



PERIODIC REVIEW REPORT

Haverstraw Harbors Site

NYSDEC BCP ID: C344060

Dr. Girling Drive

Haverstraw, New York

April 2017

Revised June 2017

WCD File: GH9964.44

Environmental & Construction Risk Management

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Prepared By:

**WCD Group, LLC
24 Davis Avenue
Poughkeepsie, New York 12603**

Prepared For:

**GDC Development Properties LLC
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Valhalla, New York 10595**

The undersigned has reviewed this Periodic Review Report and certifies to GDC Development Properties, LLC and to the New York State Department of Environmental Conservation (NYSDEC) that the information provided in this document is accurate as of the date of issuance by this office.

The undersigned is a Qualified Environmental Professional as defined by 6NYCRR Part 375-1.2 (aj) and supporting documents. The undersigned possesses sufficient specific education, training, and experience necessary to exercise professional judgment to develop opinions and conclusions regarding the presence of releases or threatened releases to the surface or subsurface of the site or off-site areas, sufficient to meet the objectives and performance factors for the areas of practice identified in NYSDEC guidance document DER-10.

Paul H. Ciminello

June 27, 2017



Qualified Environmental Professional

Date

Signature



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1.0 INTRODUCTION

1.1 Purpose

This Periodic Review Report (PRR) details on-going site management activities at the Haverstraw Harbors Site (“Site”), which entered the New York State Department of Environmental Conservation (NYSDEC) Brownfield Cleanup Program (BCP) in July 2004 (BCP ID: C344060). The Site is located at Dr. George Girling Drive, Village of Haverstraw, Rockland County, New York. A map displaying the Site location is presented as Figure 1, Appendix A.

1.2 Site Description

The Site is an irregularly-shaped, 5.0479-acre parcel, bounded by a portion of the Metro North Railroad (MNR) parking lot to the north, the Harbors at Haverstraw residential complex to the south, the Hudson River to the east, and West Street to the west (see Figure 1). Dr. George W. Girling Drive (“Girling Drive”) traverses the Site in an “L” shape from the western Site boundary and ends in the central portion of the Site. The western portion of the Site is currently occupied by the Village of Haverstraw Department of Public Works (“DPW”). The eastern portion of the Site is currently vacant. The Site layout is depicted on Figure 1, Appendix A.

2.0 BACKGROUND

2.1 Site History

The Site is historically comprised of four parcels:

- Former Rockland Fuel Oil Company (Rockland Fuel) parcel, located at the southeastern portion of the Site;
- Portion of the former Keahon parcel, located at the northeastern portion of the Site; and,
- Two DPW parcels (northern and southern parcels), located at the western portion of the Site.

The Rockland Fuel and Keahon parcels are located at the eastern end of Girling Drive, along the western shoreline of the Hudson River. The DPW parcels are located on both the northern and southern sides of Girling Drive (the southern parcel also has frontage on West Street).

The Rockland Fuel parcel is the site of a former major oil storage facility (MOSF). Aboveground storage tanks (ASTs), ancillary structures, and a limited area of solvent contaminated soil were removed in 2003.

The Keahon parcel is the site of a former concrete manufacturer, which contained ASTs and fuel pumps removed prior to the installation of the MNR parking lot.

The northern DPW parcel is utilized as a maintenance yard containing a salt/gravel shed, and two ASTs (diesel fuel and gasoline) with a fuel pump. The northern DPW parcel is the site of a former wastewater treatment plant.

The southern DPW parcel contains a garage utilized for vehicle maintenance activities, an office trailer, construction trailer associated with the Harbors at Haverstraw residential complex, and a western landscaped area, which contains a 3,000-gallon underground storage tank (UST) supplying heating oil to the garage.

2.2 Prior Investigations and Remediation Activities

2.2.1 Prior Investigations

The following investigations have been conducted by Ecosystems Strategies (ESI, now part of WCD Group, LLC [WCD]) at the Site:

- Phase I Environmental Site Assessment for the Keahon and Rockland Fuel parcels, February 5, 1999;
- Combined Phase I – Phase II Environmental Site Assessment for the Rockland Fuel and northern DPW parcel, June 4, 1999;
- Summary Report of Remedial Activities (SRRA) for the former Rockland Fuel parcel, August 2003;
- Tank Closure Site Assessment (TCSA) for the former Rockland Fuel and Keahon parcels, August 2003;
- Letter Reports documenting sampling of on- and off-site monitoring wells for the Rockland Fuel parcel, April 23, 2002 and February 24, 2004;
- Tank Closure Report (TCR) for the southern DPW parcel, February 2, 2005
- Summary Report of Subsurface Investigation for the southern DPW parcel, August 2005; and,
- Site Investigation Report (SIR), October 2007.

Environmental investigations prior to the SIR identified petroleum contamination in subsurface soils in the eastern and southwestern portions of the Site and in on-site groundwater, and solvent contamination in subsurface soils in the central portion of the Site.

Interim remedial activities at the Site included: removal of all petroleum bulk storage at the Rockland and Keahon parcels (TCSA), removal of solvent impacted soils in the central portion of the Site (SRRA); and removal of an UST in the southwestern portion of the Site (TCR).

The SIR confirmed and extensively documented petroleum contamination in on-site subsurface soils in the northeastern, southeastern and southwestern portions of the Site. Light non-aqueous phase liquid (LNAPL) was identified in several areas associated with grossly contaminated petroleum-impacted soils. No significant off-site contamination associated with the Site was reported in the SIR.

2.2.2 Remediation Activities

The following remedial actions were conducted as part of the implementation of the NYSDEC approved Remedial Action Work Plan (RAWP, November 2007) prepared by ESI:

1. Excavation of accessible soil/fill exceeding restricted residential soil cleanup objectives (SCOs) and/or grossly contaminated soils to varying depths (maximum depth of 12 feet bsg) in the northeast, southern, and southwestern portions of the Site. Figures 3.1, 3.2 and 3.3, Appendix A depict the areas of excavation at the Site;
2. Recovery, containerization and disposal of accessible LNAPL present in excavation areas;

3. Installation of a demarcation layer in areas with known or suspected remaining contamination;
4. Backfilling excavated areas with NYSDEC-approved material;
5. Demolition of the Sales Center (a temporary structure in the southeastern portion of the Site) during remedial activities to access grossly contaminated soils underneath the building;
6. Construction and maintenance of a cover system consisting of impermeable surfaces (asphalt, pavement and/or building/trailer footprint) or landscaped areas with at least 24 inches of clean soil to prevent human exposure to remaining contaminated soil/fill remaining at the Site. Figure 4 and Table A, Appendix B provide a depiction and summary of remaining soil contamination at the Site, respectively. Figures 5.1 and 5.2 depict the cover system for the Site;
7. Provision for the installation of a sub-slab depressurization system (SSDS), if deemed necessary, in any future building erected on-site during development activities;
8. Execution and recording of an Environmental Easement (EE) to restrict land use and prevent future exposure to any contamination remaining at the site;
9. Establishing Institutional Controls (see Section 2.4);
10. Development and implementation of a Site Management Plan (SMP) for long term management of remaining contamination as required by the EE, which includes plans for: (1) Institutional and Engineering Controls, (2) monitoring, (3) operation and maintenance and (4) reporting.

Remedial activities were completed at the Site from May through November 2013.

2.3 Engineering Controls

Engineering controls (ECs) have been put into place in order to manage remaining on-site contamination. The only existing EC at the Site is the cover system, to prevent exposure to remaining contamination in soil/fill.

The SMP contains provisions for future ECs. The conditions upon which to implement the future ECs are presented in the SMP. The future ECs consist of:

- The installation of a SSDS, if deemed necessary, in any future building erected on-site during development activities; and,
- In-situ treatment to address remaining contamination in the event LNAPL is encountered in remaining wells and/or this contamination migrates to areas where no previous contamination has been documented.

A site-wide inspection form completed by WCD, which documents the annual inspection of the existing EC, is provided in Appendix C. The cover system is discussed in Section 2.3.1. An evaluation on the need to implement future ECs is presented in Sections 2.3.2 and 2.3.3. These sections discuss the maintenance and operation activities outlined in the SMP, in addition to other pertinent activities that have occurred in the past year.

2.3.1 Cover System

The cover system at the Site consist of a minimum of 24 inches of clean soil, asphalt pavement, concrete-covered sidewalks, trailers in the northern DPW parcel, and/or concrete building slabs of no less than 3 inches in thickness.

The inspection of the cover system was completed on April 14, 2017. The cover system was observed to be in good condition at the time of the inspection and no significant cracks, vegetation between cracks, ponding of surface water or surface depressions were noted. Photographs of cover system at the Site are presented as Appendix D.

2.3.2 Sub-slab Depressurization System

A SSDS will be installed, if deemed necessary after the evaluation of soil vapor data and in consultation with NYSDEC, in any building erected on-site during future development activities to prevent exposure to any soil vapor intrusion from remaining contamination that exists beneath the Site.

No new structures have been erected since the implementation of the RAWP. No SSDS has been installed at the Site to date. All future buildings erected on-site will be evaluated to determine the need of a SSDS in accordance with the SMP.

2.3.3 Contingency for In-situ Treatment and Groundwater Monitoring

In-situ treatment of on-site soils and groundwater will be conducted in the event LNAPL is encountered in remaining wells and/or remaining contamination migrates to areas where no previous contamination has been documented. Mobility of remaining contamination will be evaluated by assessing contaminant concentrations in groundwater and the presence of LNAPL.

Post-remediation groundwater monitoring has been conducted at the Site since July 2014 to assess the need for in-situ treatment, document post-remedial groundwater quality and assess natural attenuation. Groundwater monitoring consists of the sampling of on-site and off-site monitoring wells for constituents of concern and determining the presence or absence of LNAPL. Figure 2, Appendix A depicts the monitoring well locations. The latest groundwater sampling event was conducted on July 27, 2016. A Letter Report documenting the July 2016 groundwater monitoring and sampling activities, presented as Appendix E, was prepared by ESI and submitted to NYSDEC on August 24, 2016. The conclusions of the Letter Report are presented below.

No measurable LNAPL was observed at any of the wells during the July 2016 groundwater monitoring activities. Field evidence of petroleum contamination (i.e. odors, sheen and PID readings) was observed in monitoring wells HMW-7R and HMW-10R; however, laboratory data indicates that no petroleum compounds were detected at concentrations above groundwater standards. These findings support the conclusion that remaining petroleum contamination in on-site soils and groundwater is highly degraded.

Low-level exceedances of groundwater standards for several chlorinated solvents continue to be present at HMW-8 (TCE and its breakdown products) and HWM-13 (chlorobenzene). Current data suggest that TCE is naturally degrading in situ; chlorobenzene concentrations, however, appear to be relatively stable.

It is the opinion of WCD that residual petroleum and solvent contamination does not warrant in-situ treatment at this time, based on the absence of LNAPL and only low-level concentrations of dissolved VOCs in on-site groundwater.

A SSDS is anticipated for any building erected on-site during future development activities to prevent exposure to any soil-gas intrusion from remaining contamination. Soil-gas sampling is anticipated in locations where the proposed residential buildings will be erected to determine the need and extent of the SSDS as per the requirements of the SMP.

Groundwater monitoring will be conducted on an annual basis for the third year of post-remediation monitoring as indicated in the SMP. The next sampling event is anticipated in July 2017.

2.4 Institutional Controls

A series of Institutional Controls (ICs) have been put into place to: (1) implement, maintain and monitor EC systems; (2) prevent future exposure to remaining contamination by controlling disturbances of the subsurface contamination; and, (3) limit the use and development of the Site to restricted residential uses only. Adherence to these ICs on the Site is required by the EE and will be implemented under the SMP. These ICs are:

- Compliance with the EE and SMP by the Grantor and the Grantor's successors and assigns;
- All ECs must be operated and maintained as specified in the SMP;
- All ECs on the Controlled Site must be inspected at a frequency and in a manner defined in the SMP;
- Groundwater, soil vapor and other environmental or public health monitoring must be performed as defined in the SMP; and,
- Data and information pertinent to site management of the Controlled Site must be reported at the frequency and in a manner defined in the SMP.

The Site has a series of ICs in the form of site restrictions. Site restrictions that apply to the Controlled Site are:

- The site may only be used for restricted residential use provided that the long-term Engineering and Institutional Controls included in the SMP are employed.
- The Site may not be used for a higher level of use, such as unrestricted and residential uses without additional remediation and amendment of the EE, as approved by the NYSDEC;
- All future activities on the Site that will disturb remaining contaminated material must be conducted in accordance with the SMP;
- The use of the groundwater underlying the Site is prohibited without treatment rendering it safe for intended use;
- Vegetable gardens and farming on the site are prohibited;

- The site owner or remedial party will submit to NYSDEC a written statement that certifies, under penalty of perjury, that: (1) controls employed at the Controlled Site are unchanged from the previous certification or that any changes to the controls were approved by the NYSDEC; and, (2) nothing has occurred that impairs the ability of the controls to protect public health and environment or that constitute a violation or failure to comply with the SMP. NYSDEC retains the right to access such Controlled Site at any time in order to evaluate the continued maintenance of any and all controls. This certification shall be submitted annually, or an alternate period of time that NYSDEC may allow and will be made by an expert that the NYSDEC finds acceptable.

2.5 Compliance with Engineering and Institutional Controls

The EC currently implemented at the Site is effective in protecting human health and the environment. The EC is in compliance with the SMP and is effective for protecting human health and the environment.

The Site was observed to be a storage, maintenance and repair facility for the DPW and vacant land during the annual Site inspection. The Site is not currently used for unrestricted or residential uses. Groundwater is not in use at the Site at this time and no gardens or farms are present. No new structures were erected at the Site. The ICs are currently implemented at the Site and are effective for protecting human health and the environment.

The completed NYSDEC EC/ICs Certification Form is provided in Appendix F.

3.0 CONCLUSIONS

Visual inspection of the cover system confirm that the existing ECs are in good condition and working properly. Available groundwater quality data indicate that in-situ treatment is not warranted at this time. All ECs and ICs in place at the Site are in compliance with the SMP.

The services summarized in this PRR were conducted in accordance with the approved NYSDEC Brownfields Program SMP, and are considered by WCD to satisfy the requirements set forth in the SMP. The next report will be submitted by April 2018.

APPENDIX A

Figures



Source: U.S. Department of Interior Geological Survey Topographic Map of the Haverstraw, NY Quadrangle, dated 1967 (photorevised 1979)

Figure 1 - Site Location and Boundaries Map

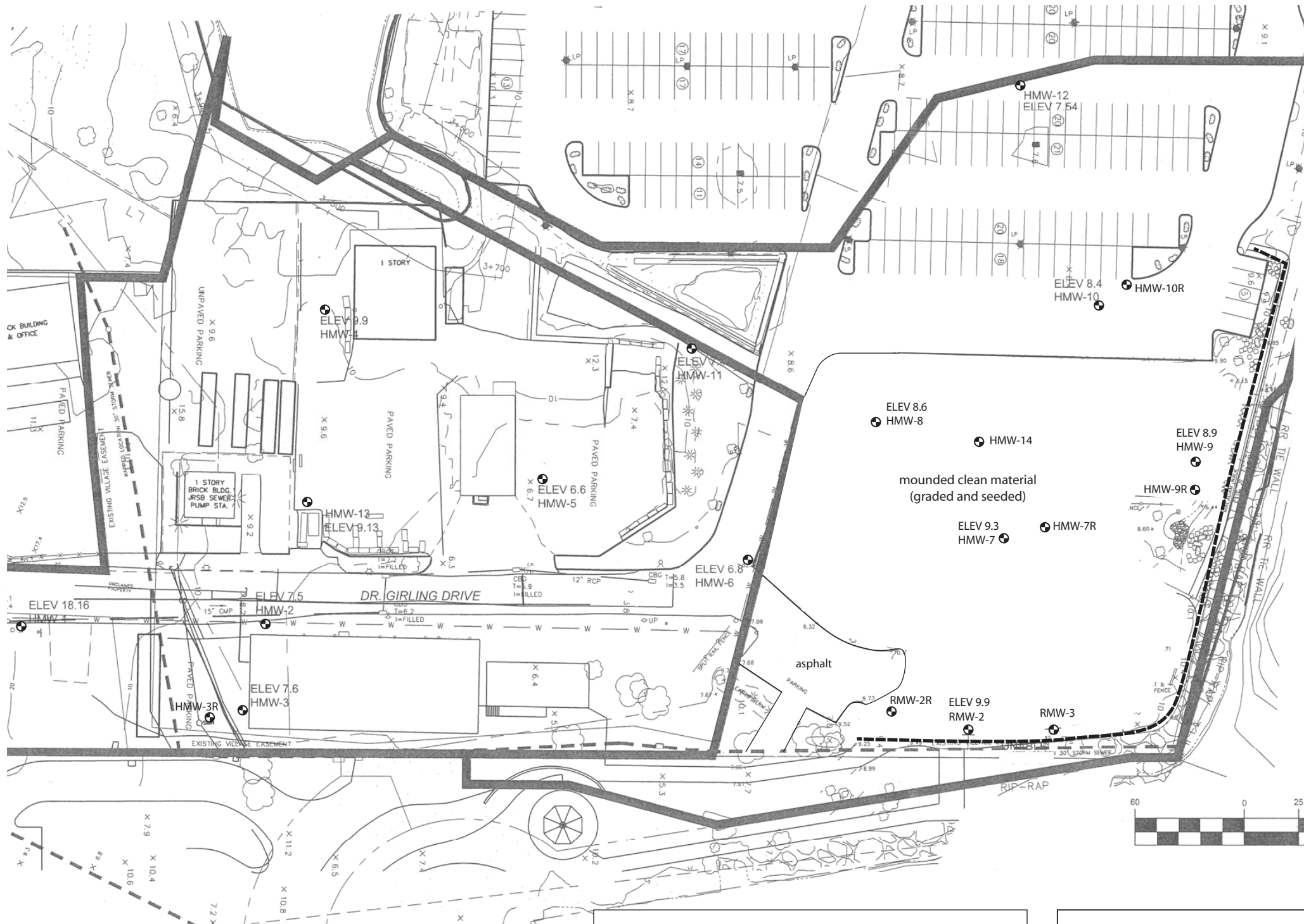
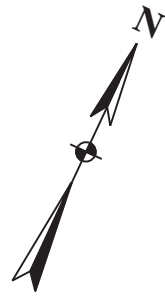
Haverstraw Harbors Site - BCP Site ID C344060
Dr. George W. Girling Drive
Village of Haverstraw
Rockland County, New York



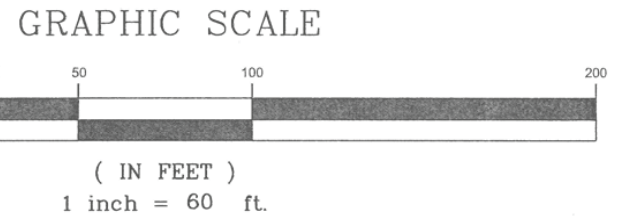
File: GH9964.44

June 2017

Appendix A



Note:
The following wells have been destroyed:
HMW-2, HMW-3, HMW-4, HMW-7, HMW-9, HMW-10, HMW-11,
RMW-2, RMW-2R and RMW-3.

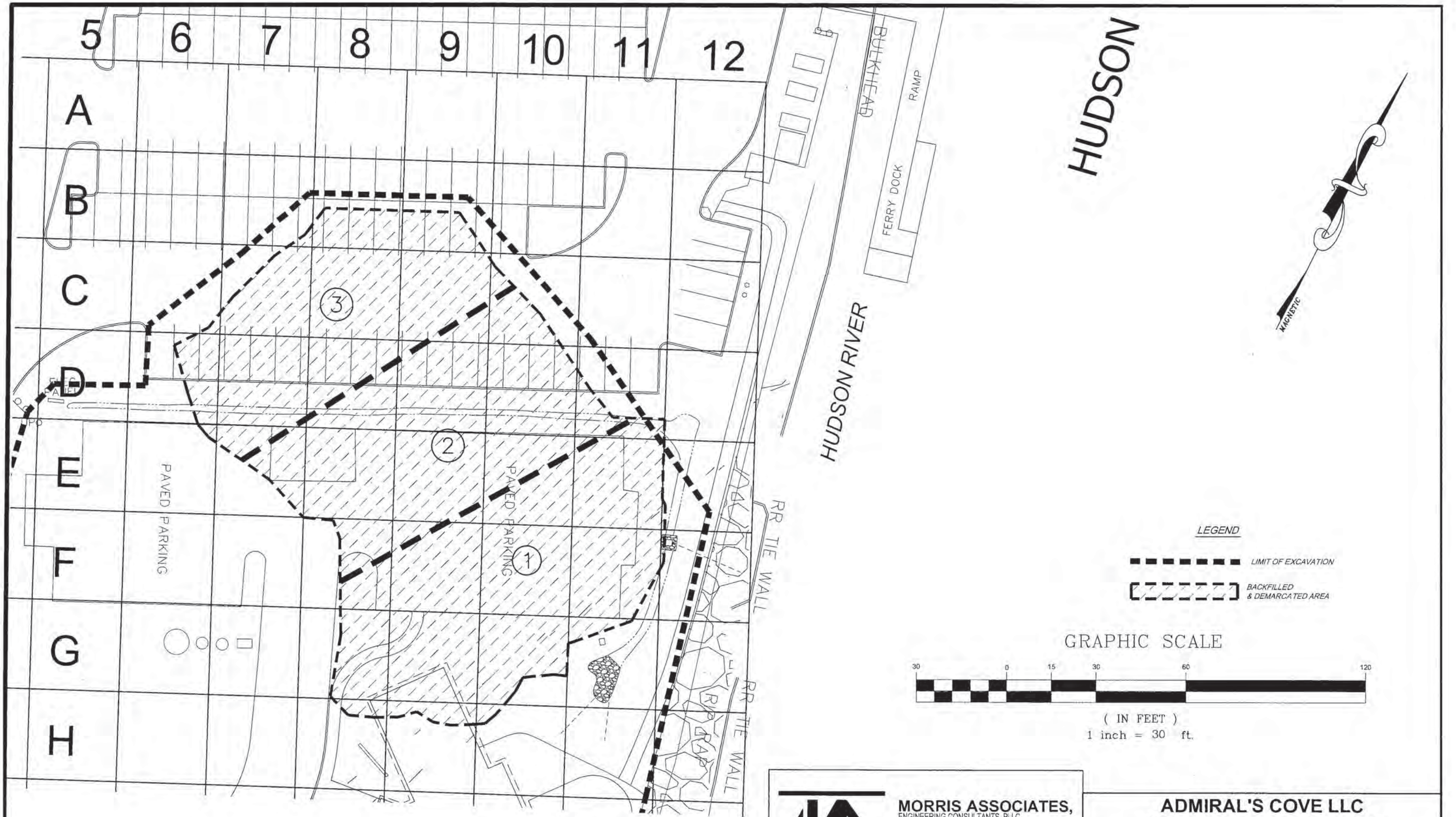


Legend:

	subject property border
	monitoring well location
	asphalt walkway

Figure 2 - Monitoring Well Locations	
Haverstraw Harbors Site - BCP Site ID C344060 Dr. George W. Girling Drive Village of Haverstraw Rockland County, New York	
File: GH9964.44	Scale as shown
June 2017	Appendix A

Base map provided by Morris Associates Engineering Consultants, PLLC - Figure 6 - Monitoring Well Locations dated 10/4/2013. All feature locations are approximate. This map is intended as a schematic to be used in conjunction with the associated report, and it should not be relied upon as a survey for planning or other activities.

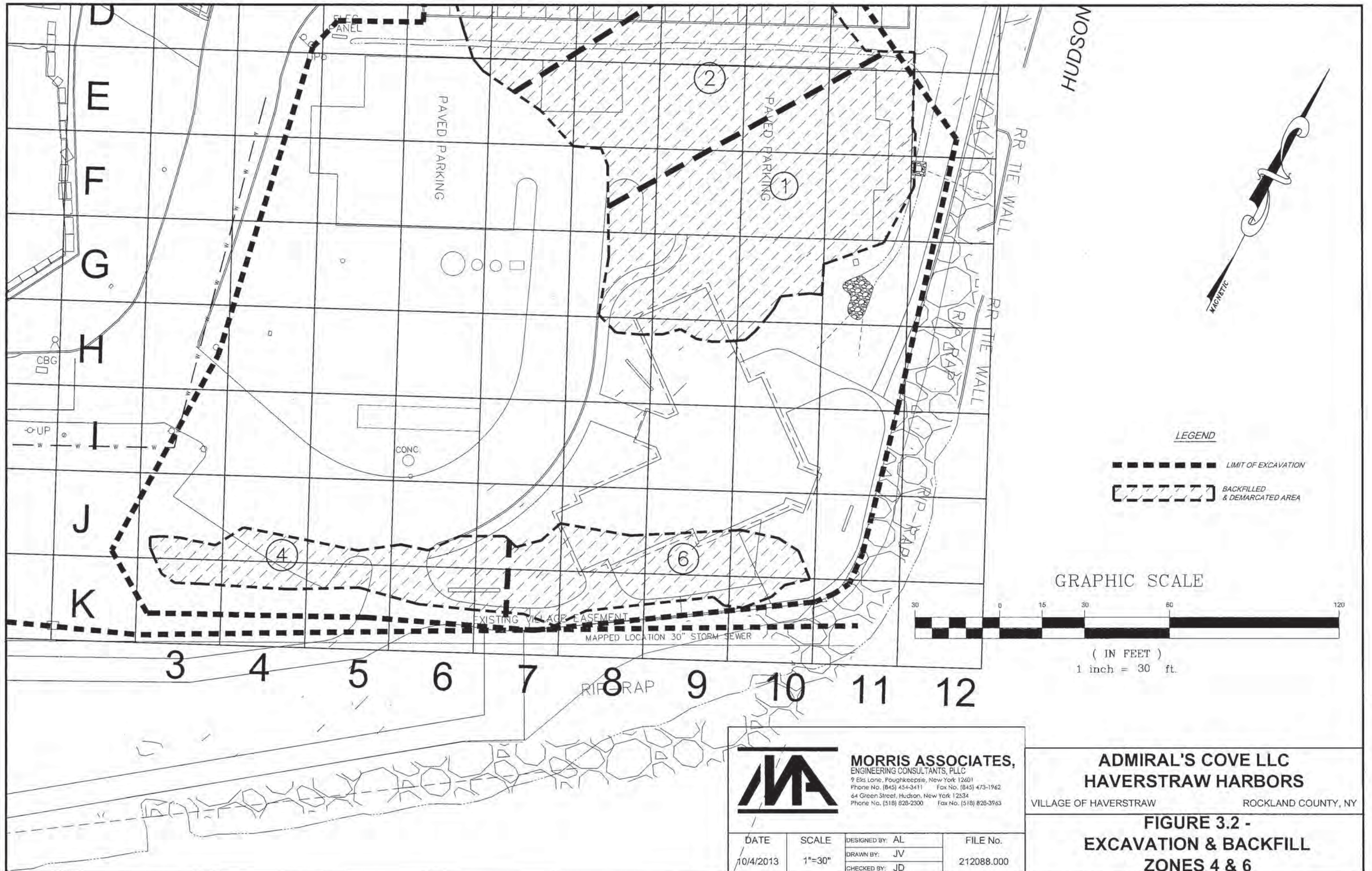


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**ADMIRAL'S COVE LLC
HAVERSTRAW HARBORS**
VILLAGE OF HAVERSTRAW ROCKLAND COUNTY, NY

DATE	SCALE	DESIGNED BY: AL	FILE No.
10/4/2013	1"=30"	DRAWN BY: JV	212088.000
		CHECKED BY: JD	

**FIGURE 3.1 -
EXCAVATION & BACKFILL
ZONES 1, 2 & 3**



LEGEND

- LIMIT OF EXCAVATION
- BACKFILLED & DEMARCATED AREA

GRAPHIC SCALE



(IN FEET)
1 inch = 30 ft.

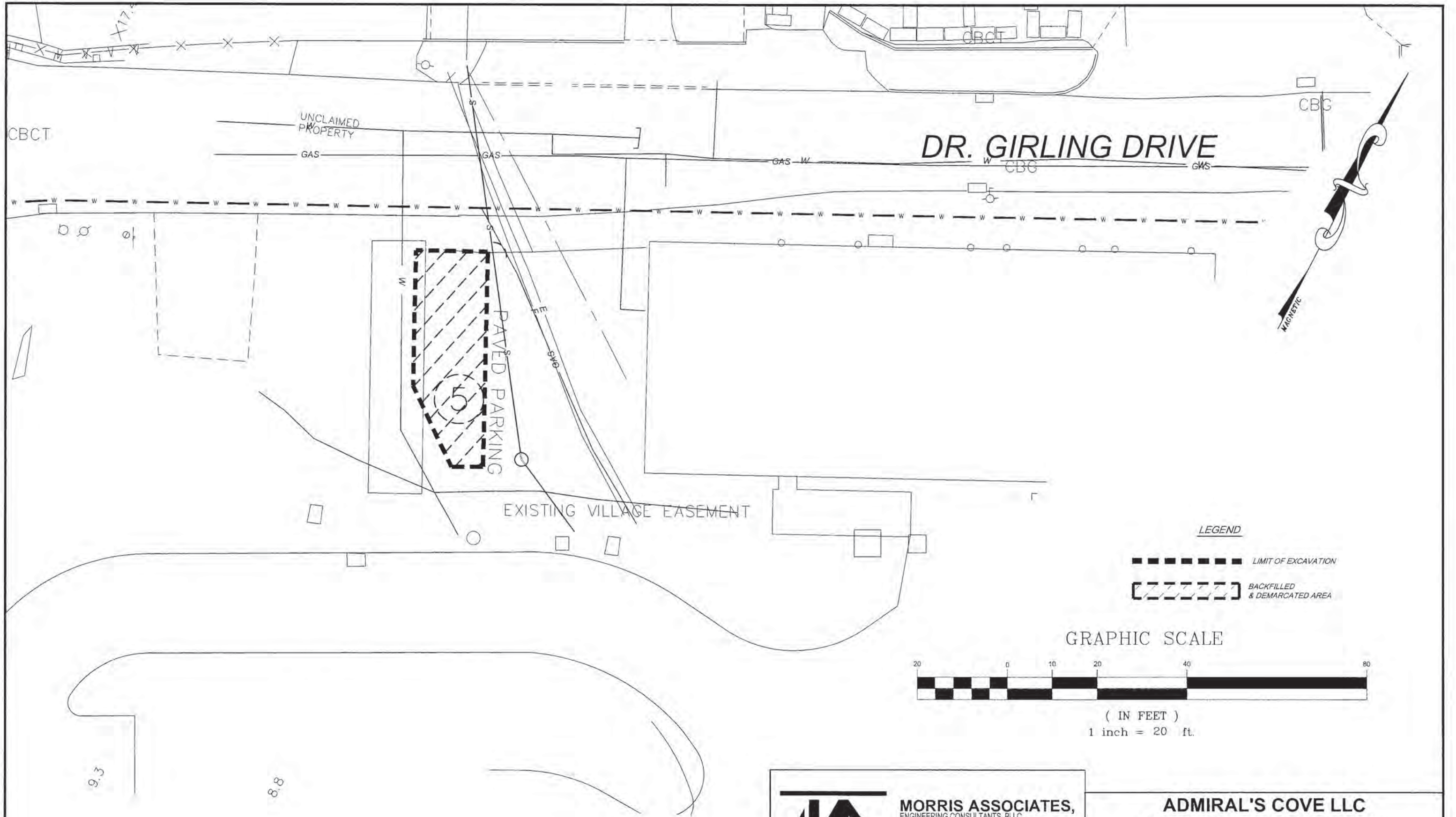




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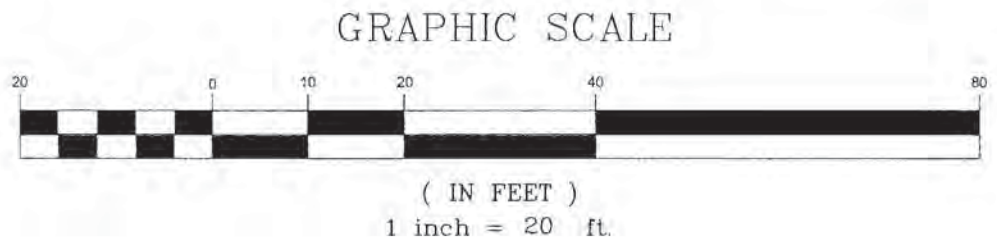
ADMIRAL'S COVE LLC
HAVERSTRAW HARBORS
VILLAGE OF HAVERSTRAW ROCKLAND COUNTY, NY


DATE	SCALE	DESIGNED BY:	FILE No.
10/4/2013	1"=30"	AL	212088.000
		DRAWN BY: JV	
		CHECKED BY: JD	

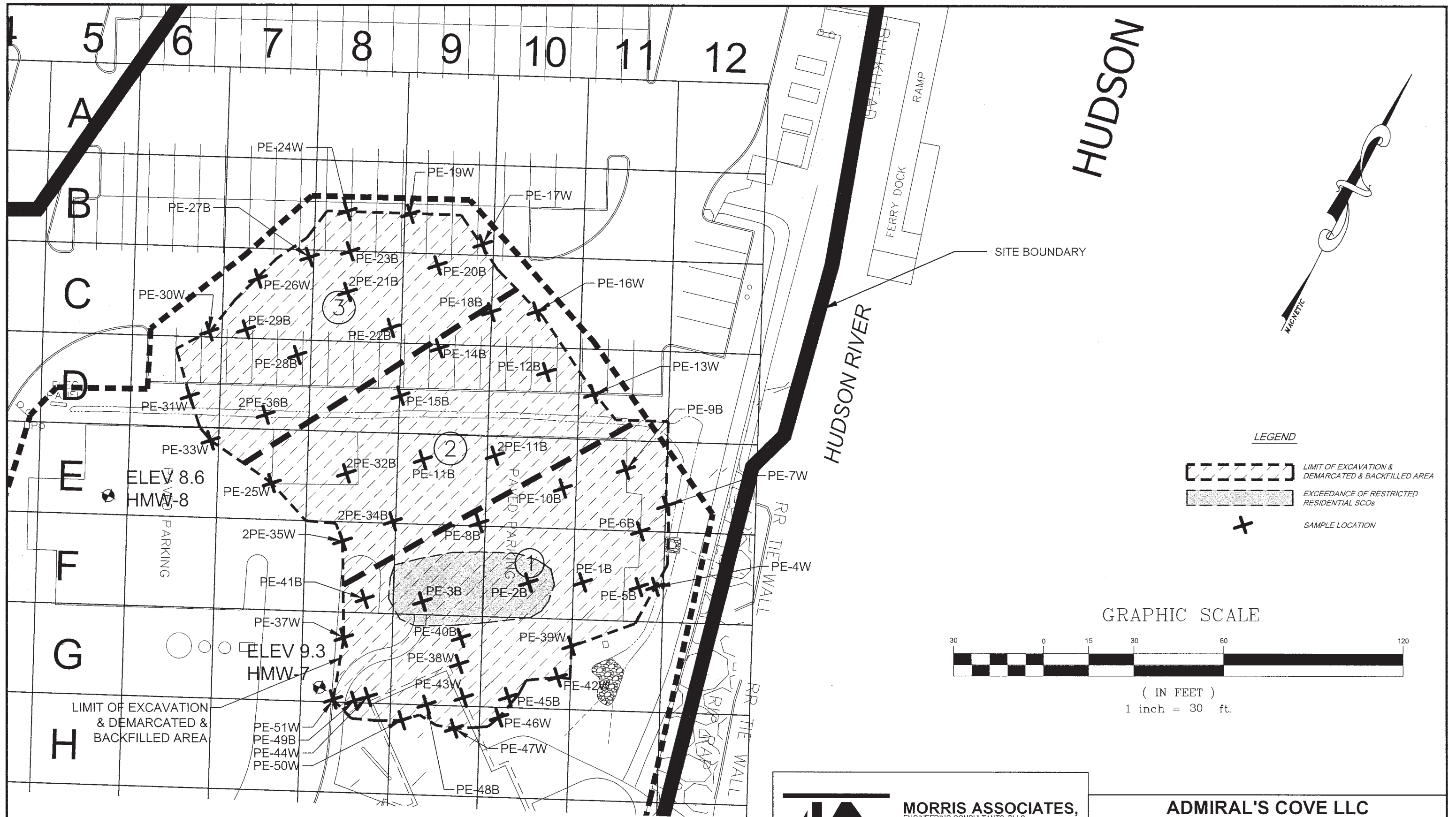
FIGURE 3.2 -
EXCAVATION & BACKFILL
ZONES 4 & 6



- LEGEND**
-  LIMIT OF EXCAVATION
 -  BACKFILLED & DEMARCATED AREA



 MORRIS ASSOCIATES, ENGINEERING CONSULTANTS, PLLC <small>9 Elk Lane, Poughkeepsie, New York 12601 Phone No. (845) 454-3411 Fax No. (845) 473-1962 64 Green Street, Hudson, New York 12534 Phone No. (518) 828-2300 Fax No. (518) 828-3963</small>				ADMIRAL'S COVE LLC HAVERSTRAW HARBORS VILLAGE OF HAVERSTRAW ROCKLAND COUNTY, NY	
				FIGURE 3.3 - EXCAVATION & BACKFILL ZONE 5	
DATE	SCALE	DESIGNED BY:	FILE No.		
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		JV			
		CHECKED BY:			
		JD			



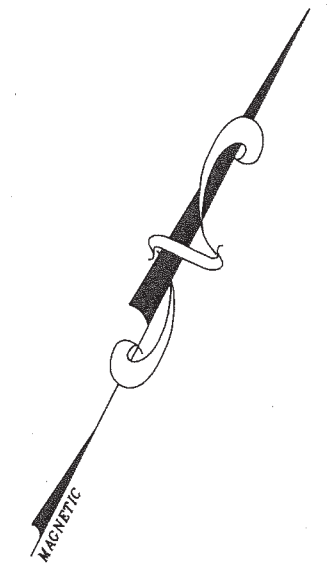
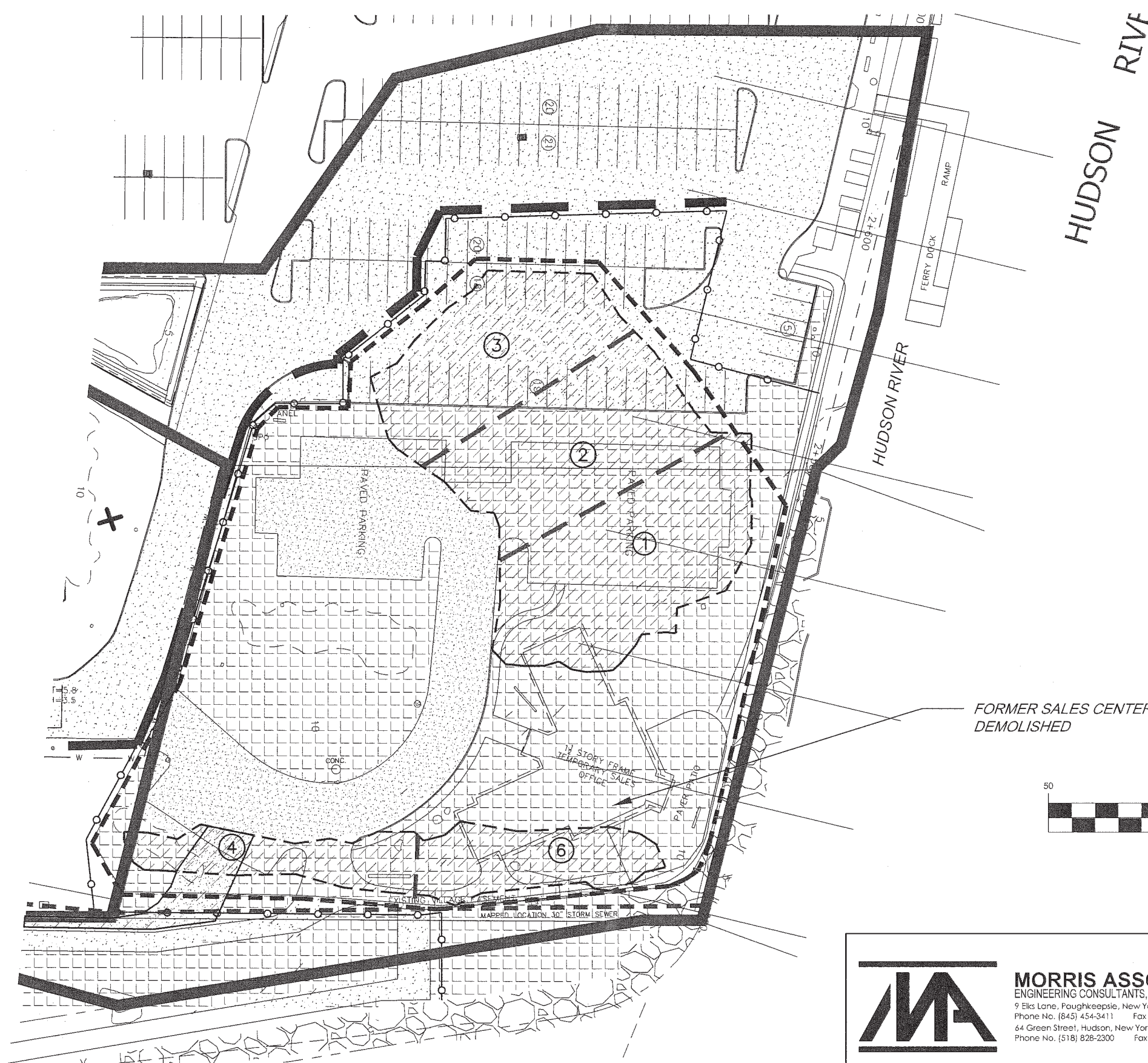
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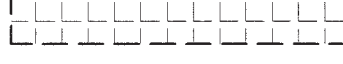

**ADMIRAL'S COVE LLC
HAVERSTRAW HARBORS**

VILLAGE OF HAVERSTRAW ROCKLAND COUNTY, NY

**FIGURE 4 - EXCEEDANCES OF
RESTRICTED RESIDENTIAL SCOs
(POST REMEDY) - ZONES 1, 2 & 3**



LEGEND

-  BACKFILLED AND DEMARCATED AREAS
-  ASPHALT PAVEMENT
-  LANDSCAPED AREAS
-  REVETMENT

FORMER SALES CENTER
DEMOLISHED

GRAPHIC SCALE



(IN FEET)
1 inch = 50 ft.

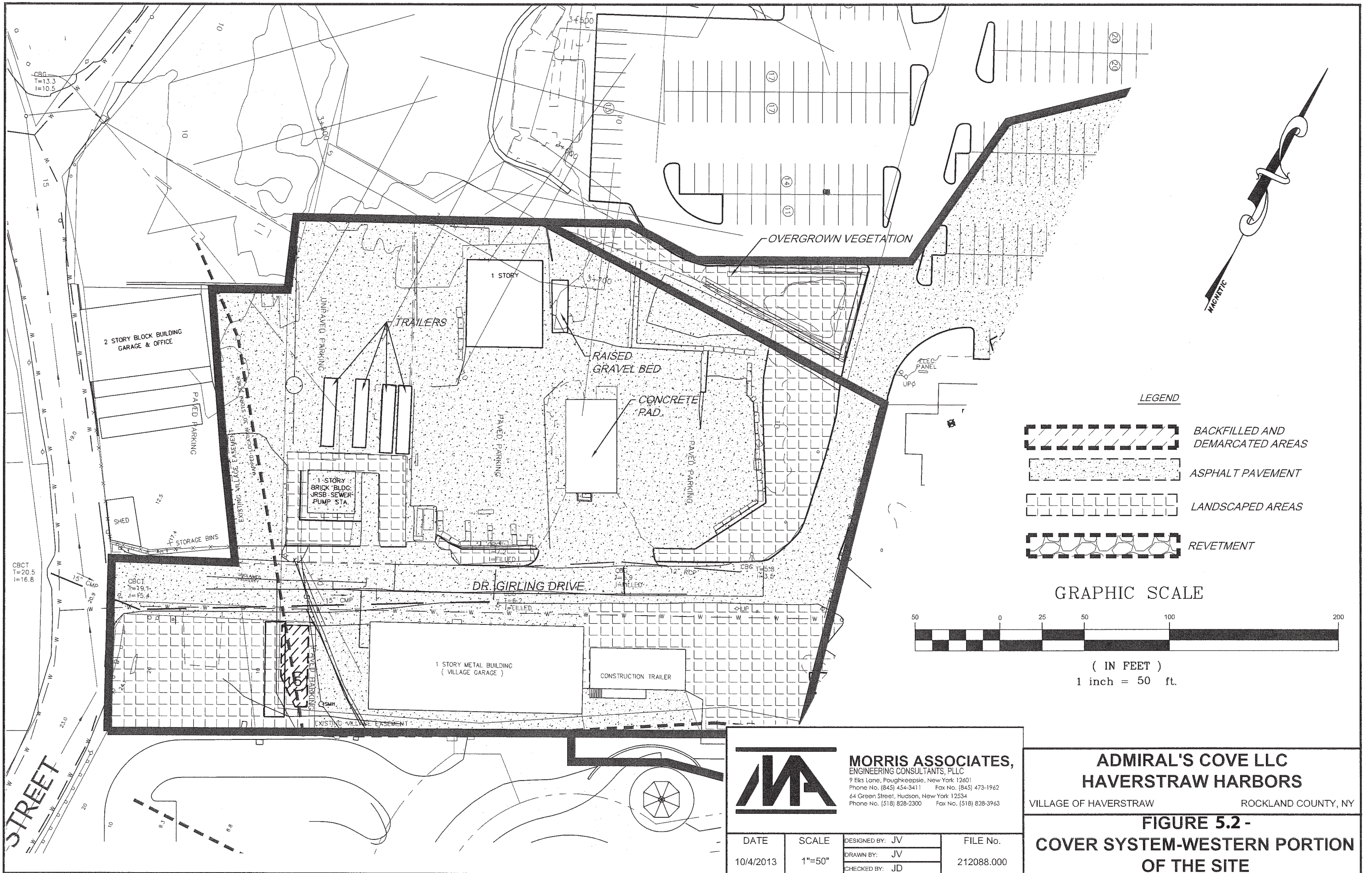


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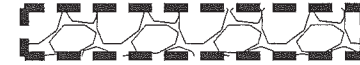
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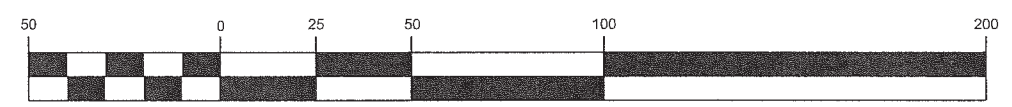
**FIGURE 5.1 -
COVER SYSTEM-EASTERN PORTION
OF THE SITE**



LEGEND

-  BACKFILLED AND DEMARCATED AREAS
-  ASPHALT PAVEMENT
-  LANDSCAPED AREAS
-  REVETMENT

GRAPHIC SCALE



(IN FEET)
1 inch = 50 ft.

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DATE	SCALE	DESIGNED BY: JV	FILE No.
10/4/2013	1"=50"	DRAWN BY: JV	212088.000
		CHECKED BY: JD	

**FIGURE 5.2 -
COVER SYSTEM-WESTERN PORTION
OF THE SITE**

APPENDIX B

Table A: Summary of Remaining Exceedances in Soil

REVISED 2017-06-02

Appendix B

Table A: Summary of Remaining Exceedances in Soil

Excavation ID	Sample ID	Description	Contaminant of Concern	Guidance Level* (mg/kg)	Laboratory Result (mg/kg)
Zone 1 – NE Portion of the Site	PE-2B	Bottom	2-methylnaphthalene	36.4	49.7
	PE-3B	Bottom	2-methylnaphthalene	36.4	43.6
Zone 5 – SW Portion of the Site	DPW-PE-5W	Wall	Benzo(a)anthracene	1	2.09
	DPW-PE-6W	Wall	Benzo(a)anthracene	1	5.44
			Benzo(a)pyrene	1	1.42
			Benzo(b)fluoranthene	1	2.06
			Chrysene	3.9	10.40

Notes:

Guidance levels based on BCP Restricted-Residential Use Soil Cleanup Objectives (SCOs), 6 NYCRR, Table 375-6.8(b), with exception of 2-methylnaphthalene. Guidance level for 2-methylnaphthalene is based on BCP Protection of Groundwater SCO in the CP-51 Soil Cleanup Guidance.
J - The concentration given is an approximate value.

APPENDIX C

Side-wide Inspection Form

SITE-WIDE INSPECTION FORM
Haverstraw Harbors (NYSDEC Site ID: 366040)
51 Dr. Girling Drive, Village of Haverstraw, Rockland County, New York

Inspection Item	Yes	No	NA	Comments (Include Corrective Actions Needed)
General Checklist				
Change of ownership or use (Restricted Residential)? Transfer of COC?		✓		
Erection of structures?		✓		
Any activity likely to disrupt or expose contamination?		✓		
Any activity that will or may interfere with on-going or completed remedial program or the continued ability to implement engineering or institutional controls?		✓		
Cover System Monitoring Checklist				
Where there any ground-intrusive activities conducted (installation/relocation of utilities, etc.)? If so, specify.		✓		
Is there evidence that ground-intrusive activities were conducted? If so, specify.		✓		
Are there signs of soil erosion in the landscaped areas that could interfere with the cover system integrity? If so, specify.		✓		
Are there any holes, cracks, vegetation, or physical deficiencies in the asphalt and paved areas? If so, sketch area on reverse side.		✓		
Areas of significant ponding on-site?		✓		
Are there any holes, cracks, vegetation, or physical deficiencies in the building floor slab? If so, identify the building and sketch area on reverse side.		✓		
Groundwater Monitoring Well Network				
Are the monitoring wells (HMW-3R, HMW-5, HMW-6, HMW-7R, HMW-8, HMW-9R, HMW-10R, HMW-13 and HMW-14) usable and in good condition?	✓			
SSDS Checklist (Complete a separate sheet for every SSDS on-site and include system identification.)				
Is there an SSDS in place for building erected on-site? (If SSDS are yet to be installed, indicate in the comments section and do not complete the remainder of this section)			✓	No SSDS as no new structures
Are the units generating vacuum operating and maintained?			✓	
Is the discharge vent pipe functional and maintained? Are there any blockages in the vent pipe?			✓	
Are there any holes, cracks or physical deficiencies in the riser pipes?			✓	
Has the SSDS effluent sample been collected, analyzed and submitted to NYSDEC? (on-time event, or otherwise indicated by NYSDEC). Report to NYSDEC.			✓	
Sub-slab vacuum at all monitoring points greater than 0.002 in. of w.c.? Include vacuum readings on comments section. Report to NYSDEC.			✓	
Site Records				
Does the site operator have updated SMP and FER available on-site?	✓			

Inspection Date: 4/14/2017
 Weather:
 Inspector Name:
 Inspector Signature:
 Date of Last Inspection:
 Required Date of Next Inspection: (based on findings, otherwise annually)
 Agency:
 Agency's Telephone:
 Additional Comments or Drawings (Use Reverse Side):

Sunny 55° F
 RICHARD HOOKER
 R. Hooker
 January 13, 2016
 Annually
 ECOSYSTEMS, A WCD GROUP COMPANY
 845 AS2, 1658
 NA

APPENDIX D

Photographs

PHOTOGRAPHS



1. Cover system in the northern DPW parcel in the vicinity of the salt/gravel shed.



2. Cover system in the northern DPW parcel west of the salt/gravel shed.

PHOTOGRAPHS



3. Cover system in the eastern portion of the Site



4. Cover system in the northeastern portion of the Site.

PHOTOGRAPHS



5. Eastern portion of Girling Drive and cover system in the southern DPW parcel east of the DPW garage



6. Cover system in the southeastern portion of the Site

APPENDIX E

January 2016 Post-Remediation Groundwater Letter Report



Ecosystems Strategies, Inc.

24 Davis Avenue, Poughkeepsie, NY 12603

phone 845.452.1658 | fax 845.485.7083 | ecosystemsstrategies.com

August 24, 2016

James Candiloro, P.E.

New York State Department of Environmental Conservation

Division of Environmental Remediation

625 Broadway, 11th Floor

Albany, New York 12233

via EMAIL: james.candiloro@dec.ny.gov

Re: Post-Remediation Groundwater Sampling Event – July 2016

Haverstraw Harbors Site B

NYSDEC BCP Site ID: C344060

ESI File: GH9964.50

Dear Mr. Candiloro:

Ecosystems Strategies Inc. (ESI) has prepared this Letter Report to document post-remediation groundwater monitoring and sampling activities at Haverstraw Harbors Site B (hereafter referred to as the “Site”). This Letter Report describes sampling activities and laboratory results for the July 2016 groundwater sampling event and provides a summary of all post-remediation groundwater sampling events. The Site is located at Dr. George W. Girling Drive (Girling Drive), Village of Haverstraw, Rockland County, New York.

This post-remediation groundwater monitoring event was conducted to assess the performance of the remedy as specified in the NYSDEC-approved Site Management Plan (SMP, March 21, 2014). The SMP addresses remaining contamination at the Site after the completion of remedial activities (conducted from May to December 2013), which were performed in conformance with the NYSDEC-approved Remedial Work Plan and Alternative Analysis (November 2007).

The SMP requires groundwater monitoring at the following on-site wells: RMW-2R, HMW-3R, HMW-9R, HMW-10R, HMW-5 to HMW-8, HMW-13, and HMW-14. A Monitoring Well Location Map is provided as Attachment A. (Note: NYSDEC granted permission to waive the reinstallation and sampling of monitoring well RMW-2R in a December 22, 2014 communication. Reinstallation and sampling could be required by NYSDEC in the future.)

WELL SAMPLING

Groundwater sampling activities were conducted on July 27, 2016 by ESI personnel. Well sampling logs are provided as Attachment B.

No measurable light non-aqueous phase liquid (LNAPL) was detected at any of the monitoring wells during groundwater sampling activities. Table A, presented below, provides a summary of field evidence of contamination (FEC) observed during the July 2016 sampling event.



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 August 24, 2016
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Table A: January 2016 Post-Remediation Field Evidence of Contamination

Well ID	PID Reading at the Top of Casing (ppm*)	Purged Groundwater	
		Odor	Sheen
HMW-3R	0.0	None	None
HMW-5	0.3	Slight	Slight
HMW-6	0.3	None	None
HMW-7R	18.8	Moderate	Slight
HMW-8	8.5	Slight	None
HMW-9R	0.0	None	Slight
HMW-10R	94.9	Strong	Moderate
HMW-13	0.0	Slight	None
HMW-14	6.9	Slight	Slight
RMW-2R	Destroyed		

Notes: *ppm = parts per million,

Historically, strong FEC has been observed in monitoring wells HMW-7R and HMW-10R, with moderate FEC in HMW-14 at all post-remediation sampling events (slight to no FEC has been observed in remaining wells). FEC observed in the July 2016 sampling event is overall consistent with historical data. A slight increase was noted in PID readings at HMW-8 and HMW-14 (versus January 2016 PID readings 2.0 ppm and 2.2 ppm, respectively) and a slight decrease in PID readings was noted at HMW-7 and HMW-10R (January 2016 PID readings 24.8 ppm and 114.7 ppm, respectively). FEC documented in HMW-7R and HMW-10R is likely to be indicative of remaining petroleum contamination in on-site soils and groundwater.

LABORATORY RESULTS

A summary of the results of the laboratory analyses conducted on groundwater samples is presented below. Data summary tables and the laboratory reports are provided in Attachments C and D, respectively, and recommendations regarding these findings are located in the Conclusions section of this Letter Report.

All groundwater samples were analyzed for volatile organic compounds (VOCs) utilizing USEPA Method 8260. Guidance levels for all compounds detected in water are based on NYSDEC Division of Water Technical and Operational Guidance Series 1.1.1, Ambient Water Quality Standards (AWQS) and Guidance Values and Groundwater Effluent Limitations.

AREA NORTH AND SOUTHWEST OF DR. GIRLING DRIVE (NORTHERN AND SOUTHERN DPW PARCELS)

Monitoring wells in the area north and southwest of Girling Drive include: HMW-3R, HMW-5, HMW-6, and HMW-13.

An elevated concentration of chlorobenzene was detected at HMW-13 (14 µg/L, guidance level 5 µg/L) and a slightly elevated concentration of benzene was detected at HMW-5 (1.9 µg/L, guidance level 1 µg/L). No other concentrations of chlorobenzene or benzene were detected in the remaining wells in this area. Trace concentrations of tetrachloroethylene (PCE) were detected in HMW-3R (1.2 µg/L, guidance level 5 µg/L) and HMW-5 (0.77 µg/L). Trace concentrations of 2-butanone (0.81 µg/L, guidance level 50 µg/L) and cyclohexane (0.5 µg/L, guidance level not established) were detected in HMW-6. No other



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concentrations of PCE, 2-butanone, or cyclohexane were detected in the remaining wells in this area. Non-elevated concentrations of tert-butyl alcohol (TBA) were detected in HMW-13, HMW-5, and HMW-6 and non-elevated concentrations of acetone and methyl tert-butyl ether (MTBE) were detected in all samples (no other VOCs were detected).

The current chlorobenzene concentration at HMW-13 is consistent with pre- and post-remediation concentrations. Current concentrations of benzene at HMW-5 are consistent with post remediation concentrations. Note: post-remediation concentrations of benzene at HMW-5 slightly increased (peak concentration 2.7 µg/L, July 2014) compared to pre-remediation concentrations (ranging from 0.62 µg/L to non-detect). Concentrations of PCE at HMW-3R and HMW-5, while below AWQS, have not been detected in pre- or post-remediation sampling events at these locations and will be closely reviewed in the next biannual sampling event (January 2017). Generally, all other trace concentrations of VOCs remained consistent with pre-remediation concentrations.

AREA EAST OF GIRLING DRIVE

Monitoring wells in the area east of Girling Drive include: HMW-7R, HMW-8, HMW-9R, HMW-10R and HMW-14.

Trichloroethene and Related Compounds

Elevated concentrations of trichloroethylene (TCE, 6.9 µg/L, guidance level 5 µg/L), cis-1,2-dichloroethene (cis-1,2-DCE, 8.7 µg/L, guidance level 5 µg/L), trans-1,2-dichloroethene (trans-1,2-DCE, 11 µg/L, guidance level 5 µg/L) and trace to low concentrations of PCE (0.37 µg/L), vinyl chloride (1.4 µg/L, guidance level 2 µg/L), and 1,1-dichloroethylene (0.26 µg/L, guidance level 5 µg/L) were detected at HMW-8. Trace concentrations of PCE were detected in HMW-7R and HMW-9R (0.53 µg/L and 0.35 µg/L, respectively). No other concentrations of PCE, TCE, trans-1,2-DCE, cis-1,2-DCE, 1,1-DCE, or VC were detected in remaining samples in this area.

Post-remediation concentrations of TCE at HMW-8 continue to show a steady decrease compared to previous post-remediation and pre-remediation sampling events (pre-remediation peak valued of 46 µg/L). Slight increases in cis-1,2-DCE, trans-1,2-DCE, and VC concentrations at HMW-8 are consistent with TCE dechlorination and resulting decreased TCE levels. Concentrations of PCE at HMW-7R, HMW-8, and HMW-9R, while below AWQS, have not been detected in pre- or post-remediation sampling events at these locations and will be closely reviewed in the next biannual sampling event (January 2017).

Benzene and Related Compounds

A low level concentration of benzene (0.84 µg/L, guidance level 1 µg/L) was detected at HMW-8. No other concentrations of benzene were detected at the remaining wells in this area. Non-elevated concentrations of isopropylbenzene were detected at HMW-7R, HMW-9R, HMW-10R, and HMW-14 and non-elevated concentrations of n-propylbenzene were detected at HMW-7R, HMW-9R, and HMW-10R. No other concentrations of isopropylbenzene or n-propylbenzene were detected at all remaining wells in this area.

The current benzene concentration at HMW-8 is consistent with historical post-remediation concentrations. Post-remediation concentrations of isopropylbenzene and n-propylbenzene at HMW-7R continue to show a decreasing trend, have remained consistently low and/or non-detect at HMW-8, HMW-9R HMW-10R, and HMW-14.



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Other VOCs

Trace concentrations of several other VOCs were detected in all samples. Generally, trace concentrations remained relatively consistent in all wells compared to pre-remediation conditions.

DATA USABILITY REPORT

A Data Usability Report (DUSR, Attachment E) was prepared by ZDataReports in July 2016 for the laboratory data generated in January 2016, in accordance with the SMP and NYSDEC DER-10. All data were determined to be usable for qualitative and quantitative purposes.

Laboratory data for the July 2016 sampling event will be submitted to ZDataReports once ASP-B data packages from the laboratory become available for the generation of a DUSR. The DUSR will be submitted in the following Letter Report.

CONCLUSIONS

No measurable LNAPL was observed at any of the wells during the July 2016 groundwater monitoring activities. Field evidence of petroleum contamination (i.e. odors, sheen and PID readings) was observed in monitoring wells HMW-7R and HMW-10R; however, laboratory data indicates that no petroleum compounds were detected at concentrations above guidance levels. These findings support the conclusion that remaining petroleum contamination in on-site soils and groundwater is highly degraded.

Low-level exceedances of groundwater standards for several chlorinated solvents continue to be present at HMW-8 (TCE and its breakdown products) and HWM-13 (chlorobenzene). Current data suggest that TCE is naturally degrading in situ; chlorobenzene concentrations, however, appear to be relatively stable.

It is the opinion of ESI that residual petroleum and solvent contamination does not warrant in-situ treatment at this time, based on the absence of LNAPL and only low-level concentrations of dissolved VOCs in on-site groundwater.

A sub-slab depressurization system (SSDS) is anticipated for any building erected on-site during future development activities to prevent exposure to any soil-gas intrusion from remaining contamination. Soil-gas sampling is anticipated in locations where the proposed residential buildings will be erected to determine the need and extent of the SSDS as per the requirements of the SMP.

Groundwater monitoring will be conducted on an annual basis for the third year of post-remediation monitoring as indicated in the SMP. The next sampling event is anticipated in July 2017.

Should you have any questions with regard to this Letter Report, do not hesitate to contact me.

Sincerely,

ECOSYSTEMS STRATEGIES, INC.

A handwritten signature in black ink, appearing to read "Paul H. Ciminello".

Paul H. Ciminello
President

Attachments:

Attachment A – Figure 1: Monitoring Well Locations



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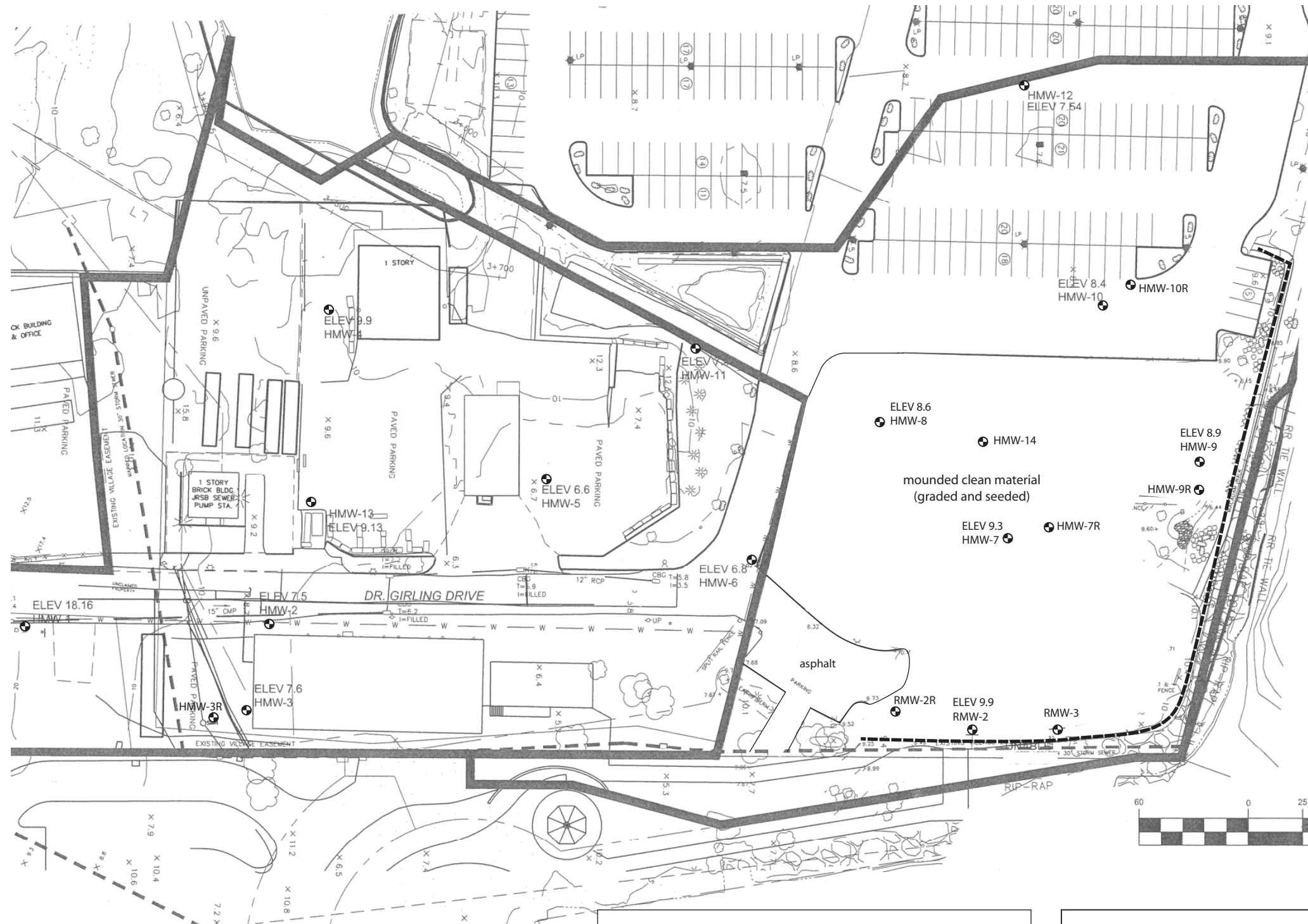
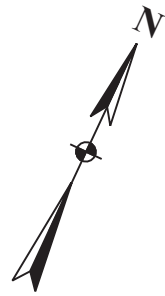
Attachment B – Well Sampling Logs
Attachment C – Data Summary Tables
Attachment D – Laboratory Results
Attachment E – DUSR

cc: R. Andujar-McNeil, ESI
J. Dziegelewski, GDC
M. Ginsburg, GDC

rosaura@ecosystemsstrategies.com
jdziegelewski@gdcllc.com
Mginsburg@gdcllc.com

ATTACHMENT A

Figure 1: Monitoring Well Location Map



Note:

The following wells have been destroyed:
 HMW-2, HMW-3, HMW-4, HMW-7, HMW-9, HMW-10, HMW-11,
 RMW-2, RMW-2R and RMW-3.

GRAPHIC SCALE



(IN FEET)
 1 inch = 60 ft.

- Legend:
- subject property border
 - monitoring well location
 - asphalt walkway

Figure 1: Monitoring Well Locations

Haverstraw Harbors Site - BCP Site ID C344060
 Dr. George W. Girling Drive
 Village of Haverstraw
 Rockland County, New York

ESI File: GH9964.50

Scale as shown

May 2015

Attachment A

Base map provided by Morris Associates Engineering Consultants, PLLC - Figure 6 - Monitoring Well Locations dated 10/4/2013. All feature locations are approximate. This map is intended as a schematic to be used in conjunction with the associated report, and it should not be relied upon as a survey for planning or other activities.



Ecosystems Strategies, Inc.

ATTACHMENT B

Well Sampling Logs

GROUNDWATER MONITORING WELL SAMPLING FIELD LOG

Haverstraw Harbors Site (NYSDEC Site ID: C344060)

51 Dr. Girling Drive, Village of Haverstraw, Rockland County, New York

Date: July 27, 2016
 Field Personnel: Michelle Weisman and F. Sipowitz
 Monitoring Well No.: HAW-3B
 PID Reading: 00 ppm
 Purged Water Characteristics: NO
 LNAPL (circle one): Yes/No (No)
 LNAPL thickness (in.): NO

Depth to well water: 44.8 ft
 Depth to well bottom: _____ ft
 Purging Device (pump type): Geopump/
 Purged Volume: 2 gallon

Odor (circle one): slight/moderate/strong: NO Sheen (circle one): slight/moderate/strong: NO

Clock Time	Water Depth below MP ft	Pump Dial	Purge Rate ml/min	Cum. Volume Purged liters	Temp °C	Spec. Cond.2 uS/cm	pH	ORP ³ mv	DO mg/L	Turbidity NTU	Comments
8:23		4.11			19.7	2.664	6.79	-124.6	0.57	8.8	
8:26					19.9	2.688	6.83	-128.0	0.42	9.9	
8:29		3.89			19.9	2.707	6.43	-128.5	0.44	12.1	
8:32					20.4	2.931	6.82	-129.0	0.41	8.5	
8:35					20.7	2.951	6.83	-130.6	0.38	2.2	
8:38					20.8	3.061	6.82	-131.1	0.35	6.6	
8:41					20.7	3.148	6.82	-131.6	0.33	7.0	
8:44					20.7	3.172	6.82	-132.5	0.32	7.3	
8:47					20.6	3.195	6.82	-132.7	0.31	7.6	

Stabilization Criteria

1. Pump dial setting (for example: hertz, cycles/min, etc).
2. uSiemens per cm (same as umhos/cm) at 25°C
3. Oxidation reduction potential (ORP)

3% 3% +0.1 +10mv 10% 10%

#1

GROUNDWATER MONITORING WELL SAMPLING FIELD LOG

Haverstraw Harbors Site (NYSDEC Site ID: C344060)

51 Dr. Girling Drive, Village of Haverstraw, Rockland County, New York

Date: July 27, 2016

Field Personnel Michelle Weisman and F. Sipowitz

Monitoring Well No.: HAW 5

PID Reading: 0.3 ppm

Odor (circle one): slight/moderate/strong: Sheen (circle one): slight/moderate/strong

Purged Water Characteristics:-

Depth to well water: 8.6 ft

Purging Device (pump type): Geopump/

Purged Volume: gallon

LNAPL (circle one): Yes/No

LNAPL thickness (in.):

Clock Time	Water Depth below MP ft	Pump Dial	Purge Rate ml/min	Cum. Volume Purged liters	Temp °C	Spec. Cond.2 uS/CM	pH	ORP ³ mv	DO mg/L	Turbidity NTU	Comments
057		3.98									
1003					22.2	7.687	7.54	-124.3	0.61	1.2	
1010					22.0	7.664	7.32	-139.1	0.40	1.3	
1013					21.9	7.637	7.31	-137.9	0.37	1.1	
1016					21.8	7.852	7.30	-140.5	0.33	1.0	
1018					21.8	9.332	7.26	-149.1	0.31	1.1	
1022					21.8	10.842	7.24	-154.0	0.30	1.2	
1025					21.9	12.400	7.22	-157.9	0.30	1.1	
1028					21.9	13.590	7.21	-160.3	0.28	1.2	
1031					21.8	14.461	7.20	-162.7	0.28	1.0	

Stabilization Criteria 3% 3% +0.1 +10mv 10% 10%

1. Pump dial setting (for example: hertz, cycles/min, etc).
2. uSiemens per cm (same as umhos/cm) at 25°C
3. Oxidation reduction potential (ORP)

#2

GROUNDWATER MONITORING WELL SAMPLING FIELD LOG
 Haverstraw Harbors Site (NYSDEC Site ID: C344060)
 51 Dr. Girling Drive, Village of Haverstraw, Rockland County, New York

Date: July 27, 2016
 Field Personnel: Michelle Weisman and F. Sipowitz
 Monitoring Well No.: HMAW5
 PID Reading: 0.3 ppm

Depth to well water: 3.6 ft
 Depth to well bottom: _____ ft.
 Purging Device (pump type): Geopump/
 Purged Volume: _____ gallon

Odor (circle one): slight/moderate/strong: Slight/moderate/strong
 Sheen (circle one): slight/moderate/strong
 Purged Water Characteristics:-
 LNAPL (circle one): Yes/No
 LNAPL thickness (in.): 0.9

Clock Time	Water Depth below MP ft	Pump Dial	Purge Rate ml/min	Cum. Volume Purged liters	Temp °C	Spec. Cond. 2 uS/CM	pH	ORP ³ mv	DO mg/L	Turbidity NTU	Comments
1034					21.8	15021	7.19	-164.6	0.23	0.9	
1033					21.9	15635	7.19	-155.1	0.26	0.9	

- Stabilization Criteria
- 1. Pump dial setting (for example: hertz, cycles/min, etc).
 - 2. uSiemens per cm (same as umhos/cm) at 25°C
 - 3. Oxidation reduction potential (ORP)

3% 3% +0.1 +10mv 10% 10%

GROUNDWATER MONITORING WELL SAMPLING FIELD LOG
Haverstraw Harbors Site (NYSDEC Site ID: C344060)
51 Dr. Girling Drive, Village of Haverstraw, Rockland County, New York

Date: July 27, 2016
 Field Personnel: Michelle Weisman and F. Sipowitz
 Monitoring Well No.: HMAW-CO
 PID Reading: 0.3 ppm

Depth to well water: 3.96 ft
 Depth to well bottom: _____ ft
 Purging Device (pump type): Geopump/ Peristaltic
 Purged Volume: _____ gallon

Odor (circle one): slight/moderate/strong: NO Sheen (circle one): slight/moderate/strong: NO
 Purged Water Characteristics: _____
 LNAPL (circle one): Yes/No: (No)
 LNAPL thickness (in.): _____

Clock Time	Water Depth below MP ft	Pump Dial	Purge Rate ml/min	Cum. Volume Purged liters	Temp °C	Spec. Cond.2 uS/CM	pH	ORP ³ mv	DO mg/L	Turbidity NTU	Comments
10:02											
10:11					22.6	3023	7.00	-148.3	0.37	31.0	
10:14					22.7	2992	6.93	-148.7	0.32	28.1	
10:17					22.9	2976	6.97	-148.9	0.30	26.5	
10:20					23.0	2970	7.00	-148.8	0.28	25.1	
10:23					23.0	2967	7.04	-148.7	0.27	24.7	
					23.2	2966	7.02	-148.4	0.25	19.5	

- Stabilization Criteria
- 1. Pump dial setting (for example: hertz, cycles/min, etc).
 - 2. uSiemens per cm (same as umhos/cm) at 25°C
 - 3. Oxidation reduction potential (ORP)

3% 3% +0.1 +10mv 10% 10%

GROUNDWATER MONITORING WELL SAMPLING FIELD LOG

Haverstraw Harbors Site (NYSDEC Site ID: C344060)

51 Dr. Girling Drive, Village of Haverstraw, Rockland County, New York

Date: July 27, 2016

Field Personnel Michelle Weisman and F. Sipowitz

Depth to well water: 11.8 ft
Depth to well bottom: _____ ft.

Monitoring Well No.: HMWTR

Purging Device (pump type): Geopump/ _____

PID Reading: 18.8 ppm

Purged Volume: _____ gallon

Purged Water Characteristics:-

Odor (circle one): slight/moderate/strong: moderate

Sheen (circle one): slight/moderate/strong: moderate

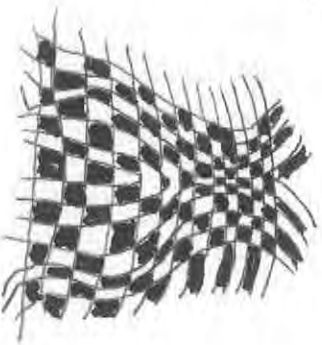
LNAPL (circle one): Yes/No No
LNAPL thickness (in.): _____

Clock Time 24 hr	Water Depth below MP ft	Pump Dial	Purge Rate ml/min	Cum. Volume Purged liters	Temp °C	Spec. Cond. 2 US/CM	pH	ORP ³ mv	DO mg/L	Turbidity NTU	Comments
13:03		4.05			18.1	4224	6.81	-144.4	0.52	0.9	
13:06					17.5	4226	6.79	-145.0	0.41	0.8	
13:09					17.6	4214	6.79	-145.8	0.38	1.0	
13:12					17.5	4184	6.79	-144.2	0.36	1.0	
13:15					17.5	4177	6.79	-146.9	0.35	1.0	
13:15					17.2	4169	6.78	-147.2	0.34	1.1	
13:21					17.4	4165	6.78	-147.7	0.33	1.1	

Stabilization Criteria

3% 3% +0.1 +-10mv 10% 10%

1. Pump dial setting (for example: hertz, cycles/min, etc).
2. usiemens per cm (same as umhos/cm) at 25°C
3. Oxidation reduction potential (ORP)



GROUNDWATER MONITORING WELL SAMPLING FIELD LOG

Haverstraw Harbors Site (NYSDEC Site ID: C344060)

51 Dr. Girling Drive, Village of Haverstraw, Rockland County, New York

Date: July 27, 2016

Field Personnel: Michelle Weisman and F. Sipowitz

Monitoring Well No.: HMMW 8

PID Reading: 8.5 ppm

Depth to well water: 5.76 ft

Depth to well bottom: _____ ft.

Purging Device (pump type): Geopump/

Purged Volume: _____ gallon

Odor (circle one): slight/moderate/strong:

Sheen (circle one): slight/moderate/strong

Purged Water Characteristics:-

NO

LNAPL (circle one): Yes/No

LNAPL thickness (in.): _____

Clock Time	Water Depth below MP ft	Pump Dial	Purge Rate ml/min	Cum. Volume Purged liters	Temp °C	Spec. Cond. 2 us/cm	pH	ORP ³ mv	DO mg/L	Turbidity NTU	Comments
1107		3.91									
1120					17.7	2.077	9.15	-110.9	0.55	6.4	
1123					17.8	1.700	9.18	-132.9	0.45	6.2	
1126					17.8	1.659	9.21	-143.2	0.41	5.9	
1129					17.9	1.654	9.23	-150.1	0.38	6.6	
1132					17.9	1.652	9.24	-150.6	0.36	5.7	
1135					17.9	1.651	9.25	-160.1	0.35	5.5	
1138					17.9	1.649	9.24	-162.2	0.35	5.4	

Stabilization Criteria 3% 3% +0.1 +10mv 10% 10%

1. Pump dial setting (for example: hertz, cycles/min, etc).
2. uSiemens per cm (same as umhos/cm) at 25°C
3. Oxidation reduction potential (ORP)

GROUNDWATER MONITORING WELL SAMPLING FIELD LOG

Haverstraw Harbors Site (NYSDEC Site ID: C344060)

51 Dr. Girling Drive, Village of Haverstraw, Rockland County, New York

Date: July 27, 2016

Field Personnel Michelle Weisman and F. Sipowitz

Monitoring Well No.: HW11D 9R

PID Reading: 1.1 ppm

Depth to well water: 3.09 ft
Depth to well bottom: _____ ft.

Purging Device (pump type): Geopump/ _____

Purged Volume: _____ gallon

Odor (circle one): slight/moderate/strong: NO

Sheen (circle one): slight/moderate/strong: NO

Purged Water Characteristics:-

LNAPL (circle one): Yes/No NO

LNAPL thickness (in.): _____

Clock Time 24 hr	Water Depth below MP ft	Pump Dial	Purge Rate ml/min	Cum. Volume Purged liters	Temp °C	Spec. Cond.2 US/CM	pH	ORP ³ mv	DO mg/L	Turbidity NTU	Comments
12:48					19.7	26602	6.82	-132.6	0.47	5.3	
12:51					19.5	26553	6.82	134.2	0.81	5.6	
12:54					19.4	2654	6.82	-135.9	0.28	4.5	
12:57					19.5	2654	6.83	-136.1	0.27	4.6	
1:00					19.5	2656	6.83	-136.6	0.26	4.4	

Stabilization Criteria 3% 3% +0.1 +10mv 10% 10%

1. Pump dial setting (for example: hertz, cycles/min, etc).
2. uSiemens per cm (same as umhos/cm) at 25 °C
3. Oxidation reduction potential (ORP)

GROUNDWATER MONITORING WELL SAMPLING FIELD LOG

Haverstraw Harbors Site (NYSDEC Site ID: C344060)

51 Dr. Girling Drive, Village of Haverstraw, Rockland County, New York

Date: July 27, 2016

Field Personnel Michelle Weisman and F. Sipowitz

Monitoring Well No.: HMW-10R

PID Reading: 94.9 ppm

Odor (circle one): slight/moderate/**strong**

Purged Water Characteristics:-

Sheen (circle one): slight/moderate/**strong**

Depth to well water: 6.36 ft
 Depth to well bottom: _____ ft.
 Purging Device (pump type): Geopump/
 Purged Volume: _____ gallon

LNAPL (circle one): Yes/**No**
 LNAPL thickness (in.): _____

Clock Time	Water Depth below MP ft	Pump Dial	Purge Rate ml/min	Cum. Volume Purged liters	Temp °C	Spec. Cond. 2 uS/CM	pH	ORP ³ mv	DO mg/l	Turbidity NTU	Comments
11:42					21.9	2485	6.98	-155.9	0.36	8.6	
11:45					21.8	2479	6.94	-158.2	0.31	4.0	
11:48					21.8	2474	6.94	-160.3	0.29	4.2	
11:51					21.8	2469	6.95	-161.7	0.27	4.7	
11:54					21.9	2465	6.94	-162.8	0.26	5.5	

- Stabilization Criteria
- 1. Pump dial setting (for example: hertz, cycles/min, etc).
 - 2. uSiemens per cm (same as umhos/cm) at 25°C
 - 3. Oxidation reduction potential (ORP)

3% 3% +0.1 +10mv 10% 10%

GROUNDWATER MONITORING WELL SAMPLING FIELD LOG

Haverstraw Harbors Site (NYSDEC Site ID: C344060)

51 Dr. Girling Drive, Village of Haverstraw, Rockland County, New York

Date: July 27, 2016

Depth to well water: 4.60ft

Field Personnel: Michelle Weisman and F. Sipowitz

Depth to well bottom: _____ ft.

Monitoring Well No.: MMW 13

Purging Device (pump type): Geopump / _____

PID Reading: 0.0 ppm

Purged Volume: _____ gallon

Odor (circle one): slight/moderate/strong:

Sheen (circle one): slight/moderate/strong

Purged Water Characteristics:-

LNAPL (circle one): Yes/No No

LNAPL thickness (in.): _____

Clock Time	Water Depth below MP ft	Pump Dial	Purge Rate ml/min	Cum. Volume Purged liters	Temp °C	Spec. Cond.2 uS/CM	pH	ORP ³ mv	DO mg/L	Turbidity NTU	Comments
<u>9:10</u>		<u>4.04</u>									
<u>9:20</u>					<u>19.3</u>	<u>2.329</u>	<u>6.92</u>	<u>-111.1</u>	<u>0.60</u>	<u>5.7</u>	
<u>9:23</u>					<u>19.5</u>	<u>2.296</u>	<u>6.81</u>	<u>-113.8</u>	<u>0.50</u>	<u>5.3</u>	
<u>9:26</u>		<u>3.90</u>			<u>19.6</u>	<u>2.276</u>	<u>6.80</u>	<u>-115.2</u>	<u>0.47</u>	<u>5.4</u>	
<u>9:29</u>					<u>19.8</u>	<u>2.259</u>	<u>6.78</u>	<u>-117.9</u>	<u>0.45</u>	<u>5.2</u>	
<u>10:32</u>					<u>19.9</u>	<u>2.242</u>	<u>6.79</u>	<u>-119.4</u>	<u>0.44</u>	<u>5.5</u>	
<u>10:35</u>					<u>19.9</u>	<u>2.235</u>	<u>6.79</u>	<u>-120.9</u>	<u>0.43</u>	<u>5.7</u>	

Stabilization Criteria

3% 3% +0.1 +10mv 10% 10%

1. Pump dial setting (for example: hertz, cycles/min, etc).
2. uSiemens per cm (same as umhos/cm) at 25°C
3. Oxidation reduction potential (ORP)

GROUNDWATER MONITORING WELL SAMPLING FIELD LOG
Haverstraw Harbors Site (NYSDEC Site ID: C344060)
51 Dr. Girling Drive, Village of Haverstraw, Rockland County, New York

Date: July 27, 2016
 Field Personnel: Michelle Weisman and F. Sipowitz
 Monitoring Well No.: HAWW 141
 PID Reading: 6.9 ppm

Odor (circle one): slight/moderate/strong: Sheen (circle one): slight/moderate/strong
 Purged Water Characteristics:-
 Depth to well water: 11.31 ft.
 Depth to well bottom: _____ ft.
 Purging Device (pump type): Geopump/ _____
 Purged Volume: _____ gallon

LNAPL (circle one): Yes/No
 LNAPL thickness (in.): _____

Clock Time 24 hr	Water Depth below MP ft	Pump Dial	Purge Rate ml/min	Cum. Volume Purged liters	Temp °C	Spec. Cond.2 uS/CM	pH	ORP ³ mv	DO mg/L	Turbidity NTU	Comments
12 ⁰³											
12 ⁰⁹		3.99			17.6	1504	7.01	-111.9	0.70	14.8	
12 ¹⁵					17.6	1506	6.99	-119.4	0.48	13.5	
12 ¹⁸					17.7	1508	6.96	-123.8	0.44	12.9	
12 ²¹					17.7	1504	6.97	-128.9	0.41	10.2	
12 ²⁴					18.0	1509	6.99	-133.7	0.39	7.5	
12 ²⁷					17.9	1507	7.00	-136.4	0.39	7.0	
12 ³⁰					17.8	1507	7.01	-137.8	0.37	6.6	

- Stabilization Criteria
- 1. Pump dial setting (for example: hertz, cycles/min, etc),
 - 2. uSiemens per cm (same as umhos/cm) at 25°C
 - 3. Oxidation reduction potential (ORP)

3% 3% +0.1 +10mv 10% 10%



ATTACHMENT C

Data Summary Tables

Table 2: Post-Remediation - SVOCs in Groundwater

All data in µg/L

Guidance: NYSDEC TOGS 1.1.1

Elevated concentrations in **Bold and Yellow**

SVOCs (USEPA Method 8270)	Guidance Level	HMW-3R (2014-11-05)		
		Result	Flag	RL
2-Methylnaphthalene	NE	ND		5.00
Acenaphthene	20	ND		0.0500
Acenaphthylene	NE	ND		0.0500
Anthracene	50	ND		0.0500
Benzo(a)anthracene	0.002	ND		0.0500
Benzo(a)pyrene	NE	ND		0.0500
Benzo(b)fluoranthene	0.002	ND		0.0500
Benzo(g,h,i)perylene	NE	ND		0.0500
Benzo(k)fluoranthene	0.002	ND		0.0500
Chrysene	0.002	ND		0.0500
Dibenzo(a,h)anthracene	NE	ND		0.0500
Fluoranthene	50	ND		0.0500
Fluorene	50	ND		0.0500
Indeno(1,2,3-cd)pyrene	0.002	ND		0.0500
Naphthalene	10	ND		0.0500
Phenanthrene	50	ND		0.0500
Pyrene	50	ND		0.0500

RL = Reporting Limit ND = Not Detected NE = Not Established NA = Not Analyzed

Flags: J = Below RL B = Detected in laboratory blank

E = Estimated concentration

Table 3 (cont'd): Pre-Remediation - VOCs in Groundwater

VOCs (USEPA Method 8260)	Regulatory Criteria/ Guidance Level µg/L	Data Columns																							
		HMW-9		HMW-10			HMW-11		HMW-12			HMW-13				RMW-2				Trip Blank					
		2007	2012	2007	2012	May-2013	2007	2012	2012	Jan-2013	Apr-2013	Jul-2013	Jan-2013	Apr-2013	Jul-2013	Oct-2013	2007	2012	May-2013	Jul-2013	Jan-2013	May-2013	Jul-2013	Oct-2013	
1,1,1,2-Tetrachloroethane	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
1,1,1-Trichloroethane	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
1,1,2,2-Tetrachloroethane	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
1,1,2-Trichloro-1,2,2-trifluoroethane	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
1,1,2-Trichloroethane	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
1,1-Dichloroethane	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
1,1-Dichloroethylene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
1,1-Dichloropropylene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
1,2,3-Trichlorobenzene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
1,2,3-Trichloropropane	0.04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
1,2,3-Trimethylbenzene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
1,2,4-Trichlorobenzene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
1,2,4-Trimethylbenzene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.3 J	ND	ND	ND	ND	ND	ND	ND	
1,2-Dibromo-3-chloropropane	0.04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
1,2-Dibromoethane	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
1,2-Dichlorobenzene	3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
1,2-Dichloroethane	0.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
cis-1,2-Dichloroethylene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
trans-1,2-Dichloroethylene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
1,2-Dichloroethylene (total)	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
1,2-Dichloropropane	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
1,3,5-Trimethylbenzene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.3 J	ND	ND	ND	ND	ND	ND	ND	
1,3-Dichlorobenzene	3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
1,3-Dichloropropane	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
1,4-Dichlorobenzene	3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
1-Chlorohexane	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
2,2-Dichloropropane	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
2-Butanone	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
2-Chlorotoluene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
4-Chlorotoluene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
Acetone	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	3.3 J	ND	ND	ND	ND	ND	ND	15	ND	ND	ND	ND	
Benzene	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.7	2.3 J	3.2 J	ND	ND	ND	ND	ND	ND	
Bromobenzene	5	ND	ND	ND	ND	3.1 J,B	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	4.8 J,B	ND	ND	ND	ND	
Bromochloromethane	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5.7 B	ND	ND	ND	ND	ND	ND	
Bromodichloromethane	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
Bromoform	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
Bromomethane	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
Carbon tetrachloride	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
Chlorobenzene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	11	18	18	24	ND	ND	ND	ND	ND	ND	ND	ND	ND	
Chloroethane	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
Chloroform	7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	4.0 J	ND	ND	
Chloromethane	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
Cis-1,3-Dichloropropylene	0.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
Dibromochloromethane	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
Dibromomethane	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
Dichlorodifluoromethane	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
Ethylbenzene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
Hexachlorobutadiene	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
Isopropylbenzene	5	3.2 J	ND	13	2.7 J	ND	5.1	ND	ND	ND	ND	ND	ND	ND	ND	1.4	1.4 J	ND	ND	ND	ND	ND	ND	ND	
Methylene chloride	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
Methyl tert-butyl ether (MTBE)	10	ND	ND	2.2 J	2.9 J	ND	5.1	ND	1.8 J	1.2 J	ND	ND	ND	ND	3.0 J	3.8	3.8 J	3.7 J	4.4 J	ND	ND	ND	ND	ND	
Naphthalene	10	ND	ND	0.81 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
n-Butylbenzene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
n-Propylbenzene	5	ND	ND	ND	2.4 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.4 J	3.0 J	ND	ND	ND	ND	ND	ND	
Xylenes (o,m,p)	5	ND	ND	1.2 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
p-Isopropyltoluene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
sec-Butylbenzene	5	3.2 J	ND	7	2.7 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.2 J	ND	ND	ND	ND	ND	ND	ND	
Styrene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
tert-Butylbenzene	5	1.6 J	ND	2.9 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
Tetrachloroethylene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
Toluene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
trans-1,3-Dichloropropylene	0.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
Trichloroethylene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
Trichlorofluoromethane	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
Vinyl chloride	2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	

Notes:

Regulatory Criteria/Guidance levels based on Title 6 NYCRR Part 703 Water Quality Standards or NYSDEC Division of Water TOGS 1.1.1 (June 1998) and subsequent NYSDEC Memoranda, as appropriate.

J - Data indicate the presence of a compound that meets the identification criteria. The result is less than the quantitation limit but greater than zero. The concentration given is an approximate value.

B - Analyte is found in the associated analysis batch blank.

ND = Not Detected

Blue shade indicates detectable concentrations.

Bold and yellow shade indicates exceedance of applicable regulatory criteria.

ESI File: GH9964.50



ATTACHMENT D

Laboratory Results



Technical Report

prepared for:

Ecosystems Strategies, Inc.
24 Davis Avenue
Poughkeepsie NY, 12603
Attention: Michelle Weisman

Report Date: 08/05/2016
Client Project ID: GH9964.50
York Project (SDG) No.: 16G1101

Revision No. 1.0

CT Cert. No. PH-0723

New Jersey Cert. No. CT-005



New York Cert. No. 10854

PA Cert. No. 68-04440

Report Date: 08/05/2016
Client Project ID: GH9964.50
York Project (SDG) No.: 16G1101

Ecosystems Strategies, Inc.
24 Davis Avenue
Poughkeepsie NY, 12603
Attention: Michelle Weisman

Purpose and Results

This report contains the analytical data for the sample(s) identified on the attached chain-of-custody received in our laboratory on July 28, 2016 and listed below. The project was identified as your project: **GH9964.50**.

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

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

All analyses met the method and laboratory standard operating procedure requirements except as indicated by any data flags, the meaning of which are explained in the attachment to this report, and case narrative if applicable.

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

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

<u>York Sample ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Date Collected</u>	<u>Date Received</u>
16G1101-01	HMW-3R	Water	07/27/2016	07/28/2016
16G1101-02	HMW-5	Water	07/27/2016	07/28/2016
16G1101-03	HMW-6	Water	07/27/2016	07/28/2016
16G1101-04	HMW-7R	Water	07/27/2016	07/28/2016
16G1101-05	HMW-8	Water	07/27/2016	07/28/2016
16G1101-06	HMW-9R	Water	07/27/2016	07/28/2016
16G1101-07	HMW-10R	Water	07/27/2016	07/28/2016
16G1101-08	HMW-13	Water	07/27/2016	07/28/2016
16G1101-09	HMW-14	Water	07/27/2016	07/28/2016
16G1101-10	DUP-20160727	Water	07/27/2016	07/28/2016
16G1101-11	TB-20160727	Water	07/27/2016	07/28/2016

General Notes for York Project (SDG) No.: 16G1101

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

Approved By:



Benjamin Gulizia
Laboratory Director

Date: 08/05/2016





Sample Information

Client Sample ID: HMW-3R

York Sample ID: 16G1101-01

<u>York Project (SDG) No.</u>	<u>Client Project ID</u>	<u>Matrix</u>	<u>Collection Date/Time</u>	<u>Date Received</u>
16G1101	GH9964.50	Water	July 27, 2016 3:00 pm	07/28/2016

Volatile Organics, 8260 - Comprehensive

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5030B

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
630-20-6	1,1,1,2-Tetrachloroethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 03:23	BK
71-55-6	1,1,1-Trichloroethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 03:23	BK
79-34-5	1,1,2,2-Tetrachloroethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 03:23	BK
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 03:23	BK
79-00-5	1,1,2-Trichloroethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 03:23	BK
75-34-3	1,1-Dichloroethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 03:23	BK
75-35-4	1,1-Dichloroethylene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 03:23	BK
87-61-6	1,2,3-Trichlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 03:23	BK
96-18-4	1,2,3-Trichloropropane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 03:23	BK
120-82-1	1,2,4-Trichlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 03:23	BK
95-63-6	1,2,4-Trimethylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 03:23	BK
96-12-8	1,2-Dibromo-3-chloropropane	ND		ug/L	0.80	2.0	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 03:23	BK
106-93-4	1,2-Dibromoethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 03:23	BK
95-50-1	1,2-Dichlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 03:23	BK
107-06-2	1,2-Dichloroethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 03:23	BK
78-87-5	1,2-Dichloropropane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 03:23	BK
108-67-8	1,3,5-Trimethylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 03:23	BK
541-73-1	1,3-Dichlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 03:23	BK
106-46-7	1,4-Dichlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 03:23	BK
123-91-1	1,4-Dioxane	ND		ug/L	40	40	1	EPA 8260C Certifications: NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 03:23	BK
78-93-3	2-Butanone	ND		ug/L	0.80	2.0	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 03:23	BK
591-78-6	2-Hexanone	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 03:23	BK
108-10-1	4-Methyl-2-pentanone	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 03:23	BK



Sample Information

Client Sample ID: HMW-3R

York Sample ID: 16G1101-01

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

16G1101

GH9964.50

Water

July 27, 2016 3:00 pm

07/28/2016

Volatile Organics, 8260 - Comprehensive

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5030B

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
67-64-1	Acetone	1.6	CCV-E, SCAL- E, J	ug/L	1.0	2.0	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 03:23	BK
107-02-8	Acrolein	ND		ug/L	0.80	2.0	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 03:23	BK
107-13-1	Acrylonitrile	ND		ug/L	0.80	2.0	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 03:23	BK
71-43-2	Benzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 03:23	BK
74-97-5	Bromochloromethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 03:23	BK
75-27-4	Bromodichloromethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 03:23	BK
75-25-2	Bromoform	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 03:23	BK
74-83-9	Bromomethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 03:23	BK
75-15-0	Carbon disulfide	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 03:23	BK
56-23-5	Carbon tetrachloride	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 03:23	BK
108-90-7	Chlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 03:23	BK
75-00-3	Chloroethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 03:23	BK
67-66-3	Chloroform	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 03:23	BK
74-87-3	Chloromethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 03:23	BK
156-59-2	cis-1,2-Dichloroethylene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 03:23	BK
10061-01-5	cis-1,3-Dichloropropylene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 03:23	BK
110-82-7	Cyclohexane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 03:23	BK
124-48-1	Dibromochloromethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 03:23	BK
74-95-3	Dibromomethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 03:23	BK
75-71-8	Dichlorodifluoromethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 03:23	BK
100-41-4	Ethyl Benzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 03:23	BK
87-68-3	Hexachlorobutadiene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 03:23	BK
98-82-8	Isopropylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 03:23	BK



Sample Information

Client Sample ID: HMW-3R

York Sample ID: 16G1101-01

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

16G1101

GH9964.50

Water

July 27, 2016 3:00 pm

07/28/2016

Volatile Organics, 8260 - Comprehensive

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5030B

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
79-20-9	Methyl acetate	ND		ug/L	0.80	2.0	1	EPA 8260C Certifications: NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 03:23	BK
1634-04-4	Methyl tert-butyl ether (MTBE)	1.4		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 03:23	BK
108-87-2	Methylcyclohexane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 03:23	BK
75-09-2	Methylene chloride	ND		ug/L	1.0	2.0	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 03:23	BK
104-51-8	n-Butylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 03:23	BK
103-65-1	n-Propylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 03:23	BK
95-47-6	o-Xylene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: NELAC-NY10854	08/04/2016 16:47	08/05/2016 03:23	BK
179601-23-1	p- & m- Xylenes	ND		ug/L	0.50	1.0	1	EPA 8260C Certifications: NELAC-NY10854	08/04/2016 16:47	08/05/2016 03:23	BK
99-87-6	p-Isopropyltoluene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 03:23	BK
135-98-8	sec-Butylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 03:23	BK
100-42-5	Styrene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 03:23	BK
75-65-0	tert-Butyl alcohol (TBA)	ND		ug/L	0.80	2.0	1	EPA 8260C Certifications: NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 03:23	BK
98-06-6	tert-Butylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 03:23	BK
127-18-4	Tetrachloroethylene	1.2		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 03:23	BK
108-88-3	Toluene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 03:23	BK
156-60-5	trans-1,2-Dichloroethylene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 03:23	BK
10061-02-6	trans-1,3-Dichloropropylene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 03:23	BK
79-01-6	Trichloroethylene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 03:23	BK
75-69-4	Trichlorofluoromethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 03:23	BK
75-01-4	Vinyl Chloride	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 03:23	BK
1330-20-7	* Xylenes, Total	ND		ug/L	0.60	1.5	1	EPA 8260C Certifications: CTDOH,NJDEP	08/04/2016 16:47	08/05/2016 03:23	BK

	Surrogate Recoveries	Result	Acceptance Range
17060-07-0	Surrogate: 1,2-Dichloroethane-d4	108 %	69-130
2037-26-5	Surrogate: Toluene-d8	92.7 %	81-117
460-00-4	Surrogate: p-Bromofluorobenzene	97.5 %	79-122



Sample Information

Client Sample ID: HMW-3R

York Sample ID: 16G1101-01

<u>York Project (SDG) No.</u> 16G1101	<u>Client Project ID</u> GH9964.50	<u>Matrix</u> Water	<u>Collection Date/Time</u> July 27, 2016 3:00 pm	<u>Date Received</u> 07/28/2016
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Sample Information

Client Sample ID: HMW-5

York Sample ID: 16G1101-02

<u>York Project (SDG) No.</u> 16G1101	<u>Client Project ID</u> GH9964.50	<u>Matrix</u> Water	<u>Collection Date/Time</u> July 27, 2016 3:00 pm	<u>Date Received</u> 07/28/2016
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Volatile Organics, 8260 - Comprehensive

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5030B

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
630-20-6	1,1,1,2-Tetrachloroethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 03:53	BK
71-55-6	1,1,1-Trichloroethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 03:53	BK
79-34-5	1,1,2,2-Tetrachloroethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 03:53	BK
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 03:53	BK
79-00-5	1,1,2-Trichloroethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 03:53	BK
75-34-3	1,1-Dichloroethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 03:53	BK
75-35-4	1,1-Dichloroethylene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 03:53	BK
87-61-6	1,2,3-Trichlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 03:53	BK
96-18-4	1,2,3-Trichloropropane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 03:53	BK
120-82-1	1,2,4-Trichlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 03:53	BK
95-63-6	1,2,4-Trimethylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 03:53	BK
96-12-8	1,2-Dibromo-3-chloropropane	ND		ug/L	0.80	2.0	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 03:53	BK
106-93-4	1,2-Dibromoethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 03:53	BK
95-50-1	1,2-Dichlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 03:53	BK
107-06-2	1,2-Dichloroethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 03:53	BK
78-87-5	1,2-Dichloropropane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 03:53	BK
108-67-8	1,3,5-Trimethylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 03:53	BK
541-73-1	1,3-Dichlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 03:53	BK
106-46-7	1,4-Dichlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 03:53	BK



Sample Information

Client Sample ID: HMW-5

York Sample ID: 16G1101-02

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

16G1101

GH9964.50

Water

July 27, 2016 3:00 pm

07/28/2016

Volatile Organics, 8260 - Comprehensive

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5030B

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
123-91-1	1,4-Dioxane	ND		ug/L	40	40	1	EPA 8260C Certifications: NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 03:53	BK
78-93-3	2-Butanone	ND		ug/L	0.80	2.0	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 03:53	BK
591-78-6	2-Hexanone	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 03:53	BK
108-10-1	4-Methyl-2-pentanone	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 03:53	BK
67-64-1	Acetone	6.5	CCV-E, SCAL-E	ug/L	1.0	2.0	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 03:53	BK
107-02-8	Acrolein	ND		ug/L	0.80	2.0	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 03:53	BK
107-13-1	Acrylonitrile	ND		ug/L	0.80	2.0	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 03:53	BK
71-43-2	Benzene	1.9		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 03:53	BK
74-97-5	Bromochloromethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 03:53	BK
75-27-4	Bromodichloromethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 03:53	BK
75-25-2	Bromoform	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 03:53	BK
74-83-9	Bromomethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 03:53	BK
75-15-0	Carbon disulfide	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 03:53	BK
56-23-5	Carbon tetrachloride	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 03:53	BK
108-90-7	Chlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 03:53	BK
75-00-3	Chloroethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 03:53	BK
67-66-3	Chloroform	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 03:53	BK
74-87-3	Chloromethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 03:53	BK
156-59-2	cis-1,2-Dichloroethylene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 03:53	BK
10061-01-5	cis-1,3-Dichloropropylene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 03:53	BK
110-82-7	Cyclohexane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 03:53	BK
124-48-1	Dibromochloromethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 03:53	BK
74-95-3	Dibromomethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 03:53	BK



Sample Information

Client Sample ID: HMW-5

York Sample ID: 16G1101-02

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

16G1101

GH9964.50

Water

July 27, 2016 3:00 pm

07/28/2016

Volatile Organics, 8260 - Comprehensive

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5030B

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
75-71-8	Dichlorodifluoromethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 03:53	BK
100-41-4	Ethyl Benzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 03:53	BK
87-68-3	Hexachlorobutadiene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 03:53	BK
98-82-8	Isopropylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 03:53	BK
79-20-9	Methyl acetate	ND		ug/L	0.80	2.0	1	EPA 8260C Certifications: NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 03:53	BK
1634-04-4	Methyl tert-butyl ether (MTBE)	5.4		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 03:53	BK
108-87-2	Methylcyclohexane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 03:53	BK
75-09-2	Methylene chloride	ND		ug/L	1.0	2.0	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 03:53	BK
104-51-8	n-Butylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 03:53	BK
103-65-1	n-Propylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 03:53	BK
95-47-6	o-Xylene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: NELAC-NY10854	08/04/2016 16:47	08/05/2016 03:53	BK
179601-23-1	p- & m- Xylenes	ND		ug/L	0.50	1.0	1	EPA 8260C Certifications: NELAC-NY10854	08/04/2016 16:47	08/05/2016 03:53	BK
99-87-6	p-Isopropyltoluene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 03:53	BK
135-98-8	sec-Butylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 03:53	BK
100-42-5	Styrene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 03:53	BK
75-65-0	tert-Butyl alcohol (TBA)	21	CCV-E	ug/L	0.80	2.0	1	EPA 8260C Certifications: NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 03:53	BK
98-06-6	tert-Butylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 03:53	BK
127-18-4	Tetrachloroethylene	0.77		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 03:53	BK
108-88-3	Toluene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 03:53	BK
156-60-5	trans-1,2-Dichloroethylene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 03:53	BK
10061-02-6	trans-1,3-Dichloropropylene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 03:53	BK
79-01-6	Trichloroethylene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 03:53	BK
75-69-4	Trichlorofluoromethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 03:53	BK



Sample Information

Client Sample ID: HMW-5

York Sample ID: 16G1101-02

Table with 5 columns: York Project (SDG) No., Client Project ID, Matrix, Collection Date/Time, Date Received. Values: 16G1101, GH9964.50, Water, July 27, 2016 3:00 pm, 07/28/2016

Volatile Organics, 8260 - Comprehensive

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5030B

Main data table for Volatile Organics, 8260 - Comprehensive. Columns include CAS No., Parameter, Result, Flag, Units, Reported to LOD/MDL, LOQ, Dilution, Reference Method, Date/Time Prepared, Date/Time Analyzed, Analyst. Includes rows for Vinyl Chloride, Xylenes, and Surrogate Recoveries.

Sample Information

Client Sample ID: HMW-6

York Sample ID: 16G1101-03

Table with 5 columns: York Project (SDG) No., Client Project ID, Matrix, Collection Date/Time, Date Received. Values: 16G1101, GH9964.50, Water, July 27, 2016 3:00 pm, 07/28/2016

Volatile Organics, 8260 - Comprehensive

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5030B

Main data table for Volatile Organics, 8260 - Comprehensive. Columns include CAS No., Parameter, Result, Flag, Units, Reported to LOD/MDL, LOQ, Dilution, Reference Method, Date/Time Prepared, Date/Time Analyzed, Analyst. Lists various chlorinated hydrocarbons.



Sample Information

Client Sample ID: HMW-6

York Sample ID: 16G1101-03

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

16G1101

GH9964.50

Water

July 27, 2016 3:00 pm

07/28/2016

Volatile Organics, 8260 - Comprehensive

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5030B

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
106-93-4	1,2-Dibromoethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 16:04	BK
95-50-1	1,2-Dichlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 16:04	BK
107-06-2	1,2-Dichloroethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 16:04	BK
78-87-5	1,2-Dichloropropane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 16:04	BK
108-67-8	1,3,5-Trimethylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 16:04	BK
541-73-1	1,3-Dichlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 16:04	BK
106-46-7	1,4-Dichlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 16:04	BK
123-91-1	1,4-Dioxane	ND		ug/L	40	40	1	EPA 8260C Certifications: NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 16:04	BK
78-93-3	2-Butanone	0.81	J, B	ug/L	0.80	2.0	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 16:04	BK
591-78-6	2-Hexanone	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 16:04	BK
108-10-1	4-Methyl-2-pentanone	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 16:04	BK
67-64-1	Acetone	5.5		ug/L	1.0	2.0	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 16:04	BK
107-02-8	Acrolein	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 16:04	BK
107-13-1	Acrylonitrile	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 16:04	BK
71-43-2	Benzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 16:04	BK
74-97-5	Bromochloromethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 16:04	BK
75-27-4	Bromodichloromethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 16:04	BK
75-25-2	Bromoform	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 16:04	BK
74-83-9	Bromomethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 16:04	BK
75-15-0	Carbon disulfide	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 16:04	BK
56-23-5	Carbon tetrachloride	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 16:04	BK
108-90-7	Chlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 16:04	BK
75-00-3	Chloroethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 16:04	BK



Sample Information

Client Sample ID: HMW-6

York Sample ID: 16G1101-03

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

16G1101

GH9964.50

Water

July 27, 2016 3:00 pm

07/28/2016

Volatile Organics, 8260 - Comprehensive

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5030B

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
67-66-3	Chloroform	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 16:04	BK
74-87-3	Chloromethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 16:04	BK
156-59-2	cis-1,2-Dichloroethylene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 16:04	BK
10061-01-5	cis-1,3-Dichloropropylene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 16:04	BK
110-82-7	Cyclohexane	0.47	J	ug/L	0.20	0.50	1	EPA 8260C Certifications: NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 16:04	BK
124-48-1	Dibromochloromethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 16:04	BK
74-95-3	Dibromomethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 16:04	BK
75-71-8	Dichlorodifluoromethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 16:04	BK
100-41-4	Ethyl Benzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 16:04	BK
87-68-3	Hexachlorobutadiene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 16:04	BK
98-82-8	Isopropylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 16:04	BK
79-20-9	Methyl acetate	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 16:04	BK
1634-04-4	Methyl tert-butyl ether (MTBE)	1.6		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 16:04	BK
108-87-2	Methylcyclohexane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 16:04	BK
75-09-2	Methylene chloride	ND		ug/L	1.0	2.0	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 16:04	BK
104-51-8	n-Butylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 16:04	BK
103-65-1	n-Propylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 16:04	BK
95-47-6	o-Xylene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: NELAC-NY10854	08/04/2016 09:22	08/04/2016 16:04	BK
179601-23-1	p- & m- Xylenes	ND		ug/L	0.50	1.0	1	EPA 8260C Certifications: NELAC-NY10854	08/04/2016 09:22	08/04/2016 16:04	BK
99-87-6	p-Isopropyltoluene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 16:04	BK
135-98-8	sec-Butylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 16:04	BK
100-42-5	Styrene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 16:04	BK
75-65-0	tert-Butyl alcohol (TBA)	ND		ug/L	0.50	1.0	1	EPA 8260C Certifications: NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 16:04	BK



Sample Information

Client Sample ID: HMW-6

York Sample ID: 16G1101-03

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

16G1101

GH9964.50

Water

July 27, 2016 3:00 pm

07/28/2016

Volatile Organics, 8260 - Comprehensive

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5030B

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
98-06-6	tert-Butylbenzene	0.21	J	ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 16:04	BK
127-18-4	Tetrachloroethylene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 16:04	BK
108-88-3	Toluene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 16:04	BK
156-60-5	trans-1,2-Dichloroethylene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 16:04	BK
10061-02-6	trans-1,3-Dichloropropylene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 16:04	BK
79-01-6	Trichloroethylene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 16:04	BK
75-69-4	Trichlorofluoromethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 16:04	BK
75-01-4	Vinyl Chloride	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 16:04	BK
1330-20-7	* Xylenes, Total	ND		ug/L	0.60	1.5	1	EPA 8260C Certifications: CTDOH,NJDEP	08/04/2016 09:22	08/04/2016 16:04	BK
Surrogate Recoveries		Result			Acceptance Range						
17060-07-0	Surrogate: 1,2-Dichloroethane-d4	114 %			69-130						
2037-26-5	Surrogate: Toluene-d8	109 %			81-117						
460-00-4	Surrogate: p-Bromofluorobenzene	101 %			79-122						

Sample Information

Client Sample ID: HMW-7R

York Sample ID: 16G1101-04

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

16G1101

GH9964.50

Water

July 27, 2016 3:00 pm

07/28/2016

Volatile Organics, 8260 - Comprehensive

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5030B

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
630-20-6	1,1,1,2-Tetrachloroethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 04:23	BK
71-55-6	1,1,1-Trichloroethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 04:23	BK
79-34-5	1,1,2,2-Tetrachloroethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 04:23	BK
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 04:23	BK
79-00-5	1,1,2-Trichloroethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 04:23	BK



Sample Information

Client Sample ID: HMW-7R

York Sample ID: 16G1101-04

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

16G1101

GH9964.50

Water

July 27, 2016 3:00 pm

07/28/2016

Volatile Organics, 8260 - Comprehensive

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5030B

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
75-34-3	1,1-Dichloroethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 04:23	BK
75-35-4	1,1-Dichloroethylene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 04:23	BK
87-61-6	1,2,3-Trichlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 04:23	BK
96-18-4	1,2,3-Trichloropropane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 04:23	BK
120-82-1	1,2,4-Trichlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 04:23	BK
95-63-6	1,2,4-Trimethylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 04:23	BK
96-12-8	1,2-Dibromo-3-chloropropane	ND		ug/L	0.80	2.0	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 04:23	BK
106-93-4	1,2-Dibromoethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 04:23	BK
95-50-1	1,2-Dichlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 04:23	BK
107-06-2	1,2-Dichloroethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 04:23	BK
78-87-5	1,2-Dichloropropane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 04:23	BK
108-67-8	1,3,5-Trimethylbenzene	0.37	J	ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 04:23	BK
541-73-1	1,3-Dichlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 04:23	BK
106-46-7	1,4-Dichlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 04:23	BK
123-91-1	1,4-Dioxane	ND		ug/L	40	40	1	EPA 8260C Certifications: NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 04:23	BK
78-93-3	2-Butanone	2.0	CCV-E, J	ug/L	0.80	2.0	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 04:23	BK
591-78-6	2-Hexanone	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 04:23	BK
108-10-1	4-Methyl-2-pentanone	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 04:23	BK
67-64-1	Acetone	13	CCV-E, SCAL- E	ug/L	1.0	2.0	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 04:23	BK
107-02-8	Acrolein	ND		ug/L	0.80	2.0	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 04:23	BK
107-13-1	Acrylonitrile	ND		ug/L	0.80	2.0	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 04:23	BK
71-43-2	Benzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 04:23	BK
74-97-5	Bromochloromethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 04:23	BK



Sample Information

Client Sample ID: HMW-7R

York Sample ID: 16G1101-04

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

16G1101

GH9964.50

Water

July 27, 2016 3:00 pm

07/28/2016

Volatile Organics, 8260 - Comprehensive

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5030B

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
75-27-4	Bromodichloromethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 04:23	BK
75-25-2	Bromoform	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 04:23	BK
74-83-9	Bromomethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 04:23	BK
75-15-0	Carbon disulfide	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 04:23	BK
56-23-5	Carbon tetrachloride	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 04:23	BK
108-90-7	Chlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 04:23	BK
75-00-3	Chloroethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 04:23	BK
67-66-3	Chloroform	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 04:23	BK
74-87-3	Chloromethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 04:23	BK
156-59-2	cis-1,2-Dichloroethylene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 04:23	BK
10061-01-5	cis-1,3-Dichloropropylene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 04:23	BK
110-82-7	Cyclohexane	5.7		ug/L	0.20	0.50	1	EPA 8260C Certifications: NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 04:23	BK
124-48-1	Dibromochloromethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 04:23	BK
74-95-3	Dibromomethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 04:23	BK
75-71-8	Dichlorodifluoromethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 04:23	BK
100-41-4	Ethyl Benzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 04:23	BK
87-68-3	Hexachlorobutadiene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 04:23	BK
98-82-8	Isopropylbenzene	0.46	J	ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 04:23	BK
79-20-9	Methyl acetate	ND		ug/L	0.80	2.0	1	EPA 8260C Certifications: NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 04:23	BK
1634-04-4	Methyl tert-butyl ether (MTBE)	10		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 04:23	BK
108-87-2	Methylcyclohexane	0.90		ug/L	0.20	0.50	1	EPA 8260C Certifications: NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 04:23	BK
75-09-2	Methylene chloride	ND		ug/L	1.0	2.0	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 04:23	BK
104-51-8	n-Butylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 04:23	BK



Sample Information

Client Sample ID: HMW-7R

York Sample ID: 16G1101-04

<u>York Project (SDG) No.</u> 16G1101	<u>Client Project ID</u> GH9964.50	<u>Matrix</u> Water	<u>Collection Date/Time</u> July 27, 2016 3:00 pm	<u>Date Received</u> 07/28/2016
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Volatile Organics, 8260 - Comprehensive

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5030B

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
103-65-1	n-Propylbenzene	0.32	J	ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 04:23	BK
95-47-6	o-Xylene	0.21	J	ug/L	0.20	0.50	1	EPA 8260C Certifications: NELAC-NY10854	08/04/2016 16:47	08/05/2016 04:23	BK
179601-23-1	p- & m- Xylenes	ND		ug/L	0.50	1.0	1	EPA 8260C Certifications: NELAC-NY10854	08/04/2016 16:47	08/05/2016 04:23	BK
99-87-6	p-Isopropyltoluene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 04:23	BK
135-98-8	sec-Butylbenzene	0.56		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 04:23	BK
100-42-5	Styrene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 04:23	BK
75-65-0	tert-Butyl alcohol (TBA)	41	E, CCV-E	ug/L	0.80	2.0	1	EPA 8260C Certifications: NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 04:23	BK
98-06-6	tert-Butylbenzene	2.8		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 04:23	BK
127-18-4	Tetrachloroethylene	0.53		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 04:23	BK
108-88-3	Toluene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 04:23	BK
156-60-5	trans-1,2-Dichloroethylene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 04:23	BK
10061-02-6	trans-1,3-Dichloropropylene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 04:23	BK
79-01-6	Trichloroethylene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 04:23	BK
75-69-4	Trichlorofluoromethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 04:23	BK
75-01-4	Vinyl Chloride	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 04:23	BK
1330-20-7	* Xylenes, Total	ND		ug/L	0.60	1.5	1	EPA 8260C Certifications: CTDOH,NJDEP	08/04/2016 16:47	08/05/2016 04:23	BK
Surrogate Recoveries		Result	Acceptance Range								
17060-07-0	Surrogate: 1,2-Dichloroethane-d4	126 %	69-130								
2037-26-5	Surrogate: Toluene-d8	97.4 %	81-117								
460-00-4	Surrogate: p-Bromofluorobenzene	96.6 %	79-122								

Sample Information

Client Sample ID: HMW-8

York Sample ID: 16G1101-05

<u>York Project (SDG) No.</u> 16G1101	<u>Client Project ID</u> GH9964.50	<u>Matrix</u> Water	<u>Collection Date/Time</u> July 27, 2016 3:00 pm	<u>Date Received</u> 07/28/2016
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Sample Information

Client Sample ID: HMW-8

York Sample ID: 16G1101-05

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

16G1101

GH9964.50

Water

July 27, 2016 3:00 pm

07/28/2016

Volatile Organics, 8260 - Comprehensive

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5030B

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
630-20-6	1,1,1,2-Tetrachloroethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 04:53	BK
71-55-6	1,1,1-Trichloroethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 04:53	BK
79-34-5	1,1,2,2-Tetrachloroethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 04:53	BK
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 04:53	BK
79-00-5	1,1,2-Trichloroethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 04:53	BK
75-34-3	1,1-Dichloroethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 04:53	BK
75-35-4	1,1-Dichloroethylene	0.26	J	ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 04:53	BK
87-61-6	1,2,3-Trichlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 04:53	BK
96-18-4	1,2,3-Trichloropropane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 04:53	BK
120-82-1	1,2,4-Trichlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 04:53	BK
95-63-6	1,2,4-Trimethylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 04:53	BK
96-12-8	1,2-Dibromo-3-chloropropane	ND		ug/L	0.80	2.0	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 04:53	BK
106-93-4	1,2-Dibromoethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 04:53	BK
95-50-1	1,2-Dichlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 04:53	BK
107-06-2	1,2-Dichloroethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 04:53	BK
78-87-5	1,2-Dichloropropane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 04:53	BK
108-67-8	1,3,5-Trimethylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 04:53	BK
541-73-1	1,3-Dichlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 04:53	BK
106-46-7	1,4-Dichlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 04:53	BK
123-91-1	1,4-Dioxane	ND		ug/L	40	40	1	EPA 8260C Certifications: NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 04:53	BK
78-93-3	2-Butanone	ND		ug/L	0.80	2.0	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 04:53	BK
591-78-6	2-Hexanone	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 04:53	BK
108-10-1	4-Methyl-2-pentanone	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 04:53	BK



Sample Information

Client Sample ID: HMW-8

York Sample ID: 16G1101-05

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

16G1101

GH9964.50

Water

July 27, 2016 3:00 pm

07/28/2016

Volatile Organics, 8260 - Comprehensive

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5030B

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
67-64-1	Acetone	4.4	CCV-E, SCAL-E	ug/L	1.0	2.0	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 04:53	BK
107-02-8	Acrolein	ND		ug/L	0.80	2.0	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 04:53	BK
107-13-1	Acrylonitrile	ND		ug/L	0.80	2.0	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 04:53	BK
71-43-2	Benzene	0.84		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 04:53	BK
74-97-5	Bromochloromethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 04:53	BK
75-27-4	Bromodichloromethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 04:53	BK
75-25-2	Bromoform	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 04:53	BK
74-83-9	Bromomethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 04:53	BK
75-15-0	Carbon disulfide	0.21	J	ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 04:53	BK
56-23-5	Carbon tetrachloride	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 04:53	BK
108-90-7	Chlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 04:53	BK
75-00-3	Chloroethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 04:53	BK
67-66-3	Chloroform	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 04:53	BK
74-87-3	Chloromethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 04:53	BK
156-59-2	cis-1,2-Dichloroethylene	8.7		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 04:53	BK
10061-01-5	cis-1,3-Dichloropropylene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 04:53	BK
110-82-7	Cyclohexane	0.40	J	ug/L	0.20	0.50	1	EPA 8260C Certifications: NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 04:53	BK
124-48-1	Dibromochloromethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 04:53	BK
74-95-3	Dibromomethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 04:53	BK
75-71-8	Dichlorodifluoromethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 04:53	BK
100-41-4	Ethyl Benzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 04:53	BK
87-68-3	Hexachlorobutadiene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 04:53	BK
98-82-8	Isopropylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 04:53	BK



Sample Information

Client Sample ID: HMW-8

York Sample ID: 16G1101-05

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

16G1101

GH9964.50

Water

July 27, 2016 3:00 pm

07/28/2016

Volatile Organics, 8260 - Comprehensive

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5030B

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
79-20-9	Methyl acetate	ND		ug/L	0.80	2.0	1	EPA 8260C Certifications: NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 04:53	BK
1634-04-4	Methyl tert-butyl ether (MTBE)	1.0		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 04:53	BK
108-87-2	Methylcyclohexane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 04:53	BK
75-09-2	Methylene chloride	ND		ug/L	1.0	2.0	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 04:53	BK
104-51-8	n-Butylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 04:53	BK
103-65-1	n-Propylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 04:53	BK
95-47-6	o-Xylene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: NELAC-NY10854	08/04/2016 16:47	08/05/2016 04:53	BK
179601-23-1	p- & m- Xylenes	ND		ug/L	0.50	1.0	1	EPA 8260C Certifications: NELAC-NY10854	08/04/2016 16:47	08/05/2016 04:53	BK
99-87-6	p-Isopropyltoluene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 04:53	BK
135-98-8	sec-Butylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 04:53	BK
100-42-5	Styrene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 04:53	BK
75-65-0	tert-Butyl alcohol (TBA)	ND		ug/L	0.80	2.0	1	EPA 8260C Certifications: NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 04:53	BK
98-06-6	tert-Butylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 04:53	BK
127-18-4	Tetrachloroethylene	0.37	J	ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 04:53	BK
108-88-3	Toluene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 04:53	BK
156-60-5	trans-1,2-Dichloroethylene	11		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 04:53	BK
10061-02-6	trans-1,3-Dichloropropylene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 04:53	BK
79-01-6	Trichloroethylene	6.9		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 04:53	BK
75-69-4	Trichlorofluoromethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 04:53	BK
75-01-4	Vinyl Chloride	1.4		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 04:53	BK
1330-20-7	* Xylenes, Total	ND		ug/L	0.60	1.5	1	EPA 8260C Certifications: CTDOH,NJDEP	08/04/2016 16:47	08/05/2016 04:53	BK
Surrogate Recoveries		Result	Acceptance Range								
17060-07-0	Surrogate: 1,2-Dichloroethane-d4	108 %	69-130								
2037-26-5	Surrogate: Toluene-d8	96.1 %	81-117								
460-00-4	Surrogate: p-Bromofluorobenzene	93.4 %	79-122								



Sample Information

Client Sample ID: HMW-8

York Sample ID: 16G1101-05

<u>York Project (SDG) No.</u>	<u>Client Project ID</u>	<u>Matrix</u>	<u>Collection Date/Time</u>	<u>Date Received</u>
16G1101	GH9964.50	Water	July 27, 2016 3:00 pm	07/28/2016

Sample Information

Client Sample ID: HMW-9R

York Sample ID: 16G1101-06

<u>York Project (SDG) No.</u>	<u>Client Project ID</u>	<u>Matrix</u>	<u>Collection Date/Time</u>	<u>Date Received</u>
16G1101	GH9964.50	Water	July 27, 2016 3:00 pm	07/28/2016

Volatile Organics, 8260 - Comprehensive

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5030B

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
630-20-6	1,1,1,2-Tetrachloroethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 05:24	BK
71-55-6	1,1,1-Trichloroethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 05:24	BK
79-34-5	1,1,2,2-Tetrachloroethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 05:24	BK
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 05:24	BK
79-00-5	1,1,2-Trichloroethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 05:24	BK
75-34-3	1,1-Dichloroethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 05:24	BK
75-35-4	1,1-Dichloroethylene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 05:24	BK
87-61-6	1,2,3-Trichlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 05:24	BK
96-18-4	1,2,3-Trichloropropane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 05:24	BK
120-82-1	1,2,4-Trichlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 05:24	BK
95-63-6	1,2,4-Trimethylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 05:24	BK
96-12-8	1,2-Dibromo-3-chloropropane	ND		ug/L	0.80	2.0	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 05:24	BK
106-93-4	1,2-Dibromoethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 05:24	BK
95-50-1	1,2-Dichlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 05:24	BK
107-06-2	1,2-Dichloroethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 05:24	BK
78-87-5	1,2-Dichloropropane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 05:24	BK
108-67-8	1,3,5-Trimethylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 05:24	BK
541-73-1	1,3-Dichlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 05:24	BK
106-46-7	1,4-Dichlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 05:24	BK



Sample Information

Client Sample ID: HMW-9R

York Sample ID: 16G1101-06

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

16G1101

GH9964.50

Water

July 27, 2016 3:00 pm

07/28/2016

Volatile Organics, 8260 - Comprehensive

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5030B

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
123-91-1	1,4-Dioxane	ND		ug/L	40	40	1	EPA 8260C Certifications: NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 05:24	BK
78-93-3	2-Butanone	1.3	CCV-E, J	ug/L	0.80	2.0	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 05:24	BK
591-78-6	2-Hexanone	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 05:24	BK
108-10-1	4-Methyl-2-pentanone	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 05:24	BK
67-64-1	Acetone	5.4	CCV-E, SCAL- E	ug/L	1.0	2.0	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 05:24	BK
107-02-8	Acrolein	ND		ug/L	0.80	2.0	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 05:24	BK
107-13-1	Acrylonitrile	ND		ug/L	0.80	2.0	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 05:24	BK
71-43-2	Benzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 05:24	BK
74-97-5	Bromochloromethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 05:24	BK
75-27-4	Bromodichloromethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 05:24	BK
75-25-2	Bromoform	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 05:24	BK
74-83-9	Bromomethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 05:24	BK
75-15-0	Carbon disulfide	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 05:24	BK
56-23-5	Carbon tetrachloride	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 05:24	BK
108-90-7	Chlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 05:24	BK
75-00-3	Chloroethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 05:24	BK
67-66-3	Chloroform	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 05:24	BK
74-87-3	Chloromethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 05:24	BK
156-59-2	cis-1,2-Dichloroethylene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 05:24	BK
10061-01-5	cis-1,3-Dichloropropylene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 05:24	BK
110-82-7	Cyclohexane	2.0		ug/L	0.20	0.50	1	EPA 8260C Certifications: NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 05:24	BK
124-48-1	Dibromochloromethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 05:24	BK
74-95-3	Dibromomethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 05:24	BK



Sample Information

Client Sample ID: HMW-9R

York Sample ID: 16G1101-06

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

16G1101

GH9964.50

Water

July 27, 2016 3:00 pm

07/28/2016

Volatile Organics, 8260 - Comprehensive

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5030B

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
75-71-8	Dichlorodifluoromethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 05:24	BK
100-41-4	Ethyl Benzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 05:24	BK
87-68-3	Hexachlorobutadiene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 05:24	BK
98-82-8	Isopropylbenzene	2.0		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 05:24	BK
79-20-9	Methyl acetate	ND		ug/L	0.80	2.0	1	EPA 8260C Certifications: NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 05:24	BK
1634-04-4	Methyl tert-butyl ether (MTBE)	0.75		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 05:24	BK
108-87-2	Methylcyclohexane	0.53		ug/L	0.20	0.50	1	EPA 8260C Certifications: NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 05:24	BK
75-09-2	Methylene chloride	ND		ug/L	1.0	2.0	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 05:24	BK
104-51-8	n-Butylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 05:24	BK
103-65-1	n-Propylbenzene	1.3		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 05:24	BK
95-47-6	o-Xylene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: NELAC-NY10854	08/04/2016 16:47	08/05/2016 05:24	BK
179601-23-1	p- & m- Xylenes	ND		ug/L	0.50	1.0	1	EPA 8260C Certifications: NELAC-NY10854	08/04/2016 16:47	08/05/2016 05:24	BK
99-87-6	p-Isopropyltoluene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 05:24	BK
135-98-8	sec-Butylbenzene	1.3		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 05:24	BK
100-42-5	Styrene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 05:24	BK
75-65-0	tert-Butyl alcohol (TBA)	ND		ug/L	0.80	2.0	1	EPA 8260C Certifications: NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 05:24	BK
98-06-6	tert-Butylbenzene	2.4		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 05:24	BK
127-18-4	Tetrachloroethylene	0.35	J	ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 05:24	BK
108-88-3	Toluene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 05:24	BK
156-60-5	trans-1,2-Dichloroethylene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 05:24	BK
10061-02-6	trans-1,3-Dichloropropylene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 05:24	BK
79-01-6	Trichloroethylene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 05:24	BK
75-69-4	Trichlorofluoromethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 05:24	BK



Sample Information

Client Sample ID: HMW-9R

York Sample ID: 16G1101-06

<u>York Project (SDG) No.</u> 16G1101	<u>Client Project ID</u> GH9964.50	<u>Matrix</u> Water	<u>Collection Date/Time</u> July 27, 2016 3:00 pm	<u>Date Received</u> 07/28/2016
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Volatile Organics, 8260 - Comprehensive

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5030B

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
75-01-4	Vinyl Chloride	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 16:47	08/05/2016 05:24	BK
1330-20-7	* Xylenes, Total	ND		ug/L	0.60	1.5	1	EPA 8260C Certifications: CTDOH,NJDEP	08/04/2016 16:47	08/05/2016 05:24	BK
Surrogate Recoveries		Result			Acceptance Range						
17060-07-0	Surrogate: 1,2-Dichloroethane-d4	105 %			69-130						
2037-26-5	Surrogate: Toluene-d8	106 %			81-117						
460-00-4	Surrogate: p-Bromofluorobenzene	97.6 %			79-122						

Sample Information

Client Sample ID: HMW-10R

York Sample ID: 16G1101-07

<u>York Project (SDG) No.</u> 16G1101	<u>Client Project ID</u> GH9964.50	<u>Matrix</u> Water	<u>Collection Date/Time</u> July 27, 2016 3:00 pm	<u>Date Received</u> 07/28/2016
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Volatile Organics, 8260 - Comprehensive

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5030B

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
630-20-6	1,1,1,2-Tetrachloroethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 17:00	BK
71-55-6	1,1,1-Trichloroethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 17:00	BK
79-34-5	1,1,2,2-Tetrachloroethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 17:00	BK
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 17:00	BK
79-00-5	1,1,2-Trichloroethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 17:00	BK
75-34-3	1,1-Dichloroethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 17:00	BK
75-35-4	1,1-Dichloroethylene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 17:00	BK
87-61-6	1,2,3-Trichlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 17:00	BK
96-18-4	1,2,3-Trichloropropane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 17:00	BK
120-82-1	1,2,4-Trichlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 17:00	BK
95-63-6	1,2,4-Trimethylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 17:00	BK
96-12-8	1,2-Dibromo-3-chloropropane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 17:00	BK



Sample Information

Client Sample ID: HMW-10R

York Sample ID: 16G1101-07

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

16G1101

GH9964.50

Water

July 27, 2016 3:00 pm

07/28/2016

Volatile Organics, 8260 - Comprehensive

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5030B

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
106-93-4	1,2-Dibromoethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 17:00	BK
95-50-1	1,2-Dichlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 17:00	BK
107-06-2	1,2-Dichloroethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 17:00	BK
78-87-5	1,2-Dichloropropane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 17:00	BK
108-67-8	1,3,5-Trimethylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 17:00	BK
541-73-1	1,3-Dichlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 17:00	BK
106-46-7	1,4-Dichlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 17:00	BK
123-91-1	1,4-Dioxane	ND		ug/L	40	40	1	EPA 8260C Certifications: NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 17:00	BK
78-93-3	2-Butanone	ND		ug/L	0.80	2.0	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 17:00	BK
591-78-6	2-Hexanone	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 17:00	BK
108-10-1	4-Methyl-2-pentanone	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 17:00	BK
67-64-1	Acetone	3.6		ug/L	1.0	2.0	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 17:00	BK
107-02-8	Acrolein	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 17:00	BK
107-13-1	Acrylonitrile	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 17:00	BK
71-43-2	Benzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 17:00	BK
74-97-5	Bromochloromethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 17:00	BK
75-27-4	Bromodichloromethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 17:00	BK
75-25-2	Bromoform	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 17:00	BK
74-83-9	Bromomethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 17:00	BK
75-15-0	Carbon disulfide	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 17:00	BK
56-23-5	Carbon tetrachloride	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 17:00	BK
108-90-7	Chlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 17:00	BK
75-00-3	Chloroethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 17:00	BK
67-66-3	Chloroform	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 17:00	BK



Sample Information

Client Sample ID: HMW-10R

York Sample ID: 16G1101-07

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

16G1101

GH9964.50

Water

July 27, 2016 3:00 pm

07/28/2016

Volatile Organics, 8260 - Comprehensive

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5030B

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
74-87-3	Chloromethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 17:00	BK
156-59-2	cis-1,2-Dichloroethylene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 17:00	BK
10061-01-5	cis-1,3-Dichloropropylene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 17:00	BK
110-82-7	Cyclohexane	1.4		ug/L	0.20	0.50	1	EPA 8260C Certifications: NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 17:00	BK
124-48-1	Dibromochloromethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 17:00	BK
74-95-3	Dibromomethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 17:00	BK
75-71-8	Dichlorodifluoromethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 17:00	BK
100-41-4	Ethyl Benzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 17:00	BK
87-68-3	Hexachlorobutadiene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 17:00	BK
98-82-8	Isopropylbenzene	0.39	J	ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 17:00	BK
79-20-9	Methyl acetate	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 17:00	BK
1634-04-4	Methyl tert-butyl ether (MTBE)	1.1		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 17:00	BK
108-87-2	Methylcyclohexane	0.40	J	ug/L	0.20	0.50	1	EPA 8260C Certifications: NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 17:00	BK
75-09-2	Methylene chloride	ND		ug/L	1.0	2.0	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 17:00	BK
104-51-8	n-Butylbenzene	0.26	J	ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 17:00	BK
103-65-1	n-Propylbenzene	0.46	J	ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 17:00	BK
95-47-6	o-Xylene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: NELAC-NY10854	08/04/2016 09:22	08/04/2016 17:00	BK
179601-23-1	p- & m- Xylenes	ND		ug/L	0.50	1.0	1	EPA 8260C Certifications: NELAC-NY10854	08/04/2016 09:22	08/04/2016 17:00	BK
99-87-6	p-Isopropyltoluene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 17:00	BK
135-98-8	sec-Butylbenzene	0.52		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 17:00	BK
100-42-5	Styrene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 17:00	BK
75-65-0	tert-Butyl alcohol (TBA)	0.90	CCV-E, J	ug/L	0.50	1.0	1	EPA 8260C Certifications: NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 17:00	BK
98-06-6	tert-Butylbenzene	0.98		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 17:00	BK



Sample Information

Client Sample ID: HMW-10R

York Sample ID: 16G1101-07

Table with 5 columns: York Project (SDG) No., Client Project ID, Matrix, Collection Date/Time, Date Received. Values: 16G1101, GH9964.50, Water, July 27, 2016 3:00 pm, 07/28/2016

Volatile Organics, 8260 - Comprehensive

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5030B

Main data table with 13 columns: CAS No., Parameter, Result, Flag, Units, Reported to LOD/MDL, LOQ, Dilution, Reference Method, Date/Time Prepared, Date/Time Analyzed, Analyst. Rows include Tetrachloroethylene, Toluene, trans-1,2-Dichloroethylene, etc.

Surrogate Recoveries

Result

Acceptance Range

Table with 3 columns: Surrogate, Result, Acceptance Range. Rows: 17060-07-0 Surrogate: 1,2-Dichloroethane-d4 (110%, 69-130), 2037-26-5 Surrogate: Toluene-d8 (109%, 81-117), 460-00-4 Surrogate: p-Bromofluorobenzene (103%, 79-122)

Sample Information

Client Sample ID: HMW-13

York Sample ID: 16G1101-08

Table with 5 columns: York Project (SDG) No., Client Project ID, Matrix, Collection Date/Time, Date Received. Values: 16G1101, GH9964.50, Water, July 27, 2016 3:00 pm, 07/28/2016

Volatile Organics, 8260 - Comprehensive

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5030B

Main data table with 13 columns: CAS No., Parameter, Result, Flag, Units, Reported to LOD/MDL, LOQ, Dilution, Reference Method, Date/Time Prepared, Date/Time Analyzed, Analyst. Rows include 1,1,1,2-Tetrachloroethane, 1,1,1-Trichloroethane, 1,1,2,2-Tetrachloroethane, etc.



Sample Information

Client Sample ID: HMW-13

York Sample ID: 16G1101-08

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

16G1101

GH9964.50

Water

July 27, 2016 3:00 pm

07/28/2016

Volatile Organics, 8260 - Comprehensive

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5030B

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
75-35-4	1,1-Dichloroethylene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 17:27	BK
87-61-6	1,2,3-Trichlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 17:27	BK
96-18-4	1,2,3-Trichloropropane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 17:27	BK
120-82-1	1,2,4-Trichlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 17:27	BK
95-63-6	1,2,4-Trimethylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 17:27	BK
96-12-8	1,2-Dibromo-3-chloropropane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 17:27	BK
106-93-4	1,2-Dibromoethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 17:27	BK
95-50-1	1,2-Dichlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 17:27	BK
107-06-2	1,2-Dichloroethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 17:27	BK
78-87-5	1,2-Dichloropropane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 17:27	BK
108-67-8	1,3,5-Trimethylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 17:27	BK
541-73-1	1,3-Dichlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 17:27	BK
106-46-7	1,4-Dichlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 17:27	BK
123-91-1	1,4-Dioxane	ND		ug/L	40	40	1	EPA 8260C Certifications: NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 17:27	BK
78-93-3	2-Butanone	ND		ug/L	0.80	2.0	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 17:27	BK
591-78-6	2-Hexanone	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 17:27	BK
108-10-1	4-Methyl-2-pentanone	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 17:27	BK
67-64-1	Acetone	3.6		ug/L	1.0	2.0	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 17:27	BK
107-02-8	Acrolein	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 17:27	BK
107-13-1	Acrylonitrile	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 17:27	BK
71-43-2	Benzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 17:27	BK
74-97-5	Bromochloromethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 17:27	BK
75-27-4	Bromodichloromethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 17:27	BK
75-25-2	Bromoform	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 17:27	BK



Sample Information

Client Sample ID: HMW-13

York Sample ID: 16G1101-08

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

16G1101

GH9964.50

Water

July 27, 2016 3:00 pm

07/28/2016

Volatile Organics, 8260 - Comprehensive

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5030B

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
74-83-9	Bromomethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 17:27	BK
75-15-0	Carbon disulfide	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 17:27	BK
56-23-5	Carbon tetrachloride	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 17:27	BK
108-90-7	Chlorobenzene	14		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 17:27	BK
75-00-3	Chloroethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 17:27	BK
67-66-3	Chloroform	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 17:27	BK
74-87-3	Chloromethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 17:27	BK
156-59-2	cis-1,2-Dichloroethylene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 17:27	BK
10061-01-5	cis-1,3-Dichloropropylene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 17:27	BK
110-82-7	Cyclohexane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 17:27	BK
124-48-1	Dibromochloromethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 17:27	BK
74-95-3	Dibromomethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 17:27	BK
75-71-8	Dichlorodifluoromethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 17:27	BK
100-41-4	Ethyl Benzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 17:27	BK
87-68-3	Hexachlorobutadiene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 17:27	BK
98-82-8	Isopropylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 17:27	BK
79-20-9	Methyl acetate	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 17:27	BK
1634-04-4	Methyl tert-butyl ether (MTBE)	1.8		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 17:27	BK
108-87-2	Methylcyclohexane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 17:27	BK
75-09-2	Methylene chloride	ND		ug/L	1.0	2.0	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 17:27	BK
104-51-8	n-Butylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 17:27	BK
103-65-1	n-Propylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 17:27	BK
95-47-6	o-Xylene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: NELAC-NY10854	08/04/2016 09:22	08/04/2016 17:27	BK



Sample Information

Client Sample ID: HMW-13

York Sample ID: 16G1101-08

<u>York Project (SDG) No.</u> 16G1101	<u>Client Project ID</u> GH9964.50	<u>Matrix</u> Water	<u>Collection Date/Time</u> July 27, 2016 3:00 pm	<u>Date Received</u> 07/28/2016
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Volatile Organics, 8260 - Comprehensive

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5030B

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
179601-23-1	p- & m- Xylenes	ND		ug/L	0.50	1.0	1	EPA 8260C Certifications: NELAC-NY10854	08/04/2016 09:22	08/04/2016 17:27	BK
99-87-6	p-Isopropyltoluene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 17:27	BK
135-98-8	sec-Butylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 17:27	BK
100-42-5	Styrene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 17:27	BK
75-65-0	tert-Butyl alcohol (TBA)	6.9	CCV-E	ug/L	0.50	1.0	1	EPA 8260C Certifications: NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 17:27	BK
98-06-6	tert-Butylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 17:27	BK
127-18-4	Tetrachloroethylene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 17:27	BK
108-88-3	Toluene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 17:27	BK
156-60-5	trans-1,2-Dichloroethylene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 17:27	BK
10061-02-6	trans-1,3-Dichloropropylene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 17:27	BK
79-01-6	Trichloroethylene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 17:27	BK
75-69-4	Trichlorofluoromethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 17:27	BK
75-01-4	Vinyl Chloride	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 17:27	BK
1330-20-7	* Xylenes, Total	ND		ug/L	0.60	1.5	1	EPA 8260C Certifications: CTDOH,NJDEP	08/04/2016 09:22	08/04/2016 17:27	BK
Surrogate Recoveries		Result	Acceptance Range								
17060-07-0	Surrogate: 1,2-Dichloroethane-d4	106 %	69-130								
2037-26-5	Surrogate: Toluene-d8	109 %	81-117								
460-00-4	Surrogate: p-Bromofluorobenzene	107 %	79-122								

Sample Information

Client Sample ID: HMW-14

York Sample ID: 16G1101-09

<u>York Project (SDG) No.</u> 16G1101	<u>Client Project ID</u> GH9964.50	<u>Matrix</u> Water	<u>Collection Date/Time</u> July 27, 2016 3:00 pm	<u>Date Received</u> 07/28/2016
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Volatile Organics, 8260 - Comprehensive

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5030B

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

Client Sample ID: HMW-14

York Sample ID: 16G1101-09

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

16G1101

GH9964.50

Water

July 27, 2016 3:00 pm

07/28/2016

Volatile Organics, 8260 - Comprehensive

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5030B

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
630-20-6	1,1,1,2-Tetrachloroethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 17:55	BK
71-55-6	1,1,1-Trichloroethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 17:55	BK
79-34-5	1,1,2,2-Tetrachloroethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 17:55	BK
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 17:55	BK
79-00-5	1,1,2-Trichloroethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 17:55	BK
75-34-3	1,1-Dichloroethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 17:55	BK
75-35-4	1,1-Dichloroethylene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 17:55	BK
87-61-6	1,2,3-Trichlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 17:55	BK
96-18-4	1,2,3-Trichloropropane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 17:55	BK
120-82-1	1,2,4-Trichlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 17:55	BK
95-63-6	1,2,4-Trimethylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 17:55	BK
96-12-8	1,2-Dibromo-3-chloropropane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 17:55	BK
106-93-4	1,2-Dibromoethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 17:55	BK
95-50-1	1,2-Dichlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 17:55	BK
107-06-2	1,2-Dichloroethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 17:55	BK
78-87-5	1,2-Dichloropropane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 17:55	BK
108-67-8	1,3,5-Trimethylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 17:55	BK
541-73-1	1,3-Dichlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 17:55	BK
106-46-7	1,4-Dichlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 17:55	BK
123-91-1	1,4-Dioxane	ND		ug/L	40	40	1	EPA 8260C Certifications: NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 17:55	BK
78-93-3	2-Butanone	1.7	B, J	ug/L	0.80	2.0	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 17:55	BK
591-78-6	2-Hexanone	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 17:55	BK
108-10-1	4-Methyl-2-pentanone	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 17:55	BK



Sample Information

Client Sample ID: HMW-14

York Sample ID: 16G1101-09

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

16G1101

GH9964.50

Water

July 27, 2016 3:00 pm

07/28/2016

Volatile Organics, 8260 - Comprehensive

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5030B

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
67-64-1	Acetone	7.2		ug/L	1.0	2.0	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 17:55	BK
107-02-8	Acrolein	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 17:55	BK
107-13-1	Acrylonitrile	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 17:55	BK
71-43-2	Benzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 17:55	BK
74-97-5	Bromochloromethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 17:55	BK
75-27-4	Bromodichloromethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 17:55	BK
75-25-2	Bromoform	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 17:55	BK
74-83-9	Bromomethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 17:55	BK
75-15-0	Carbon disulfide	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 17:55	BK
56-23-5	Carbon tetrachloride	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 17:55	BK
108-90-7	Chlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 17:55	BK
75-00-3	Chloroethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 17:55	BK
67-66-3	Chloroform	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 17:55	BK
74-87-3	Chloromethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 17:55	BK
156-59-2	cis-1,2-Dichloroethylene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 17:55	BK
10061-01-5	cis-1,3-Dichloropropylene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 17:55	BK
110-82-7	Cyclohexane	1.3		ug/L	0.20	0.50	1	EPA 8260C Certifications: NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 17:55	BK
124-48-1	Dibromochloromethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 17:55	BK
74-95-3	Dibromomethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 17:55	BK
75-71-8	Dichlorodifluoromethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 17:55	BK
100-41-4	Ethyl Benzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 17:55	BK
87-68-3	Hexachlorobutadiene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 17:55	BK
98-82-8	Isopropylbenzene	0.61		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 17:55	BK



Sample Information

Client Sample ID: HMW-14

York Sample ID: 16G1101-09

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

16G1101

GH9964.50

Water

July 27, 2016 3:00 pm

07/28/2016

Volatile Organics, 8260 - Comprehensive

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5030B

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
79-20-9	Methyl acetate	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 17:55	BK
1634-04-4	Methyl tert-butyl ether (MTBE)	5.6		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 17:55	BK
108-87-2	Methylcyclohexane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 17:55	BK
75-09-2	Methylene chloride	ND		ug/L	1.0	2.0	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 17:55	BK
104-51-8	n-Butylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 17:55	BK
103-65-1	n-Propylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 17:55	BK
95-47-6	o-Xylene	0.38	J	ug/L	0.20	0.50	1	EPA 8260C Certifications: NELAC-NY10854	08/04/2016 09:22	08/04/2016 17:55	BK
179601-23-1	p- & m- Xylenes	ND		ug/L	0.50	1.0	1	EPA 8260C Certifications: NELAC-NY10854	08/04/2016 09:22	08/04/2016 17:55	BK
99-87-6	p-Isopropyltoluene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 17:55	BK
135-98-8	sec-Butylbenzene	0.53		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 17:55	BK
100-42-5	Styrene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 17:55	BK
75-65-0	tert-Butyl alcohol (TBA)	ND		ug/L	0.50	1.0	1	EPA 8260C Certifications: NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 17:55	BK
98-06-6	tert-Butylbenzene	0.73		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 17:55	BK
127-18-4	Tetrachloroethylene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 17:55	BK
108-88-3	Toluene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 17:55	BK
156-60-5	trans-1,2-Dichloroethylene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 17:55	BK
10061-02-6	trans-1,3-Dichloropropylene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 17:55	BK
79-01-6	Trichloroethylene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 17:55	BK
75-69-4	Trichlorofluoromethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 17:55	BK
75-01-4	Vinyl Chloride	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 17:55	BK
1330-20-7	* Xylenes, Total	0.70	J	ug/L	0.60	1.5	1	EPA 8260C Certifications: CTDOH,NJDEP	08/04/2016 09:22	08/04/2016 17:55	BK

Surrogate Recoveries

Result

Acceptance Range

17060-07-0	Surrogate: 1,2-Dichloroethane-d4	110 %
2037-26-5	Surrogate: Toluene-d8	110 %
460-00-4	Surrogate: p-Bromofluorobenzene	100 %

69-130

81-117

79-122



Sample Information

Client Sample ID: HMW-14

York Sample ID: 16G1101-09

<u>York Project (SDG) No.</u> 16G1101	<u>Client Project ID</u> GH9964.50	<u>Matrix</u> Water	<u>Collection Date/Time</u> July 27, 2016 3:00 pm	<u>Date Received</u> 07/28/2016
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Sample Information

Client Sample ID: DUP-20160727

York Sample ID: 16G1101-10

<u>York Project (SDG) No.</u> 16G1101	<u>Client Project ID</u> GH9964.50	<u>Matrix</u> Water	<u>Collection Date/Time</u> July 27, 2016 3:00 pm	<u>Date Received</u> 07/28/2016
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Volatile Organics, 8260 - Comprehensive

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5030B

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
630-20-6	1,1,1,2-Tetrachloroethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 18:22	BK
71-55-6	1,1,1-Trichloroethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 18:22	BK
79-34-5	1,1,2,2-Tetrachloroethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 18:22	BK
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 18:22	BK
79-00-5	1,1,2-Trichloroethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 18:22	BK
75-34-3	1,1-Dichloroethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 18:22	BK
75-35-4	1,1-Dichloroethylene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 18:22	BK
87-61-6	1,2,3-Trichlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 18:22	BK
96-18-4	1,2,3-Trichloropropane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 18:22	BK
120-82-1	1,2,4-Trichlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 18:22	BK
95-63-6	1,2,4-Trimethylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 18:22	BK
96-12-8	1,2-Dibromo-3-chloropropane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 18:22	BK
106-93-4	1,2-Dibromoethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 18:22	BK
95-50-1	1,2-Dichlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 18:22	BK
107-06-2	1,2-Dichloroethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 18:22	BK
78-87-5	1,2-Dichloropropane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 18:22	BK
108-67-8	1,3,5-Trimethylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 18:22	BK
541-73-1	1,3-Dichlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 18:22	BK
106-46-7	1,4-Dichlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 18:22	BK



Sample Information

Client Sample ID: DUP-20160727

York Sample ID: 16G1101-10

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

16G1101

GH9964.50

Water

July 27, 2016 3:00 pm

07/28/2016

Volatile Organics, 8260 - Comprehensive

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5030B

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
123-91-1	1,4-Dioxane	ND		ug/L	40	40	1	EPA 8260C Certifications: NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 18:22	BK
78-93-3	2-Butanone	ND		ug/L	0.80	2.0	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 18:22	BK
591-78-6	2-Hexanone	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 18:22	BK
108-10-1	4-Methyl-2-pentanone	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 18:22	BK
67-64-1	Acetone	ND		ug/L	1.0	2.0	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 18:22	BK
107-02-8	Acrolein	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 18:22	BK
107-13-1	Acrylonitrile	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 18:22	BK
71-43-2	Benzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 18:22	BK
74-97-5	Bromochloromethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 18:22	BK
75-27-4	Bromodichloromethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 18:22	BK
75-25-2	Bromoform	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 18:22	BK
74-83-9	Bromomethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 18:22	BK
75-15-0	Carbon disulfide	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 18:22	BK
56-23-5	Carbon tetrachloride	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 18:22	BK
108-90-7	Chlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 18:22	BK
75-00-3	Chloroethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 18:22	BK
67-66-3	Chloroform	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 18:22	BK
74-87-3	Chloromethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 18:22	BK
156-59-2	cis-1,2-Dichloroethylene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 18:22	BK
10061-01-5	cis-1,3-Dichloropropylene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 18:22	BK
110-82-7	Cyclohexane	0.50		ug/L	0.20	0.50	1	EPA 8260C Certifications: NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 18:22	BK
124-48-1	Dibromochloromethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 18:22	BK
74-95-3	Dibromomethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 18:22	BK
75-71-8	Dichlorodifluoromethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 18:22	BK



Sample Information

Client Sample ID: DUP-20160727

York Sample ID: 16G1101-10

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

16G1101

GH9964.50

Water

July 27, 2016 3:00 pm

07/28/2016

Volatile Organics, 8260 - Comprehensive

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5030B

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
100-41-4	Ethyl Benzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 18:22	BK
87-68-3	Hexachlorobutadiene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 18:22	BK
98-82-8	Isopropylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 18:22	BK
79-20-9	Methyl acetate	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 18:22	BK
1634-04-4	Methyl tert-butyl ether (MTBE)	1.6		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 18:22	BK
108-87-2	Methylcyclohexane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 18:22	BK
75-09-2	Methylene chloride	ND		ug/L	1.0	2.0	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 18:22	BK
104-51-8	n-Butylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 18:22	BK
103-65-1	n-Propylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 18:22	BK
95-47-6	o-Xylene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: NELAC-NY10854	08/04/2016 09:22	08/04/2016 18:22	BK
179601-23-1	p- & m- Xylenes	ND		ug/L	0.50	1.0	1	EPA 8260C Certifications: NELAC-NY10854	08/04/2016 09:22	08/04/2016 18:22	BK
99-87-6	p-Isopropyltoluene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 18:22	BK
135-98-8	sec-Butylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 18:22	BK
100-42-5	Styrene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 18:22	BK
75-65-0	tert-Butyl alcohol (TBA)	ND		ug/L	0.50	1.0	1	EPA 8260C Certifications: NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 18:22	BK
98-06-6	tert-Butylbenzene	0.26	J	ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 18:22	BK
127-18-4	Tetrachloroethylene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 18:22	BK
108-88-3	Toluene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 18:22	BK
156-60-5	trans-1,2-Dichloroethylene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 18:22	BK
10061-02-6	trans-1,3-Dichloropropylene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 18:22	BK
79-01-6	Trichloroethylene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 18:22	BK
75-69-4	Trichlorofluoromethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 18:22	BK
75-01-4	Vinyl Chloride	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 18:22	BK



Sample Information

Client Sample ID: DUP-20160727

York Sample ID: 16G1101-10

Table with 5 columns: York Project (SDG) No., Client Project ID, Matrix, Collection Date/Time, Date Received. Values: 16G1101, GH9964.50, Water, July 27, 2016 3:00 pm, 07/28/2016

Volatile Organics, 8260 - Comprehensive

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5030B

Main data table for Volatile Organics, 8260 - Comprehensive. Columns include CAS No., Parameter, Result, Flag, Units, Reported to LOD/MDL, LOQ, Dilution, Reference Method, Date/Time Prepared, Date/Time Analyzed, Analyst. Includes surrogate recoveries for 1,2-Dichloroethane-d4, Toluene-d8, and p-Bromofluorobenzene.

Sample Information

Client Sample ID: TB-20160727

York Sample ID: 16G1101-11

Table with 5 columns: York Project (SDG) No., Client Project ID, Matrix, Collection Date/Time, Date Received. Values: 16G1101, GH9964.50, Water, July 27, 2016 3:00 pm, 07/28/2016

Volatile Organics, 8260 - Comprehensive

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5030B

Main data table for Volatile Organics, 8260 - Comprehensive. Columns include CAS No., Parameter, Result, Flag, Units, Reported to LOD/MDL, LOQ, Dilution, Reference Method, Date/Time Prepared, Date/Time Analyzed, Analyst. Lists various chlorinated hydrocarbons and their results.



Sample Information

Client Sample ID: TB-20160727

York Sample ID: 16G1101-11

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

16G1101

GH9964.50

Water

July 27, 2016 3:00 pm

07/28/2016

Volatile Organics, 8260 - Comprehensive

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5030B

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
95-50-1	1,2-Dichlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 18:50	BK
107-06-2	1,2-Dichloroethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 18:50	BK
78-87-5	1,2-Dichloropropane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 18:50	BK
108-67-8	1,3,5-Trimethylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 18:50	BK
541-73-1	1,3-Dichlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 18:50	BK
106-46-7	1,4-Dichlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 18:50	BK
123-91-1	1,4-Dioxane	ND		ug/L	40	40	1	EPA 8260C Certifications: NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 18:50	BK
78-93-3	2-Butanone	ND		ug/L	0.80	2.0	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 18:50	BK
591-78-6	2-Hexanone	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 18:50	BK
108-10-1	4-Methyl-2-pentanone	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 18:50	BK
67-64-1	Acetone	ND		ug/L	1.0	2.0	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 18:50	BK
107-02-8	Acrolein	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 18:50	BK
107-13-1	Acrylonitrile	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 18:50	BK
71-43-2	Benzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 18:50	BK
74-97-5	Bromochloromethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 18:50	BK
75-27-4	Bromodichloromethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 18:50	BK
75-25-2	Bromoform	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 18:50	BK
74-83-9	Bromomethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 18:50	BK
75-15-0	Carbon disulfide	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 18:50	BK
56-23-5	Carbon tetrachloride	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 18:50	BK
108-90-7	Chlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 18:50	BK
75-00-3	Chloroethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 18:50	BK
67-66-3	Chloroform	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 18:50	BK
74-87-3	Chloromethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 18:50	BK



Sample Information

Client Sample ID: TB-20160727

York Sample ID: 16G1101-11

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

16G1101

GH9964.50

Water

July 27, 2016 3:00 pm

07/28/2016

Volatile Organics, 8260 - Comprehensive

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5030B

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
156-59-2	cis-1,2-Dichloroethylene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 18:50	BK
10061-01-5	cis-1,3-Dichloropropylene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 18:50	BK
110-82-7	Cyclohexane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 18:50	BK
124-48-1	Dibromochloromethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 18:50	BK
74-95-3	Dibromomethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 18:50	BK
75-71-8	Dichlorodifluoromethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 18:50	BK
100-41-4	Ethyl Benzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 18:50	BK
87-68-3	Hexachlorobutadiene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 18:50	BK
98-82-8	Isopropylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 18:50	BK
79-20-9	Methyl acetate	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 18:50	BK
1634-04-4	Methyl tert-butyl ether (MTBE)	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 18:50	BK
108-87-2	Methylcyclohexane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 18:50	BK
75-09-2	Methylene chloride	ND		ug/L	1.0	2.0	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 18:50	BK
104-51-8	n-Butylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 18:50	BK
103-65-1	n-Propylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 18:50	BK
95-47-6	o-Xylene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: NELAC-NY10854	08/04/2016 09:22	08/04/2016 18:50	BK
179601-23-1	p- & m- Xylenes	ND		ug/L	0.50	1.0	1	EPA 8260C Certifications: NELAC-NY10854	08/04/2016 09:22	08/04/2016 18:50	BK
99-87-6	p-Isopropyltoluene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 18:50	BK
135-98-8	sec-Butylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 18:50	BK
100-42-5	Styrene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 18:50	BK
75-65-0	tert-Butyl alcohol (TBA)	ND		ug/L	0.50	1.0	1	EPA 8260C Certifications: NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 18:50	BK
98-06-6	tert-Butylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 18:50	BK
127-18-4	Tetrachloroethylene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 18:50	BK
108-88-3	Toluene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 18:50	BK



Sample Information

Client Sample ID: TB-20160727

York Sample ID: 16G1101-11

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

16G1101

GH9964.50

Water

July 27, 2016 3:00 pm

07/28/2016

Volatile Organics, 8260 - Comprehensive

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5030B

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
156-60-5	trans-1,2-Dichloroethylene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 18:50	BK
10061-02-6	trans-1,3-Dichloropropylene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 18:50	BK
79-01-6	Trichloroethylene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 18:50	BK
75-69-4	Trichlorofluoromethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 18:50	BK
75-01-4	Vinyl Chloride	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP	08/04/2016 09:22	08/04/2016 18:50	BK
1330-20-7	* Xylenes, Total	ND		ug/L	0.60	1.5	1	EPA 8260C Certifications: CTDOH,NJDEP	08/04/2016 09:22	08/04/2016 18:50	BK
Surrogate Recoveries		Result			Acceptance Range						
17060-07-0	Surrogate: 1,2-Dichloroethane-d4	110 %			69-130						
2037-26-5	Surrogate: Toluene-d8	109 %			81-117						
460-00-4	Surrogate: p-Bromofluorobenzene	105 %			79-122						



Analytical Batch Summary

Batch ID: BH60274

Preparation Method: EPA 5030B

Prepared By: BGS

YORK Sample ID	Client Sample ID	Preparation Date
16G1101-03	HMW-6	08/04/16
16G1101-07	HMW-10R	08/04/16
16G1101-08	HMW-13	08/04/16
16G1101-09	HMW-14	08/04/16
16G1101-10	DUP-20160727	08/04/16
16G1101-11	TB-20160727	08/04/16
BH60274-BLK1	Blank	08/04/16
BH60274-BS1	LCS	08/04/16
BH60274-BSD1	LCS Dup	08/04/16
BH60274-MS1	Matrix Spike	08/04/16
BH60274-MSD1	Matrix Spike Dup	08/04/16

Batch ID: BH60371

Preparation Method: EPA 5030B

Prepared By: BK

YORK Sample ID	Client Sample ID	Preparation Date
16G1101-01	HMW-3R	08/04/16
16G1101-02	HMW-5	08/04/16
16G1101-04	HMW-7R	08/04/16
16G1101-05	HMW-8	08/04/16
16G1101-06	HMW-9R	08/04/16
BH60371-BLK1	Blank	08/04/16
BH60371-BS1	LCS	08/04/16
BH60371-BSD1	LCS Dup	08/04/16



Volatile Organic Compounds by GC/MS - Quality Control Data
York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
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Batch BH60274 - EPA 5030B

Blank (BH60274-BLK1)

Prepared & Analyzed: 08/04/2016

1,1,1,2-Tetrachloroethane	ND	0.50	ug/L								
1,1,1-Trichloroethane	ND	0.50	"								
1,1,2,2-Tetrachloroethane	ND	0.50	"								
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.50	"								
1,1,2-Trichloroethane	ND	0.50	"								
1,1-Dichloroethane	ND	0.50	"								
1,1-Dichloroethylene	ND	0.50	"								
1,2,3-Trichlorobenzene	ND	0.50	"								
1,2,3-Trichloropropane	ND	0.50	"								
1,2,4-Trichlorobenzene	ND	0.50	"								
1,2,4-Trimethylbenzene	ND	0.50	"								
1,2-Dibromo-3-chloropropane	ND	0.50	"								
1,2-Dibromoethane	ND	0.50	"								
1,2-Dichlorobenzene	ND	0.50	"								
1,2-Dichloroethane	ND	0.50	"								
1,2-Dichloropropane	ND	0.50	"								
1,3,5-Trimethylbenzene	ND	0.50	"								
1,3-Dichlorobenzene	ND	0.50	"								
1,4-Dichlorobenzene	ND	0.50	"								
1,4-Dioxane	ND	40	"								
2-Butanone	0.94	2.0	"								
2-Hexanone	ND	0.50	"								
4-Methyl-2-pentanone	ND	0.50	"								
Acetone	ND	2.0	"								
Acrolein	ND	0.50	"								
Acrylonitrile	ND	0.50	"								
Benzene	ND	0.50	"								
Bromochloromethane	ND	0.50	"								
Bromodichloromethane	ND	0.50	"								
Bromoform	ND	0.50	"								
Bromomethane	ND	0.50	"								
Carbon disulfide	ND	0.50	"								
Carbon tetrachloride	ND	0.50	"								
Chlorobenzene	ND	0.50	"								
Chloroethane	ND	0.50	"								
Chloroform	ND	0.50	"								
Chloromethane	ND	0.50	"								
cis-1,2-Dichloroethylene	ND	0.50	"								
cis-1,3-Dichloropropylene	ND	0.50	"								
Cyclohexane	ND	0.50	"								
Dibromochloromethane	ND	0.50	"								
Dibromomethane	ND	0.50	"								
Dichlorodifluoromethane	ND	0.50	"								
Ethyl Benzene	ND	0.50	"								
Hexachlorobutadiene	ND	0.50	"								
Isopropylbenzene	ND	0.50	"								
Methyl acetate	ND	0.50	"								
Methyl tert-butyl ether (MTBE)	ND	0.50	"								
Methylcyclohexane	ND	0.50	"								
Methylene chloride	ND	2.0	"								
n-Butylbenzene	ND	0.50	"								



Volatile Organic Compounds by GC/MS - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
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Batch BH60274 - EPA 5030B

Blank (BH60274-BLK1)

Prepared & Analyzed: 08/04/2016

n-Propylbenzene	ND	0.50	ug/L								
o-Xylene	ND	0.50	"								
p- & m- Xylenes	ND	1.0	"								
p-Isopropyltoluene	ND	0.50	"								
sec-Butylbenzene	ND	0.50	"								
Styrene	ND	0.50	"								
tert-Butyl alcohol (TBA)	ND	1.0	"								
tert-Butylbenzene	ND	0.50	"								
Tetrachloroethylene	ND	0.50	"								
Toluene	ND	0.50	"								
trans-1,2-Dichloroethylene	ND	0.50	"								
trans-1,3-Dichloropropylene	ND	0.50	"								
Trichloroethylene	ND	0.50	"								
Trichlorofluoromethane	ND	0.50	"								
Vinyl Chloride	ND	0.50	"								
Xylenes, Total	ND	1.5	"								

Surrogate: 1,2-Dichloroethane-d4	11.3		"	10.0		113	69-130				
Surrogate: Toluene-d8	11.0		"	10.0		110	81-117				
Surrogate: p-Bromofluorobenzene	10.7		"	10.0		107	79-122				

LCS (BH60274-BS1)

Prepared & Analyzed: 08/04/2016

1,1,1,2-Tetrachloroethane	11		ug/L	10.0		109	82-126				
1,1,1-Trichloroethane	11		"	10.0		106	78-136				
1,1,2,2-Tetrachloroethane	11		"	10.0		112	76-129				
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	9.8		"	10.0		97.6	54-165				
1,1,2-Trichloroethane	11		"	10.0		107	82-123				
1,1-Dichloroethane	12		"	10.0		118	82-129				
1,1-Dichloroethylene	11		"	10.0		110	68-138				
1,2,3-Trichlorobenzene	5.2		"	10.0		52.5	76-136	Low Bias			
1,2,3-Trichloropropane	11		"	10.0		112	77-128				
1,2,4-Trichlorobenzene	6.7		"	10.0		67.4	76-137	Low Bias			
1,2,4-Trimethylbenzene	12		"	10.0		121	82-132				
1,2-Dibromo-3-chloropropane	10		"	10.0		99.5	45-147				
1,2-Dibromoethane	11		"	10.0		106	83-124				
1,2-Dichlorobenzene	10		"	10.0		104	79-123				
1,2-Dichloroethane	11		"	10.0		107	73-132				
1,2-Dichloropropane	11		"	10.0		114	78-126				
1,3,5-Trimethylbenzene	12		"	10.0		119	80-131				
1,3-Dichlorobenzene	11		"	10.0		105	86-122				
1,4-Dichlorobenzene	10		"	10.0		103	85-124				
1,4-Dioxane	180		"	200		91.2	10-349				
2-Butanone	10		"	10.0		102	49-152				
2-Hexanone	12		"	10.0		115	51-146				
4-Methyl-2-pentanone	11		"	10.0		106	57-145				
Acetone	13		"	10.0		129	14-150				
Acrolein	7.3		"	10.0		72.9	10-153				
Acrylonitrile	11		"	10.0		110	51-150				
Benzene	11		"	10.0		107	85-126				
Bromochloromethane	12		"	10.0		122	77-128				
Bromodichloromethane	12		"	10.0		119	79-128				
Bromoform	10		"	10.0		102	78-133				
Bromomethane	12		"	10.0		124	43-168				



Volatile Organic Compounds by GC/MS - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting	Spike	Source*	%REC	%REC	Limits	Flag	RPD	
		Limit							Units	Level

Batch BH60274 - EPA 5030B

LCS (BH60274-BS1)

Prepared & Analyzed: 08/04/2016

Carbon disulfide	11		ug/L	10.0	110	68-146				
Carbon tetrachloride	11		"	10.0	107	77-141				
Chlorobenzene	11		"	10.0	107	88-120				
Chloroethane	14		"	10.0	141	65-136	High Bias			
Chloroform	11		"	10.0	107	82-128				
Chloromethane	5.0		"	10.0	50.0	43-155				
cis-1,2-Dichloroethylene	11		"	10.0	106	83-129				
cis-1,3-Dichloropropylene	11		"	10.0	108	80-131				
Cyclohexane	10		"	10.0	99.8	63-149				
Dibromochloromethane	10		"	10.0	102	80-130				
Dibromomethane	12		"	10.0	117	72-134				
Dichlorodifluoromethane	15		"	10.0	150	44-144	High Bias			
Ethyl Benzene	12		"	10.0	124	80-131				
Hexachlorobutadiene	6.7		"	10.0	66.7	67-146	Low Bias			
Isopropylbenzene	11		"	10.0	110	76-140				
Methyl acetate	11		"	10.0	107	51-139				
Methyl tert-butyl ether (MTBE)	9.4		"	10.0	93.6	76-135				
Methylcyclohexane	11		"	10.0	108	72-143				
Methylene chloride	11		"	10.0	112	55-137				
n-Butylbenzene	12		"	10.0	121	79-132				
n-Propylbenzene	12		"	10.0	118	78-133				
o-Xylene	12		"	10.0	116	78-130				
p- & m- Xylenes	25		"	20.0	126	77-133				
p-Isopropyltoluene	12		"	10.0	116	81-136				
sec-Butylbenzene	11		"	10.0	108	79-137				
Styrene	12		"	10.0	122	67-132				
tert-Butyl alcohol (TBA)	9.6		"	10.0	95.8	25-162				
tert-Butylbenzene	11		"	10.0	108	77-138				
Tetrachloroethylene	10		"	10.0	105	82-131				
Toluene	12		"	10.0	119	80-127				
trans-1,2-Dichloroethylene	11		"	10.0	109	80-132				
trans-1,3-Dichloropropylene	11		"	10.0	110	78-131				
Trichloroethylene	11		"	10.0	110	82-128				
Trichlorofluoromethane	16		"	10.0	158	67-139	High Bias			
Vinyl Chloride	13		"	10.0	128	58-145				
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>10.7</i>		<i>"</i>	<i>10.0</i>	<i>107</i>	<i>69-130</i>				
<i>Surrogate: Toluene-d8</i>	<i>11.0</i>		<i>"</i>	<i>10.0</i>	<i>110</i>	<i>81-117</i>				
<i>Surrogate: p-Bromofluorobenzene</i>	<i>9.96</i>		<i>"</i>	<i>10.0</i>	<i>99.6</i>	<i>79-122</i>				



Volatile Organic Compounds by GC/MS - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting		Spike Level	Source*		%REC Limits	Flag	RPD		Flag
		Limit	Units		Result	%REC			RPD	Limit	
Batch BH60274 - EPA 5030B											
LCS Dup (BH60274-BSD1)										Prepared & Analyzed: 08/04/2016	
1,1,1,2-Tetrachloroethane	11		ug/L	10.0	111	82-126			1.63	30	
1,1,1-Trichloroethane	10		"	10.0	104	78-136			1.14	30	
1,1,2,2-Tetrachloroethane	12		"	10.0	118	76-129			4.95	30	
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	9.5		"	10.0	95.2	54-165			2.49	30	
1,1,2-Trichloroethane	12		"	10.0	116	82-123			8.52	30	
1,1-Dichloroethane	12		"	10.0	117	82-129			0.764	30	
1,1-Dichloroethylene	11		"	10.0	107	68-138			2.87	30	
1,2,3-Trichlorobenzene	6.9		"	10.0	69.4	76-136	Low Bias		27.7	30	
1,2,3-Trichloropropane	12		"	10.0	118	77-128			4.77	30	
1,2,4-Trichlorobenzene	8.0		"	10.0	79.6	76-137			16.6	30	
1,2,4-Trimethylbenzene	12		"	10.0	119	82-132			1.08	30	
1,2-Dibromo-3-chloropropane	11		"	10.0	112	45-147			11.8	30	
1,2-Dibromoethane	11		"	10.0	114	83-124			6.92	30	
1,2-Dichlorobenzene	11		"	10.0	108	79-123			3.58	30	
1,2-Dichloroethane	11		"	10.0	114	73-132			6.45	30	
1,2-Dichloropropane	12		"	10.0	122	78-126			6.45	30	
1,3,5-Trimethylbenzene	12		"	10.0	121	80-131			1.76	30	
1,3-Dichlorobenzene	11		"	10.0	106	86-122			0.947	30	
1,4-Dichlorobenzene	10		"	10.0	104	85-124			1.16	30	
1,4-Dioxane	310		"	200	156	10-349			52.7	30	Non-dir.
2-Butanone	11		"	10.0	111	49-152			8.81	30	
2-Hexanone	13		"	10.0	130	51-146			12.5	30	
4-Methyl-2-pentanone	12		"	10.0	122	57-145			13.8	30	
Acetone	15		"	10.0	146	14-150			12.9	30	
Acrolein	7.3		"	10.0	73.3	10-153			0.547	30	
Acrylonitrile	11		"	10.0	110	51-150			0.637	30	
Benzene	11		"	10.0	107	85-126			0.561	30	
Bromochloromethane	12		"	10.0	122	77-128			0.820	30	
Bromodichloromethane	12		"	10.0	125	79-128			4.92	30	
Bromoform	11		"	10.0	114	78-133			11.1	30	
Bromomethane	13		"	10.0	134	43-168			7.92	30	
Carbon disulfide	11		"	10.0	106	68-146			4.09	30	
Carbon tetrachloride	10		"	10.0	104	77-141			2.18	30	
Chlorobenzene	11		"	10.0	108	88-120			0.927	30	
Chloroethane	15		"	10.0	151	65-136	High Bias		7.18	30	
Chloroform	11		"	10.0	109	82-128			1.58	30	
Chloromethane	6.8		"	10.0	68.1	43-155			30.7	30	Non-dir.
cis-1,2-Dichloroethylene	11		"	10.0	107	83-129			1.03	30	
cis-1,3-Dichloropropylene	11		"	10.0	115	80-131			6.29	30	
Cyclohexane	10		"	10.0	100	63-149			0.200	30	
Dibromochloromethane	11		"	10.0	111	80-130			8.43	30	
Dibromomethane	13		"	10.0	127	72-134			8.36	30	
Dichlorodifluoromethane	14		"	10.0	143	44-144			4.83	30	
Ethyl Benzene	13		"	10.0	125	80-131			0.641	30	
Hexachlorobutadiene	7.7		"	10.0	77.1	67-146			14.5	30	
Isopropylbenzene	11		"	10.0	106	76-140			4.35	30	
Methyl acetate	11		"	10.0	114	51-139			6.68	30	
Methyl tert-butyl ether (MTBE)	10		"	10.0	101	76-135			7.51	30	
Methylcyclohexane	11		"	10.0	110	72-143			1.92	30	
Methylene chloride	12		"	10.0	115	55-137			2.73	30	
n-Butylbenzene	12		"	10.0	124	79-132			2.21	30	



Volatile Organic Compounds by GC/MS - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
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Batch BH60274 - EPA 5030B

LCS Dup (BH60274-BSD1)

Prepared & Analyzed: 08/04/2016

n-Propylbenzene	11		ug/L	10.0		113	78-133		4.41	30	
o-Xylene	12		"	10.0		118	78-130		2.22	30	
p- & m- Xylenes	25		"	20.0		127	77-133		0.790	30	
p-Isopropyltoluene	11		"	10.0		114	81-136		2.17	30	
sec-Butylbenzene	11		"	10.0		106	79-137		1.86	30	
Styrene	13		"	10.0		129	67-132		5.50	30	
tert-Butyl alcohol (TBA)	12		"	10.0		122	25-162		24.2	30	
tert-Butylbenzene	11		"	10.0		106	77-138		2.62	30	
Tetrachloroethylene	11		"	10.0		106	82-131		1.23	30	
Toluene	12		"	10.0		120	80-127		1.08	30	
trans-1,2-Dichloroethylene	11		"	10.0		109	80-132		0.458	30	
trans-1,3-Dichloropropylene	12		"	10.0		117	78-131		6.52	30	
Trichloroethylene	11		"	10.0		112	82-128		1.71	30	
Trichlorofluoromethane	15		"	10.0		150	67-139	High Bias	5.06	30	
Vinyl Chloride	12		"	10.0		125	58-145		2.53	30	
Surrogate: 1,2-Dichloroethane-d4	11.0		"	10.0		110	69-130				
Surrogate: Toluene-d8	11.0		"	10.0		110	81-117				
Surrogate: p-Bromofluorobenzene	9.65		"	10.0		96.5	79-122				

Matrix Spike (BH60274-MS1)

*Source sample: 16G1101-03 (HMW-6)

Prepared & Analyzed: 08/04/2016

1,1,1,2-Tetrachloroethane	10		ug/L	10.0	ND	104	45-161				
1,1,1-Trichloroethane	9.8		"	10.0	ND	98.2	70-146				
1,1,2,2-Tetrachloroethane	11		"	10.0	ND	110	74-121				
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	7.9		"	10.0	ND	79.4	21-217				
1,1,2-Trichloroethane	10		"	10.0	ND	105	59-146				
1,1-Dichloroethane	11		"	10.0	ND	108	54-146				
1,1-Dichloroethylene	10		"	10.0	ND	100	44-165				
1,2,3-Trichlorobenzene	8.9		"	10.0	ND	89.2	40-161				
1,2,3-Trichloropropane	11		"	10.0	ND	111	74-127				
1,2,4-Trichlorobenzene	8.8		"	10.0	ND	88.3	41-161				
1,2,4-Trimethylbenzene	11		"	10.0	ND	108	72-129				
1,2-Dibromo-3-chloropropane	11		"	10.0	ND	114	31-151				
1,2-Dibromoethane	10		"	10.0	ND	101	75-125				
1,2-Dichlorobenzene	9.7		"	10.0	ND	97.1	63-122				
1,2-Dichloroethane	10		"	10.0	ND	101	68-131				
1,2-Dichloropropane	11		"	10.0	ND	111	77-121				
1,3,5-Trimethylbenzene	11		"	10.0	ND	107	69-126				
1,3-Dichlorobenzene	9.6		"	10.0	ND	95.9	74-119				
1,4-Dichlorobenzene	9.3		"	10.0	ND	93.2	70-124				
1,4-Dioxane	310		"	200	ND	157	10-310				
2-Butanone	9.4		"	10.0	0.81	85.7	10-193				
2-Hexanone	12		"	10.0	ND	121	53-133				
4-Methyl-2-pentanone	11		"	10.0	ND	114	38-150				
Acetone	13		"	10.0	5.5	73.8	13-149				
Acrolein	6.6		"	10.0	ND	66.1	10-195				
Acrylonitrile	10		"	10.0	ND	104	37-165				
Benzene	9.8		"	10.0	ND	98.4	38-155				
Bromochloromethane	11		"	10.0	ND	112	75-121				
Bromodichloromethane	11		"	10.0	ND	110	70-129				
Bromoform	9.8		"	10.0	ND	98.2	66-136				
Bromomethane	6.8		"	10.0	ND	68.5	30-158				
Carbon disulfide	10		"	10.0	ND	102	10-138				



Volatile Organic Compounds by GC/MS - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting		Spike Level	Source*		%REC Limits	Flag	RPD	
		Limit	Units		Result	%REC			RPD	Limit
Batch BH60274 - EPA 5030B										
Matrix Spike (BH60274-MS1)	*Source sample: 16G1101-03 (HMW-6)						Prepared & Analyzed: 08/04/2016			
Carbon tetrachloride	9.9		ug/L	10.0	ND	98.6	71-146			
Chlorobenzene	10		"	10.0	ND	100	81-117			
Chloroethane	13		"	10.0	ND	133	51-145			
Chloroform	9.9		"	10.0	ND	99.2	80-124			
Chloromethane	3.4		"	10.0	ND	33.9	16-163			
cis-1,2-Dichloroethylene	9.5		"	10.0	ND	95.0	76-125			
cis-1,3-Dichloropropylene	10		"	10.0	ND	99.7	58-131			
Cyclohexane	9.4		"	10.0	0.47	88.8	70-130			
Dibromochloromethane	9.9		"	10.0	ND	98.6	71-129			
Dibromomethane	11		"	10.0	ND	110	76-120			
Dichlorodifluoromethane	11		"	10.0	ND	107	30-147			
Ethyl Benzene	12		"	10.0	ND	117	72-128			
Hexachlorobutadiene	6.6		"	10.0	ND	65.7	34-166			
Isopropylbenzene	9.5		"	10.0	ND	94.7	66-139			
Methyl acetate	10		"	10.0	ND	102	10-200			
Methyl tert-butyl ether (MTBE)	11		"	10.0	1.6	93.2	75-128			
Methylcyclohexane	8.8		"	10.0	ND	88.5	70-130			
Methylene chloride	9.8		"	10.0	ND	98.0	57-128			
n-Butylbenzene	11		"	10.0	ND	106	61-138			
n-Propylbenzene	11		"	10.0	ND	106	66-134			
o-Xylene	11		"	10.0	ND	111	69-126			
p- & m- Xylenes	24		"	20.0	ND	118	67-130			
p-Isopropyltoluene	10		"	10.0	ND	103	64-137			
sec-Butylbenzene	10		"	10.0	ND	100	53-155			
Styrene	12		"	10.0	ND	116	69-125			
tert-Butyl alcohol (TBA)	14		"	10.0	ND	144	10-130	High Bias		
tert-Butylbenzene	10		"	10.0	0.21	99.5	65-139			
Tetrachloroethylene	9.3		"	10.0	ND	92.6	64-139			
Toluene	11		"	10.0	ND	111	76-123			
trans-1,2-Dichloroethylene	10		"	10.0	ND	99.7	79-131			
trans-1,3-Dichloropropylene	11		"	10.0	ND	107	55-130			
Trichloroethylene	10		"	10.0	ND	103	53-145			
Trichlorofluoromethane	14		"	10.0	ND	143	61-142	High Bias		
Vinyl Chloride	11		"	10.0	ND	109	31-165			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>11.0</i>		<i>"</i>	<i>10.0</i>		<i>110</i>	<i>69-130</i>			
<i>Surrogate: Toluene-d8</i>	<i>10.9</i>		<i>"</i>	<i>10.0</i>		<i>109</i>	<i>81-117</i>			
<i>Surrogate: p-Bromofluorobenzene</i>	<i>9.61</i>		<i>"</i>	<i>10.0</i>		<i>96.1</i>	<i>79-122</i>			



Volatile Organic Compounds by GC/MS - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BH60274 - EPA 5030B											
Matrix Spike Dup (BH60274-MSD1)	*Source sample: 16G1101-03 (HMW-6)						Prepared & Analyzed: 08/04/2016				
1,1,1,2-Tetrachloroethane	10		ug/L	10.0	ND	101	45-161		2.93	30	
1,1,1-Trichloroethane	9.7		"	10.0	ND	97.2	70-146		1.02	30	
1,1,2,2-Tetrachloroethane	11		"	10.0	ND	112	74-121		1.89	30	
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	8.4		"	10.0	ND	84.3	21-217		5.99	30	
1,1,2-Trichloroethane	10		"	10.0	ND	104	59-146		0.574	30	
1,1-Dichloroethane	11		"	10.0	ND	109	54-146		0.828	30	
1,1-Dichloroethylene	10		"	10.0	ND	102	44-165		1.78	30	
1,2,3-Trichlorobenzene	8.9		"	10.0	ND	89.2	40-161		0.00	30	
1,2,3-Trichloropropane	11		"	10.0	ND	108	74-127		2.46	30	
1,2,4-Trichlorobenzene	8.8		"	10.0	ND	87.5	41-161		0.910	30	
1,2,4-Trimethylbenzene	11		"	10.0	ND	108	72-129		0.278	30	
1,2-Dibromo-3-chloropropane	11		"	10.0	ND	112	31-151		1.86	30	
1,2-Dibromoethane	10		"	10.0	ND	102	75-125		1.18	30	
1,2-Dichlorobenzene	9.8		"	10.0	ND	98.2	63-122		1.13	30	
1,2-Dichloroethane	9.9		"	10.0	ND	98.9	68-131		1.70	30	
1,2-Dichloropropane	11		"	10.0	ND	108	77-121		2.47	30	
1,3,5-Trimethylbenzene	11		"	10.0	ND	106	69-126		1.50	30	
1,3-Dichlorobenzene	9.6		"	10.0	ND	95.8	74-119		0.104	30	
1,4-Dichlorobenzene	9.3		"	10.0	ND	93.4	70-124		0.214	30	
1,4-Dioxane	360		"	200	ND	179	10-310		12.8	30	
2-Butanone	9.3		"	10.0	0.81	85.1	10-193		0.642	30	
2-Hexanone	12		"	10.0	ND	117	53-133		3.70	30	
4-Methyl-2-pentanone	11		"	10.0	ND	114	38-150		0.351	30	
Acetone	12		"	10.0	5.5	69.7	13-149		3.24	30	
Acrolein	7.0		"	10.0	ND	70.1	10-195		5.87	30	
Acrylonitrile	8.4		"	10.0	ND	83.7	37-165		21.6	30	
Benzene	9.9		"	10.0	ND	99.3	38-155		0.910	30	
Bromochloromethane	11		"	10.0	ND	108	75-121		3.37	30	
Bromodichloromethane	11		"	10.0	ND	108	70-129		1.84	30	
Bromoform	10		"	10.0	ND	99.5	66-136		1.32	30	
Bromomethane	8.4		"	10.0	ND	84.3	30-158		20.7	30	
Carbon disulfide	11		"	10.0	ND	105	10-138		3.19	30	
Carbon tetrachloride	9.8		"	10.0	ND	97.5	71-146		1.12	30	
Chlorobenzene	10		"	10.0	ND	100	81-117		0.0996	30	
Chloroethane	13		"	10.0	ND	132	51-145		0.828	30	
Chloroform	9.8		"	10.0	ND	98.2	80-124		1.01	30	
Chloromethane	5.7		"	10.0	ND	57.2	16-163		51.2	30	Non-dir.
cis-1,2-Dichloroethylene	9.6		"	10.0	ND	95.5	76-125		0.525	30	
cis-1,3-Dichloropropylene	9.9		"	10.0	ND	99.1	58-131		0.604	30	
Cyclohexane	9.6		"	10.0	0.47	91.0	70-130		2.33	30	
Dibromochloromethane	9.7		"	10.0	ND	97.3	71-129		1.33	30	
Dibromomethane	11		"	10.0	ND	109	76-120		0.911	30	
Dichlorodifluoromethane	12		"	10.0	ND	115	30-147		7.29	30	
Ethyl Benzene	11		"	10.0	ND	114	72-128		2.25	30	
Hexachlorobutadiene	6.2		"	10.0	ND	62.1	34-166		5.63	30	
Isopropylbenzene	10		"	10.0	ND	99.5	66-139		4.94	30	
Methyl acetate	10		"	10.0	ND	103	10-200		0.389	30	
Methyl tert-butyl ether (MTBE)	11		"	10.0	1.6	96.3	75-128		2.80	30	
Methylcyclohexane	9.1		"	10.0	ND	90.8	70-130		2.57	30	
Methylene chloride	9.7		"	10.0	ND	96.9	57-128		1.13	30	
n-Butylbenzene	10		"	10.0	ND	104	61-138		2.57	30	



Volatile Organic Compounds by GC/MS - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting	Units	Spike	Source*	%REC	%REC	Limits	Flag	RPD	
		Limit								RPD	Limit
Batch BH60274 - EPA 5030B											
Matrix Spike Dup (BH60274-MSD1)	*Source sample: 16G1101-03 (HMW-6)						Prepared & Analyzed: 08/04/2016				
n-Propylbenzene	10		ug/L	10.0	ND	105	66-134			0.761	30
o-Xylene	11		"	10.0	ND	107	69-126			3.57	30
p- & m- Xylenes	23		"	20.0	ND	115	67-130			2.95	30
p-Isopropyltoluene	10		"	10.0	ND	102	64-137			1.56	30
sec-Butylbenzene	9.8		"	10.0	ND	98.3	53-155			2.01	30
Styrene	11		"	10.0	ND	112	69-125			2.99	30
tert-Butyl alcohol (TBA)	15		"	10.0	ND	146	10-130	High Bias		1.65	30
tert-Butylbenzene	10		"	10.0	0.21	97.7	65-139			1.79	30
Tetrachloroethylene	9.2		"	10.0	ND	92.3	64-139			0.325	30
Toluene	11		"	10.0	ND	110	76-123			0.633	30
trans-1,2-Dichloroethylene	9.9		"	10.0	ND	99.1	79-131			0.604	30
trans-1,3-Dichloropropylene	10		"	10.0	ND	102	55-130			5.00	30
Trichloroethylene	10		"	10.0	ND	102	53-145			0.878	30
Trichlorofluoromethane	14		"	10.0	ND	143	61-142	High Bias		0.140	30
Vinyl Chloride	12		"	10.0	ND	123	31-165			12.0	30
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>10.8</i>		<i>"</i>	<i>10.0</i>		<i>108</i>	<i>69-130</i>				
<i>Surrogate: Toluene-d8</i>	<i>10.7</i>		<i>"</i>	<i>10.0</i>		<i>107</i>	<i>81-117</i>				
<i>Surrogate: p-Bromofluorobenzene</i>	<i>9.76</i>		<i>"</i>	<i>10.0</i>		<i>97.6</i>	<i>79-122</i>				

Batch BH60371 - EPA 5030B

Blank (BH60371-BLK1)	Prepared: 08/04/2016 Analyzed: 08/05/2016										
1,1,1,2-Tetrachloroethane	ND	0.50	ug/L								
1,1,1-Trichloroethane	ND	0.50	"								
1,1,2,2-Tetrachloroethane	ND	0.50	"								
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.50	"								
1,1,2-Trichloroethane	ND	0.50	"								
1,1-Dichloroethane	ND	0.50	"								
1,1-Dichloroethylene	ND	0.50	"								
1,2,3-Trichlorobenzene	ND	0.50	"								
1,2,3-Trichloropropane	ND	0.50	"								
1,2,4-Trichlorobenzene	ND	0.50	"								
1,2,4-Trimethylbenzene	ND	0.50	"								
1,2-Dibromo-3-chloropropane	ND	2.0	"								
1,2-Dibromoethane	ND	0.50	"								
1,2-Dichlorobenzene	ND	0.50	"								
1,2-Dichloroethane	ND	0.50	"								
1,2-Dichloropropane	ND	0.50	"								
1,3,5-Trimethylbenzene	ND	0.50	"								
1,3-Dichlorobenzene	ND	0.50	"								
1,4-Dichlorobenzene	ND	0.50	"								
1,4-Dioxane	ND	40	"								
2-Butanone	ND	2.0	"								
2-Hexanone	ND	0.50	"								
4-Methyl-2-pentanone	ND	0.50	"								
Acetone	ND	2.0	"								
Acrolein	ND	2.0	"								
Acrylonitrile	ND	2.0	"								
Benzene	ND	0.50	"								
Bromochloromethane	ND	0.50	"								
Bromodichloromethane	ND	0.50	"								
Bromoform	ND	0.50	"								



Volatile Organic Compounds by GC/MS - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting	Units	Spike	Source*	%REC	%REC	Limits	Flag	RPD	RPD	Limit	Flag
		Limit								Limit			

Batch BH60371 - EPA 5030B

Blank (BH60371-BLK1)

Prepared: 08/04/2016 Analyzed: 08/05/2016

Bromomethane	ND	0.50	ug/L										
Carbon disulfide	ND	0.50	"										
Carbon tetrachloride	ND	0.50	"										
Chlorobenzene	ND	0.50	"										
Chloroethane	ND	0.50	"										
Chloroform	ND	0.50	"										
Chloromethane	ND	0.50	"										
cis-1,2-Dichloroethylene	ND	0.50	"										
cis-1,3-Dichloropropylene	ND	0.50	"										
Cyclohexane	ND	0.50	"										
Dibromochloromethane	ND	0.50	"										
Dibromomethane	ND	0.50	"										
Dichlorodifluoromethane	ND	0.50	"										
Ethyl Benzene	ND	0.50	"										
Hexachlorobutadiene	ND	0.50	"										
Isopropylbenzene	ND	0.50	"										
Methyl acetate	ND	2.0	"										
Methyl tert-butyl ether (MTBE)	ND	0.50	"										
Methylcyclohexane	ND	0.50	"										
Methylene chloride	ND	2.0	"										
n-Butylbenzene	ND	0.50	"										
n-Propylbenzene	ND	0.50	"										
o-Xylene	ND	0.50	"										
p- & m- Xylenes	ND	1.0	"										
p-Isopropyltoluene	ND	0.50	"										
sec-Butylbenzene	ND	0.50	"										
Styrene	ND	0.50	"										
tert-Butyl alcohol (TBA)	ND	2.0	"										
tert-Butylbenzene	ND	0.50	"										
Tetrachloroethylene	ND	0.50	"										
Toluene	ND	0.50	"										
trans-1,2-Dichloroethylene	ND	0.50	"										
trans-1,3-Dichloropropylene	ND	0.50	"										
Trichloroethylene	ND	0.50	"										
Trichlorofluoromethane	ND	0.50	"										
Vinyl Chloride	ND	0.50	"										
Xylenes, Total	ND	1.5	"										
<hr/>													
Surrogate: 1,2-Dichloroethane-d4	11.0		"	10.0		110		69-130					
Surrogate: Toluene-d8	9.98		"	10.0		99.8		81-117					
Surrogate: p-Bromofluorobenzene	9.56		"	10.0		95.6		79-122					



Volatile Organic Compounds by GC/MS - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting		Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	
		Limit	Units						RPD	Limit
Batch BH60371 - EPA 5030B										
LCS (BH60371-BS1)										
Prepared & Analyzed: 08/04/2016										
1,1,1,2-Tetrachloroethane	11		ug/L	10.0		113	82-126			
1,1,1-Trichloroethane	12		"	10.0		116	78-136			
1,1,2,2-Tetrachloroethane	11		"	10.0		106	76-129			
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	9.7		"	10.0		97.1	54-165			
1,1,2-Trichloroethane	11		"	10.0		114	82-123			
1,1-Dichloroethane	12		"	10.0		118	82-129			
1,1-Dichloroethylene	11		"	10.0		112	68-138			
1,2,3-Trichlorobenzene	11		"	10.0		111	76-136			
1,2,3-Trichloropropane	12		"	10.0		123	77-128			
1,2,4-Trichlorobenzene	11		"	10.0		114	76-137			
1,2,4-Trimethylbenzene	11		"	10.0		110	82-132			
1,2-Dibromo-3-chloropropane	12		"	10.0		120	45-147			
1,2-Dibromoethane	12		"	10.0		118	83-124			
1,2-Dichlorobenzene	11		"	10.0		110	79-123			
1,2-Dichloroethane	13		"	10.0		132	73-132			
1,2-Dichloropropane	11		"	10.0		111	78-126			
1,3,5-Trimethylbenzene	11		"	10.0		110	80-131			
1,3-Dichlorobenzene	11		"	10.0		108	86-122			
1,4-Dichlorobenzene	11		"	10.0		108	85-124			
1,4-Dioxane	970		"	200		483	10-349	High Bias		
2-Butanone	13		"	10.0		132	49-152			
2-Hexanone	14		"	10.0		145	51-146			
4-Methyl-2-pentanone	13		"	10.0		126	57-145			
Acetone	16		"	10.0		164	14-150	High Bias		
Acrolein	7.0		"	10.0		70.4	10-153			
Acrylonitrile	12		"	10.0		116	51-150			
Benzene	11		"	10.0		108	85-126			
Bromochloromethane	12		"	10.0		122	77-128			
Bromodichloromethane	12		"	10.0		124	79-128			
Bromoform	12		"	10.0		121	78-133			
Bromomethane	12		"	10.0		120	43-168			
Carbon disulfide	11		"	10.0		106	68-146			
Carbon tetrachloride	11		"	10.0		109	77-141			
Chlorobenzene	11		"	10.0		108	88-120			
Chloroethane	11		"	10.0		110	65-136			
Chloroform	12		"	10.0		120	82-128			
Chloromethane	11		"	10.0		111	43-155			
cis-1,2-Dichloroethylene	11		"	10.0		109	83-129			
cis-1,3-Dichloropropylene	11		"	10.0		114	80-131			
Cyclohexane	10		"	10.0		103	63-149			
Dibromochloromethane	12		"	10.0		117	80-130			
Dibromomethane	13		"	10.0		134	72-134			
Dichlorodifluoromethane	11		"	10.0		111	44-144			
Ethyl Benzene	11		"	10.0		108	80-131			
Hexachlorobutadiene	9.7		"	10.0		97.1	67-146			
Isopropylbenzene	10		"	10.0		105	76-140			
Methyl acetate	12		"	10.0		122	51-139			
Methyl tert-butyl ether (MTBE)	11		"	10.0		113	76-135			
Methylcyclohexane	9.7		"	10.0		97.3	72-143			
Methylene chloride	8.6		"	10.0		85.9	55-137			
n-Butylbenzene	11		"	10.0		109	79-132			



Volatile Organic Compounds by GC/MS - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
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Batch BH60371 - EPA 5030B

LCS (BH60371-BS1)

Prepared & Analyzed: 08/04/2016

n-Propylbenzene	10		ug/L	10.0		103	78-133				
o-Xylene	10		"	10.0		104	78-130				
p- & m- Xylenes	21		"	20.0		103	77-133				
p-Isopropyltoluene	11		"	10.0		108	81-136				
sec-Butylbenzene	10		"	10.0		102	79-137				
Styrene	12		"	10.0		118	67-132				
tert-Butyl alcohol (TBA)	18		"	10.0		178	25-162	High Bias			
tert-Butylbenzene	9.1		"	10.0		90.6	77-138				
Tetrachloroethylene	18		"	10.0		180	82-131	High Bias			
Toluene	11		"	10.0		105	80-127				
trans-1,2-Dichloroethylene	11		"	10.0		108	80-132				
trans-1,3-Dichloropropylene	12		"	10.0		115	78-131				
Trichloroethylene	12		"	10.0		117	82-128				
Trichlorofluoromethane	11		"	10.0		105	67-139				
Vinyl Chloride	11		"	10.0		106	58-145				
Surrogate: 1,2-Dichloroethane-d4	11.0		"	10.0		110	69-130				
Surrogate: Toluene-d8	9.69		"	10.0		96.9	81-117				
Surrogate: p-Bromofluorobenzene	9.85		"	10.0		98.5	79-122				

LCS Dup (BH60371-BS1)

Prepared: 08/04/2016 Analyzed: 08/05/2016

1,1,1,2-Tetrachloroethane	12		ug/L	10.0		115	82-126		2.10	30	
1,1,1-Trichloroethane	12		"	10.0		117	78-136		1.63	30	
1,1,2,2-Tetrachloroethane	12		"	10.0		116	76-129		8.98	30	
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	10		"	10.0		102	54-165		5.41	30	
1,1,2-Trichloroethane	12		"	10.0		118	82-123		2.94	30	
1,1-Dichloroethane	12		"	10.0		119	82-129		1.52	30	
1,1-Dichloroethylene	11		"	10.0		115	68-138		2.74	30	
1,2,3-Trichlorobenzene	12		"	10.0		116	76-136		5.02	30	
1,2,3-Trichloropropane	12		"	10.0		124	77-128		1.37	30	
1,2,4-Trichlorobenzene	11		"	10.0		115	76-137		0.962	30	
1,2,4-Trimethylbenzene	11		"	10.0		112	82-132		1.72	30	
1,2-Dibromo-3-chloropropane	11		"	10.0		114	45-147		4.36	30	
1,2-Dibromoethane	12		"	10.0		120	83-124		1.94	30	
1,2-Dichlorobenzene	11		"	10.0		110	79-123		0.272	30	
1,2-Dichloroethane	12		"	10.0		122	73-132		8.19	30	
1,2-Dichloropropane	11		"	10.0		111	78-126		0.360	30	
1,3,5-Trimethylbenzene	11		"	10.0		111	80-131		0.817	30	
1,3-Dichlorobenzene	11		"	10.0		109	86-122		1.20	30	
1,4-Dichlorobenzene	10		"	10.0		105	85-124		2.73	30	
1,4-Dioxane	990		"	200		497	10-349	High Bias	2.81	30	
2-Butanone	15		"	10.0		148	49-152		11.8	30	
2-Hexanone	14		"	10.0		143	51-146		1.32	30	
4-Methyl-2-pentanone	12		"	10.0		124	57-145		2.00	30	
Acetone	15		"	10.0		152	14-150	High Bias	7.33	30	
Acrolein	7.5		"	10.0		74.8	10-153		6.06	30	
Acrylonitrile	13		"	10.0		134	51-150		14.5	30	
Benzene	11		"	10.0		111	85-126		3.11	30	
Bromochloromethane	12		"	10.0		122	77-128		0.327	30	
Bromodichloromethane	12		"	10.0		121	79-128		2.86	30	
Bromoform	12		"	10.0		122	78-133		1.07	30	
Bromomethane	12		"	10.0		116	43-168		3.56	30	
Carbon disulfide	12		"	10.0		115	68-146		8.22	30	



Volatile Organic Compounds by GC/MS - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting	Spike	Source*	%REC	%REC	Limits	Flag	RPD	
		Limit							Units	Level

Batch BH60371 - EPA 5030B

LCS Dup (BH60371-BSD1)

Prepared: 08/04/2016 Analyzed: 08/05/2016

Carbon tetrachloride	11		ug/L	10.0	111	77-141			2.00	30
Chlorobenzene	11		"	10.0	108	88-120			0.0923	30
Chloroethane	11		"	10.0	110	65-136			0.182	30
Chloroform	12		"	10.0	120	82-128			0.249	30
Chloromethane	11		"	10.0	112	43-155			0.449	30
cis-1,2-Dichloroethylene	11		"	10.0	114	83-129			4.67	30
cis-1,3-Dichloropropylene	11		"	10.0	114	80-131			0.176	30
Cyclohexane	11		"	10.0	106	63-149			3.26	30
Dibromochloromethane	12		"	10.0	120	80-130			2.19	30
Dibromomethane	13		"	10.0	132	72-134			1.57	30
Dichlorodifluoromethane	12		"	10.0	115	44-144			3.80	30
Ethyl Benzene	11		"	10.0	110	80-131			2.38	30
Hexachlorobutadiene	9.8		"	10.0	97.9	67-146			0.821	30
Isopropylbenzene	11		"	10.0	106	76-140			1.23	30
Methyl acetate	13		"	10.0	127	51-139			3.69	30
Methyl tert-butyl ether (MTBE)	12		"	10.0	118	76-135			4.07	30
Methylcyclohexane	9.7		"	10.0	96.7	72-143			0.619	30
Methylene chloride	9.1		"	10.0	90.9	55-137			5.66	30
n-Butylbenzene	11		"	10.0	110	79-132			0.183	30
n-Propylbenzene	11		"	10.0	105	78-133			2.11	30
o-Xylene	10		"	10.0	104	78-130			0.866	30
p- & m- Xylenes	21		"	20.0	105	77-133			1.82	30
p-Isopropyltoluene	11		"	10.0	110	81-136			1.74	30
sec-Butylbenzene	10		"	10.0	103	79-137			1.17	30
Styrene	12		"	10.0	118	67-132			0.00	30
tert-Butyl alcohol (TBA)	17		"	10.0	172	25-162	High Bias		3.49	30
tert-Butylbenzene	9.6		"	10.0	95.5	77-138			5.27	30
Tetrachloroethylene	17		"	10.0	172	82-131	High Bias		4.60	30
Toluene	11		"	10.0	108	80-127			2.72	30
trans-1,2-Dichloroethylene	11		"	10.0	113	80-132			4.24	30
trans-1,3-Dichloropropylene	12		"	10.0	116	78-131			1.30	30
Trichloroethylene	11		"	10.0	114	82-128			2.59	30
Trichlorofluoromethane	11		"	10.0	109	67-139			3.55	30
Vinyl Chloride	11		"	10.0	109	58-145			3.26	30
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>10.9</i>		<i>"</i>	<i>10.0</i>	<i>109</i>	<i>69-130</i>				
<i>Surrogate: Toluene-d8</i>	<i>9.89</i>		<i>"</i>	<i>10.0</i>	<i>98.9</i>	<i>81-117</i>				
<i>Surrogate: p-Bromofluorobenzene</i>	<i>10.0</i>		<i>"</i>	<i>10.0</i>	<i>100</i>	<i>79-122</i>				



Volatile Analysis Sample Containers

Lab ID	Client Sample ID	Volatile Sample Container
16G1101-01	HMW-3R	40mL Clear Vial (pre-pres.) HCl; Cool to 4° C
16G1101-02	HMW-5	40mL Clear Vial (pre-pres.) HCl; Cool to 4° C
16G1101-03	HMW-6	40mL Clear Vial (pre-pres.) HCl; Cool to 4° C
16G1101-04	HMW-7R	40mL Clear Vial (pre-pres.) HCl; Cool to 4° C
16G1101-05	HMW-8	40mL Clear Vial (pre-pres.) HCl; Cool to 4° C
16G1101-06	HMW-9R	40mL Clear Vial (pre-pres.) HCl; Cool to 4° C
16G1101-07	HMW-10R	40mL Clear Vial (pre-pres.) HCl; Cool to 4° C
16G1101-08	HMW-13	40mL Clear Vial (pre-pres.) HCl; Cool to 4° C
16G1101-09	HMW-14	40mL Clear Vial (pre-pres.) HCl; Cool to 4° C
16G1101-10	DUP-20160727	40mL Clear Vial (pre-pres.) HCl; Cool to 4° C
16G1101-11	TB-20160727	40mL Clear Vial (pre-pres.) HCl; Cool to 4° C



Notes and Definitions

SCAL-E	The value reported is ESTIMATED. The value is estimated due to its behavior during initial calibration (average Rf > 20%).
QR-04	The RPD exceeded control limits for the LCS/LCSD QC.
QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
QL-02	This LCS analyte is outside Laboratory Recovery limits due to the analyte behavior using the referenced method. The reference method has certain limitations with respect to analytes of this nature.
J	Detected below the Reporting Limit but greater than or equal to the Method Detection Limit (MDL/LOD) or in the case of a TIC, the result is an estimated concentration.
E	The concentration indicated for this analyte is an estimated value above the calibration range of the instrument. This value is considered an estimate.
CCV-E	The value reported is ESTIMATED. The value is estimated due to its behavior during continuing calibration verification (>20% Difference for average Rf or >20% Drift for quadratic fit).
B	Analyte is found in the associated analysis batch blank. For volatiles, methylene chloride and acetone are common lab contaminants.

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

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



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

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

Certification for pH is no longer offered by NYDOH ELAP.

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

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

Revision Description: Corrected Client Project ID per client



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(203) 325-1371
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Field Chain-of-Custody Record

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

York Project No. 116 G-1101

YOUR Information		Report to:		Invoice To:		Your Project ID		Turn-Around Time		Report/Deliverable Type	
Company: Ecosystems Strategies Inc.		SAME <input checked="" type="checkbox"/>		SAME <input checked="" type="checkbox"/>		GG9964.50		RUSH-Same Day		Summary Report <input checked="" type="checkbox"/>	
Address: 24 Davis Avenue		Name: _____		Name: <u>Brenda</u>		Purchase Order #		RUSH-Next Day		QA Report <input checked="" type="checkbox"/>	
Phone: 845-452-1658		Company: _____		Company: _____		Purchase Order #		RUSH-Two Day		CT RCP	
Contact: michelle		Address: _____		Address: _____		Purchase Order #		RUSH-Three Day		CT RCP DOA/DUE Pkg	
E-mail: michelle@ecosystemsstrategies.com		E-mail: _____		E-mail: _____		Purchase Order #		RUSH-Four Day		NY ASP A Package	
						Samples from CT, NY, X, NJ, _____		Standard (5-7day)		NY ASP B Package <input checked="" type="checkbox"/>	

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

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

Nichelle Weisman
Samples Collected/Authorized By (Signature)

Nichelle Weisman
Name (printed)

Volatiles	Semi-Vols. Pest/PCB/Herb	Metals	Misc. Org.	Full Lists
8260 full 624 STARS list Nassau Co. BTEX MTBE TCL list TAGM list CT RCP list Arom. only Halog only App IX list 8021B list	8270 or 625 STARS list BN Only Acids Only PAH list TAGM list CT RCP list TCL list NDEP list App. IX TCLP BNA SPL or TCLP	RCRAB PP13 list TAL CT15 list TAGM list NDEP list Total Dissolved SPL or TCLP Ink-Meats List Below Helium	TPH GRO TPH DRO CT EPH NY 310-13 TPH 1664 Air TO14A Air TO15 Air STARS SPL or TCLP Air VPH Air TICs Mediane Helium	Phi Poll. TCL Organics TAL-Met/CoN Full TCLP Full App IX Part 360-Base/Ink Part 360-Base/Ink Part 360-Base/Ink Part 360-Base/Ink NYDEP Sewer NYSDCS Sewer TAGM

Sample Identification	Date+Time Sampled	Matrix	Analysis Requested (List above includes common analysis)	Container Description
DUP-20160727	7/27/2016	GW	VOCs 8260	4 x 40 ml vials
TB-20160727	↓	DI Water	↓	2 x 40 ml vials

Comments:

4°C _____ Frozen _____ HCl _____ MeOH _____ HNO₃ _____ H₂SO₄ _____ NaOH _____
ZnAc _____ Ascorbic Acid _____ Other _____

Special Instructions
Field Filtered
Lab to Filter

Samples Relinquished By Nichelle Weisman Date/Time 7/28/16
Samples Relinquished By Michelle Weisman Date/Time 7/28/16

Samples Received in LAB by _____ Date/Time _____
Samples Received By Michelle Weisman Date/Time 7/28/16

Temperature on Receipt 3.9 °C



Ecosystems Strategies, Inc.

ATTACHMENT E

DUSR

Data Usability Summary Report
Haverstraw Harbors Site # GH9964.50
Haverstraw, New York

Groundwater Samples
Collected January 2016

July 2016

ZDATA REPORTS
Data Management and Validation Services
118 Rose Lane Terrace, Syracuse, NY 13219, (716) 907-2341

Data Usability Summary Report

**Groundwater Samples
Collected January 13, 2016**

**Haverstraw Harbors Site ESI File GH9964.50
Haverstraw, New York**

Prepared By:

**ZDataReports
Data Management and Validation Service
118 Rose Lane Terrace
Syracuse, New York 13219**

EXECUTIVE SUMMARY

This report addresses data quality for nine groundwater samples, one field duplicate and one trip blank collected at the Haverstraw Harbors Site ESI File GH9964.50 located in Haverstraw, New York. The samples were analyzed for volatile organics (VOCs) following New York State Department of Environmental Conservation (NYSDEC) Analytical Services Protocol (ASP) methodologies. Sample collection was performed by Ecosystems Strategies, Inc. of Poughkeepsie, New York. Analytical services were provided by York Analytical Laboratories, Inc. located in Stratford, Connecticut.

The volatile organics analysis data were determined to be usable for qualitative and quantitative purposes with no exceptions. Sample results for several compounds were qualified based on deviations from initial and continuing calibration criteria, matrix spike and laboratory control samples.

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Appendices

Appendix A - Data Validation Checklists

SECTION 1 - INTRODUCTION

1.1 Introduction

This report addresses data quality for nine groundwater samples, one field duplicate sample and one trip blank collected at Haverstraw Harbors Site ESI File GH9964.50 located in Haverstraw, New York. The samples were analyzed for volatile organics (VOCs) following New York State Department of Environmental Conservation (NYSDEC) Analytical Services Protocol (ASP) methodologies. Sample collection was performed by Ecosystems Strategies, Inc. of Poughkeepsie, New York. Analytical services were provided by York Analytical Laboratories, Inc. located in Stratford, Connecticut. The quantity and types of samples submitted for data validation are tabulated below.

Table 1: Introduction - Sample Summary Table

SDG#	Date Collected	Matrix	Sample Identification	
			Client ID	Laboratory ID
16A0405	01/13/2016	Groundwater	HMW-3R	16A0405-01
			HMW-5	16A0405-02
			HMW-6	16A0405-03
			HMW-7R	16A0405-04
			HMW-8	16A0405-05
			HMW-9R	16A0405-06
			HMW-10R	16A0405-07
			HMW-13	16A0405-08
			HMW-14	16A0405-09
			DUP-20160113	16A0405-10
			TB-20160113	16A0405-11

1.2 Analytical Methods

The samples were analyzed for volatile organics (VOCs) following New York State Department of Environmental Conservation (NYSDEC) Analytical Services Protocol (ASP) methodologies (2005 update). Laboratory analyses were provided by York Analytical Laboratories, Inc. located in Stratford, Connecticut.

1.3 Validation Protocols

Data validation is a process that involves the evaluation of analytical data against prescribed quality control criteria to determine the usefulness of the data. The analytical data addressed in this report were evaluated utilizing the quality control criteria presented in the following documents:

- *USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review*, USEPA-540-R-08-01, June 2008.
- *USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Data Review*, USEPA-540-R-10-011, January 2010.
- *CLP Organics Data Review and Preliminary Review*, SOP No. HW-6 Revision #14, USEPA Region II, September 2006.

- *Validating Volatile Organic Compounds By Gas Chromatography/Mass Spectrometry SW-846 Method 8260B*, SOP No. HW-24 Revision #2, USEPA Hazardous Waste Support Branch, August 2008.
- *Exhibit E of New York State Department of Environmental Conservation Analytical Services Protocol (NYSDEC ASP)*, NYSDEC June 2005.

1.3.1 Organic Parameters

The validation of organic parameters for this project followed the requirements presented in the analytical methodology and the data validation guidelines presented above. The following QA/QC parameters were evaluated:

Volatile Organics Analyses

1. Holding Times
2. GC/MS Instrument Tuning Criteria
3. Calibration
 - a. Initial Calibration
 - b. Continuing Calibration
4. Blank Analysis
5. Surrogate Recovery
6. Matrix Spike / Matrix Spike Duplicate Analysis
7. Reference Standard Analysis
8. Internal Standards Recovery
9. Compound Identification and Quantification
10. Field Duplicate Analysis
11. System Performance
12. Documentation Completeness
13. Overall Data Assessment

1.4 Data Qualifiers

The following qualifiers as specified in the guidance documents presented in Section 1.3 of this report have been used for this data validation.

- U Indicates that the compound was analyzed for, but was not detected. The sample quantification limit is presented and adjusted for dilution. This qualifier is also used to signify that the detection limit of an analyte was raised due to blank contamination.
- J Indicates that the result should be considered approximate. This qualifier is used when the data validation procedure identifies a deficiency in the data generation process.
- UJ Indicates that the detection limit for the analyte in this sample should be considered approximate. This qualifier is used when the data validation process identifies a deficiency in the data generation process.

- R Indicates that the previously reported detection limit or sample result has been rejected due to a major deficiency in the data generation procedure. The data are considered to be unusable for both qualitative and quantitative purposes.

The following sections of this document present a summary of the data validation process. Section 2 discusses data compliance with established QA/QC criteria and qualifications performed on the sample data. A discussion of the Precision, Accuracy, Representativeness, Comparability, and Completeness (PARCC) of the data and data usability are discussed in Section 3. The USEPA Region II Data Validation Checklists are presented in Appendix A.

SECTION 2 - DATA VALIDATION SUMMARY

This section presents a discussion of QA/QC parameter compliance with established criteria and the qualification of data performed when QA/QC parameter deviations were identified. When several deviations from established QA/QC criteria were observed, the final qualifier assigned to the data was based on the cumulative effect of the deviations.

2.1 Volatiles Analysis

Data validation was performed for 11 groundwater samples including a trip blank and a blind duplicate sample. The QA/QC parameters presented in Section 1.3.2 of this report were found to be within specified limits with the exception of the following:

Blank Analysis

The method blanks contained detectable concentrations of several target compounds. Blank action levels were calculated at ten times the blank concentrations for the common laboratory contaminants and five times for other target compounds. Detected sample results, which were less than the blank action levels were qualified with a "U" in the associated samples. Results that were detected below the contract required detection limit (CRDL) were raised to the CRDL and qualified with a "U" qualifier. The "U" qualifier indicates that the volatile organic was analyzed for but was not detected above the CRDL. Samples qualified for blank contamination are tabulated below.

Table 2: Volatile Organics Analysis - Blank Analysis Deviations

Blank Matrix	Date Analyzed	Compound	Blank Action Level	Associated Samples	Qualified Sample Result
Water (BA60665)	01/19/2016	Carbon Disulfide	1.55 µg/L	HMW-8	0.50 U µg/L
Water (BA60698)	01/19/2016	Acetone	19 µg/L	HMW-9R HMW-10R HMW-13	2.0 U µg/L 2.0 U µg/L 2.0 U µg/L
Water (BA60725)	01/20/2016	Acetone	11 µg/L	HMW-14 DUP-20160113 TB-20160113	2.0 U µg/L 2.0 U µg/L 2.9 U µg/L
TB-20160113	01/20/2016	t-Butyl Alcohol	6.5 µg/L	HMW-3R HMW-6 HMW-8 HMW-9R HMW-10R	2.0 U µg/L 2.0 U µg/L 2.0 U µg/L 3.2 U µg/L 5.8 U µg/L

Initial Calibration

The initial calibration relative standard deviation (%RSD) limit, which requires the %RSD to be less than 30 percent, was exceeded for several compounds. Sample qualification included the approximation (J, UJ) of results when %RSD criteria were exceeded. Samples requiring qualification due to these deviations are tabulated below.

Table 3: Volatiles Organics Analyses – Initial Calibration Deviations

Date Analyzed	Compound	%RSD	Result Qualifier	Affected Samples
MSVOA6 01/14/2016	Bromomethane	78.2 %	UJ	HMW-3R HMW-5 HMW-6 HMW-7R HMW-8 HMW-9R HMW-10R HMW-13 HMW-14 DUP-20160113 TB-20160113

Continuing Calibration

The continuing calibration percent difference (%D) limit, which requires the %D to be less than 25 percent, was exceeded for several compounds. Sample qualification included the approximation (J, UJ) of results when %D criteria were exceeded, but were less than 90 percent. Non-detected results were rejected (R) for compounds with %D values greater than 90 percent. Samples requiring qualification due to these deviations are tabulated below.

Table 4: Volatile Organics Analysis - Continuing Calibration Deviations

Date Analyzed	Compound	%D	Result Qualifier	Affected Samples
MSVOA6 01/19/2016 (09:23)	Bromomethane	-44.6 %	UJ	HMW-3R
	Acetone	33.3 %	UJ	HMW-5
	4-Methyl-2-pentanone	47.9 %	UJ	HMW-6
	2-Hexanone	27.1 %	UJ	HMW-7R HMW-8
MSVOA6 01/19/2016 (21:45)	Bromomethane	62.3 %	UJ	HMW-9R
	t-Butyl Alcohol	60.9 %	UJ	HMW-10R
	4-Methyl-2-pentanone	43.0 %	UJ	HMW-13
MSVOA6 01/20/2016 (08:58)	Bromomethane	30.0 %	UJ	HMW-14
	Carbon Disulfide	-26.8 %	UJ	DUP-20160113
	4-Methyl-2-pentanone	42.3 %	UJ	TB-20160113

Laboratory Control Sample Analysis

Laboratory control sample (LCS) recovery criteria requiring recoveries to be within laboratory generated control limits were exceeded for several compounds. Qualification of sample data included the approximation of results when spike recoveries were greater than the upper limit, but less than 200 percent or less than the lower limit, but greater than 10 percent. Non-detected sample results were rejected (R) for compounds with recoveries that were less than 10 percent. Samples qualified due to LCS recovery deviations are tabulated below.

Table 5: Volatile Organics Analysis - Laboratory Control Sample Deviations

Matrix	Compound	Percent Recovery	Control Limits	Qualifier	Affected Samples
Water BA60665	4-Methyl-2-pentanone Acrylonitrile	56.1 % / 58.7 % 133 % / 38.8 %	57 % to 145 % 51 % to 150 %	UJ UJ	HMW-3R HMW-5 HMW-6 HMW-7R HMW-8
Water BA60725	4-Methyl-2-pentanone	56.2 % / 60.8 %	57 % to 145 %	UJ	HMW-14 DUP-20160113 TB-20160113

Matrix Spike Recovery

Matrix spike/matrix spike duplicate (MS/MSD) recovery criteria requiring compound recoveries to be within laboratory generated control limits were exceeded for several compounds. Qualification of sample results included the approximation of results when spike recoveries were greater than the upper limit, but less than 200 percent or less than the lower limit, but greater than 10 percent. Non-detected sample results were rejected (R) for compounds with recoveries less than 10 percent. Samples qualified due to MS/MSD recovery deviations are tabulated below.

Table 6: Volatile Organics Analyses - MS/MSD Analysis Deviations

MS/MSD Sample ID	Compound	Percent Recovery (MS/MSD)	Control Limits	Qualifier	Affected Samples
HMW-7R	Methyl Acetate	201 % / 201 %	10 % to 200 %	UJ	HMW-3R HMW-5 HMW-6 HMW-7R HMW-8 HMW-9R HMW-10R HMW-13 HMW-14 DUP-20160113 TB-20160113

Overall Data Assessment

Overall, the laboratory performed volatile organics analyses in accordance with the requirements specified in the method listed in Section 1.2. These data were determined to be usable for qualitative and quantitative purposes with the no exceptions. Sample results for several compounds were qualified based on deviations from initial calibration and continuing calibration criteria, deviations in laboratory control samples, deviations in matrix spike sample recoveries and method blank detected compounds.

SECTION 3 - DATA USABILITY and PARCC EVALUATION

3.1 Data Usability

This section presents a summary of the usability of the analytical data and an evaluation of the PARCC parameters. Data usability was calculated as the percentage of data that was not qualified as rejected based on a significant deviation from established QA/QC criteria. Data usability, which was calculated separately for each type of analysis, is tabulated below.

Table 10: Data Usability and PARCC Evaluation - Data Usability

Parameter	Usability	Deviations
Volatile Parameters	100 %	None resulting in the rejection of data

3.2 PARCC Evaluation

The following sections provide an evaluation of the analytical data with respect to the precision, accuracy, representativeness, comparability, and completeness (PARCC) parameters.

3.2.1 Precision

Precision is measured through field duplicate samples, split samples, and laboratory duplicate samples. For this sampling program, 0.0 percent of the analytical data required qualification from field duplicate criteria deviations.

3.2.2 Accuracy

Matrix spike sample, surrogate recovery, internal standard recovery, laboratory control samples, and calibration criteria indicate the accuracy of the data. For this sampling program, 5.16 percent of the data were qualified for calibration criteria deviations, 1.76 percent of the data were qualified for laboratory control sample deviations, 1.49 percent of the data were qualified due to deviation in matrix spike criteria, and 0.0 percent of the data were qualified due to deviation in surrogate recovery criteria. Overall, 8.41 percent of the data were qualified due for deviations in accuracy metrics.

3.2.3 Representativeness

Holding times, sample preservation, and blank analysis are indicators of the representativeness of the analytical data. For this investigation, 0.00 percent of the analytical data required qualification for blank analysis deviations.

3.2.4 Comparability

Comparability is not compromised provided that the analytical methods did not change over time. A major component of comparability is the use of standard reference materials for calibration and QC. These standards are compared to other unknowns to verify their concentrations. Since standard analytical methods and reporting procedures were consistently used by the laboratory, the comparability criteria for the analytical data were met.

3.2.5 Completeness

The overall percent usability or completeness of the data was 100 percent.

APPENDIX A

DATA VALIDATION CHECKLISTS

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I. Part A: VOA Analyses	2

Data Validation Checklist - Part A: VOA Analyses

No:	Parameter	YES	NO	N/A
1.0	<u>Traffic Reports and Laboratory Narrative</u>			
1.1	Are the traffic Report Forms present for all samples?	X		
1.2	Do the Traffic Reports or Lab Narrative indicate any problems with sample receipt, condition of samples, analytical problems or special circumstances affecting the quality of the data?		X	
2.0	<u>Holding Times</u>			
2.1	Have any VOA technical holding times, determined from date of collection to date of analysis, been exceeded?		X	
3.0	<u>System Monitoring Compound (SMC) Recovery (Form II)</u>			
3.1	Are the VOA SMC Recovery Summaries (FORM II) present for each of the following matrices:			
	a. Low Water	X		
	b. Low Soil			X
	c. Air			X
3.2	Are all the VOA samples listed on the appropriate System Monitoring Compound Recovery Summary for each of the following matrices:			
	a. Low Water	X		
	b. Low Soil			X
	c. Air			X
3.3	Were outliers marked correctly with an asterisk?	X		
3.4	Was one or more VOA system monitoring compound recovery outside of contract specifications for any sample or method blank?		X	
	If yes, were samples re-analyzed?			X
	Were method blanks re-analyzed?			X
3.5	Are there any transcription/calculation errors between raw data and Form II?		X	
4.0	<u>Matrix Spikes (Form III)</u>			
4.1	Is the Matrix Spike/Matrix Spike Duplicate Recovery Form (Form III) present?	X		
4.2	Were matrix spikes analyzed at the required frequency for each of the following matrices?			
	a. Low Water	X		
	b. Low Soil			X
	c. Air			X
4.3	How many VOA spike recoveries are outside QC limits? Water <u> 1 </u> out of 67 Soils <u> </u> out of 54			
4.4	How many RPD's for matrix spike and matrix spike duplicate recoveries are outside QC limits? Water <u> 0 </u> out of 67 Soils <u> </u> out of 54			

Data Validation Checklist - Part A: VOA Analyses

No:	Parameter	YES	NO	N/A
5.0	<u>Blanks (Form IV)</u>			
5.1	Is the Method Blank Summary (Form IV) present?	X		
5.2	Frequency of Analysis: for the analysis of VOA TCL compounds, has a reagent/method blank been analyzed for each SDG or every 20 samples of similar matrix (low water, low soil, medium soil), whichever is more frequent?	X		
5.3	Has a VOA method/instrument blank been analyzed at least once every twelve hours for each concentration level and GC/MS system used?	X		
5.4	Is the chromatographic performance (baseline stability) for each instrument acceptable for VOAs?	X		
6.0	<u>Contamination</u>			
6.1	Do any method/instrument/reagent blanks have positive results (TCL and/or TIC) for VOAs?	X		
6.2	Do any field/trip/rinse blanks have positive VOA results (TCL and/or TIC)?	X		
6.3	Are there field/rinse/equipment blanks associated with every sample?	X		
7.0	<u>GC/MS Instrument Performance Check (Form V)</u>			
7.1	Are the GC/MS Instrument Performance Check Forms (Form V) present for Bromofluorobenzene (BFB)?	X		
7.2	Are the enhanced bar graph spectrum and mass/charge (m/z) listing for the BFB provided for each twelve hour shift?	X		
7.3	Has an instrument performance compound been analyzed for every twelve hours of sample analysis per instrument?	X		
7.4	Have the ion abundances been normalized to m/z 95?	X		
7.5	Have the ion abundance criteria been met for each instrument used?	X		
7.6	Are there any transcription/calculation errors between mass lists and Form V's?		X	
7.7	Have the appropriate number of significant figures (two) been reported?	X		
7.8	Are the spectra of the mass calibration compound acceptable?	X		
8.0	<u>Target Compound List (TCL) Analytes</u>			
8.1	Are the Organic Analysis Data Sheets (Form I VOA) present with required header information on each page, for each of the following:			
	a. Sample and/or fractions as appropriate?	X		
	b. Matrix spikes and matrix spike duplicates?	X		
	c. Blanks?	X		
8.2	Are the VOA Reconstructed Ion Chromatograms, the mass spectra for the identified compounds, and the data system printouts (Quant Reports) included in the sample package for each of the following?			
	a. Samples and/or fractions as appropriate?	X		
	b. Matrix spikes and matrix spike duplicates (Mass spectra not required)?	X		
	c. Blanks?	X		
8.3	Are the response factors shown in the Quant Report?	X		

Data Validation Checklist - Part A: VOA Analyses

No:	Parameter	YES	NO	N/A
8.4	Is the chromatographic performance acceptable with respect to:			
	Baseline stability?	X		
	Resolution?	X		
	Peak shape?	X		
	Full-scale graph (attenuation)?	X		
	Other:			X
8.5	Are the lab-generated standard mass spectra of the identified VOA compounds present for each sample?	X		
8.6	Is the RRT of each reported compound within 0.06 RRT units of the standard RRT in the continuing calibration?	X		
8.7	Are all ions in the standard mass spectrum at a relative intensity greater than 10% also present in the sample mass spectrum?	X		
8.8	Do sample and standard relative ion intensities agree within 20%?	X		
9.0	<u>Tentatively Identified Compounds (TIC)</u>			
9.1	Are all Tentatively Identified Compound Forms (Form I Part B) present; and do listed TICs include scan number or retention time, estimated concentration and “JN” qualifier?			X
9.2	Are the mass spectra for the tentatively identified compounds and associated “best match” spectra included in the sample package for each of the following:			
	a. Samples and/or fractions as appropriate?			X
	b. Blanks?			X
9.3	Are any TCL compounds (from any fraction) listed as TIC compounds?			X
9.4	Are all ions present in the reference mass spectrum with a relative intensity greater than 10% also present in the sample mass spectrum?			X
9.5	Do TIC and “best match” standard relative ion intensities agree within 20%?			X
10.0	<u>Compound Quantitation and Reported Detection Limits</u>			
10.1	Are there any transcription/calculation errors in Form I results?		X	
10.2	Are the CRQLs adjusted to reflect sample dilutions and, for soils, sample moisture?	X		
11.0	<u>Standards Data (GC/MS)</u>			
11.1	Are the Reconstructed Ion Chromatograms, and data system printouts present for initial and continuing calibration?	X		
12.0	<u>GC/MS Initial Calibration (Form VI)</u>			
12.1	Are the Initial Calibration Forms (Form VI) present and complete for the volatile fraction at concentrations of 10, 20, 50, 100, 200 ug/L? Are there separate calibrations for low/med soils and low soil samples?	X		
12.2	Were all low level soil standards, blanks, and samples analyzed by heated purge?			X
12.3	Are the response factors stable for VOA's over the concentration range of the calibration (%Relative Standard Deviation (%RSD) <30%)		X	
12.4	Are the RRFs above 0.01?	X		
12.5	Are there any transcription/calculation errors in the reporting of average response factors (RRF) or %RSD?		X	

Data Validation Checklist - Part A: VOA Analyses

No:	Parameter	YES	NO	N/A
13.0	<u>GC/MS Continuing Calibration (Form VII)</u>			
13.1	Are the Continuing Calibration Forms (Form VII) present and complete for the volatile fraction?	X		
13.2	Has a continuing calibration standard been analyzed for every twelve hours of sample analysis per instrument?	X		
13.3	Do any volatile compounds have a percent difference (%D) between the initial and continuing RRF which exceeds the +/- 25% criteria?	X		
13.4	Do any volatile compounds have a RRF <0.01?		X	
13.5	Are there any transcription/calculation errors in the reporting of average response factor (RRF) or %difference (%D) between initial and continuing RRFs?		X	
14.0	<u>Internal Standard (Form VIII)</u>			
14.1	Are the internal standard areas (Form VIII) of every sample and blank within the upper and lower limits (-50% to +100%) for each continuing calibration?	X		
14.2	Are the retention times of the internal standards within 30 seconds of the associated calibration standard?	X		
15.0	<u>Field Duplicates</u>			
15.1	Were any field duplicates submitted for VOA analysis?	X		

APPENDIX F

Engineering Controls Certification Form



Enclosure 2
NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
Site Management Periodic Review Report Notice
Institutional and Engineering Controls Certification Form



	Site Details	Box 1	
Site No.	C344060		
Site Name Haverstraw Harbors Site			
Site Address: Dr. George W. Girling Drive		Zip Code: 10927-	
City/Town: Haverstraw			
County: Rockland			
Site Acreage: 5.0			
Reporting Period: March 04, 2016 to March 04, 2017			
		YES	NO
1.	Is the information above correct?	<input checked="" 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 checked="" 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 checked="" 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 checked="" type="checkbox"/>
If you answered YES to questions 2 thru 4, include documentation or evidence that documentation has been previously submitted with this certification form.			
5.	Is the site currently undergoing development?	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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

Box 2A

8. Has any new information revealed that assumptions made in the Qualitative Exposure Assessment regarding offsite contamination are no longer valid?

YES NO

If you answered YES to question 8, include documentation or evidence that documentation has been previously submitted with this certification form.

9. Are the assumptions in the Qualitative Exposure Assessment still valid?
(The Qualitative Exposure Assessment must be certified every five years)

If you answered NO to question 9, the Periodic Review Report must include an updated Qualitative Exposure Assessment based on the new assumptions.

SITE NO. C344060

Box 3

Description of Institutional Controls

<u>Parcel</u>	<u>Owner</u>	<u>Institutional Control</u>
27.14-1-5.1	Admiral's Cove Haverstraw, LLC	Ground Water Use Restriction Soil Management Plan Landuse Restriction Site Management Plan
27.62-2-12	Village of Haverstraw	Ground Water Use Restriction Soil Management Plan Landuse Restriction Site Management Plan
27.62-2-7.1	Admiral's Cove Haverstraw, LLC	Ground Water Use Restriction Soil Management Plan Landuse Restriction Site Management Plan
27.62-2-7.2	Admiral's Cove Haverstraw, LLC	Ground Water Use Restriction Soil Management Plan Landuse Restriction Site Management Plan
27.62-2-8	Village of Haverstraw	Ground Water Use Restriction Soil Management Plan Landuse Restriction Site Management Plan

Description of Engineering Controls

<u>Parcel</u>	<u>Engineering Control</u>
27.14-1-5.1	Vapor Mitigation Cover System
27.62-2-12	Vapor Mitigation Cover System
27.62-2-7.1	Vapor Mitigation Cover System
27.62-2-7.2	Vapor Mitigation Cover System
27.62-2-8	Vapor Mitigation Cover System

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. C344060**

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 Paul H. Ciminello at WCD Group, LLC,
print name print business address

am certifying as designed representative (Owner or Remedial Party)

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



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

06/27/17
Date

IC/EC CERTIFICATIONS

Box 7

Qualified Environmental Professional Signature

I certify that all information in Boxes 4 and 5 are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law.

I Paul H. Ciminello at WCD Group, LLC,
print name print business address

am certifying as a Qualified Environmental Professional for the Owner
(Owner or Remedial Party)

Paul H. Ciminello



06/27/17

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

Stamp (Required for PE)

Date