (PFUnA)	ND	2.0	ng/L	1		SOP 434-PFAAS	4/30/18	5/8/18 20:10	KAF
NEtFOSAA	ND	2.0	ng/L	1		SOP 434-PFAAS	4/30/18	5/8/18 20:10	KAF
Perfluorododecanoic acid (PFDoA)	ND	2.0	ng/L	1		SOP 434-PFAAS	4/30/18	5/8/18 20:10	KAF
Perfluorotridecanoic acid (PFTrDA)	ND	2.0	ng/L	1		SOP 434-PFAAS	4/30/18	5/8/18 20:10	KAF
Perfluorotetradecanoic acid (PFTA)	ND	2.0	ng/L	1		SOP 434-PFAAS	4/30/18	5/8/18 20:10	KAF
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
13C-PFHxA	130	70-130							
13C-PFDA	86.0	70-130							
d5-NEtFOSAA	96.0	70-130							



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Project Location: W. Babylon, NY

Sample Description:

Work Order: 18D1212

Date Received: 4/25/2018

Field Sample #: MW-3

Sampled: 4/23/2018 12:53

Sample ID: 18D1212-02

Sample Matrix: Ground Water

**Metals Analyses (Dissolved)**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Nickel	0.076	0.010	mg/L	1		SW-846 6010C-D	4/26/18	4/27/18 16:13	QNW



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Project Location: W. Babylon, NY

Sample Description:

Work Order: 18D1212

Date Received: 4/25/2018

Field Sample #: MW-4

Sampled: 4/23/2018 12:40

Sample ID: 18D1212-03

Sample Matrix: Ground Water

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**Metals Analyses (Dissolved)**

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Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Nickel	0.24	0.010	mg/L	1		SW-846 6010C-D	4/26/18	4/27/18 16:19	QNW



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Project Location: W. Babylon, NY

Sample Description:

Work Order: 18D1212

Date Received: 4/25/2018

Field Sample #: MW-5R

Sampled: 4/23/2018 11:30

Sample ID: 18D1212-04

Sample Matrix: Ground Water

## 1,4-Dioxane by isotope dilution GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
1,4-Dioxane	ND	0.20	µg/L	1		SW-846 8270D	4/26/18	4/30/18 17:34	IMR
Surrogates	% Recovery	Recovery Limits			Flag/Qual				
1,4-Dioxane-d8	20.0	15-110						4/30/18 17:34	



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Project Location: W. Babylon, NY

Sample Description:

Work Order: 18D1212

Date Received: 4/25/2018

Field Sample #: MW-5R

Sampled: 4/23/2018 11:30

Sample ID: 18D1212-04

Sample Matrix: Ground Water

### Miscellaneous Organic Analyses

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanesulfonic acid (PFBS)	8.9	2.0	ng/L	1		SOP 434-PFAAS	4/30/18	5/8/18 19:40	KAF
Perfluorohexanoic acid (PFHxA)	14	2.0	ng/L	1		SOP 434-PFAAS	4/30/18	5/8/18 19:40	KAF
Perfluoroheptanoic acid (PFHpA)	7.2	2.0	ng/L	1		SOP 434-PFAAS	4/30/18	5/8/18 19:40	KAF
Perfluorobutanoic acid (PFBA)	4.0	3.0	ng/L	1		SOP 434-PFAAS	4/30/18	5/8/18 19:40	KAF
Perfluorodecanesulfonic acid (PFDS)	ND	3.0	ng/L	1		SOP 434-PFAAS	4/30/18	5/8/18 19:40	KAF
Perfluoroheptanesulfonic acid (PFHpS)	16	3.0	ng/L	1		SOP 434-PFAAS	4/30/18	5/8/18 19:40	KAF
Perfluorooctanesulfonamide (FOSA)	ND	3.0	ng/L	1		SOP 434-PFAAS	4/30/18	5/8/18 19:40	KAF
Perfluoropentanoic acid (PFPeA)	13	3.0	ng/L	1		SOP 434-PFAAS	4/30/18	5/8/18 19:40	KAF
6:2 Fluorotelomersulfonate (6:2 FTS)	ND	3.0	ng/L	1		SOP 434-PFAAS	4/30/18	5/8/18 19:40	KAF
8:2 Fluorotelomersulfonate (8:2 FTS)	ND	3.0	ng/L	1		SOP 434-PFAAS	4/30/18	5/8/18 19:40	KAF
Perfluorohexanesulfonic acid (PFHxS)	51	2.0	ng/L	1		SOP 434-PFAAS	4/30/18	5/8/18 19:40	KAF
Perfluorooctanoic acid (PFOA)	15	2.0	ng/L	1		SOP 434-PFAAS	4/30/18	5/8/18 19:40	KAF
Perfluorooctanesulfonic acid (PFOS)	96	2.0	ng/L	1		SOP 434-PFAAS	4/30/18	5/8/18 19:40	KAF
Perfluorononanoic acid (PFNA)	ND	2.0	ng/L	1		SOP 434-PFAAS	4/30/18	5/8/18 19:40	KAF
Perfluorodecanoic acid (PFDA)	ND	2.0	ng/L	1		SOP 434-PFAAS	4/30/18	5/8/18 19:40	KAF
NMeFOSAA	ND	2.0	ng/L	1		SOP 434-PFAAS	4/30/18	5/8/18 19:40	KAF
Perfluoroundecanoic acid (PFUnA)	ND	2.0	ng/L	1		SOP 434-PFAAS	4/30/18	5/8/18 19:40	KAF
NEtFOSAA	ND	2.0	ng/L	1		SOP 434-PFAAS	4/30/18	5/8/18 19:40	KAF
Perfluorododecanoic acid (PFDoA)	ND	2.0	ng/L	1		SOP 434-PFAAS	4/30/18	5/8/18 19:40	KAF
Perfluorotridecanoic acid (PFTrDA)	ND	2.0	ng/L	1		SOP 434-PFAAS	4/30/18	5/8/18 19:40	KAF
Perfluorotetradecanoic acid (PFTA)	ND	2.0	ng/L	1		SOP 434-PFAAS	4/30/18	5/8/18 19:40	KAF
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
13C-PFHxA	99.8	70-130							
13C-PFDA	90.1	70-130							
d5-NEtFOSAA	70.1	70-130							



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Project Location: W. Babylon, NY

Sample Description:

Work Order: 18D1212

Date Received: 4/25/2018

Sampled: 4/23/2018 11:30

Field Sample #: MW-5R

Sample ID: 18D1212-04

Sample Matrix: Ground Water

**Metals Analyses (Dissolved)**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Nickel	1.6	0.010	mg/L	1		SW-846 6010C-D	4/26/18	4/27/18 16:24	QNW



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Project Location: W. Babylon, NY

Sample Description:

Work Order: 18D1212

Date Received: 4/25/2018

Field Sample #: MW-10

Sampled: 4/23/2018 17:30

Sample ID: 18D1212-05

Sample Matrix: Ground Water

## 1,4-Dioxane by isotope dilution GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
1,4-Dioxane	0.37	0.20	µg/L	1		SW-846 8270D	4/28/18	5/1/18 17:14	IMR
Surrogates	% Recovery		Recovery Limits		Flag/Qual				
1,4-Dioxane-d8	24.0		15-110				5/1/18 17:14		



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Project Location: W. Babylon, NY

Sample Description:

Work Order: 18D1212

Date Received: 4/25/2018

Field Sample #: MW-10

Sampled: 4/23/2018 17:30

Sample ID: 18D1212-05

Sample Matrix: Ground Water

**Metals Analyses (Dissolved)**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Chromium	ND	0.010	mg/L	1		SW-846 6010C-D	4/26/18	4/27/18 14:07	QNW
Copper	ND	0.010	mg/L	1		SW-846 6010C-D	4/26/18	4/27/18 14:07	QNW
Nickel	ND	0.010	mg/L	1		SW-846 6010C-D	4/26/18	4/27/18 14:07	QNW



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Project Location: W. Babylon, NY

Sample Description:

Work Order: 18D1212

Date Received: 4/25/2018

Field Sample #: MW-12

Sampled: 4/23/2018 17:33

Sample ID: 18D1212-06

Sample Matrix: Ground Water

#### Metals Analyses (Dissolved)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Chromium	ND	0.010	mg/L	1		SW-846 6010C-D	4/26/18	4/27/18 14:02	QNW
Copper	0.099	0.010	mg/L	1		SW-846 6010C-D	4/26/18	4/27/18 14:02	QNW
Nickel	0.40	0.010	mg/L	1		SW-846 6010C-D	4/26/18	4/27/18 14:02	QNW



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Project Location: W. Babylon, NY

Sample Description:

Work Order: 18D1212

Date Received: 4/25/2018

Field Sample #: MW-20

Sampled: 4/24/2018 06:38

Sample ID: 18D1212-07

Sample Matrix: Ground Water

## Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	5.0	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:07	BGL
Acenaphthylene	ND	5.0	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:07	BGL
Acetophenone	ND	10	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:07	BGL
Aniline	ND	5.0	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:07	BGL
Anthracene	ND	5.0	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:07	BGL
Benzidine	ND	20	µg/L	1	R-05, V-04, V-05	SW-846 8270D	4/30/18	5/2/18 21:07	BGL
Benzo(a)anthracene	ND	5.0	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:07	BGL
Benzo(a)pyrene	ND	5.0	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:07	BGL
Benzo(b)fluoranthene	ND	5.0	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:07	BGL
Benzo(g,h,i)perylene	ND	5.0	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:07	BGL
Benzo(k)fluoranthene	ND	5.0	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:07	BGL
Benzoic Acid	ND	10	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:07	BGL
Bis(2-chloroethoxy)methane	ND	10	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:07	BGL
Bis(2-chloroethyl)ether	ND	10	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:07	BGL
Bis(2-chloroisopropyl)ether	ND	10	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:07	BGL
Bis(2-Ethylhexyl)phthalate	ND	10	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:07	BGL
4-Bromophenylphenylether	ND	10	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:07	BGL
Butylbenzylphthalate	ND	10	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:07	BGL
Carbazole	ND	10	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:07	BGL
4-Chloroaniline	ND	10	µg/L	1	V-34	SW-846 8270D	4/30/18	5/2/18 21:07	BGL
4-Chloro-3-methylphenol	ND	10	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:07	BGL
2-Chloronaphthalene	ND	10	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:07	BGL
2-Chlorophenol	ND	10	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:07	BGL
4-Chlorophenylphenylether	ND	10	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:07	BGL
Chrysene	ND	5.0	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:07	BGL
Dibenz(a,h)anthracene	ND	5.0	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:07	BGL
Dibenzofuran	ND	5.0	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:07	BGL
Di-n-butylphthalate	ND	10	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:07	BGL
1,2-Dichlorobenzene	ND	5.0	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:07	BGL
1,3-Dichlorobenzene	ND	5.0	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:07	BGL
1,4-Dichlorobenzene	ND	5.0	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:07	BGL
3,3-Dichlorobenzidine	ND	10	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:07	BGL
2,4-Dichlorophenol	ND	10	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:07	BGL
Diethylphthalate	ND	10	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:07	BGL
2,4-Dimethylphenol	ND	10	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:07	BGL
Dimethylphthalate	ND	10	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:07	BGL
4,6-Dinitro-2-methylphenol	ND	10	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:07	BGL
2,4-Dinitrophenol	ND	10	µg/L	1	V-19	SW-846 8270D	4/30/18	5/2/18 21:07	BGL
2,4-Dinitrotoluene	ND	10	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:07	BGL
2,6-Dinitrotoluene	ND	10	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:07	BGL
Di-n-octylphthalate	ND	10	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:07	BGL
1,2-Diphenylhydrazine (as Azobenzene)	ND	10	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:07	BGL
Fluoranthene	ND	5.0	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:07	BGL
Fluorene	ND	5.0	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:07	BGL



39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

Project Location: W. Babylon, NY

Sample Description:

Work Order: 18D1212

Date Received: 4/25/2018

Field Sample #: MW-20

Sampled: 4/24/2018 06:38

Sample ID: 18D1212-07

Sample Matrix: Ground Water

## Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobenzene	ND	10	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:07	BGL
Hexachlorobutadiene	ND	10	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:07	BGL
Hexachlorocyclopentadiene	ND	10	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:07	BGL
Hexachloroethane	ND	10	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:07	BGL
Indeno(1,2,3-cd)pyrene	ND	5.0	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:07	BGL
Isophorone	ND	10	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:07	BGL
1-Methylnaphthalene	ND	5.0	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:07	BGL
2-Methylnaphthalene	ND	5.0	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:07	BGL
2-Methylphenol	ND	10	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:07	BGL
3/4-Methylphenol	ND	10	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:07	BGL
Naphthalene	ND	5.0	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:07	BGL
2-Nitroaniline	ND	10	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:07	BGL
3-Nitroaniline	ND	10	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:07	BGL
4-Nitroaniline	ND	10	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:07	BGL
Nitrobenzene	ND	10	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:07	BGL
2-Nitrophenol	ND	10	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:07	BGL
4-Nitrophenol	ND	10	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:07	BGL
N-Nitrosodimethylamine	ND	10	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:07	BGL
N-Nitrosodiphenylamine	ND	10	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:07	BGL
N-Nitrosodi-n-propylamine	ND	10	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:07	BGL
Pentachloronitrobenzene	ND	10	µg/L	1	V-16	SW-846 8270D	4/30/18	5/2/18 21:07	BGL
Pentachlorophenol	ND	10	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:07	BGL
Phenanthrene	ND	5.0	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:07	BGL
Phenol	ND	10	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:07	BGL
Pyrene	ND	5.0	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:07	BGL
Pyridine	ND	5.0	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:07	BGL
1,2,4,5-Tetrachlorobenzene	ND	10	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:07	BGL
1,2,4-Trichlorobenzene	ND	5.0	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:07	BGL
2,4,5-Trichlorophenol	ND	10	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:07	BGL
2,4,6-Trichlorophenol	ND	10	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:07	BGL
Surrogates	% Recovery	Recovery Limits			Flag/Qual				
2-Fluorophenol	36.3	15-110						5/2/18 21:07	
Phenol-d6	25.0	15-110						5/2/18 21:07	
Nitrobenzene-d5	56.7	30-130						5/2/18 21:07	
2-Fluorobiphenyl	49.9	30-130						5/2/18 21:07	
2,4,6-Tribromophenol	64.3	15-110						5/2/18 21:07	
p-Terphenyl-d14	82.3	30-130						5/2/18 21:07	



39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

Project Location: W. Babylon, NY

Sample Description:

Work Order: 18D1212

Date Received: 4/25/2018

Field Sample #: MW-21

Sampled: 4/24/2018 06:33

Sample ID: 18D1212-08

Sample Matrix: Ground Water

## Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	5.1	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:33	BGL
Acenaphthylene	ND	5.1	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:33	BGL
Acetophenone	ND	10	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:33	BGL
Aniline	ND	5.1	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:33	BGL
Anthracene	ND	5.1	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:33	BGL
Benzidine	ND	20	µg/L	1	R-05, V-04, V-05	SW-846 8270D	4/30/18	5/2/18 21:33	BGL
Benzo(a)anthracene	ND	5.1	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:33	BGL
Benzo(a)pyrene	ND	5.1	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:33	BGL
Benzo(b)fluoranthene	ND	5.1	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:33	BGL
Benzo(g,h,i)perylene	ND	5.1	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:33	BGL
Benzo(k)fluoranthene	ND	5.1	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:33	BGL
Benzoic Acid	ND	10	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:33	BGL
Bis(2-chloroethoxy)methane	ND	10	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:33	BGL
Bis(2-chloroethyl)ether	ND	10	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:33	BGL
Bis(2-chloroisopropyl)ether	ND	10	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:33	BGL
Bis(2-Ethylhexyl)phthalate	ND	10	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:33	BGL
4-Bromophenylphenylether	ND	10	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:33	BGL
Butylbenzylphthalate	ND	10	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:33	BGL
Carbazole	ND	10	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:33	BGL
4-Chloroaniline	ND	10	µg/L	1	V-34	SW-846 8270D	4/30/18	5/2/18 21:33	BGL
4-Chloro-3-methylphenol	ND	10	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:33	BGL
2-Chloronaphthalene	ND	10	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:33	BGL
2-Chlorophenol	ND	10	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:33	BGL
4-Chlorophenylphenylether	ND	10	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:33	BGL
Chrysene	ND	5.1	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:33	BGL
Dibenz(a,h)anthracene	ND	5.1	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:33	BGL
Dibenzofuran	ND	5.1	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:33	BGL
Di-n-butylphthalate	ND	10	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:33	BGL
1,2-Dichlorobenzene	ND	5.1	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:33	BGL
1,3-Dichlorobenzene	ND	5.1	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:33	BGL
1,4-Dichlorobenzene	ND	5.1	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:33	BGL
3,3-Dichlorobenzidine	ND	10	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:33	BGL
2,4-Dichlorophenol	ND	10	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:33	BGL
Diethylphthalate	ND	10	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:33	BGL
2,4-Dimethylphenol	ND	10	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:33	BGL
Dimethylphthalate	ND	10	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:33	BGL
4,6-Dinitro-2-methylphenol	ND	10	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:33	BGL
2,4-Dinitrophenol	ND	10	µg/L	1	V-19	SW-846 8270D	4/30/18	5/2/18 21:33	BGL
2,4-Dinitrotoluene	ND	10	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:33	BGL
2,6-Dinitrotoluene	ND	10	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:33	BGL
Di-n-octylphthalate	ND	10	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:33	BGL
1,2-Diphenylhydrazine (as Azobenzene)	ND	10	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:33	BGL
Fluoranthene	ND	5.1	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:33	BGL
Fluorene	ND	5.1	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:33	BGL



39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

Project Location: W. Babylon, NY

Sample Description:

Work Order: 18D1212

Date Received: 4/25/2018

Field Sample #: MW-21

Sampled: 4/24/2018 06:33

Sample ID: 18D1212-08

Sample Matrix: Ground Water

## Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobenzene	ND	10	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:33	BGL
Hexachlorobutadiene	ND	10	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:33	BGL
Hexachlorocyclopentadiene	ND	10	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:33	BGL
Hexachloroethane	ND	10	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:33	BGL
Indeno(1,2,3-cd)pyrene	ND	5.1	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:33	BGL
Isophorone	ND	10	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:33	BGL
1-Methylnaphthalene	ND	5.1	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:33	BGL
2-Methylnaphthalene	ND	5.1	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:33	BGL
2-Methylphenol	ND	10	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:33	BGL
3/4-Methylphenol	ND	10	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:33	BGL
Naphthalene	ND	5.1	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:33	BGL
2-Nitroaniline	ND	10	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:33	BGL
3-Nitroaniline	ND	10	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:33	BGL
4-Nitroaniline	ND	10	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:33	BGL
Nitrobenzene	ND	10	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:33	BGL
2-Nitrophenol	ND	10	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:33	BGL
4-Nitrophenol	ND	10	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:33	BGL
N-Nitrosodimethylamine	ND	10	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:33	BGL
N-Nitrosodiphenylamine	ND	10	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:33	BGL
N-Nitrosodi-n-propylamine	ND	10	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:33	BGL
Pentachloronitrobenzene	ND	10	µg/L	1	V-16	SW-846 8270D	4/30/18	5/2/18 21:33	BGL
Pentachlorophenol	ND	10	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:33	BGL
Phenanthrene	ND	5.1	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:33	BGL
Phenol	ND	10	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:33	BGL
Pyrene	ND	5.1	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:33	BGL
Pyridine	ND	5.1	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:33	BGL
1,2,4,5-Tetrachlorobenzene	ND	10	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:33	BGL
1,2,4-Trichlorobenzene	ND	5.1	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:33	BGL
2,4,5-Trichlorophenol	ND	10	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:33	BGL
2,4,6-Trichlorophenol	ND	10	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:33	BGL
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
2-Fluorophenol	40.1	15-110							
Phenol-d6	28.4	15-110							
Nitrobenzene-d5	62.8	30-130							
2-Fluorobiphenyl	50.6	30-130							
2,4,6-Tribromophenol	63.5	15-110							
p-Terphenyl-d14	78.1	30-130							



39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

Project Location: W. Babylon, NY

Sample Description:

Work Order: 18D1212

Date Received: 4/25/2018

Field Sample #: MW-23

Sampled: 4/23/2018 16:13

Sample ID: 18D1212-09

Sample Matrix: Ground Water

## Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	5.1	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:58	BGL
Acenaphthylene	ND	5.1	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:58	BGL
Acetophenone	ND	10	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:58	BGL
Aniline	ND	5.1	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:58	BGL
Anthracene	ND	5.1	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:58	BGL
Benzidine	ND	20	µg/L	1	R-05, V-04, V-05	SW-846 8270D	4/30/18	5/2/18 21:58	BGL
Benzo(a)anthracene	ND	5.1	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:58	BGL
Benzo(a)pyrene	ND	5.1	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:58	BGL
Benzo(b)fluoranthene	ND	5.1	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:58	BGL
Benzo(g,h,i)perylene	ND	5.1	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:58	BGL
Benzo(k)fluoranthene	ND	5.1	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:58	BGL
Benzoic Acid	ND	10	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:58	BGL
Bis(2-chloroethoxy)methane	ND	10	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:58	BGL
Bis(2-chloroethyl)ether	ND	10	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:58	BGL
Bis(2-chloroisopropyl)ether	ND	10	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:58	BGL
Bis(2-Ethylhexyl)phthalate	ND	10	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:58	BGL
4-Bromophenylphenylether	ND	10	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:58	BGL
Butylbenzylphthalate	ND	10	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:58	BGL
Carbazole	ND	10	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:58	BGL
4-Chloroaniline	ND	10	µg/L	1	V-34	SW-846 8270D	4/30/18	5/2/18 21:58	BGL
4-Chloro-3-methylphenol	ND	10	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:58	BGL
2-Chloronaphthalene	ND	10	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:58	BGL
2-Chlorophenol	ND	10	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:58	BGL
4-Chlorophenylphenylether	ND	10	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:58	BGL
Chrysene	ND	5.1	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:58	BGL
Dibenz(a,h)anthracene	ND	5.1	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:58	BGL
Dibenzofuran	ND	5.1	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:58	BGL
Di-n-butylphthalate	ND	10	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:58	BGL
1,2-Dichlorobenzene	ND	5.1	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:58	BGL
1,3-Dichlorobenzene	ND	5.1	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:58	BGL
1,4-Dichlorobenzene	ND	5.1	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:58	BGL
3,3-Dichlorobenzidine	ND	10	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:58	BGL
2,4-Dichlorophenol	ND	10	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:58	BGL
Diethylphthalate	ND	10	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:58	BGL
2,4-Dimethylphenol	ND	10	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:58	BGL
Dimethylphthalate	ND	10	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:58	BGL
4,6-Dinitro-2-methylphenol	ND	10	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:58	BGL
2,4-Dinitrophenol	ND	10	µg/L	1	V-19	SW-846 8270D	4/30/18	5/2/18 21:58	BGL
2,4-Dinitrotoluene	ND	10	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:58	BGL
2,6-Dinitrotoluene	ND	10	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:58	BGL
Di-n-octylphthalate	ND	10	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:58	BGL
1,2-Diphenylhydrazine (as Azobenzene)	ND	10	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:58	BGL
Fluoranthene	ND	5.1	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:58	BGL
Fluorene	ND	5.1	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:58	BGL



39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

Project Location: W. Babylon, NY

Sample Description:

Work Order: 18D1212

Date Received: 4/25/2018

Field Sample #: MW-23

Sampled: 4/23/2018 16:13

Sample ID: 18D1212-09

Sample Matrix: Ground Water

## Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobenzene	ND	10	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:58	BGL
Hexachlorobutadiene	ND	10	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:58	BGL
Hexachlorocyclopentadiene	ND	10	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:58	BGL
Hexachloroethane	ND	10	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:58	BGL
Indeno(1,2,3-cd)pyrene	ND	5.1	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:58	BGL
Isophorone	ND	10	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:58	BGL
1-Methylnaphthalene	ND	5.1	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:58	BGL
2-Methylnaphthalene	ND	5.1	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:58	BGL
2-Methylphenol	ND	10	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:58	BGL
3/4-Methylphenol	ND	10	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:58	BGL
Naphthalene	ND	5.1	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:58	BGL
2-Nitroaniline	ND	10	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:58	BGL
3-Nitroaniline	ND	10	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:58	BGL
4-Nitroaniline	ND	10	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:58	BGL
Nitrobenzene	ND	10	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:58	BGL
2-Nitrophenol	ND	10	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:58	BGL
4-Nitrophenol	ND	10	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:58	BGL
N-Nitrosodimethylamine	ND	10	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:58	BGL
N-Nitrosodiphenylamine	ND	10	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:58	BGL
N-Nitrosodi-n-propylamine	ND	10	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:58	BGL
Pentachloronitrobenzene	ND	10	µg/L	1	V-16	SW-846 8270D	4/30/18	5/2/18 21:58	BGL
Pentachlorophenol	ND	10	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:58	BGL
Phenanthrene	ND	5.1	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:58	BGL
Phenol	ND	10	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:58	BGL
Pyrene	ND	5.1	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:58	BGL
Pyridine	ND	5.1	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:58	BGL
1,2,4,5-Tetrachlorobenzene	ND	10	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:58	BGL
1,2,4-Trichlorobenzene	ND	5.1	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:58	BGL
2,4,5-Trichlorophenol	ND	10	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:58	BGL
2,4,6-Trichlorophenol	ND	10	µg/L	1		SW-846 8270D	4/30/18	5/2/18 21:58	BGL
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
2-Fluorophenol	41.9	15-110							
Phenol-d6	28.8	15-110							
Nitrobenzene-d5	60.0	30-130							
2-Fluorobiphenyl	51.3	30-130							
2,4,6-Tribromophenol	60.7	15-110							
p-Terphenyl-d14	75.0	30-130							



39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

Project Location: W. Babylon, NY

Sample Description:

Work Order: 18D1212

Date Received: 4/25/2018

Field Sample #: MW-23

Sampled: 4/23/2018 16:13

Sample ID: 18D1212-09

Sample Matrix: Ground Water

## 1,4-Dioxane by isotope dilution GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
1,4-Dioxane	ND	0.23	µg/L	1		SW-846 8270D	4/26/18	4/30/18 17:53	IMR
Surrogates	% Recovery	Recovery Limits			Flag/Qual				
1,4-Dioxane-d8	31.2	15-110						4/30/18 17:53	



39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

Project Location: W. Babylon, NY

Sample Description:

Work Order: 18D1212

Date Received: 4/25/2018

Field Sample #: MW-26R

Sampled: 4/23/2018 14:48

Sample ID: 18D1212-10

Sample Matrix: Ground Water

**Metals Analyses (Dissolved)**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Chromium	ND	0.010	mg/L	1		SW-846 6010C-D	4/26/18	4/27/18 14:12	QNW
Copper	0.032	0.010	mg/L	1		SW-846 6010C-D	4/26/18	4/27/18 14:12	QNW
Nickel	ND	0.010	mg/L	1		SW-846 6010C-D	4/26/18	4/27/18 14:12	QNW



39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

Project Location: W. Babylon, NY

Sample Description:

Work Order: 18D1212

Date Received: 4/25/2018

Field Sample #: Equipment Blank

Sampled: 4/23/2018 16:30

Sample ID: 18D1212-11

Sample Matrix: Equipment Blank Water

### Miscellaneous Organic Analyses

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanesulfonic acid (PFBS)	ND	2.0	ng/L	1		SOP 434-PFAAS	4/30/18	5/8/18 20:23	KAF
Perfluorohexanoic acid (PFHxA)	ND	2.0	ng/L	1		SOP 434-PFAAS	4/30/18	5/8/18 20:23	KAF
Perfluoroheptanoic acid (PFHpA)	ND	2.0	ng/L	1		SOP 434-PFAAS	4/30/18	5/8/18 20:23	KAF
Perfluorobutanoic acid (PFBA)	ND	3.0	ng/L	1		SOP 434-PFAAS	4/30/18	5/8/18 20:23	KAF
Perfluorodecanesulfonic acid (PFDS)	ND	3.0	ng/L	1		SOP 434-PFAAS	4/30/18	5/8/18 20:23	KAF
Perfluoroheptanesulfonic acid (PFHpS)	ND	3.0	ng/L	1		SOP 434-PFAAS	4/30/18	5/8/18 20:23	KAF
Perfluorooctanesulfonamide (FOSA)	ND	3.0	ng/L	1		SOP 434-PFAAS	4/30/18	5/8/18 20:23	KAF
Perfluoropentanoic acid (PFPeA)	ND	3.0	ng/L	1		SOP 434-PFAAS	4/30/18	5/8/18 20:23	KAF
6:2 Fluorotelomersulfonate (6:2 FTS)	ND	3.0	ng/L	1		SOP 434-PFAAS	4/30/18	5/8/18 20:23	KAF
8:2 Fluorotelomersulfonate (8:2 FTS)	ND	3.0	ng/L	1		SOP 434-PFAAS	4/30/18	5/8/18 20:23	KAF
Perfluorohexanesulfonic acid (PFHxS)	ND	2.0	ng/L	1		SOP 434-PFAAS	4/30/18	5/8/18 20:23	KAF
Perfluorooctanoic acid (PFOA)	ND	2.0	ng/L	1		SOP 434-PFAAS	4/30/18	5/8/18 20:23	KAF
Perfluorooctanesulfonic acid (PFOS)	ND	2.0	ng/L	1		SOP 434-PFAAS	4/30/18	5/8/18 20:23	KAF
Perfluorononanoic acid (PFNA)	ND	2.0	ng/L	1		SOP 434-PFAAS	4/30/18	5/8/18 20:23	KAF
Perfluorodecanoic acid (PFDA)	ND	2.0	ng/L	1		SOP 434-PFAAS	4/30/18	5/8/18 20:23	KAF
NMeFOSAA	ND	2.0	ng/L	1		SOP 434-PFAAS	4/30/18	5/8/18 20:23	KAF
Perfluoroundecanoic acid (PFUnA)	ND	2.0	ng/L	1		SOP 434-PFAAS	4/30/18	5/8/18 20:23	KAF
NEtFOSAA	ND	2.0	ng/L	1		SOP 434-PFAAS	4/30/18	5/8/18 20:23	KAF
Perfluorododecanoic acid (PFDoA)	ND	2.0	ng/L	1		SOP 434-PFAAS	4/30/18	5/8/18 20:23	KAF
Perfluorotridecanoic acid (PFTrDA)	ND	2.0	ng/L	1		SOP 434-PFAAS	4/30/18	5/8/18 20:23	KAF
Perfluorotetradecanoic acid (PFTA)	ND	2.0	ng/L	1		SOP 434-PFAAS	4/30/18	5/8/18 20:23	KAF
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
13C-PFHxA	113	70-130							
13C-PFDA	75.7	70-130							
d5-NEtFOSAA	88.2	70-130							



39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

Project Location: W. Babylon, NY

Sample Description:

Work Order: 18D1212

Date Received: 4/25/2018

Field Sample #: Field Dup

Sampled: 4/23/2018 11:30

Sample ID: 18D1212-12

Sample Matrix: Ground Water

### Miscellaneous Organic Analyses

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanesulfonic acid (PFBS)	ND	2.0	ng/L	1		SOP 434-PFAAS	4/30/18	5/8/18 20:36	KAF
Perfluorohexanoic acid (PFHxA)	ND	2.0	ng/L	1		SOP 434-PFAAS	4/30/18	5/8/18 20:36	KAF
Perfluoroheptanoic acid (PFHpA)	ND	2.0	ng/L	1		SOP 434-PFAAS	4/30/18	5/8/18 20:36	KAF
Perfluorobutanoic acid (PFBA)	ND	3.0	ng/L	1		SOP 434-PFAAS	4/30/18	5/8/18 20:36	KAF
Perfluorodecanesulfonic acid (PFDS)	ND	3.0	ng/L	1		SOP 434-PFAAS	4/30/18	5/8/18 20:36	KAF
Perfluoroheptanesulfonic acid (PFHpS)	ND	3.0	ng/L	1		SOP 434-PFAAS	4/30/18	5/8/18 20:36	KAF
Perfluorooctanesulfonamide (FOSA)	ND	3.0	ng/L	1		SOP 434-PFAAS	4/30/18	5/8/18 20:36	KAF
Perfluoropentanoic acid (PFPeA)	ND	3.0	ng/L	1		SOP 434-PFAAS	4/30/18	5/8/18 20:36	KAF
6:2 Fluorotelomersulfonate (6:2 FTS)	ND	3.0	ng/L	1		SOP 434-PFAAS	4/30/18	5/8/18 20:36	KAF
8:2 Fluorotelomersulfonate (8:2 FTS)	ND	3.0	ng/L	1		SOP 434-PFAAS	4/30/18	5/8/18 20:36	KAF
Perfluorohexanesulfonic acid (PFHxS)	ND	2.0	ng/L	1		SOP 434-PFAAS	4/30/18	5/8/18 20:36	KAF
Perfluorooctanoic acid (PFOA)	ND	2.0	ng/L	1		SOP 434-PFAAS	4/30/18	5/8/18 20:36	KAF
Perfluorooctanesulfonic acid (PFOS)	ND	2.0	ng/L	1		SOP 434-PFAAS	4/30/18	5/8/18 20:36	KAF
Perfluorononanoic acid (PFNA)	ND	2.0	ng/L	1		SOP 434-PFAAS	4/30/18	5/8/18 20:36	KAF
Perfluorodecanoic acid (PFDA)	ND	2.0	ng/L	1		SOP 434-PFAAS	4/30/18	5/8/18 20:36	KAF
NMeFOSAA	ND	2.0	ng/L	1		SOP 434-PFAAS	4/30/18	5/8/18 20:36	KAF
Perfluoroundecanoic acid (PFUnA)	ND	2.0	ng/L	1		SOP 434-PFAAS	4/30/18	5/8/18 20:36	KAF
NEtFOSAA	ND	2.0	ng/L	1		SOP 434-PFAAS	4/30/18	5/8/18 20:36	KAF
Perfluorododecanoic acid (PFDoA)	ND	2.0	ng/L	1		SOP 434-PFAAS	4/30/18	5/8/18 20:36	KAF
Perfluorotridecanoic acid (PFTrDA)	ND	2.0	ng/L	1		SOP 434-PFAAS	4/30/18	5/8/18 20:36	KAF
Perfluorotetradecanoic acid (PFTA)	ND	2.0	ng/L	1		SOP 434-PFAAS	4/30/18	5/8/18 20:36	KAF
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
13C-PFHxA	127	70-130							
13C-PFDA	73.7	70-130							
d5-NEtFOSAA	78.0	70-130							



39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

### Sample Extraction Data

#### Prep Method: EPA 537-SOP 434-PFAAS

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
18D1212-02 [MW-3]	B201871	250	1.00	04/30/18
18D1212-04 [MW-5R]	B201871	250	1.00	04/30/18
18D1212-11 [Equipment Blank]	B201871	250	1.00	04/30/18
18D1212-12 [Field Dup]	B201871	250	1.00	04/30/18

#### Prep Method: SW-846 3005A Dissolved-SW-846 6010C-D

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
18D1212-01 [MW-2]	B201857	50.0	50.0	04/26/18
18D1212-02 [MW-3]	B201857	50.0	50.0	04/26/18
18D1212-03 [MW-4]	B201857	50.0	50.0	04/26/18
18D1212-04 [MW-5R]	B201857	50.0	50.0	04/26/18
18D1212-05 [MW-10]	B201857	50.0	50.0	04/26/18
18D1212-06 [MW-12]	B201857	50.0	50.0	04/26/18
18D1212-10 [MW-26R]	B201857	50.0	50.0	04/26/18

#### Prep Method: SW-846 3510C-SW-846 8270D

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
18D1212-02 [MW-3]	B201844	1000	1.00	04/26/18
18D1212-04 [MW-5R]	B201844	1000	1.00	04/26/18
18D1212-09 [MW-23]	B201844	875	1.00	04/26/18

#### Prep Method: SW-846 3510C-SW-846 8270D

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
18D1212-05 [MW-10]	B202067	1000	1.00	04/28/18

#### Prep Method: SW-846 3510C-SW-846 8270D

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
18D1212-07 [MW-20]	B202110	1000	1.00	04/30/18
18D1212-08 [MW-21]	B202110	980	1.00	04/30/18
18D1212-09 [MW-23]	B202110	990	1.00	04/30/18



39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

## QUALITY CONTROL

## Semivolatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch B202110 - SW-846 3510C</b>										
<b>Blank (B202110-BLK1)</b>				Prepared: 04/30/18 Analyzed: 05/02/18						
Acenaphthene	ND	5.0	µg/L							
Acenaphthylene	ND	5.0	µg/L							
Acetophenone	ND	10	µg/L							
Aniline	ND	5.0	µg/L							
Anthracene	ND	5.0	µg/L							
Benzidine	ND	20	µg/L							R-05, V-04, V-05
Benzo(a)anthracene	ND	5.0	µg/L							
Benzo(a)pyrene	ND	5.0	µg/L							
Benzo(b)fluoranthene	ND	5.0	µg/L							
Benzo(g,h,i)perylene	ND	5.0	µg/L							
Benzo(k)fluoranthene	ND	5.0	µg/L							
Benzoic Acid	ND	10	µg/L							
Bis(2-chloroethoxy)methane	ND	10	µg/L							
Bis(2-chloroethyl)ether	ND	10	µg/L							
Bis(2-chloroisopropyl)ether	ND	10	µg/L							
Bis(2-Ethylhexyl)phthalate	ND	10	µg/L							
4-Bromophenylphenylether	ND	10	µg/L							
Butylbenzylphthalate	ND	10	µg/L							
Carbazole	ND	10	µg/L							
4-Chloroaniline	ND	10	µg/L							V-34
4-Chloro-3-methylphenol	ND	10	µg/L							
2-Chloronaphthalene	ND	10	µg/L							
2-Chlorophenol	ND	10	µg/L							
4-Chlorophenylphenylether	ND	10	µg/L							
Chrysene	ND	5.0	µg/L							
Dibenz(a,h)anthracene	ND	5.0	µg/L							
Dibenzofuran	ND	5.0	µg/L							
Di-n-butylphthalate	ND	10	µg/L							
1,2-Dichlorobenzene	ND	5.0	µg/L							
1,3-Dichlorobenzene	ND	5.0	µg/L							
1,4-Dichlorobenzene	ND	5.0	µg/L							
3,3-Dichlorobenzidine	ND	10	µg/L							
2,4-Dichlorophenol	ND	10	µg/L							
Diethylphthalate	ND	10	µg/L							
2,4-Dimethylphenol	ND	10	µg/L							
Dimethylphthalate	ND	10	µg/L							
4,6-Dinitro-2-methylphenol	ND	10	µg/L							
2,4-Dinitrophenol	ND	10	µg/L							V-19
2,4-Dinitrotoluene	ND	10	µg/L							
2,6-Dinitrotoluene	ND	10	µg/L							
Di-n-octylphthalate	ND	10	µg/L							
1,2-Diphenylhydrazine (as Azobenzene)	ND	10	µg/L							
Fluoranthene	ND	5.0	µg/L							
Fluorene	ND	5.0	µg/L							
Hexachlorobenzene	ND	10	µg/L							
Hexachlorobutadiene	ND	10	µg/L							
Hexachlorocyclopentadiene	ND	10	µg/L							
Hexachloroethane	ND	10	µg/L							
Indeno(1,2,3-cd)pyrene	ND	5.0	µg/L							
Isophorone	ND	10	µg/L							
1-Methylnaphthalene	ND	5.0	µg/L							
2-Methylnaphthalene	ND	5.0	µg/L							



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## QUALITY CONTROL

## Semivolatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch B202110 - SW-846 3510C</b>										
<b>Blank (B202110-BLK1)</b>				Prepared: 04/30/18 Analyzed: 05/02/18						
2-Methylphenol	ND	10	µg/L							
3/4-Methylphenol	ND	10	µg/L							
Naphthalene	ND	5.0	µg/L							
2-Nitroaniline	ND	10	µg/L							
3-Nitroaniline	ND	10	µg/L							
4-Nitroaniline	ND	10	µg/L							
Nitrobenzene	ND	10	µg/L							
2-Nitrophenol	ND	10	µg/L							
4-Nitrophenol	ND	10	µg/L							
N-Nitrosodimethylamine	ND	10	µg/L							
N-Nitrosodiphenylamine	ND	10	µg/L							
N-Nitrosodi-n-propylamine	ND	10	µg/L							
Pentachloronitrobenzene	ND	10	µg/L							V-16
Pentachlorophenol	ND	10	µg/L							
Phenanthrene	ND	5.0	µg/L							
Phenol	ND	10	µg/L							
Pyrene	ND	5.0	µg/L							
Pyridine	ND	5.0	µg/L							
1,2,4,5-Tetrachlorobenzene	ND	10	µg/L							
1,2,4-Trichlorobenzene	ND	5.0	µg/L							
2,4,5-Trichlorophenol	ND	10	µg/L							
2,4,6-Trichlorophenol	ND	10	µg/L							
Surrogate: 2-Fluorophenol	89.1		µg/L	200		44.6	15-110			
Surrogate: Phenol-d6	61.6		µg/L	200		30.8	15-110			
Surrogate: Nitrobenzene-d5	77.7		µg/L	100		77.7	30-130			
Surrogate: 2-Fluorobiphenyl	60.0		µg/L	101		59.4	30-130			
Surrogate: 2,4,6-Tribromophenol	136		µg/L	200		68.2	15-110			
Surrogate: p-Terphenyl-d14	91.1		µg/L	101		90.2	30-130			
<b>LCS (B202110-BS1)</b>				Prepared: 04/30/18 Analyzed: 05/01/18						
Acenaphthene	33.0	5.0	µg/L	50.0		65.9	40-140			
Acenaphthylene	34.2	5.0	µg/L	50.0		68.4	40-140			
Acetophenone	42.6	10	µg/L	50.0		85.2	40-140			
Aniline	35.8	5.0	µg/L	50.0		71.6	40-140			
Anthracene	38.6	5.0	µg/L	50.0		77.2	40-140			
<b>Benzidine</b>	14.5	20	µg/L	50.0		<b>29.0</b>	* 40-140			L-07A, V-04, V-05
Benzo(a)anthracene	39.0	5.0	µg/L	50.0		78.0	40-140			
Benzo(a)pyrene	39.8	5.0	µg/L	50.0		79.7	40-140			
Benzo(b)fluoranthene	38.2	5.0	µg/L	50.0		76.4	40-140			
Benzo(g,h,i)perylene	39.6	5.0	µg/L	50.0		79.2	40-140			
Benzo(k)fluoranthene	40.7	5.0	µg/L	50.0		81.3	40-140			
Benzoic Acid	12.6	10	µg/L	50.0		25.2	10-130			†
Bis(2-chloroethoxy)methane	45.8	10	µg/L	50.0		91.5	40-140			
Bis(2-chloroethyl)ether	40.8	10	µg/L	50.0		81.6	40-140			
Bis(2-chloroisopropyl)ether	46.1	10	µg/L	50.0		92.2	40-140			
Bis(2-Ethylhexyl)phthalate	37.5	10	µg/L	50.0		75.1	40-140			
4-Bromophenylphenylether	38.5	10	µg/L	50.0		77.0	40-140			
Butylbenzylphthalate	38.8	10	µg/L	50.0		77.6	40-140			
Carbazole	38.4	10	µg/L	50.0		76.8	40-140			
4-Chloroaniline	39.4	10	µg/L	50.0		78.9	40-140			
4-Chloro-3-methylphenol	41.0	10	µg/L	50.0		81.9	30-130			
2-Chloronaphthalene	32.0	10	µg/L	50.0		64.0	40-140			



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## QUALITY CONTROL

## Semivolatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch B202110 - SW-846 3510C</b>										
<b>LCS (B202110-BS1)</b>				Prepared: 04/30/18 Analyzed: 05/01/18						
2-Chlorophenol	38.2	10	µg/L	50.0		76.4	30-130			
4-Chlorophenylphenylether	36.1	10	µg/L	50.0		72.3	40-140			
Chrysene	37.8	5.0	µg/L	50.0		75.7	40-140			
Dibenz(a,h)anthracene	39.8	5.0	µg/L	50.0		79.7	40-140			
Dibenzofuran	36.4	5.0	µg/L	50.0		72.8	40-140			
Di-n-butylphthalate	38.3	10	µg/L	50.0		76.7	40-140			
1,2-Dichlorobenzene	37.2	5.0	µg/L	50.0		74.4	40-140			
1,3-Dichlorobenzene	36.5	5.0	µg/L	50.0		73.1	40-140			
1,4-Dichlorobenzene	36.9	5.0	µg/L	50.0		73.7	40-140			
3,3-Dichlorobenzidine	42.9	10	µg/L	50.0		85.7	40-140			
2,4-Dichlorophenol	40.3	10	µg/L	50.0		80.7	30-130			
Diethylphthalate	36.5	10	µg/L	50.0		73.0	40-140			
2,4-Dimethylphenol	39.7	10	µg/L	50.0		79.4	30-130			
Dimethylphthalate	38.1	10	µg/L	50.0		76.2	40-140			
4,6-Dinitro-2-methylphenol	33.3	10	µg/L	50.0		66.5	30-130			
2,4-Dinitrophenol	31.2	10	µg/L	50.0		62.4	30-130			V-19
2,4-Dinitrotoluene	35.6	10	µg/L	50.0		71.3	40-140			
2,6-Dinitrotoluene	38.9	10	µg/L	50.0		77.9	40-140			
Di-n-octylphthalate	36.7	10	µg/L	50.0		73.3	40-140			
1,2-Diphenylhydrazine (as Azobenzene)	40.6	10	µg/L	50.0		81.2	40-140			
Fluoranthene	38.6	5.0	µg/L	50.0		77.2	40-140			
Fluorene	35.7	5.0	µg/L	50.0		71.4	40-140			
Hexachlorobenzene	38.0	10	µg/L	50.0		76.0	40-140			
Hexachlorobutadiene	38.6	10	µg/L	50.0		77.3	40-140			
Hexachlorocyclopentadiene	26.0	10	µg/L	50.0		52.1	30-140			†
Hexachloroethane	39.0	10	µg/L	50.0		77.9	40-140			
Indeno(1,2,3-cd)pyrene	38.7	5.0	µg/L	50.0		77.4	40-140			
Isophorone	42.0	10	µg/L	50.0		84.0	40-140			
1-Methylnaphthalene	42.3	5.0	µg/L	50.0		84.6	40-140			
2-Methylnaphthalene	42.2	5.0	µg/L	50.0		84.3	40-140			
2-Methylphenol	30.4	10	µg/L	50.0		60.8	30-130			
3/4-Methylphenol	33.9	10	µg/L	50.0		67.8	30-130			
Naphthalene	39.4	5.0	µg/L	50.0		78.8	40-140			
2-Nitroaniline	36.8	10	µg/L	50.0		73.7	40-140			
3-Nitroaniline	35.5	10	µg/L	50.0		71.0	40-140			
4-Nitroaniline	36.8	10	µg/L	50.0		73.5	40-140			
Nitrobenzene	40.2	10	µg/L	50.0		80.3	40-140			
2-Nitrophenol	39.0	10	µg/L	50.0		77.9	30-130			
4-Nitrophenol	18.2	10	µg/L	50.0		36.5	10-130			†
N-Nitrosodimethylamine	27.9	10	µg/L	50.0		55.8	40-140			
N-Nitrosodiphenylamine	47.5	10	µg/L	50.0		95.1	40-140			
N-Nitrosodi-n-propylamine	41.6	10	µg/L	50.0		83.3	40-140			
Pentachloronitrobenzene	37.9	10	µg/L	50.0		75.8	40-140			V-16
Pentachlorophenol	29.4	10	µg/L	50.0		58.8	30-130			
Phenanthrene	38.3	5.0	µg/L	50.0		76.6	40-140			
Phenol	16.9	10	µg/L	50.0		33.8	20-130			†
Pyrene	37.6	5.0	µg/L	50.0		75.3	40-140			
Pyridine	14.4	5.0	µg/L	50.0		28.8	10-140			†
1,2,4,5-Tetrachlorobenzene	35.2	10	µg/L	50.0		70.4	40-140			
1,2,4-Trichlorobenzene	38.1	5.0	µg/L	50.0		76.1	40-140			
2,4,5-Trichlorophenol	36.8	10	µg/L	50.0		73.6	30-130			
2,4,6-Trichlorophenol	35.6	10	µg/L	50.0		71.1	30-130			



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## QUALITY CONTROL

## Semivolatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch B202110 - SW-846 3510C</b>										
<b>LCS (B202110-BS1)</b>				Prepared: 04/30/18 Analyzed: 05/01/18						
Surrogate: 2-Fluorophenol	105		µg/L	200		52.7	15-110			
Surrogate: Phenol-d6	69.7		µg/L	200		34.8	15-110			
Surrogate: Nitrobenzene-d5	83.7		µg/L	100		83.7	30-130			
Surrogate: 2-Fluorobiphenyl	67.3		µg/L	101		66.6	30-130			
Surrogate: 2,4,6-Tribromophenol	157		µg/L	200		78.5	15-110			
Surrogate: p-Terphenyl-d14	86.8		µg/L	101		85.9	30-130			
<b>LCS Dup (B202110-BSD1)</b>				Prepared: 04/30/18 Analyzed: 05/01/18						
Acenaphthene	30.4	5.0	µg/L	50.0		60.7	40-140	8.21	20	
Acenaphthylene	32.8	5.0	µg/L	50.0		65.7	40-140	4.06	20	
Acetophenone	38.6	10	µg/L	50.0		77.2	40-140	9.90	20	
Aniline	34.4	5.0	µg/L	50.0		68.8	40-140	4.02	50	‡
Anthracene	34.9	5.0	µg/L	50.0		69.8	40-140	10.0	20	
Benzidine	24.8	20	µg/L	50.0		49.7	40-140	52.5 *	20	R-05, V-05
Benzo(a)anthracene	35.1	5.0	µg/L	50.0		70.1	40-140	10.6	20	
Benzo(a)pyrene	36.8	5.0	µg/L	50.0		73.5	40-140	8.07	20	
Benzo(b)fluoranthene	34.8	5.0	µg/L	50.0		69.7	40-140	9.20	20	
Benzo(g,h,i)perylene	36.2	5.0	µg/L	50.0		72.4	40-140	8.89	20	
Benzo(k)fluoranthene	36.0	5.0	µg/L	50.0		71.9	40-140	12.2	20	
Benzoic Acid	10.0	10	µg/L	50.0		20.1	10-130	22.7	50	† ‡
Bis(2-chloroethoxy)methane	41.3	10	µg/L	50.0		82.6	40-140	10.2	20	
Bis(2-chloroethyl)ether	36.8	10	µg/L	50.0		73.6	40-140	10.3	20	
Bis(2-chloroisopropyl)ether	41.0	10	µg/L	50.0		82.0	40-140	11.7	20	
Bis(2-Ethylhexyl)phthalate	33.8	10	µg/L	50.0		67.7	40-140	10.4	20	
4-Bromophenylphenylether	34.3	10	µg/L	50.0		68.6	40-140	11.5	20	
Butylbenzylphthalate	35.5	10	µg/L	50.0		71.0	40-140	8.91	20	
Carbazole	34.8	10	µg/L	50.0		69.6	40-140	9.83	20	
4-Chloroaniline	36.4	10	µg/L	50.0		72.8	40-140	7.99	20	
4-Chloro-3-methylphenol	37.4	10	µg/L	50.0		74.8	30-130	9.06	20	
2-Chloronaphthalene	31.3	10	µg/L	50.0		62.5	40-140	2.37	20	
2-Chlorophenol	34.4	10	µg/L	50.0		68.7	30-130	10.6	20	
4-Chlorophenylphenylether	34.6	10	µg/L	50.0		69.2	40-140	4.30	20	
Chrysene	34.6	5.0	µg/L	50.0		69.3	40-140	8.80	20	
Dibenz(a,h)anthracene	37.0	5.0	µg/L	50.0		74.1	40-140	7.28	20	
Dibenzofuran	34.3	5.0	µg/L	50.0		68.5	40-140	6.08	20	
Di-n-butylphthalate	34.6	10	µg/L	50.0		69.3	40-140	10.1	20	
1,2-Dichlorobenzene	33.2	5.0	µg/L	50.0		66.4	40-140	11.5	20	
1,3-Dichlorobenzene	32.7	5.0	µg/L	50.0		65.5	40-140	11.0	20	
1,4-Dichlorobenzene	32.6	5.0	µg/L	50.0		65.2	40-140	12.2	20	
3,3-Dichlorobenzidine	39.6	10	µg/L	50.0		79.3	40-140	7.81	20	
2,4-Dichlorophenol	36.4	10	µg/L	50.0		72.7	30-130	10.4	20	
Diethylphthalate	34.4	10	µg/L	50.0		68.7	40-140	5.98	20	
2,4-Dimethylphenol	35.8	10	µg/L	50.0		71.6	30-130	10.4	20	
Dimethylphthalate	36.7	10	µg/L	50.0		73.3	40-140	3.77	50	‡
4,6-Dinitro-2-methylphenol	31.0	10	µg/L	50.0		61.9	30-130	7.23	50	‡
2,4-Dinitrophenol	29.8	10	µg/L	50.0		59.6	30-130	4.46	50	V-19 ‡
2,4-Dinitrotoluene	33.7	10	µg/L	50.0		67.4	40-140	5.63	20	
2,6-Dinitrotoluene	36.7	10	µg/L	50.0		73.4	40-140	5.87	20	
Di-n-octylphthalate	33.0	10	µg/L	50.0		66.1	40-140	10.4	20	
1,2-Diphenylhydrazine (as Azobenzene)	36.2	10	µg/L	50.0		72.3	40-140	11.6	20	
Fluoranthene	35.0	5.0	µg/L	50.0		70.0	40-140	9.73	20	
Fluorene	34.3	5.0	µg/L	50.0		68.5	40-140	4.14	20	



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## QUALITY CONTROL

## Semivolatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch B202110 - SW-846 3510C</b>										
<b>LCS Dup (B202110-BSD1)</b>										
Prepared: 04/30/18 Analyzed: 05/01/18										
Hexachlorobenzene	34.1	10	µg/L	50.0		68.1	40-140	10.9	20	
Hexachlorobutadiene	34.6	10	µg/L	50.0		69.2	40-140	11.0	20	
Hexachlorocyclopentadiene	24.7	10	µg/L	50.0		49.4	30-140	5.24	50	† ‡
Hexachloroethane	34.1	10	µg/L	50.0		68.2	40-140	13.3	50	‡
Indeno(1,2,3-cd)pyrene	36.0	5.0	µg/L	50.0		71.9	40-140	7.31	50	‡
Isophorone	38.5	10	µg/L	50.0		77.0	40-140	8.69	20	
1-Methylnaphthalene	38.7	5.0	µg/L	50.0		77.4	40-140	8.87	20	
2-Methylnaphthalene	38.2	5.0	µg/L	50.0		76.4	40-140	9.83	20	
2-Methylphenol	29.3	10	µg/L	50.0		58.7	30-130	3.48	20	
3/4-Methylphenol	31.2	10	µg/L	50.0		62.5	30-130	8.20	20	
Naphthalene	35.9	5.0	µg/L	50.0		71.9	40-140	9.24	20	
2-Nitroaniline	35.5	10	µg/L	50.0		71.0	40-140	3.73	20	
3-Nitroaniline	32.7	10	µg/L	50.0		65.4	40-140	8.24	20	
4-Nitroaniline	35.1	10	µg/L	50.0		70.1	40-140	4.68	20	
Nitrobenzene	36.5	10	µg/L	50.0		73.0	40-140	9.58	20	
2-Nitrophenol	35.7	10	µg/L	50.0		71.3	30-130	8.82	20	
4-Nitrophenol	17.3	10	µg/L	50.0		34.6	10-130	5.29	50	† ‡
N-Nitrosodimethylamine	24.8	10	µg/L	50.0		49.6	40-140	11.6	20	
N-Nitrosodiphenylamine	42.8	10	µg/L	50.0		85.5	40-140	10.6	20	
N-Nitrosodi-n-propylamine	37.6	10	µg/L	50.0		75.2	40-140	10.1	20	
Pentachloronitrobenzene	34.7	10	µg/L	50.0		69.4	40-140	8.76	20	V-16
Pentachlorophenol	26.5	10	µg/L	50.0		53.0	30-130	10.5	50	‡
Phenanthrene	34.8	5.0	µg/L	50.0		69.6	40-140	9.63	20	
Phenol	14.9	10	µg/L	50.0		29.8	20-130	12.4	20	†
Pyrene	34.3	5.0	µg/L	50.0		68.5	40-140	9.40	20	
Pyridine	17.6	5.0	µg/L	50.0		35.2	10-140	20.0	50	† ‡
1,2,4,5-Tetrachlorobenzene	34.0	10	µg/L	50.0		68.0	40-140	3.41	20	
1,2,4-Trichlorobenzene	33.8	5.0	µg/L	50.0		67.5	40-140	12.0	20	
2,4,5-Trichlorophenol	35.2	10	µg/L	50.0		70.5	30-130	4.30	20	
2,4,6-Trichlorophenol	34.0	10	µg/L	50.0		68.1	30-130	4.31	50	‡
Surrogate: 2-Fluorophenol	96.3		µg/L	200		48.2	15-110			
Surrogate: Phenol-d6	62.2		µg/L	200		31.1	15-110			
Surrogate: Nitrobenzene-d5	75.6		µg/L	100		75.6	30-130			
Surrogate: 2-Fluorobiphenyl	64.9		µg/L	101		64.2	30-130			
Surrogate: 2,4,6-Tribromophenol	153		µg/L	200		76.7	15-110			
Surrogate: p-Terphenyl-d14	80.5		µg/L	101		79.7	30-130			



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**QUALITY CONTROL**
**1,4-Dioxane by isotope dilution GC/MS - Quality Control**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch B201844 - SW-846 3510C</b>										
<b>Blank (B201844-BLK1)</b>				Prepared: 04/26/18 Analyzed: 04/30/18						
1,4-Dioxane	ND	0.20	µg/L							
Surrogate: 1,4-Dioxane-d8	1.85		µg/L	10.0		18.5	15-110			
<b>LCS (B201844-BS1)</b>				Prepared: 04/26/18 Analyzed: 04/30/18						
1,4-Dioxane	13.8	0.20	µg/L	10.0		138	40-140			
Surrogate: 1,4-Dioxane-d8	0.763		µg/L	10.0		7.63 *	15-110			S-26
<b>LCS Dup (B201844-BSD1)</b>				Prepared: 04/26/18 Analyzed: 04/30/18						
1,4-Dioxane	16.5	0.20	µg/L	10.0		165 *	40-140	17.2	30	L-07
Surrogate: 1,4-Dioxane-d8	0.857		µg/L	10.0		8.57 *	15-110			S-26
<b>Matrix Spike (B201844-MS2)</b>				Source: 18D1212-09 Prepared: 04/26/18 Analyzed: 04/30/18						
1,4-Dioxane	10.5	0.20	µg/L	10.0	ND	105	40-140			
Surrogate: 1,4-Dioxane-d8	1.63		µg/L	10.0		16.3	15-110			
<b>Matrix Spike Dup (B201844-MSD2)</b>				Source: 18D1212-09 Prepared: 04/26/18 Analyzed: 04/30/18						
1,4-Dioxane	11.5	0.20	µg/L	10.0	ND	115	40-140	8.46	20	
Surrogate: 1,4-Dioxane-d8	1.49		µg/L	10.0		14.9 *	15-110			S-23
<b>Batch B202067 - SW-846 3510C</b>										
<b>Blank (B202067-BLK1)</b>				Prepared: 04/28/18 Analyzed: 05/01/18						
1,4-Dioxane	ND	0.20	µg/L							
Surrogate: 1,4-Dioxane-d8	3.34		µg/L	10.0		33.4	15-110			
<b>LCS (B202067-BS1)</b>				Prepared: 04/28/18 Analyzed: 05/01/18						
1,4-Dioxane	9.92	0.20	µg/L	10.0		99.2	40-140			
Surrogate: 1,4-Dioxane-d8	3.70		µg/L	10.0		37.0	15-110			
<b>LCS Dup (B202067-BSD1)</b>				Prepared: 04/28/18 Analyzed: 05/01/18						
1,4-Dioxane	11.3	0.20	µg/L	10.0		113	40-140	13.0	30	
Surrogate: 1,4-Dioxane-d8	2.83		µg/L	10.0		28.3	15-110			



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## QUALITY CONTROL

## Miscellaneous Organic Analyses - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch B201871 - EPA 537</b>										
<b>Blank (B201871-BLK1)</b>										
Prepared: 04/30/18 Analyzed: 05/08/18										
Perfluorobutanesulfonic acid (PFBS)	ND	2.0	ng/L							
Perfluorohexanoic acid (PFHxA)	ND	2.0	ng/L							
Perfluoroheptanoic acid (PFHpA)	ND	2.0	ng/L							
Perfluorobutanoic acid (PFBA)	ND	3.0	ng/L							
Perfluorodecanesulfonic acid (PFDS)	ND	3.0	ng/L							
Perfluoroheptanesulfonic acid (PFHpS)	ND	3.0	ng/L							
Perfluorooctanesulfonamide (FOSA)	ND	3.0	ng/L							
Perfluoropentanoic acid (PFPeA)	ND	3.0	ng/L							
6:2 Fluorotelomersulfonate (6:2 FTS)	ND	3.0	ng/L							
8:2 Fluorotelomersulfonate (8:2 FTS)	ND	3.0	ng/L							
Perfluorohexanesulfonic acid (PFHxS)	ND	2.0	ng/L							
Perfluorooctanoic acid (PFOA)	ND	2.0	ng/L							
Perfluorooctanesulfonic acid (PFOS)	ND	2.0	ng/L							
Perfluorononanoic acid (PFNA)	ND	2.0	ng/L							
Perfluorodecanoic acid (PFDA)	ND	2.0	ng/L							
NMeFOSAA	ND	2.0	ng/L							
Perfluoroundecanoic acid (PFUnA)	ND	2.0	ng/L							
NEtFOSAA	ND	2.0	ng/L							
Perfluorododecanoic acid (PFDoA)	ND	2.0	ng/L							
Perfluorotridecanoic acid (PFTrDA)	ND	2.0	ng/L							
Perfluorotetradecanoic acid (PFTA)	ND	2.0	ng/L							
Surrogate: 13C-PFHxA	39.1		ng/L	40.0		97.7	70-130			
Surrogate: 13C-PFDA	40.7		ng/L	40.0		102	70-130			
Surrogate: d5-NEtFOSAA	160		ng/L	160		100	70-130			
<b>LCS (B201871-BS1)</b>										
Prepared: 04/30/18 Analyzed: 05/08/18										
Perfluorobutanesulfonic acid (PFBS)	1.67	2.0	ng/L	1.77		94.5	50-150			
Perfluorohexanoic acid (PFHxA)	2.60	2.0	ng/L	2.00		130	50-150			
Perfluoroheptanoic acid (PFHpA)	2.24	2.0	ng/L	2.00		112	50-150			
Perfluorobutanoic acid (PFBA)	1.58	3.0	ng/L	2.00		79.2	50-150			
Perfluorodecanesulfonic acid (PFDS)	1.55	3.0	ng/L	1.93		80.1	50-150			
Perfluoroheptanesulfonic acid (PFHpS)	2.19	3.0	ng/L	1.90		115	50-150			
Perfluorooctanesulfonamide (FOSA)	1.18	3.0	ng/L	2.00		58.8	50-150			
Perfluoropentanoic acid (PFPeA)	2.35	3.0	ng/L	2.00		118	50-150			
<b>6:2 Fluorotelomersulfonate (6:2 FTS)</b>	4.26	3.0	ng/L	1.90		<b>224</b> *	50-150			L-05
<b>8:2 Fluorotelomersulfonate (8:2 FTS)</b>	3.49	3.0	ng/L	1.92		<b>182</b> *	50-150			L-01
Perfluorohexanesulfonic acid (PFHxS)	2.39	2.0	ng/L	1.82		131	50-150			
Perfluorooctanoic acid (PFOA)	2.23	2.0	ng/L	2.00		112	50-150			
Perfluorooctanesulfonic acid (PFOS)	2.16	2.0	ng/L	1.85		117	50-150			
Perfluorononanoic acid (PFNA)	2.55	2.0	ng/L	2.00		128	50-150			
Perfluorodecanoic acid (PFDA)	1.77	2.0	ng/L	2.00		88.6	50-150			
NMeFOSAA	1.84	2.0	ng/L	2.00		92.1	50-150			
Perfluoroundecanoic acid (PFUnA)	1.70	2.0	ng/L	2.00		85.0	50-150			
NEtFOSAA	1.63	2.0	ng/L	2.00		81.5	50-150			
Perfluorododecanoic acid (PFDoA)	1.34	2.0	ng/L	2.00		67.0	50-150			
Perfluorotridecanoic acid (PFTrDA)	1.23	2.0	ng/L	2.00		61.4	50-150			
Perfluorotetradecanoic acid (PFTA)	1.67	2.0	ng/L	2.00		83.4	50-150			
Surrogate: 13C-PFHxA	35.7		ng/L	40.0		89.2	70-130			
Surrogate: 13C-PFDA	30.1		ng/L	40.0		75.2	70-130			
<b>Surrogate: d5-NEtFOSAA</b>	102		ng/L	160		<b>63.8</b> *	70-130			S-26



39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

## QUALITY CONTROL

## Miscellaneous Organic Analyses - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch B201871 - EPA 537</b>										
<b>Matrix Spike (B201871-MS2)</b>	<b>Source: 18D1212-02</b>			Prepared: 04/30/18 Analyzed: 05/08/18						
Perfluorobutanesulfonic acid (PFBS)	5.00	2.0	ng/L	1.77	2.36	149	50-150			
<b>Perfluorohexanoic acid (PFHxA)</b>	7.22	2.0	ng/L	2.00	3.12	<b>205</b>	* 50-150			MS-11
Perfluoroheptanoic acid (PFHpA)	4.00	2.0	ng/L	2.00	2.11	94.3	50-150			
<b>Perfluorobutanoic acid (PFBA)</b>	2.57	3.0	ng/L	2.00	1.77	<b>40.2</b>	* 50-150			MS-22
Perfluorodecanesulfonic acid (PFDS)	1.28	3.0	ng/L	1.93	ND	66.2	50-150			
Perfluoroheptanesulfonic acid (PFHpS)	5.19	3.0	ng/L	1.90	3.16	106	50-150			
<b>Perfluorooctanesulfonamide (FOSA)</b>	0.0826	3.0	ng/L	2.00	ND	<b>4.13</b>	* 50-150			MS-15
Perfluoropentanoic acid (PFPeA)	6.53	3.0	ng/L	2.00	4.26	113	50-150			
<b>6:2 Fluorotelomersulfonate (6:2 FTS)</b>	4.25	3.0	ng/L	1.90	ND	<b>224</b>	* 50-150			MS-11
8:2 Fluorotelomersulfonate (8:2 FTS)	2.66	3.0	ng/L	1.92	ND	138	50-150			
Perfluorohexanesulfonic acid (PFHxS)	3.65	2.0	ng/L	1.82	1.98	91.7	50-150			
Perfluorooctanoic acid (PFOA)	6.67	2.0	ng/L	2.00	4.58	105	50-150			
<b>Perfluorooctanesulfonic acid (PFOS)</b>	165	2.0	ng/L	1.85	88.5	<b>4140</b>	* 50-150			MS-11
Perfluorononanoic acid (PFNA)	3.16	2.0	ng/L	2.00	1.13	101	50-150			
Perfluorodecanoic acid (PFDA)	1.65	2.0	ng/L	2.00	ND	82.5	50-150			
NMeFOSAA	1.03	2.0	ng/L	2.00	ND	51.4	50-150			
<b>Perfluoroundecanoic acid (PFUnA)</b>	0.929	2.0	ng/L	2.00	ND	<b>46.4</b>	* 50-150			MS-15
<b>NEtFOSAA</b>	0.951	2.0	ng/L	2.00	ND	<b>47.5</b>	* 50-150			MS-15
<b>Perfluorododecanoic acid (PFDoA)</b>	0.257	2.0	ng/L	2.00	ND	<b>12.8</b>	* 50-150			MS-15
<b>Perfluorotridecanoic acid (PFTTrDA)</b>	0.171	2.0	ng/L	2.00	ND	<b>8.53</b>	* 50-150			MS-15
<b>Perfluorotetradecanoic acid (PFTA)</b>	0.103	2.0	ng/L	2.00	ND	<b>5.14</b>	* 50-150			MS-15
Surrogate: 13C-PFHxA	51.9		ng/L	40.0		130	70-130			
Surrogate: 13C-PFDA	31.9		ng/L	40.0		79.8	70-130			
Surrogate: d5-NEtFOSAA	155		ng/L	160		97.1	70-130			
<b>Matrix Spike Dup (B201871-MSD2)</b>	<b>Source: 18D1212-02</b>			Prepared: 04/30/18 Analyzed: 05/09/18						
Perfluorobutanesulfonic acid (PFBS)	4.22	2.0	ng/L	1.77	2.36	105	70-130	16.8	30	
<b>Perfluorohexanoic acid (PFHxA)</b>	7.28	2.0	ng/L	2.00	3.12	<b>208</b>	* 50-150	0.799	30	MS-11
Perfluoroheptanoic acid (PFHpA)	4.01	2.0	ng/L	2.00	2.11	94.9	50-150	0.346	30	
Perfluorobutanoic acid (PFBA)	3.12	3.0	ng/L	2.00	1.77	67.6	50-150	19.2	30	
<b>Perfluorodecanesulfonic acid (PFDS)</b>	0.949	3.0	ng/L	1.93	ND	<b>49.2</b>	* 50-150	29.6	30	MS-15
<b>Perfluoroheptanesulfonic acid (PFHpS)</b>	6.36	3.0	ng/L	1.90	3.16	<b>168</b>	* 50-150	20.4	30	MS-11
<b>Perfluorooctanesulfonamide (FOSA)</b>	0.120	3.0	ng/L	2.00	ND	<b>5.99</b>	* 50-150	<b>36.8</b>	* 30	MS-15
Perfluoropentanoic acid (PFPeA)	6.27	3.0	ng/L	2.00	4.26	100	50-150	4.11	30	
<b>6:2 Fluorotelomersulfonate (6:2 FTS)</b>	4.73	3.0	ng/L	1.90	ND	<b>249</b>	* 50-150	10.7	30	MS-11
8:2 Fluorotelomersulfonate (8:2 FTS)	1.82	3.0	ng/L	1.92	ND	94.6	50-150	<b>37.7</b>	* 30	MS-22
<b>Perfluorohexanesulfonic acid (PFHxS)</b>	5.82	2.0	ng/L	1.82	1.98	<b>211</b>	* 50-150	<b>45.9</b>	* 30	MS-23
Perfluorooctanoic acid (PFOA)	6.32	2.0	ng/L	2.00	4.58	87.2	50-150	5.37	30	
<b>Perfluorooctanesulfonic acid (PFOS)</b>	171	2.0	ng/L	1.85	88.5	<b>4480</b>	* 50-150	3.72	30	MS-11
Perfluorononanoic acid (PFNA)	2.45	2.0	ng/L	2.00	1.13	65.9	50-150	25.2	30	
Perfluorodecanoic acid (PFDA)	1.75	2.0	ng/L	2.00	ND	87.6	50-150	5.97	30	
NMeFOSAA	1.13	2.0	ng/L	2.00	ND	56.7	50-150	9.86	30	
<b>Perfluoroundecanoic acid (PFUnA)</b>	0.646	2.0	ng/L	2.00	ND	<b>32.3</b>	* 50-150	<b>35.9</b>	* 30	MS-15
<b>NEtFOSAA</b>	1.72	2.0	ng/L	2.00	ND	86.1	50-150	<b>57.7</b>	* 30	MS-23
<b>Perfluorododecanoic acid (PFDoA)</b>	0.480	2.0	ng/L	2.00	ND	<b>24.0</b>	* 50-150	<b>60.5</b>	* 30	MS-15
<b>Perfluorotridecanoic acid (PFTTrDA)</b>	0.243	2.0	ng/L	2.00	ND	<b>12.1</b>	* 50-150	<b>35.0</b>	* 30	MS-15
<b>Perfluorotetradecanoic acid (PFTA)</b>	0.345	2.0	ng/L	2.00	ND	<b>17.2</b>	* 50-150	<b>108</b>	* 30	MS-15
Surrogate: 13C-PFHxA	50.7		ng/L	40.0		127	70-130			
Surrogate: 13C-PFDA	36.9		ng/L	40.0		92.2	70-130			
Surrogate: d5-NEtFOSAA	142		ng/L	160		88.6	70-130			



39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

**QUALITY CONTROL**
**Metals Analyses (Dissolved) - Quality Control**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch B201857 - SW-846 3005A Dissolved</b>										
<b>Blank (B201857-BLK1)</b>				Prepared: 04/26/18 Analyzed: 04/27/18						
Chromium	ND	0.010	mg/L							
Copper	ND	0.010	mg/L							
Nickel	ND	0.010	mg/L							
<b>LCS (B201857-BS1)</b>				Prepared: 04/26/18 Analyzed: 04/27/18						
Chromium	0.504	0.010	mg/L	0.500		101	80-120			
Copper	0.993	0.010	mg/L	1.00		99.3	80-120			
Nickel	0.501	0.010	mg/L	0.500		100	80-120			
<b>LCS Dup (B201857-BSD1)</b>				Prepared: 04/26/18 Analyzed: 04/27/18						
Chromium	0.501	0.010	mg/L	0.500		100	80-120	0.599	20	
Copper	0.986	0.010	mg/L	1.00		98.6	80-120	0.655	20	
Nickel	0.498	0.010	mg/L	0.500		99.6	80-120	0.532	20	
<b>Matrix Spike (B201857-MS2)</b>				<b>Source: 18D1212-06</b>		Prepared: 04/26/18 Analyzed: 04/27/18				
Chromium	0.503	0.010	mg/L	0.500	0.00682	99.2	75-125			
Copper	1.08	0.010	mg/L	1.00	0.0992	98.0	75-125			
Nickel	0.895	0.010	mg/L	0.500	0.402	98.5	75-125			
<b>Matrix Spike Dup (B201857-MSD2)</b>				<b>Source: 18D1212-06</b>		Prepared: 04/26/18 Analyzed: 04/27/18				
Chromium	0.512	0.010	mg/L	0.500	0.00682	101	75-125	1.75	20	
Copper	1.10	0.010	mg/L	1.00	0.0992	99.7	75-125	1.57	20	
Nickel	0.901	0.010	mg/L	0.500	0.402	99.8	75-125	0.733	20	



# FLAG/QUALIFIER SUMMARY

*	QC result is outside of established limits.
†	Wide recovery limits established for difficult compound.
‡	Wide RPD limits established for difficult compound.
#	Data exceeded client recommended or regulatory level
ND	Not Detected
RL	Reporting Limit is at the level of quantitation (LOQ)
DL	Detection Limit is the lower limit of detection determined by the MDL study
MCL	Maximum Contaminant Level
	Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.
	No results have been blank subtracted unless specified in the case narrative section.
L-01	Laboratory fortified blank /laboratory control sample recovery outside of control limits. Data validation is not affected since all results are "not detected" for all samples in this batch for this compound and bias is on the high side.
L-05	Laboratory fortified blank/laboratory control sample recovery is outside of control limits. Reported value for this compound is likely to be biased on the high side.
L-07	Either laboratory fortified blank/laboratory control sample or duplicate recovery is outside of control limits, but the other is within limits. RPD between the two LFB/LCS results is within method specified criteria.
L-07A	Either laboratory fortified blank/laboratory control sample or duplicate recovery is outside of control limits, but the other is within limits. RPD outside of control limits. Reduced precision anticipated for any reported result for this compound.
MS-11	Matrix spike recovery outside of control limits. Possibility of sample matrix effects that lead to a high bias for reported result or non-homogeneous sample aliquots cannot be eliminated.
MS-15	Matrix spike and matrix spike duplicate recoveries are outside of control limits. Data validation is not affected since results for this compound in this sample are "not detected", and recovery bias is on the high side.
MS-22	Either matrix spike or MS duplicate is outside of control limits, but the other is within limits. RPD between the two MS/MSD results is within method specified criteria.
MS-23	Either matrix spike or MS duplicate is outside of control limits, but the other is within limits. RPD between the two MS/MSD results is outside of the method specified criteria. Reduced precision anticipated for any reported result for this compound.
R-05	Laboratory fortified blank duplicate RPD is outside of control limits. Reduced precision is anticipated for any reported value for this compound.
S-23	Surrogate recovery outside of control limits in BS/MS spiked sample, all reported analytes are within control criteria, data not significantly affected.
S-26	Surrogate outside of control limits.
V-04	Initial calibration did not meet method specifications. Compound was calibrated using a response factor where %RSD is outside of method specified criteria. Reported result is estimated.
V-05	Continuing calibration did not meet method specifications and was biased on the low side for this compound. Reported result is estimated.
V-06	Continuing calibration did not meet method specifications and was biased on the high side for this compound. Reported result is estimated.
V-16	Response factor is less than method specified minimum acceptable value. Reduced precision and accuracy may be associated with reported result.
V-17	Internal standard area <50% of associated calibration standard internal standard area. Reanalysis yielded similar internal standard non-conformance.
V-19	Initial calibration did not meet method specifications. Compound was calibrated using linear regression with correlation coefficient <0.99. Reported result is estimated.
V-34	Initial calibration verification (ICV) did not meet method specifications and was biased on the low side for this compound. Reported result is estimated.



**CERTIFICATIONS**
**Certified Analyses included in this Report**

Analyte	Certifications
<b><i>SW-846 6010C-D in Water</i></b>	
Chromium	CT,NH,NY,ME,NC,VA
Copper	CT,NH,NY,ME,NC,VA
Nickel	CT,NH,NY,ME,NC,VA
<b><i>SW-846 8270D in Water</i></b>	
1,4-Dioxane	NY
Acenaphthene	CT,NY,NC,ME,NH,VA
Acenaphthylene	CT,NY,NC,ME,NH,VA
Acetophenone	NY,NC
Aniline	CT,NY,NC,ME,VA
Anthracene	CT,NY,NC,ME,NH,VA
Benidine	CT,NY,NC,ME,NH,VA
Benzo(a)anthracene	CT,NY,NC,ME,NH,VA
Benzo(a)pyrene	CT,NY,NC,ME,NH,VA
Benzo(b)fluoranthene	CT,NY,NC,ME,NH,VA
Benzo(g,h,i)perylene	CT,NY,NC,ME,NH,VA
Benzo(k)fluoranthene	CT,NY,NC,ME,NH,VA
Benzoic Acid	NY,NC,ME,NH,VA
Bis(2-chloroethoxy)methane	CT,NY,NC,ME,NH,VA
Bis(2-chloroethyl)ether	CT,NY,NC,ME,NH,VA
Bis(2-chloroisopropyl)ether	CT,NY,NC,ME,NH,VA
Bis(2-Ethylhexyl)phthalate	CT,NY,NC,ME,NH,VA
4-Bromophenylphenylether	CT,NY,NC,ME,NH,VA
Butylbenzylphthalate	CT,NY,NC,ME,NH,VA
Carbazole	NC
4-Chloroaniline	CT,NY,NC,ME,NH,VA
4-Chloro-3-methylphenol	CT,NY,NC,ME,NH,VA
2-Chloronaphthalene	CT,NY,NC,ME,NH,VA
2-Chlorophenol	CT,NY,NC,ME,NH,VA
4-Chlorophenylphenylether	CT,NY,NC,ME,NH,VA
Chrysene	CT,NY,NC,ME,NH,VA
Dibenz(a,h)anthracene	CT,NY,NC,ME,NH,VA
Dibenzofuran	CT,NY,NC,ME,NH,VA
Di-n-butylphthalate	CT,NY,NC,ME,NH,VA
1,2-Dichlorobenzene	CT,NY,NC,ME,NH,VA
1,3-Dichlorobenzene	CT,NY,NC,ME,NH,VA
1,4-Dichlorobenzene	CT,NY,NC,ME,NH,VA
3,3-Dichlorobenzidine	CT,NY,NC,ME,NH,VA
2,4-Dichlorophenol	CT,NY,NC,ME,NH,VA
Diethylphthalate	CT,NY,NC,ME,NH,VA
2,4-Dimethylphenol	CT,NY,NC,ME,NH,VA
Dimethylphthalate	CT,NY,NC,ME,NH,VA
4,6-Dinitro-2-methylphenol	CT,NY,NC,ME,NH,VA
2,4-Dinitrophenol	CT,NY,NC,ME,NH,VA
2,4-Dinitrotoluene	CT,NY,NC,ME,NH,VA
2,6-Dinitrotoluene	CT,NY,NC,ME,NH,VA
Di-n-octylphthalate	CT,NY,NC,ME,NH,VA



**CERTIFICATIONS**
**Certified Analyses included in this Report**

Analyte	Certifications
<i>SW-846 8270D in Water</i>	
1,2-Diphenylhydrazine (as Azobenzene)	NY,NC
Fluoranthene	CT,NY,NC,ME,NH,VA
Fluorene	NY,NC,ME,NH,VA
Hexachlorobenzene	CT,NY,NC,ME,NH,VA
Hexachlorobutadiene	CT,NY,NC,ME,NH,VA
Hexachlorocyclopentadiene	CT,NY,NC,ME,NH,VA
Hexachloroethane	CT,NY,NC,ME,NH,VA
Indeno(1,2,3-cd)pyrene	CT,NY,NC,ME,NH,VA
Isophorone	CT,NY,NC,ME,NH,VA
1-Methylnaphthalene	NC
2-Methylnaphthalene	CT,NY,NC,ME,NH,VA
2-Methylphenol	CT,NY,NC,NH,VA
3/4-Methylphenol	CT,NY,NC,NH,VA
Naphthalene	CT,NY,NC,ME,NH,VA
2-Nitroaniline	CT,NY,NC,ME,NH,VA
3-Nitroaniline	CT,NY,NC,ME,NH,VA
4-Nitroaniline	CT,NY,NC,ME,NH,VA
Nitrobenzene	CT,NY,NC,ME,NH,VA
2-Nitrophenol	CT,NY,NC,ME,NH,VA
4-Nitrophenol	CT,NY,NC,ME,NH,VA
N-Nitrosodimethylamine	CT,NY,NC,ME,NH,VA
N-Nitrosodiphenylamine	CT,NY,NC,ME,NH,VA
N-Nitrosodi-n-propylamine	CT,NY,NC,ME,NH,VA
Pentachloronitrobenzene	NC
Pentachlorophenol	CT,NY,NC,ME,NH,VA
Phenanthrene	CT,NY,NC,ME,NH,VA
Phenol	CT,NY,NC,ME,NH,VA
Pyrene	CT,NY,NC,ME,NH,VA
Pyridine	CT,NY,NC,ME,NH,VA
1,2,4,5-Tetrachlorobenzene	NY,NC
1,2,4-Trichlorobenzene	CT,NY,NC,ME,NH,VA
2,4,5-Trichlorophenol	CT,NY,NC,ME,NH,VA
2,4,6-Trichlorophenol	CT,NY,NC,ME,NH,VA
2-Fluorophenol	NC



39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

The CON-TEST Environmental Laboratory operates under the following certifications and accreditations:

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC - ISO17025:2005	100033	03/1/2020
MA	Massachusetts DEP	M-MA100	06/30/2018
CT	Connecticut Department of Public Health	PH-0567	09/30/2019
NY	New York State Department of Health	10899 NELAP	04/1/2019
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2019
RI	Rhode Island Department of Health	LAO00112	12/30/2018
NC	North Carolina Div. of Water Quality	652	12/31/2018
NJ	New Jersey DEP	MA007 NELAP	06/30/2018
FL	Florida Department of Health	E871027 NELAP	06/30/2018
VT	Vermont Department of Health Lead Laboratory	LL015036	07/30/2018
ME	State of Maine	2011028	06/9/2019
VA	Commonwealth of Virginia	460217	12/14/2018
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2018
VT-DW	Vermont Department of Health Drinking Water	VT-255716	06/12/2018
NC-DW	North Carolina Department of Health	25703	07/31/2018









1801212

39 Spruce Street  
East Longmeadow, MA 01028

Page 2 of 2

**Company Name:** GEC  
**Address:**  
**Phone:**  
**Project Name:**  
**Project Location:**  
**Project Number:** 1744-7090  
**Project Manager:**  
**Con-Test Quote Name/Number:**  
**Invoice Recipient:**  
**Sampled By:**

**Requested Turnaround Time**  
7-Day ☒ 10-Day ☐  
Due Date:

**Rush-Approval Required**  
1-Day ☐ 3-Day ☐  
2-Day ☐ 4-Day ☐  
**Data Delivery**  
Format: PDF ☒ EXCEL ☐  
Other: ☐  
CLP Like Data Pkg Required: ☐  
Email To: M. Bradley  
Fax To #:

Con-Test Work Order #	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	Composite	Grab	Matrix Code	Conc Code
10	MD-2626	4/23/18	2:40		X	GW	U
9	MD-WW-25		4:13				
-	MD-WW-25		4:13				
6	MD-WW-12		5:33				
-	MD-WW-12		5:33				
2	MD-WW-5		12:53				
-	MD-WW-5		12:53				
11	GROUNDWATER		4:30		X	GW	U
12	FIELD DUL		11:30			GW	U

Comments:

NY DEC category B Reporting Package

Relinquished by (signature)	Date/Time
<i>[Signature]</i>	4/24/18 16:00
Received by (signature)	Date/Time
<i>[Signature]</i>	4-25-18 13:45
Relinquished by (signature)	Date/Time
<i>[Signature]</i>	4-25-18 15:45
Received by (signature)	Date/Time
<i>[Signature]</i>	4/25/18 16:45
Relinquished by (signature)	Date/Time
<i>[Signature]</i>	4/25/18 18:30
Received by (signature)	Date/Time
<i>[Signature]</i>	4/25/18 18:30

**Project Entity**  
☐ Government  
☐ Federal  
☐ City  
☐ Municipality  
☐ 21 J  
☐ Brownfield  
☐ MWRA  
☐ School  
☐ MBTA  
☐ WRTA  
☐ Chromatogram  
☐ AIHA-LAP, LLC  
 Other



MA, CT and AIHA-LAP, LLC Accredited

Please use the following codes to indicate possible sample concentration within the Conc Code column above:  
H - High; M - Medium; L - Low; C - Clean; U - Unknown

ANALYSIS REQUESTED

2626	MD-2626	4/23/18	2:40		X	GW	U
25	MD-WW-25		4:13				
12	MD-WW-12		5:33				
5	MD-WW-5		12:53				
GROUNDWATER	MD-WW-5		12:53				
FIELD DUL	MD-WW-5		12:53				

**# of Containers**  
**Preservation Code**  
**Container Code**

**Dissolved Metals Samples**  
☐ Field Filtered  
☐ Lab to Filter

**Orthophosphate Samples**  
☐ Field Filtered  
☐ Lab to Filter

**1 Matrix Codes:**  
 GW = Ground Water  
 WW = Waste Water  
 DW = Drinking Water  
 A = Air  
 S = Soil  
 SL = Sludge  
 SOL = Solid  
 O = Other (please define)

**2 Preservation Codes:**  
 I = Iced  
 H = HCL  
 M = Methanol  
 N = Nitric Acid  
 S = Sulfuric Acid  
 B = Sodium Bisulfate  
 X = Sodium Hydroxide  
 T = Sodium Thiosulfate  
 O = Other (please define)

**3 Container Codes:**  
 A = Amber Glass  
 G = Glass  
 P = Plastic  
 ST = Sterile  
 V = Vial  
 S = Summa Canister  
 T = Tedlar Bag  
 O = Other (please define)

**PCB ONLY**  
☐ Soxhlet  
☐ Non Soxhlet




**con-test®**  
 ANALYTICAL LABORATORY

Doc# 277 Rev 5 2017

**Login Sample Receipt Checklist - (Rejection Criteria Listing - Using Acceptance Policy) Any False**

Statement will be brought to the attention of the Client - State True or False

Client GEC
 Received By SE Date 4/25/18 Time 18:30

 How were the samples received? In Cooler T No Cooler        On Ice T No Ice         
 Direct from Sampling        Ambient        Melted Ice       

 Were samples within Temperature? 2-6°C T By Gun # 577 Actual Temp - 3.6 5.0  
 By Blank #        Actual Temp -       

 Was Custody Seal Intact? N/A Were Samples Tampered with? N/A

 Was COC Relinquished? T Does Chain Agree With Samples? T

 Are there broken/leaking/loose caps on any samples? F

 Is COC in ink/ Legible? T Were samples received within holding time? T

 Did COC include all Client T Analysis T Sampler Name T

 pertinent Information? Project T ID's T Collection Dates/Times T

 Are Sample labels filled out and legible? T

 Are there Lab to Filters? F Who was notified?       

 Are there Rushes? F Who was notified?       

 Are there Short Holds? F Who was notified?       

 Is there enough Volume? T

 Is there Headspace where applicable? N/A MS/MSD? F T SE 4/25/18

 Proper Media/Containers Used? T Is splitting samples required? F

 Were trip blanks received? F SE 4/25/18 On COC? T N/A SE 4/25/18

 Do all samples have the proper pH? T Acid pH < 2 Base       

Vials	#	Containers:	#		#	
Unp-		1 Liter Amb.	<u>14</u>	1 Liter Plastic		16 oz Amb.
HCL-		500 mL Amb.		500 mL Plastic		8oz Amb/Clear
Meoh-		250 mL Amb.		250 mL Plastic	<u>19</u>	4oz Amb/Clear
Bisulfate-		Col./Bacteria		Flashpoint		2oz Amb/Clear
DI-		Other Plastic		Other Glass		Encore
Thiosulfate-		SOC Kit		Plastic Bag		Frozen:
Sulfuric-		Perchlorate		Ziplock		

**Unused Media**

Vials	#	Containers:	#		#	
Unp-		1 Liter Amb.		1 Liter Plastic		16 oz Amb.
HCL-		500 mL Amb.		500 mL Plastic		8oz Amb/Clear
Meoh-		250 mL Amb.		250 mL Plastic		4oz Amb/Clear
Bisulfate-		Col./Bacteria		Flashpoint		2oz Amb/Clear
DI-		Other Plastic		Other Glass		Encore
Thiosulfate-		SOC Kit		Plastic Bag		Frozen:
Sulfuric-		Perchlorate		Ziplock		

Comments: