Howland Hook Marine Terminal – Port Ivory Facility Site 1
40 Western Avenue
Staten Island, New York

2014 Periodic Review Report

NYSDEC VCP Site Number V-00615-2
NYSDEC Index Number W2-0957-02-07

Prepared by:
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March 2015

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March 6, 2015

Ms. Sally Dewes
Environmental Engineer II
New York State Department of Environmental Conservation
Division of Environmental Remediation
Remedial Bureau B, Section D
625 Broadway
Albany, New York 12233-7016

Re: Howland Hook Marine Terminal – Port Ivory Facility Site 1
40 Western Avenue, Staten Island, New York
VCP Site Number: V-00615-2
2014 Periodic Review Report

Dear Ms. Dewes:

To facilitate the remediation of a 14.95-acre portion of the Howland Hook Marine Terminal (HHMT) - Port Ivory Facility located at 40 Western Avenue, Staten Island, New York (the Site), The Port Authority of New York and New Jersey (the Port Authority) entered into a Voluntary Cleanup Agreement (VCA) with the New York State Department of Environmental Conservation (NYSDEC) in June 2004. VCA Number W2-0957-02-07 and Voluntary Cleanup Program (VCP) Site Number V-00615-2 (Site 1) were assigned. Under the terms of the VCA, remediation of the Site was completed in accordance with the NYSDEC-approved Remedial Action Work Plan (RAWP) dated March 2007.

As documented in the Final Engineering Report (FER), the results of the remedial activities indicated that the identified areas of concern had been satisfactorily addressed. The NYSDEC approved the FER and Site Management Plan (SMP) and issued a "Release and Covenant Not to Sue" dated May 27, 2014.

This Periodic Review Report (PRR) describes activities completed during the 2014 reporting period (May 20, 2014 through January 22, 2015) in accordance with the SMP[1]; and includes the following information:

- Identification, assessment and certification of the Engineering Control/Institutional Control (EC/IC) required by the remedy for the Site;
- Results of the required annual Site inspections;
- Applicable inspection forms and other records generated for the Site during the reporting period;

[1] A Site inspection was performed on March 29, 2014 and the results are included in this Periodic Review Report.

- Data summary tables of contaminants of concern by media (groundwater and surface water), which include a listing of parameters analyzed, along with the applicable standards, with exceedances highlighted;
- Results of analyses, copies of laboratory data sheets, and the required laboratory data deliverables for samples collected during the reporting period;
- A site evaluation, which includes the following:
    - The compliance of the remedy with the requirements of the Site-specific RAWP;
    - Any new conclusions or observations regarding Site contamination based on inspections or data generated by the Monitoring Plan for the media being monitored;
    - Recommendations regarding any necessary changes to the remedy and/or Monitoring Plan; and
    - The overall performance and effectiveness of the remedy.

There were no areas of non-compliance regarding major elements of the SMP. There are no recommended changes to the SMP. Continued annual submission of Periodic Review Reports is recommended. Additionally, a Work Plan which addresses the concentrations of benzene and toluene detected in groundwater samples collected from monitoring well PRW-7 (refer to the "Groundwater and Surface Water Monitoring" section in this PRR), will be submitted to the NYSDEC following review of the analytical results generated from the annual surface water and groundwater sampling event, scheduled for March 2015.

Site Description

The Site is a portion of the HHMT - Port Ivory Facility, which consists of three parcels: Block 1309, Lot 10; Block 1338, Lot 1; and Block 1400, Lot 1. Public roadways separate the three parcels: Western Avenue separates Block 1400, Lot 1 from Block 1338, Lot 1 and Richmond Terrace separates Block 1309, Lot 10 from Block 1338, Lot 1 and Block 1400, Lot 1. As shown on Figure 1, the HHMT - Port Ivory Facility is bordered by Bridge Creek to the west, the Arthur Kill to the north, wetlands and undeveloped land to the east, and railroad tracks to the south.

The Site consists of 14.95 acres of the 123.75-acre HHMT - Port Ivory Facility (refer to Figure 1). The Site is bordered by VCP Site 2 (Area 2A) to the east and south, Richmond Terrace to the north, and Bridge Creek to the west. Vehicular access to the northern portion of the Site is provided from Richmond Terrace. A paved roadway oriented east-west is located on the central portion of the Site and provides access to the New York Container Terminal (NYCT) property, which is across Bridge Creek from (i.e., to the west of) the Site. Currently there are no structures on the Site and it is used for container storage by NYCT.

The Port Authority is in the process of redeveloping the HHMT - Port Ivory Facility for industrial use; specifically, the Port Authority intends to utilize the Site as an intermodal facility. With regard to the HHMT - Port Ivory Facility, an intermodal facility is defined as a facility where cargo transported by ship is transferred to intermediate and final destinations via rail or truck.

Site History

The Port Authority purchased the HHMT - Port Ivory Facility from P&G in 2000. P&G used the Facility for the manufacture, warehousing, and distribution of edible oils, baking mixes, orange juice, and other foodstuffs; manufacture, warehousing, and distribution of soaps and cleaning products; and, burning of wood chips for fuel. In addition, numerous easements were established by various energy companies for underground pipelines that conveyed petroleum products. Operations at the P&G Facility began in or about 1908 and continued through approximately 1990.

The Port Authority entered into the NYSDEC VCP in June 2004. The Port Authority's objective for entering into the VCP was to investigate and remediate metals and organic compounds in soil, surface water, sediment, and/or groundwater with NYSDEC oversight. The presence of these substances is attributable to prior Facility operations by P&G that were/are unrelated to the Port Authority. The Port Authority has established different redevelopment schedules for different areas at the HHMT - Port Ivory Facility, and the NYSDEC agreed to expedite the review of information pertaining to these areas. Thus, the Port Authority agreed to establish three VCP Sites at the facility and to present assessment, investigation, and remedial action information/documentation for each Site.

Remedial Investigation

After cessation of P&G operations at the Port Ivory Facility, the Port Authority purchased the property and removed most of the remaining infrastructure at Site 1. The Port Authority retained Hatch Mott McDonald (HMM) to conduct the necessary environmental investigations. HMM's environmental evaluation efforts at the Site included the performance of a Phase I Environmental Site Assessment (Phase I ESA) with a supplemental file review, a Site Investigation (SI), a Remedial Investigation (RI), a Supplemental Remedial Investigation (SRI) and a Focused Supplemental Remedial Investigation (FSRI). The results of these investigations are summarized in the Comprehensive Remedial Investigation Report (CRIR) dated July 2007.

Both the Phase I ESA and the SI were conducted prior to the Port Authority's purchase of the Facility in December 2000, while the RI and SRI were conducted subsequent to the transfer of the property from P&G to the Port Authority. The RI and SRI were conducted to characterize the nature and extent of impacts in environmental media at and immediately adjacent to the Site. Based on the results of the RI and SRI, the Port Authority identified 18 AOCs at Site 1. Based on the results of the RI, remedial action was deemed necessary at five AOCs, which are described below.

Interim Remedial Measure (IRM) and Remedial Actions

The Port Authority completed an IRM consisting of excavation and off-Site disposal of soil at five AOCs. The IRM was completed to address petroleum impacts at AOC-Area A, AOC-Area B, AOC-Former Structures (FS-1B), elevated concentrations of arsenic at AOC-Wood Yard; and to delineate the extent of petroleum impacts at AOC-UST2. Separate IRM reports were not generated; however, the IRM is documented in the CRIR, dated July 2007 and the FER dated March 2014. A summary of the IRM activities conducted in connection with each of the five AOCs is presented in the table below.

Summary of Completed IRM		
Area of Concern	**Nature of Concern**	**Remedy**
AOC-Area A	Petroleum impacted soil near several former ASTs.	Soil was excavated and disposed of off-site and post-excavation soil samples were collected. SVOCs detected in post-excavation soil samples were attributed to fill material.
AOC-Area B	Petroleum impacted soil near several former ASTs.	Soil was excavated and disposed of off-site and post-excavation soil samples were collected. SVOCs detected in post-excavation soil samples were attributed to fill material.
AOC-Wood Yard	Elevated concentrations of arsenic in subsurface soil to a maximum depth of approximately 1.5 feet below ground surface.	Soil was excavated and disposed of off-site.
AOC-Former Structures (Vicinity of FS-1B)	Light non-aqueous phase liquid (LNAPL)-impacted soil encountered near soil boring.	Soil was excavated and disposed of off-site and post-excavation soil samples were collected. SVOCs detected in post-excavation soil samples were attributed to fill material.
AOC- UST2	Presence of mobile LNAPL identified during the RI and SRI.	Six test pits were excavated to delineate the horizontal extent of mobile LNAPL. Additional remedial action was performed in accordance with the RAWP.

Following completion of the IRM, construction of an environmental cap and establishment of a Deed Restriction were implemented in accordance with the March 2007 RAWP. Additionally, excavation and off-site disposal of soil and the removal of mobile LNAPL via vacuum extraction at AOC-UST2 were performed in accordance with the RAWP. One VOC, acetone, and four SVOCs (benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene and chrysene) were detected in post-excavation soil samples collected from AOC-UST2 at concentrations similar to concentrations in soil throughout the HHMT - Port Ivory Facility.

As documented in the FER, the results of the remedial activities conducted in VCP Site V-00615-2 (Site 1) indicated that the identified areas of concern were satisfactorily addressed. As mentioned above, NYSDEC issued a "Release and Covenant Not to Sue" determination letter dated May 27, 2014 after reviewing the FER and SMP.

Following completion of the remedial measures, impacted soil and groundwater remain at the Site. As a result, an EC and an IC are required to protect human health and the environment. The Port Authority constructed an environmental cap as an EC and has established a site-wide Deed Restriction as an IC. Additional details regarding the EC and IC are provided below.

Engineering Control

The EC for the Site consists of an environmental cap. As required in the RAWP, exposure to impacted soil and groundwater beneath the site is prevented by an environmental cap placed above the impacted soil. The environmental cap consists of concrete pavement, asphalt pavement, or one foot of crushed stone.

The environmental cap is a permanent control, and must be inspected until the NYSDEC confirms in writing that the Site-wide Deed Restriction is no longer necessary. Inspections of the EC are discussed below.

Institutional Control

The IC is required by the RAWP to (1) implement, maintain, and monitor the EC, (2) prevent future exposure to impacted soil and groundwater remaining beneath the Site, (3) prevent groundwater usage without treatment, and, (4) limit the use and development of the Site to industrial and commercial uses only. The IC for the Site is a Deed Restriction, which the Port Authority recorded at the Richmond County Courthouse.

General provisions of the Deed Restriction include the following:

- Compliance with the Deed Restriction and the NYSDEC-approved SMP;
- Limiting the use and development of the property to industrial/commercial uses only;
- Restricting disturbance of the environmental cap unless in accordance with the SMP;
- Requiring the inspection of the environmental cap at a frequency and in a manner defined in the SMP;
- Requiring the operation and maintenance of the environmental cap as specified in the SMP;
- Restricting the use of groundwater as a source of potable water, without necessary water quality treatment as determined by NYSDOH.

The Deed Restriction will notify future property owners of the impacts at the Site. The Deed Restriction will remain in effect until the NYSDEC informs the Port Authority in writing that the Deed Restriction is no longer needed.

Site Inspections

The SMP requires periodic inspections of VCP Site V-00615-2 to confirm that the cap continues to limit exposure to underlying impacted soil and groundwater. TRC representative Ms. Lindsay Metcalf conducted the first inspection of VCP Site V-00615-2 on March 19, 2014. The inspection confirmed that the environmental cap was in good condition and that it continues to limit exposure to underlying impacted soil and groundwater; however, TRC identified an area of excavation in the northeastern portion of Site 1 (refer to Figure 2). The excavation work began in Fall 2013 in support of construction of the railroad tracks for the New York Container Terminal. Soil was excavated to approximately two to three feet below ground surface in this area.

TRC representatives Ms. Lindsay Metcalf and Mr. Charles Guder conducted the second inspection of VCP Site V-00615-2 on September 29, 2014. The inspection confirmed that the environmental cap was in good condition and that it continues to limit exposure to underlying impacted soil and groundwater. The environmental cap in the area of the track excavation (identified during the March 19, 2014 inspection) was restored in accordance with the SMP.

The conditions of the environmental cap during the March 19, 2014 and September 29, 2014 inspections are presented on Figures 2 and 3. Photographic documentation of the Site inspections is provided in Attachment A.

Groundwater Monitoring Well Installation

Seven monitoring wells (PRW-1 through PRW-7) were installed in Site 1 in accordance with the NYSDEC-approved Site Management Plan[2]. Three of the wells (PRW-1 through PRW-3) were installed at the downgradient edges of selected Site 1 AOCs (AOC-UST2, AOC-Wood Yard, and AOC-Area A, respectively). Well PRW-4 was installed to monitor groundwater quality in the northern portion of the Site. Well PRW-5 was installed south of the Site 1 boundary to avoid active container terminal operations and is intended to monitor groundwater quality along the western portion of the Site (i.e., along Bridge Creek). PRW-6 and PRW-7 were installed along the western property border of Site 1 (i.e., along Bridge Creek).

Prior to the annual groundwater sampling event, the protective standpipe of PRW-7 was damaged and was subsequently repaired. Initial groundwater sampling performed in September 2014 and confirmatory sampling performed in November 2014 showed elevated concentrations of toluene in PRW-7 (discussed further below). Since it appeared that the well may have been damaged during standpipe repair work, PRW-7 was reinstalled in December 2014.

Evidence of contamination (staining, odor, and an elevated photoionization detector reading of 186 ppm) was identified in saturated soil between 15 and 16 feet below ground surface (bgs) during re-installation of PRW-7. One soil sample from this interval was submitted for analysis of VOCs. Toluene was detected in the soil sample at a concentration of 2,900 milligrams per kilogram (mg/kg), which is above the 6 NYCRR Part 375 Commercial Use Soil Cleanup Objective of 500 mg/kg. There were no other VOCs detected in the soil sample.

The locations of the Site 1 monitoring wells as well as the surface water sampling points and gauging stations are shown on Figure 4. Well construction logs are provided in Attachment B.

Groundwater and Surface Water Monitoring

In September 2014, three surface water samples (including one duplicate) were collected from Bridge Creek and groundwater samples were collected from monitoring wells PRW-1, PRW-2, PRW-3, PRW-5, PRW-6, and PRW-7 in accordance with the NYSDEC-approved SMP. Additionally, surface water elevations were measured at three gauging stations along Bridge Creek (refer to Figure 4).

[2] Note that PRW-5 was installed southeast of the location proposed in the SMP to avoid active container terminal operations in the vicinity of the proposed well location.

A groundwater sample was collected from PRW-4 in October 2014 since this well was inaccessible during the September 2014 sampling event. Additionally, a confirmatory groundwater sample was collected from PRW-7 in November 2014. Finally, a groundwater sample was collected from PRW-7 in January 2015 following reinstallation of the monitoring well.

Attached are the tabulated results of the analyses of the groundwater samples and the surface water samples (refer to Tables 1 through 10). Also attached are the groundwater surface elevation contour maps generated from high tide and low tide measurements (refer to Figures 5 and 6). Laboratory analytical data packages are provided in Attachment D. A brief discussion of the analytical results is presented below.

Groundwater Sampling – Summary of Analytical Results

With the exception of the groundwater sample collected from PRW-7 in November 2014 which was analyzed for VOCs only, the groundwater samples were analyzed for volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), metals, pesticides, polychlorinated biphenyls (PCBs), and cyanide.

As shown on the attached tables, the following compounds/parameters were detected at concentrations above NYSDEC Division of Water Technical and Operational Guidance Series (TOGS) 1.1.1 Class GA Standards and Guidance Values (Class GA Values):

- VOCs: benzene (in PRW-7) and toluene (in PRW-4 and in PRW-7).
- SVOCs: benzo(a)anthracene (in PRW-1), benzo(a)pyrene (in PRW-1), bis(2)ethylhexyl)phthalate (in PRW-7), chrysene (in PRW-1), and phenol (in PRW-4 and in PRW-7).
- Metals: antimony (in PRW-1, unfiltered), arsenic (in PRW-1 and PRW-5, both filtered and unfiltered), lead (in PRW-1, unfiltered), and mercury (in PRW-7, unfiltered).

The remaining VOCs, SVOCs and metals were not detected or were detected at concentrations below Class GA Values. There were no PCBs or pesticides detected in the groundwater samples at concentrations above Class GA Values. Additionally, cyanide was not detected at concentrations above the Class GA Standard in the groundwater samples. The results exceeding Class GA Values are shown on Figure 7.

Surface Water Elevations – Summary of Results

The surface water elevations measured at Bridge Creek during high tide and low tide in September 2014 are presented below.

Surface Water Elevations – September 2014		
Gauging Station Number	**Low Tide Elevation (Feet)**	**High Tide Elevation (Feet)**
1	2.18	1.55
2	-0.03	4.32
3	-2.29	2.41

Note: Datum is NAVD 1983

Review of the surface water elevations indicates that during low tide, the surface water flowed north toward Gauging Station No. 3 and the Arthur Kill (located northwest of Site 1). Alternatively, during high tide, surface water flowed north from Gauging Station No. 2 (south of Site 2, Area 2A) to Gauging No. 3 (northwest of Site 1), and also east from Gauging Station No. 2 toward Gauging Station No. 1 (south of Site 2, Area 2B). The results of the gauging event indicate that Bridge Creek is tidally influenced. The locations of the gauging stations are shown on Figure 4.

Surface Water Sampling – Summary of Analytical Results

The three surface water samples (including one duplicate) were analyzed for VOCs, SVOCs, metals, pesticides, PCBs, and cyanide. The metal copper (both filtered and unfiltered in SW-5; and unfiltered in SW-4), and the pesticides heptachlor (in SW-4) and 4,4-DDD (in SW-5) were detected at concentrations exceeding the TOGS 1.1.1 Ambient Water Quality Guidance Values for Class SD Saline Surface Water (AWQGVs). The remaining pesticides and metals were not detected or were detected at concentrations below the AWQSGVs. There were no VOCs, SVOCs, or PCBs detected above AWQSGVs. Cyanide was not detected in the surface water samples at concentrations above the AWQS. The results exceeding the AWQSGVs are shown on Figure 7.

Conclusions – Groundwater and Surface Water Sampling

Although two VOCs (benzene and toluene), five SVOCs (benzo(a)anthracene, benzo(a)pyrene, bis(2)ethylhexyl)phthalate, chrysene and phenol), and four metals (antimony, arsenic, mercury, and lead) were detected in groundwater at concentrations above the Class GA Values, these compounds/parameters were not detected in surface water at concentrations above the AWQSGVs. Similarly, the metal copper and pesticides heptachlor and 4,4-DDD, which were detected in surface water at concentrations which exceed the AWQSGVs, were not found in groundwater at concentrations exceeding Class GA Values. Based on the results, TRC concludes that surface water quality at Bridge Creek has not been degraded by Site groundwater and sediment sampling is not required.

Additionally, with the exception of the concentrations of toluene and benzene detected in groundwater samples collected from PRW-7, the results of the groundwater sampling are consistent with the results of prior groundwater sampling at the Site. Groundwater samples collected in September 2014, November 2014, and January 2015 from PRW-7, located in the northwestern portion of the Site, contained toluene at concentrations of 120,000 µg/L, 130,000 µg/L, and 82,000 µg/L, respectively, which is above the Class GA Value of 5 µg/L. Benzene, at a concentration of 22 µg/L, was also detected above the Class GA Value of 1 µg/L in the sample collected from PRW-7 in January 2015.

Certification of Engineering and Institutional Controls

The annual certification for VCP Site V-00615-2, consisting of a completed NYSDEC Institutional and Engineering Controls Certification Form (Form 1), dated March 6, 2015, is attached. The annual certification was prepared in accordance with the SMP and has been certified by a Qualified Environmental Professional.

Conclusions and Recommendations

The overall objective of the remedial action was to remediate VCP Site V-00615-2 to the satisfaction of the NYSDEC for future industrial and commercial uses. Under the terms of the VCA (Index Number W2-0957-02-07), remediation of the area designated as VCP Site V-00615-2 was completed. As documented in the VCP Site V-00615-2 FER, the results of the remedial activities indicate that the identified areas of concern were satisfactorily addressed. NYSDEC issued a "Release and Covenant Not to Sue" determination after reviewing the FER and SMP.

Based on the evaluation of the inspection and monitoring data, TRC concludes that:

- The EC and IC were in place, performed properly and remain effective;
- The Monitoring Plan was properly implemented. Surface water conditions are consistent with the results of previous sampling events performed at Site 1; and,
- Groundwater conditions are consistent with the results of previous sampling events performed at Site 1 with the exception of the concentrations of toluene and benzene detected in groundwater in one monitoring well, PRW-7.

Continued annual groundwater monitoring and sampling in accordance with the approved SMP for VCP Site V-00615-2 is recommended through the end of the next monitoring period, January 22, 2016. A Work Plan which addresses the toluene and benzene detected in groundwater samples collected from PRW-7 in the northwest portion of the Site will be submitted to the NYSDEC following review of the results of the annual surface water and groundwater sampling scheduled for March 2015.

Please let me know if you have any questions pertaining to this Periodic Review Report.

Very truly yours,
TRC Engineers, Inc.

Lindsay Metcalf
Project Manager

Enclosures:
Figure 1 – Site Location Map
Figure 2 – Engineering Control Map with Environmental Cap (March 19, 2014)
Figure 3 – Engineering Control Map with Environmental Cap (September 29, 2014)
Figure 4 – Groundwater and Surface Water Monitoring Locations and Surface Water Gauging Stations
Figure 5 – Groundwater Elevation Contour Map (High Tide – September 23, 2014))
Figure 6 – Groundwater Elevation Contour Map (Low Tide – September 23, 2014)
Figure 7 – Summary of Groundwater and Surface Water Sampling Results

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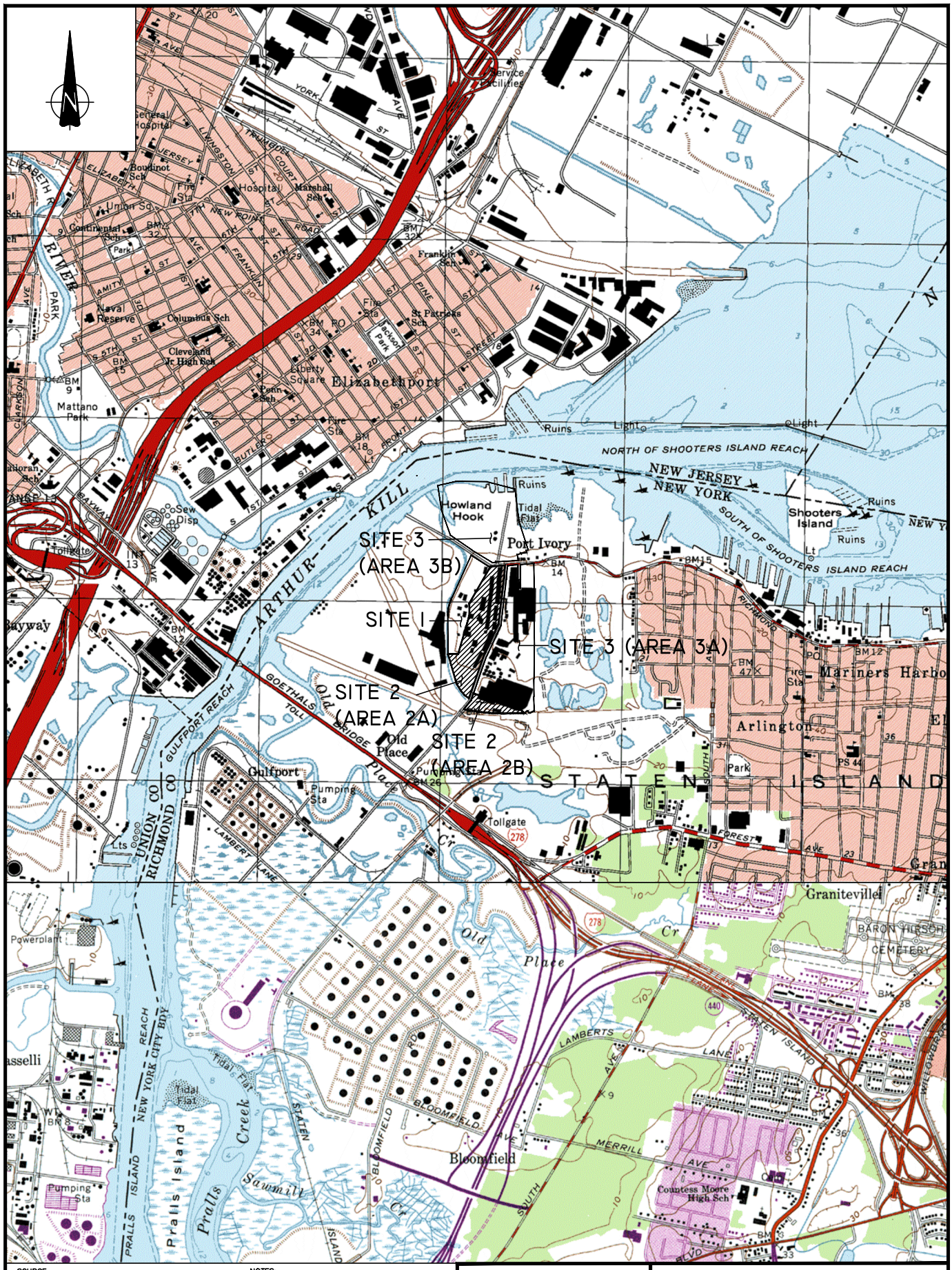
cc. W. Glynn, PANYNJ
V. Carley, PANYNJ
D. Glass, TRC
C. Guder, TRC

FIGURES



SOURCE:
UNITED STATES GEOLOGICAL SURVEY
7.5 MINUTE SERIES TOPOGRAPHIC QUADRANGLES
ELIZABETH AND ARTHUR KILL, NY–NJ,
1967, PHOTOREVISED 1981

NOTES:
HHMT – PORT IVORY FACILITY
CONSISTS OF SITES 1 THROUGH 3.

2000 0 2000 4000
SCALE IN FEET
1" = 2000'
CONTOUR INTERVAL = 10 FEET

THE PORT AUTHORITY OF NY & NJ

HHMT - PORT IVORY FACILITY

SITE LOCATION MAP
FIGURE 1

Date FEBRUARY 2015

LEGEND:

- ASPHALT COVER
- CONCRETE COVER
- CRUSHED STONE COVER
- VCP SITE BOUNDARY
- APPROXIMATE BOUNDARY OF EXCAVATION FOR NEW RAILROAD TRACKS

NOTES:

1. BUILDING NO. 40 HAS BEEN DEMOLISHED. A MODULAR BUILDING MOUNTED ON PIERS HAS BEEN CONSTRUCTED IN THE FOOTPRINT OF FORMER BUILDING 40.

80 0 80 160
SCALE IN FEET

Sheet of

THE PORT AUTHORITY
OF NY & NJ

ENGINEERING PROGRAM MANAGER

No.	Date	Revision	Approved

ENGINEERING DEPARTMENT

HHMT - PORT IVORY FACILITY

SITE 1

Title

ENGINEERING CONTROL MAP - ENVIRONMENTAL CAP (MARCH 19, 2014 INSPECTION)

L.METCALF	H.DELGADO	C.GUDER
Designed by	Drawn by	Checked by

Date FEBRUARY 2015

Contract Number

Drawing Number FIGURE 2

LEGEND:

- ASPHALT COVER
- CONCRETE COVER
- CRUSHED STONE COVER
- VCP SITE BOUNDARY

NOTES:

1. BUILDING NO. 40 HAS BEEN DEMOLISHED. A MODULAR BUILDING MOUNTED ON PIERS HAS BEEN CONSTRUCTED IN THE FOOTPRINT OF FORMER BUILDING 40.

80 0 80 160
SCALE IN FEET

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ENGINEERING PROGRAM MANAGER

No.	Date	Revision	Approved

ENGINEERING DEPARTMENT

HHMT - PORT IVORY FACILITY

SITE 1

Title

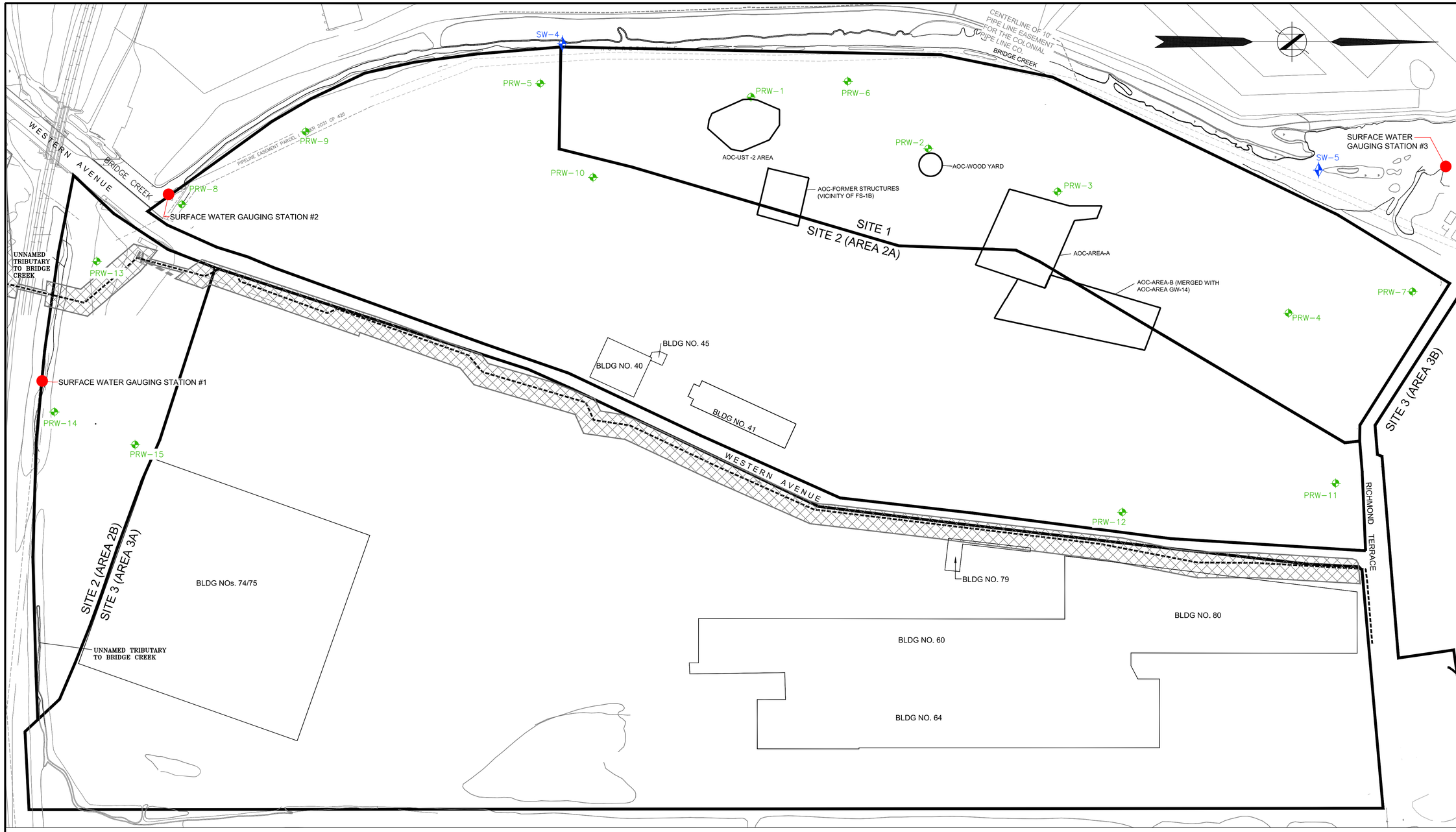
ENGINEERING CONTROL MAP - ENVIRONMENTAL CAP (SEPTEMBER 29, 2014 INSPECTION)

L.METCALF	H.DELGADO	C.GUDER
Designed by	Drawn by	Checked by

Date FEBRUARY 2015

Contract Number

Drawing Number FIGURE 3



LEGEND (SYMBOLS NOT TO SCALE):

- VCP SITE BOUINDARY
- EXISTING BUILDING
- SW-4 — SURFACE WATER SAMPLING LOCATION
- PRW-7 — GROUNDWATER MONITORING WELL LOCATION
- 30" PIPELINE
- APPROXIMATE AREA OF PIPELINE EASEMENT
- APPROXIMATE LOCATION OF SURFACE WATER GAUGING STATION

NOTES:

1. BUILDING NO. 40 HAS BEEN DEMOLISHED. A MODULAR BUILDING MOUNTED ON PIERS HAS BEEN CONSTRUCTED IN THE FOOTPRINT OF FORMER BUILDING 40.
2. VCP – VOLUNTARY CLEANUP PROGRAM

100 0 100 200
SCALE IN FEET

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No.	Date	Revision	Approved

ENGINEERING DEPARTMENT

HHMT-PORT IVORY FACILITY
SITE 1

Title

GROUNDWATER AND SURFACE WATER SAMPLING LOCATIONS AND SURFACE WATER GAUGING STATIONS

LM	HD	CG
Designed by	Drawn by	Checked by

Date MARCH 2015

Contract Number

Drawing Number FIGURE 4

SW-4
SW-5
PRW-1 EL. 2.12
PRW-2 (NOT LOCATED)
PRW-3 EL. 3.73
PRW-4 (INACCESSIBLE)
PRW-5 EL. 2.43
PRW-6 EL. 2.73
PRW-7 (NOT SURVEYED)
PRW-8 EL. 2.25
PRW-9 EL. 2.81
PRW-10 (NOT LOCATED)
PRW-11 EL. 7.80
PRW-12 EL. 15.67
PRW-13 EL. 2.20
PRW-14 EL. 1.92
PRW-15 EL. 3.37

BRIDGE CREEK
WESTERN AVENUE
UNNAMED TRIBUTARY TO BRIDGE CREEK
AOC-UST -2 AREA
AOC-WOOD YARD
AOC-FORMER STRUCTURES (VICINITY OF FS-1B)
AOC-AREA-A
AOC-AREA-B (MERGED WITH AOC-AREA GW-14)
SITE 1
SITE 2 (AREA 2A)
SITE 3 (AREA 3B)
SITE 2 (AREA 2B)
SITE 3 (AREA 3A)
RICHMOND TERRACE
BLDG NO. 45
BLDG NO. 40
BLDG NO. 41
BLDG NOs. 74/75
BLDG NO. 79
BLDG NO. 80
BLDG NO. 60
BLDG NO. 64

3.00 4.00 5.00 6.00 7.00 8.00 9.00 10.00 11.00 12.00 13.00 14.00 15.00

LEGEND (SYMBOLS NOT TO SCALE):

- VCP SITE BOUINDARY
- EXISTING BUILDING
- SW-5 — SURFACE WATER SAMPLING LOCATION
- PRW-7 — GROUNDWATER MONITORING WELL LOCATION
- 30" PIPELINE
- APPROXIMATE AREA OF PIPELINE EASEMENT
- 12.00 — GROUNDWATER SURFACE ELEVATION CONTOUR (FEET)
- EL. 2.12 — GROUNDWATER SURFACE ELEVATION (FEET)

NOTES:

1. BUILDING NO. 40 HAS BEEN DEMOLISHED. A MODULAR BUILDING MOUNTED ON PIERS HAS BEEN CONSTRUCTED IN THE FOOTPRINT OF FORMER BUILDING 40.
2. VCP – VOLUNTARY CLEANUP PROGRAM
3. GROUNDWATER SURFACE ELEVATIONS WERE MEASURED ON 9/23/2014. DATUM: NAD 1983.
4. PRW-7 WAS NOT SURVEYED.
5. PRW-2, PRW-4 AND PRW-10 COULD NOT BE LOCATED OR WERE INACCESSIBLE DURING THE HIGH TIDE GAUGING EVENT.

100 0 100 200
SCALE IN FEET

Sheet of

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ENGINEERING PROGRAM MANAGER

No.	Date	Revision	Approved

ENGINEERING DEPARTMENT

HHMT-PORT IVORY FACILITY
SITE 1

Title

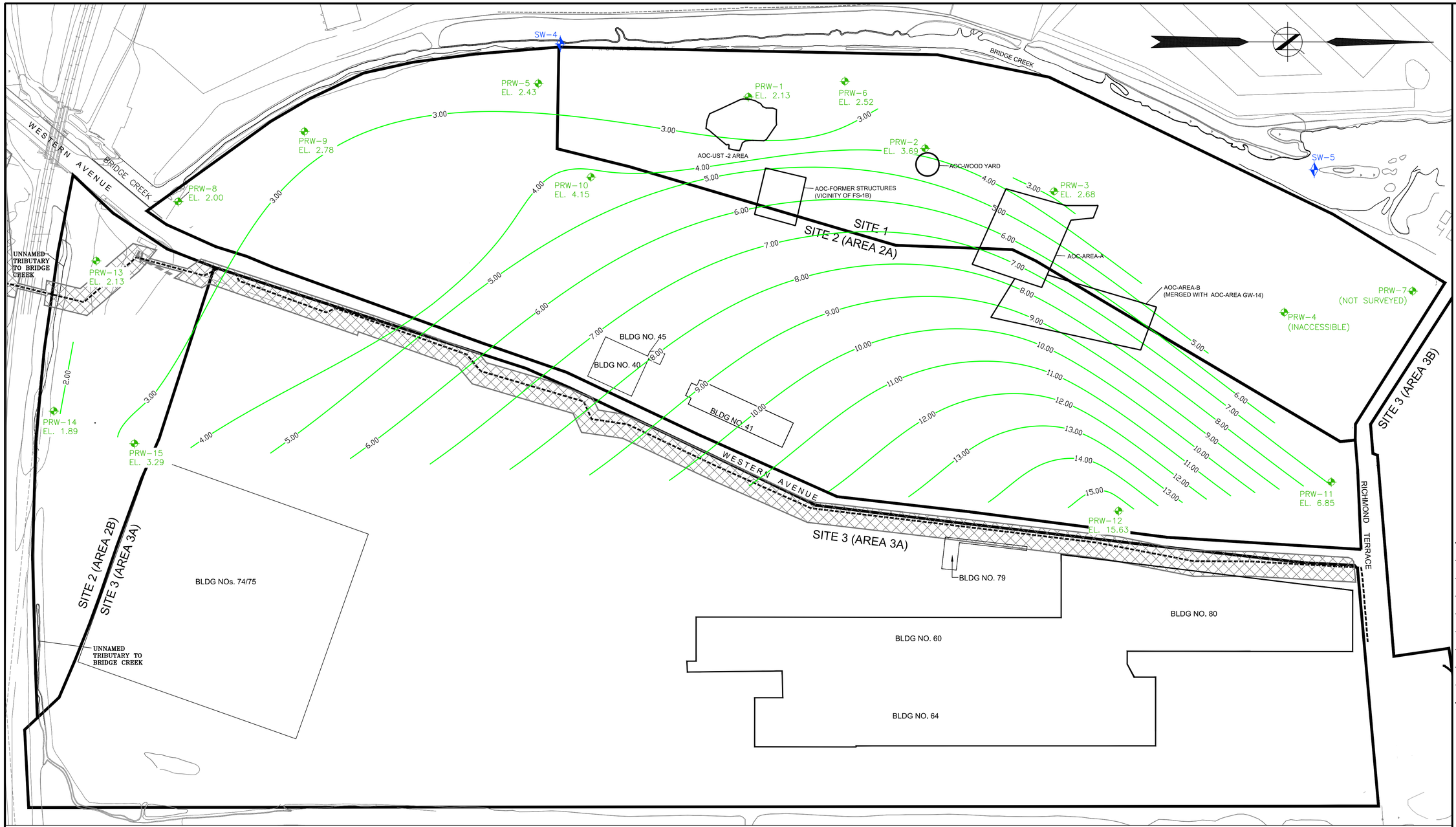
GROUNDWATER SURFACE ELEVATION CONTOUR MAP (HIGH TIDE - SEPTEMBER 23, 2014)

LM	HD	CG
Designed by	Drawn by	Checked by

Date JANUARY 2015

Contract Number

Drawing Number FIGURE 5



LEGEND (SYMBOLS NOT TO SCALE):

- VCP SITE BOUINDARY
- EXISTING BUILDING
- SW-5 — SURFACE WATER SAMPLING LOCATION
- PRW-7 — GROUNDWATER MONITORING WELL LOCATION
- 30" PIPELINE
- APPROXIMATE AREA OF PIPELINE EASEMENT
- 12.00 — GROUNDWATER SURFACE ELEVATION CONTOUR (FEET)
- EL. 2.71 — GROUNDWATER SURFACE ELEVATION (FEET)

NOTES:

1. BUILDING NO. 40 HAS BEEN DEMOLISHED. A MODULAR BUILDING MOUNTED ON PIERS HAS BEEN CONSTRUCTED IN THE FOOTPRINT OF FORMER BUILDING 40.
2. VCP – VOLUNTARY CLEANUP PROGRAM
3. GROUNDWATER SURFACE ELEVATIONS WERE MEASURED ON 9/23/2014. DATUM: NAD 1983.
4. PRW-7 WAS NOT SURVEYED.
5. PRW-4 WAS INACCESSIBLE DURING THE GAUGING EVENT.

100 0 100 200
SCALE IN FEET

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ENGINEERING PROGRAM MANAGER

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HHMT-PORT IVORY FACILITY
SITE 1

Title

GROUNDWATER SURFACE ELEVATION CONTOUR MAP (LOW TIDE - SEPTEMBER 23, 2014)

LM	HD	CG
Designed by	Drawn by	Checked by

Date FEBRUARY 2015

Contract Number

Drawing Number FIGURE 6

SW-4		
CONSTITUENT	NEW YORK STATE AWQSGV FOR CLASS SD SALINE SURFACE WATER	9/23/2014
METALS	(µg/L)	(µg/L)
COPPER (UNFILTERED)	4.8	7.04
PESTICIDES	(µg/L)	(µg/L)
HEPTACHLOR	0.0002	0.012 J

PRW-1		
CONSTITUENT	CLASS GA VALUE	9/23/2014
SVOCs	(µg/L)	(µg/L)
BENZO(A)ANTHRACENE	0.002	0.1 J
BENZO(A)PYRENE	NC*	0.08 J
CHRYSENE	0.002	0.16 J
METALS	**(µg/L)**	**(µg/L)**
ANTIMONY (UNFILTERED)	3	3.53 J
ARSENIC (UNFILTERED)	25	115.9
ARSENIC (FILTERED)	25	100.7
LEAD (UNFILTERED)	25	58.76

SW-5		
CONSTITUENT	NEW YORK STATE AWQSGV FOR CLASS SD SALINE SURFACE WATER	9/23/2014
METALS	(µg/L)	(µg/L)
COPPER (UNFILTERED)	4.8	7.63
COPPER (FILTERED)	4.8	5.83
PESTICIDES	(µg/L)	(µg/L)
4,4'-DDD	0.000011**	0.01 J
FIELD DUPLICATE OF SW-5		
METALS	(µg/L)	(µg/L)
COPPER (UNFILTERED)	4.8	8.27
COPPER (FILTERED)	4.8	5.44
PESTICIDES	(µg/L)	(µg/L)
4,4'-DDD	0.000011**	0.008 J

PRW-7				
CONSTITUENT	CLASS GA VALUE	9/23/2014	11/25/2014	1/6/2015
VOCs	(µg/L)	(µg/L)	(µg/L)	(µg/L)
BENZENE	1	ND	ND	22 J
TOLUENE	5	120,000	130,000	79,000
SVOCs	(µg/L)	(µg/L)	(µg/L)	(µg/L)
BIS(2-ETHYLHEXYL)PHTHALATE	5	9.7	NA	ND
PHENOL	1	2.7 J	NA	ND
METALS	(µg/L)	(µg/L)	(µg/L)	(µg/L)
MERCURY (UNFILTERED)	0.7	ND	NA	2.74

FIELD DUPLICATE OF PRW-7		
CONSTITUENT	CLASS GA VALUE	1/6/2015
VOCs	(µg/L)	(µg/L)
BENZENE	1	21 J
TOLUENE	5	82,000

PRW-5		
CONSTITUENT	CLASS GA VALUE	9/23/2014
METALS	(µg/L)	(µg/L)
ARSENIC (UNFILTERED)	25	47.25
ARSENIC (FILTERED)	25	49.37

PRW-4		
CONSTITUENT	CLASS GA VALUE	10/14/2014
VOCs	(µg/L)	(µg/L)
TOLUENE	5	7.6 J
SVOCS	**(µg/L)**	**(µg/L)**
PHENOL	1	14

SW-4
PRW-5
PRW-9
PRW-10
PRW-1
PRW-6
AOC-UST -2 AREA
PRW-2
AOC-WOOD YARD
AOC-FORMER STRUCTURES (VICINITY OF FS-1B)
PRW-3
AOC-AREA-A
AOC-AREA-B (MERGED WITH AOC-AREA GW-14)
SW-5
PRW-7
PRW-4
PRW-11
PRW-12
BRIDGE CREEK
SITE 1
SITE 2 (AREA 2A)
SITE 3 (AREA 3A)
SITE 3 (AREA 3B)
BLDG NO. 45
BLDG NO. 40
BLDG NO. 41
WESTERN AVENUE
RICHMOND TERRACE

LEGEND (SYMBOLS NOT TO SCALE):

- VCP SITE BOUINDARY
- EXISTING BUILDING
- SW-5 — SURFACE WATER SAMPLING LOCATION
- PRW-7 — GROUNDWATER MONITORING WELL LOCATION
- 30" PIPELINE
- APPROXIMATE AREA OF PIPELINE EASEMENT

NOTES:

1. µg/L = MICROGRAM PER LITER
2. VCP = VOLUNTARY CLEANUP PROGRAM
3. CLASS GA VALUES = NYSDEC DIVISION OF WATER TECHNICAL AND OPERATIONAL GUIDANCE SERIES (TOGS) 1.1.1 CLASS GA STANDARDS AND GUIDANCE VALUES
4. NYS AWQSGV = NEW YORK STATE AMBIENT WATER QUALITY AND GUIDANCE VALUE FOR SD SURFACE WATER CLASSIFICATION AS PUBLISHED IN THE DIVISION OF WATER TECHNICAL AND OPERATIONAL GUIDANCE SERIES (TOGS) 1.1.1 CLASS GA STANDARDS AND GUIDANCE VALUES
5. J = ESTIMATED VALUE
6. NA = NOT ANALYZED
7. ND = COMPOUND NOT DETECTED
8. ONLY RESULTS ABOVE CLASS GA VALUES AND AWQSGVs ARE SHOWN.
9. *BENZO(A)PYRENE EXCEEDANCE IS ANY CONCENTRATION ABOVE THE DETECTION LIMIT.
10. **APPLIES TO THE SUM OF 4,4'-DDD, 4'4-DDT AND 4-4'-DDE.
11. PRW-5 IS CONSIDERED A SITE 1 MONITORING WELL.

80 0 80 160
SCALE IN FEET
1"=80'

Sheet of

THE PORT AUTHORITY OF NY & NJ

ENGINEERING PROGRAM MANAGER

No.	Date	Revision	Approved

ENGINEERING DEPARTMENT

HHMT-PORT IVORY FACILITY
SITE 1

Title

SUMMARY OF GROUNDWATER AND SURFACE WATER SAMPLING RESULTS

LM	HD	CG
Designed by	Drawn by	Checked by

Date FEBRUARY 2015

Contract Number

Drawing Number FIGURE 7

TABLES

Table 1
The Port Authority of New York and New Jersey
Howland Hook Marine Terminal - Port Ivory Facility - Site 1
Staten Island, New York
Summary of Results of Analysis of Groundwater for Volatile Organic Compounds

SAMPLE ID		PRW-01-WG-201409231216			PRW-02-WG-201409231226			PRW-03-WG-201409231351			PRW-04-WG-201410141021			PRW-05-WG-201409231101			PRW-06-WG-201409231106		
SAMPLING DATE		9/23/2014			9/23/2014			9/23/2014			10/14/2014			9/23/2014			9/23/2014		
LAB SAMPLE ID		L1422287-01			L1422287-02			L1422287-03			L1424399-01			L1422287-04			L1422287-05		
SAMPLE MATRIX		WATER			WATER			WATER			WATER			WATER			WATER		
DILUTION FACTOR		1			1			1			10			1			1		
VOLATILE ORGANIC COMPOUNDS (VOCs)	Class GA Value (µg/L)	Result (µg/L)	RL	MDL	Result (µg/L)	RL	MDL	Result (µg/L)	RL	MDL	Result (µg/L)	RL	MDL	Result (µg/L)	RL	MDL	Result (µg/L)	RL	MDL
Methylene chloride	5	ND	2.5	0.7	ND	2.5	0.7	ND	2.5	0.7	ND	25	7	ND	2.5	0.7	ND	2.5	0.7
1,1-Dichloroethane	5	ND	2.5	0.7	ND	2.5	0.7	ND	2.5	0.7	ND	25	7	ND	2.5	0.7	ND	2.5	0.7
Chloroform	7	ND	2.5	0.7	ND	2.5	0.7	ND	2.5	0.7	ND	25	7	ND	2.5	0.7	ND	2.5	0.7
2-Chloroethylvinyl ether	NC	ND	10	0.7	ND	10	0.7	ND	10	0.7	ND	100	7	ND	10	0.7	ND	10	0.7
Carbon tetrachloride	5	ND	0.5	0.13	ND	0.5	0.13	ND	0.5	0.13	ND	5	1.3	ND	0.5	0.13	ND	0.5	0.13
1,2-Dichloropropane	1	ND	1	0.13	ND	1	0.13	ND	1	0.13	ND	10	1.3	ND	1	0.13	ND	1	0.13
Dibromochloromethane	50	ND	0.5	0.15	ND	0.5	0.15	ND	0.5	0.15	ND	5	1.5	ND	0.5	0.15	ND	0.5	0.15
1,1,2-Trichloroethane	1	ND	1.5	0.5	ND	1.5	0.5	ND	1.5	0.5	ND	15	5	ND	1.5	0.5	ND	1.5	0.5
Tetrachloroethene	5	ND	0.5	0.18	ND	0.5	0.18	ND	0.5	0.18	ND	5	1.8	ND	0.5	0.18	ND	0.5	0.18
Chlorobenzene	5	ND	2.5	0.7	ND	2.5	0.7	ND	2.5	0.7	ND	25	7	ND	2.5	0.7	ND	2.5	0.7
1,2-Dichloroethane	0.6	ND	0.5	0.13	ND	0.5	0.13	ND	0.5	0.13	ND	5	1.3	ND	0.5	0.13	ND	0.5	0.13
1,1,1-Trichloroethane	5	ND	2.5	0.7	ND	2.5	0.7	ND	2.5	0.7	ND	25	7	ND	2.5	0.7	ND	2.5	0.7
Bromodichloromethane	50	ND	0.5	0.19	ND	0.5	0.19	ND	0.5	0.19	ND	5	1.9	ND	0.5	0.19	ND	0.5	0.19
trans-1,3-Dichloropropene	NC	ND	0.5	0.16	ND	0.5	0.16	ND	0.5	0.16	ND	5	1.6	ND	0.5	0.16	ND	0.5	0.16
cis-1,3-Dichloropropene	NC	ND	0.5	0.14	ND	0.5	0.14	ND	0.5	0.14	ND	5	1.4	ND	0.5	0.14	ND	0.5	0.14
1,3-Dichloropropene, Total	0.4	ND	0.5	0.14	ND	0.5	0.14	ND	0.5	0.14	ND	5	1.4	ND	0.5	0.14	ND	0.5	0.14
Bromoform	50	ND	2	0.65	ND	2	0.65	ND	2	0.65	ND	20	6.5	ND	2	0.65	ND	2	0.65
1,1,2,2-Tetrachloroethane	5	ND	0.5	0.14	ND	0.5	0.14	ND	0.5	0.14	ND	5	1.4	ND	0.5	0.14	ND	0.5	0.14
Benzene	1	0.2J	0.5	0.16	ND	0.5	0.16	ND	0.5	0.16	ND	5	1.6	ND	0.5	0.16	ND	0.5	0.16
Toluene	5	ND	2.5	0.7	ND	2.5	0.7	ND	2.5	0.7	**7.6J**	25	7	ND	2.5	0.7	ND	2.5	0.7
Ethylbenzene	5	ND	2.5	0.7	ND	2.5	0.7	ND	2.5	0.7	ND	25	7	ND	2.5	0.7	ND	2.5	0.7
Chloromethane	5	ND	2.5	0.7	ND	2.5	0.7	ND	2.5	0.7	ND	25	7	ND	2.5	0.7	ND	2.5	0.7
Bromomethane	5	ND	2.5	0.7	ND	2.5	0.7	ND	2.5	0.7	ND	25	7	ND	2.5	0.7	ND	2.5	0.7
Vinyl chloride	2	ND	1	0.33	ND	1	0.33	ND	1	0.33	ND	10	3.3	ND	1	0.33	ND	1	0.33
Chloroethane	5	ND	2.5	0.7	ND	2.5	0.7	ND	2.5	0.7	ND	25	7	ND	2.5	0.7	ND	2.5	0.7
1,1-Dichloroethene	5	ND	0.5	0.14	ND	0.5	0.14	ND	0.5	0.14	ND	5	1.4	ND	0.5	0.14	ND	0.5	0.14
trans-1,2-Dichloroethene	5	ND	2.5	0.7	ND	2.5	0.7	ND	2.5	0.7	ND	25	7	ND	2.5	0.7	ND	2.5	0.7
Trichloroethene	5	ND	0.5	0.18	ND	0.5	0.18	ND	0.5	0.18	ND	5	1.8	ND	0.5	0.18	ND	0.5	0.18
1,2-Dichlorobenzene	3	ND	2.5	0.7	ND	2.5	0.7	ND	2.5	0.7	ND	25	7	ND	2.5	0.7	ND	2.5	0.7
1,3-Dichlorobenzene	3	ND	2.5	0.7	ND	2.5	0.7	ND	2.5	0.7	ND	25	7	ND	2.5	0.7	ND	2.5	0.7
1,4-Dichlorobenzene	3	ND	2.5	0.7	ND	2.5	0.7	ND	2.5	0.7	ND	25	7	ND	2.5	0.7	ND	2.5	0.7
Acrylonitrile	5	ND	5	1.5	ND	5	1.5	ND	5	1.5	ND	50	15	ND	5	1.5	ND	5	1.5
Acrolein	5	ND	5	0.63	ND	5	0.63	ND	5	0.63	ND	50	6.3	ND	5	0.63	ND	5	0.63

Notes:
Bold and highlighted indicates the value exceeds the corresponding Class GA value.
J - Estimated value
MDL - Method detection limit
NC - No criterion
ND - Compound not detected
RL - Reporting limit
µg/L - Micrograms per liter
* Dilution Factor = 1,000

Table 1
The Port Authority of New York and New Jersey
Howland Hook Marine Terminal - Port Ivory Facility - Site 1
Staten Island, New York
Summary of Results of Analysis of Groundwater for Volatile Organic Compounds

SAMPLE ID		PRW-07-WG-201409231351			PRW-07-WG-20141125-0931			PRW-07-WG-201501061316			WG-201501061316-FD-1 (Duplicate of PRW-07)			WQ-201409230000-TB-1 (Trip Blank)			WQ-201410140000-TB-1 (Trip Blank)			WQ-20150106000-TB-1 (Trip Blank)			WQ-201409231300-FB-1 (Field Blank)		
SAMPLING DATE		9/23/2014			11/25/2014			1/6/2015			1/6/2015			9/23/2014			10/10/2014			1/5/2015			9/23/2014		
LAB SAMPLE ID		L1422287-06			L1428583-01			L1500236-04			L1500236-01			L1422287-09			L1424399-02			L1500236-02			L1422287-10		
SAMPLE MATRIX		WATER			WATER			WATER			WATER			WATER			WATER			WATER			WATER		
DILUTION FACTOR		2000			2000			100			100			1			1			1			1		
VOLATILE ORGANIC COMPOUNDS (VOCs)	Class GA Value (µg/L)	Result (µg/L)	RL	MDL	Result (µg/L)	RL	MDL	Result (µg/L)	RL	MDL	Result (µg/L)	RL	MDL	Result (µg/L)	RL	MDL	Result (µg/L)	RL	MDL	Result (µg/L)	RL	MDL	Result (µg/L)	RL	MDL
Methylene chloride	5	ND	5,000	1400	ND	500	140	ND	250	70	ND	250	70	ND	2.5	0.7	ND	2.5	0.7	ND	2.50	0.7	ND	2.5	0.7
1,1-Dichloroethane	5	ND	5,000	1400	ND	500	140	ND	250	70	ND	250	70	ND	2.5	0.7	ND	2.5	0.7	ND	2.50	0.7	ND	2.5	0.7
Chloroform	7	ND	5,000	1400	ND	500	140	ND	250	70	ND	250	70	ND	2.5	0.7	ND	2.5	0.7	ND	2.50	0.7	ND	2.5	0.7
2-Chloroethylvinyl ether	NC	ND	20,000	1400	ND	2000	140	ND	1,000	70	ND	1,000	70	ND	10	0.7	ND	10	0.7	ND	10.00	0.7	ND	10	0.7
Carbon tetrachloride	5	ND	1,000	270	ND	100	27	ND	50	13	ND	50	13	ND	0.5	0.13	ND	0.5	0.13	ND	0.50	0.13	ND	0.5	0.13
1,2-Dichloropropane	1	ND	2,000	270	ND	200	27	ND	100	13	ND	100	13	ND	1	0.13	ND	1	0.13	ND	1.00	0.13	ND	1	0.13
Dibromochloromethane	50	ND	1,000	300	ND	100	30	ND	50	15	ND	50	15	ND	0.5	0.15	ND	0.5	0.15	ND	0.50	0.15	ND	0.5	0.15
1,1,2-Trichloroethane	1	ND	3,000	1000	ND	300	100	ND	150	50	ND	150	50	ND	1.5	0.5	ND	1.5	0.5	ND	1.50	0.5	ND	1.5	0.5
Tetrachloroethene	5	ND	1,000	360	ND	100	36	ND	50	18	ND	50	18	ND	0.5	0.18	ND	0.5	0.18	ND	0.50	0.18	ND	0.5	0.18
Chlorobenzene	5	ND	5,000	1400	ND	500	140	ND	250	70	ND	250	70	ND	2.5	0.7	ND	2.5	0.7	ND	2.50	0.7	ND	2.5	0.7
1,2-Dichloroethane	0.6	ND	1,000	260	ND	100	26	ND	50	13	ND	50	13	ND	0.5	0.13	ND	0.5	0.13	ND	0.50	0.13	ND	0.5	0.13
1,1,1-Trichloroethane	5	ND	5,000	1400	ND	500	140	ND	250	70	ND	250	70	ND	2.5	0.7	ND	2.5	0.7	ND	2.50	0.7	ND	2.5	0.7
Bromodichloromethane	50	ND	1,000	380	ND	100	38	ND	50	19	ND	50	19	ND	0.5	0.19	ND	0.5	0.19	ND	0.50	0.19	ND	0.5	0.19
trans-1,3-Dichloropropene	NC	ND	1,000	330	ND	100	33	ND	50	16	ND	50	16	ND	0.5	0.16	ND	0.5	0.16	ND	0.50	0.16	ND	0.5	0.16
cis-1,3-Dichloropropene	NC	ND	1,000	290	ND	100	29	ND	50	14	ND	50	14	ND	0.5	0.14	ND	0.5	0.14	ND	0.50	0.14	ND	0.5	0.14
1,3-Dichloropropene, Total	0.4	ND	1,000	290	ND	100	29	ND	50	14	ND	50	14	ND	0.5	0.14	ND	0.5	0.14	ND	0.50	0.14	ND	0.5	0.14
Bromoform	50	ND	4,000	1300	ND	400	130	ND	200	65	ND	200	65	ND	2	0.65	ND	2	0.65	ND	2.00	0.65	ND	2	0.65
1,1,2,2-Tetrachloroethane	5	ND	1,000	290	ND	100	29	ND	50	14	ND	50	14	ND	0.5	0.14	ND	0.5	0.14	ND	0.50	0.14	ND	0.5	0.14
Benzene	1	ND	1,000	320	ND	100	32	**22 J**	50	16	**21 J**	50	16	ND	0.5	0.16	ND	0.5	0.16	ND	0.50	0.16	ND	0.5	0.16
Toluene	5	**120,000**	5,000	1400	**130,000**	5000	1400	**79,000***	2,500	700	**82,000***	2,500	700	ND	2.5	0.7	ND	2.5	0.7	ND	2.50	0.7	ND	2.5	0.7
Ethylbenzene	5	ND	5,000	1400	ND	500	140	ND	250	70	ND	250	70	ND	2.5	0.7	ND	2.5	0.7	ND	2.50	0.7	ND	2.5	0.7
Chloromethane	5	ND	5,000	1400	ND	500	140	ND	250	70	ND	250	70	ND	2.5	0.7	ND	2.5	0.7	ND	2.50	0.7	ND	2.5	0.7
Bromomethane	5	ND	5,000	1400	ND	500	140	ND	250	70	ND	250	70	ND	2.5	0.7	ND	2.5	0.7	ND	2.50	0.7	ND	2.5	0.7
Vinyl chloride	2	ND	2,000	660	ND	200	66	ND	100	33	ND	100	33	ND	1	0.33	ND	1	0.33	ND	1.00	0.33	ND	1	0.33
Chloroethane	5	ND	5,000	1400	ND	500	140	ND	250	70	ND	250	70	ND	2.5	0.7	ND	2.5	0.7	ND	2.50	0.7	ND	2.5	0.7
1,1-Dichloroethene	5	ND	1,000	280	ND	100	28	ND	50	14	ND	50	14	ND	0.5	0.14	ND	0.5	0.14	ND	0.50	0.14	ND	0.5	0.14
trans-1,2-Dichloroethene	5	ND	5,000	1400	ND	500	140	ND	250	70	ND	250	70	ND	2.5	0.7	ND	2.5	0.7	ND	2.50	0.7	ND	2.5	0.7
Trichloroethene	5	ND	1,000	350	ND	100	35	ND	50	18	ND	50	18	ND	0.5	0.18	ND	0.5	0.18	ND	0.50	0.18	ND	0.5	0.18
1,2-Dichlorobenzene	3	ND	5,000	1400	ND	500	140	ND	250	70	ND	250	70	ND	2.5	0.7	ND	2.5	0.7	ND	2.50	0.7	ND	2.5	0.7
1,3-Dichlorobenzene	3	ND	5,000	1400	ND	500	140	ND	250	70	ND	250	70	ND	2.5	0.7	ND	2.5	0.7	ND	2.50	0.7	ND	2.5	0.7
1,4-Dichlorobenzene	3	ND	5,000	1400	ND	500	140	ND	250	70	ND	250	70	ND	2.5	0.7	ND	2.5	0.7	ND	2.50	0.7	ND	2.5	0.7
Acrylonitrile	5	ND	10,000	3000	ND	500	140	ND	500	150	ND	500	150	ND	5	1.5	ND	5	1.5	ND	5.00	1.5	ND	5	1.5
Acrolein	5	ND	10,000	1300	ND	500	140	ND	500	63	ND	500	63	ND	5	0.63	ND	5	0.63	ND	5.00	0.63	ND	5	0.63

Notes:
Bold and highlighted indicates the value exceeds the corresponding Class GA value.
J - Estimated value
MDL - Method detection limit
NC - No criterion
ND - Compound not detected
RL - Reporting limit
µg/L - Micrograms per liter
* Dilution Factor = 1,000

Table 2
The Port Authority of New York and New Jersey
Howland Hook Marine Terminal - Port Ivory Facility - Site 1
Staten Island, New York
Summary of Results of Analysis of Groundwater for Semi-Volatile Organic Compounds

SAMPLE ID		PRW-01-WG-201409231216			PRW-02-WG-201409231226			PRW-03-WG-201409231351			PRW-04-WG-201410141021			PRW-05-WG-201409231101			PRW-06-WG-201409231106			PRW-07-WG-201409231351			PRW-07-WG-201501061316			WG-201501061316-FD-1 (Duplicate of PRW-07)			WQ-201409231300-FB-1 (Field Blank)		
SAMPLING DATE		9/23/2014			9/23/2014			9/23/2014			10/14/2014			9/23/2014			9/23/2014			9/23/2014			1/6/2015			1/6/2015			9/23/2014		
LAB SAMPLE ID		L1422287-01			L1422287-02			L1422287-03			L1424399-01			L1422287-04			L1422287-05			L1422287-06			L1500236-04			L1500236-01			L1422287-10		
SAMPLE MATRIX		WATER			WATER			WATER			WATER			WATER			WATER			WATER			WATER			WATER			WATER		
SEMI-VOLATILE ORGANIC COMPOUNDS (SVOCs)	Class GA Value (µg/L)	Result (µg/L)	RL	MDL	Result (µg/L)	RL	MDL	Result (µg/L)	RL	MDL	Result (µg/L)	RL	MDL	Result (µg/L)	RL	MDL	Result (µg/L)	RL	MDL	Result (µg/L)	RL	MDL	Result (µg/L)	RL	MDL	Result (µg/L)	RL	MDL	Result (µg/L)	RL	MDL
1,2,4-Trichlorobenzene	5	ND	5	0.21	ND	5	0.21	ND	5	0.21	ND	5	0.21	ND	5	0.21	ND	5	0.21	ND	5	0.21	ND	5	0.21	ND	5	0.21	ND	5	0.21
Benzidine	5	ND	20	5.2	ND	20	5.2	ND	20	5.2	ND	20	5.2	ND	20	5.2	ND	20	5.2	ND	20	5.2	NA			NA			ND	20	5.2
Bis(2-chloroethyl)ether	1	ND	2	0.41	ND	2	0.41	ND	2	0.41	ND	2	0.41	ND	2	0.41	ND	2	0.41	ND	2	0.41	ND	2	0.41	ND	2	0.41	ND	2	0.41
3,3'-Dichlorobenzidine	5	ND	5	0.48	ND	5	0.48	ND	5	0.48	ND	5	0.48	ND	5	0.48	ND	5	0.48	ND	5	0.48	ND	5	0.48	ND	5	0.48	ND	5	0.48
2,4-Dinitrotoluene	5	ND	5	1	ND	5	1	ND	5	1	ND	5	1	ND	5	1	ND	5	1	ND	5	1	ND	5	1	ND	5	1	ND	5	1
2,6-Dinitrotoluene	5	ND	5	0.89	ND	5	0.89	ND	5	0.89	ND	5	0.89	ND	5	0.89	ND	5	0.89	ND	5	0.89	ND	5	0.89	ND	5	0.89	ND	5	0.89
(Hydr)Azobenzene	5	ND	2	0.54	ND	2	0.54	ND	2	0.54	ND	2	0.54	ND	2	0.54	ND	2	0.54	ND	2	0.54	NA			NA			ND	2	0.54
4-Chlorophenyl phenyl ether	NC	ND	2	0.36	ND	2	0.36	ND	2	0.36	ND	2	0.36	ND	2	0.36	ND	2	0.36	ND	2	0.36	ND	2	0.36	ND	2	0.36	ND	2	0.36
4-Bromophenyl phenyl ether	NC	ND	2	0.43	ND	2	0.43	ND	2	0.43	ND	2	0.43	ND	2	0.43	ND	2	0.43	ND	2	0.43	ND	2	0.43	ND	2	0.43	ND	2	0.43
Bis(2-chloroisopropyl)ether	5	ND	2	0.6	ND	2	0.6	ND	2	0.6	ND	2	0.6	ND	2	0.6	ND	2	0.6	ND	2	0.6	ND	2	0.6	ND	2	0.6	ND	2	0.6
Bis(2-chloroethoxy)methane	5	ND	5	0.6	ND	5	0.6	ND	5	0.6	ND	5	0.6	ND	5	0.6	ND	5	0.6	ND	5	0.6	ND	5	0.6	ND	5	0.6	ND	5	0.6
Hexachlorocyclopentadiene	5	ND	20	0.58	ND	20	0.58	ND	20	0.58	ND	20	0.58	ND	20	0.58	ND	20	0.58	ND	20	0.58	ND	20	0.58	ND	20	0.58	ND	20	0.58
Isophorone	50	ND	5	0.79	ND	5	0.79	ND	5	0.79	ND	5	0.79	ND	5	0.79	ND	5	0.79	ND	5	0.79	ND	5	0.79	ND	5	0.79	ND	5	0.79
Nitrobenzene	0.4	ND	2	0.4	ND	2	0.4	ND	2	0.4	ND	2	0.4	ND	2	0.4	ND	2	0.4	ND	2	0.4	ND	2	0.4	ND	2	0.4	ND	2	0.4
NDPA/DPA	50	ND	2	0.34	ND	2	0.34	ND	2	0.34	ND	2	0.34	ND	2	0.34	ND	2	0.34	ND	2	0.34	ND	2	0.34	ND	2	0.34	ND	2	0.34
n-Nitrosodi-n-propylamine	NC	ND	5	0.64	ND	5	0.64	ND	5	0.64	ND	5	0.64	ND	5	0.64	ND	5	0.64	ND	5	0.64	ND	5	0.64	ND	5	0.64	ND	5	0.64
Bis(2-ethylhexyl)phthalate	5	ND	3	0.93	4.2	3	0.93	4.2	3	0.93	ND	3	0.93	3.2	3	0.93	3.2	3	0.93	**9.7**	3	0.93	ND	3	0.93	ND	3	0.93	ND	3	0.93
Butyl benzyl phthalate	50	ND	5	1.1	ND	5	1.1	ND	5	1.1	ND	5	1.1	ND	5	1.1	ND	5	1.1	ND	5	1.1	ND	5	1.1	ND	5	1.1	ND	5	1.1
Di-n-butylphthalate	50	ND	5	0.77	ND	5	0.77	ND	5	0.77	ND	5	0.77	ND	5	0.77	ND	5	0.77	ND	5	0.77	ND	5	0.77	ND	5	0.77	ND	5	0.77
Di-n-octylphthalate	50	ND	5	1.2	ND	5	1.2	ND	5	1.2	ND	5	1.2	ND	5	1.2	ND	5	1.2	ND	5	1.2	ND	5	1.2	ND	5	1.2	ND	5	1.2
Diethyl phthalate	50	ND	5	0.39	ND	5	0.39	ND	5	0.39	ND	5	0.39	ND	5	0.39	ND	5	0.39	5	5	0.39	ND	5	0.39	2.2 J	5	0.39	ND	5	0.39
Dimethyl phthalate	50	ND	5	0.33	ND	5	0.33	ND	5	0.33	ND	5	0.33	ND	5	0.33	ND	5	0.33	ND	5	0.33	ND	5	0.33	ND	5	0.33	ND	5	0.33
n-Nitrosodimethylamine	NC	ND	2	0.5	ND	2	0.5	ND	2	0.5	ND	2	0.5	ND	2	0.5	ND	2	0.5	ND	2	0.5	NA			NA			ND	2	0.5
2,4,6-Trichlorophenol	NC	ND	5	0.78	ND	5	0.78	ND	5	0.78	ND	5	0.78	ND	5	0.78	ND	5	0.78	ND	5	0.78	ND	5	0.78	ND	5	0.78	ND	5	0.78
p-Chloro-m-cresol	NC	ND	2	0.54	ND	2	0.54	ND	2	0.54	ND	2	0.54	ND	2	0.54	ND	2	0.54	ND	2	0.54	ND	2	0.54	ND	2	0.54	ND	2	0.54
2-Chlorophenol	NC	ND	2	0.58	ND	2	0.58	ND	2	0.58	ND	2	0.58	ND	2	0.58	ND	2	0.58	ND	2	0.58	ND	2	0.58	ND	2	0.58	ND	2	0.58
2,4-Dichlorophenol	5	ND	5	0.56	ND	5	0.56	ND	5	0.56	ND	5	0.56	ND	5	0.56	ND	5	0.56	ND	5	0.56	ND	5	0.56	ND	5	0.56	ND	5	0.56
2,4-Dimethylphenol	50	ND	5	0.58	ND	5	0.58	ND	5	0.58	ND	5	0.58	ND	5	0.58	ND	5	0.58	ND	5	0.58	1.3 J	5	0.58	0.99 J	5	0.58	ND	5	0.58
2-Nitrophenol	NC	ND	10	1	ND	10	1	ND	10	1	ND	10	1	ND	10	1	ND	10	1	ND	10	1	ND	10	1	ND	10	1	ND	10	1
4-Nitrophenol	NC	ND	10	1.1	ND	10	1.1	ND	10	1.1	ND	10	1.1	ND	10	1.1	ND	10	1.1	ND	10	1.1	ND	10	1.1	ND	10	1.1	ND	10	1.1
2,4-Dinitrophenol	10	ND	20	1.4	ND	20	1.4	ND	20	1.4	ND	20	1.4	ND	20	1.4	ND	20	1.4	ND	20	1.4	ND	20	1.4	ND	20	1.4	ND	20	1.4
4,6-Dinitro-o-cresol	NC	ND	10	1.4	ND	10	1.4	ND	10	1.4	ND	10	1.4	ND	10	1.4	ND	10	1.4	ND	10	1.4	ND	10	1.4	ND	10	1.4	ND	10	1.4
Phenol	1	ND	5	0.27	ND	5	0.27	ND	5	0.27	**14**	5	0.27	ND	5	0.27	ND	5	0.27	**2.7J**	5	0.27	ND	5	0.27	ND	5	0.27	ND	5	0.27
Acenaphthene	20	1.4	0.2	0.06	ND	0.2	0.06	ND	0.2	0.06	0.19J	0.4	0.13	ND	0.2	0.06	ND	0.2	0.06	2	0.2	0.06	ND	1	0.32	ND	1	0.32	ND	0.2	0.06
2-Chloronaphthalene	10	ND	0.2	0.07	ND	0.2	0.07	ND	0.2	0.07	ND	0.4	0.13	ND	0.2	0.07	ND	0.2	0.07	ND	0.2	0.07	ND	1	0.33	ND	1	0.33	ND	0.2	0.07
Fluoranthene	50	0.2	0.2	0.04	ND	0.2	0.04	0.06J	0.2	0.04	0.16J	0.4	0.09	ND	0.2	0.04	ND	0.2	0.04	0.77	0.2	0.04	ND	1	0.22	0.23 J	1	0.22	ND	0.2	0.04
Hexachlorobutadiene	0.5	ND	0.5	0.07	ND	0.5	0.07	ND	0.5	0.07	ND	1	0.14	ND	0.5	0.07	ND	0.5	0.07	ND	0.5	0.07	ND	2.5	0.36	ND	2.5	0.36	ND	0.5	0.07
Naphthalene	10	ND	0.2	0.06	ND	0.2	0.06	ND	0.2	0.06	9.9	0.4	0.13	ND	0.2	0.06	ND	0.2	0.06	2.6	0.2	0.06	ND	1	0.32	0.69 J	1	0.32	ND	0.2	0.06
Benzo(a)anthracene	0.002	**0.1J**	0.2	0.06	ND	0.2	0.06	ND	0.2	0.06	ND	0.4	0.11	ND	0.2	0.06	ND	0.2	0.06	ND	0.2	0.06	ND	1	0.28	ND	1	0.28	ND	0.2	0.06
Benzo(a)pyrene	NC*	**0.08J**	0.2	0.07	ND	0.2	0.07	ND	0.2	0.07	ND	0.4	0.14	ND	0.2	0.07	ND	0.2	0.07	ND	0.2	0.07	ND	1	0.34	ND	1	0.34	ND	0.2	0.07
Benzo(b)fluoranthene	0.002	ND	0.2	0.07	ND	0.2	0.07	ND	0.2	0.07	ND	0.4	0.14	ND	0.2	0.07	ND	0.2	0.07	ND	0.2	0.07	ND	1	0.36	ND	1	0.36	ND	0.2	0.07
Benzo(k)fluoranthene	0.002	ND	0.2	0.07	ND	0.2	0.07	ND	0.2	0.07	ND	0.4	0.14	ND	0.2	0.07	ND	0.2	0.07	ND	0.2	0.07	ND	1	0.34	ND	1	0.34	ND	0.2	0.07
Chrysene	0.002	**0.16J**	0.2	0.05	ND	0.2	0.05	ND	0.2	0.05	ND	0.4	0.1	ND	0.2	0.05	ND	0.2	0.05	ND	0.2	0.05	ND	1	0.24	ND	1	0.24	ND	0.2	0.05
Acenaphthylene	NC	ND	0.2	0.05	ND	0.2	0.05	ND	0.2	0.05	ND	0.4	0.1	ND	0.2	0.05	ND	0.2	0.05	ND	0.2	0.05	ND	1	0.25	ND	1	0.25	ND	0.2	0.05
Anthracene	50	0.59	0.2	0.06	ND	0.2	0.06	0.3	0.2	0.06	0.22J	0.4	0.13	ND	0.2	0.06	ND	0.2	0.06	0.71	0.2	0.06	ND	1	0.32	ND	1	0.32	ND	0.2	0.06
Benzo(ghi)perylene	NC	ND	0.2	0.07	ND	0.2	0.07	ND	0.2	0.07	ND	0.4	0.14	ND	0.2	0.07	ND	0.2	0.07	ND	0.2	0.07	ND	1	0.35	ND	1	0.35	ND	0.2	0.07
Fluorene	50	0.43	0.2	0.06	ND	0.2	0.06	ND	0.2	0.06	0.19J	0.4	0.11	ND	0.2	0.06	ND	0.2	0.06	1.6	0.2	0.06	ND	1	0.28	ND	1	0.28	ND	0.2	0.06
Phenanthrene	50	ND	0.2	0.06	ND	0.2	0.06	ND	0.2	0.06	0.66	0.4	0.13	ND	0.2	0.06	ND	0.2	0.06	4.4	0.2	0.06	ND	1	0.32	ND	1	0.32	ND	0.2	0.06
Dibenzo(a,h)anthracene	NC	ND	0.2	0.07	ND	0.2	0.07	ND	0.2	0.07	ND	0.4	0.15	ND	0.2	0.07	ND	0.2	0.07	ND	0.2	0.07	ND	1	0.36	ND	1	0.36	ND	0.2	0.07
Indeno(1,2,3-cd)Pyrene	0.002	ND	0.2	0.08	ND	0.2	0.08	ND	0.2	0.08	ND	0.4	0.16	ND	0.2	0.08	ND	0.2	0.08	ND	0.2	0.08	ND	1	0.4	ND	1	0.4	ND	0.2	0.08
Pyrene	50	0.79	0.2	0.06	ND	0.2	0.06	0.06J	0.2	0.06	ND	0.4	0.11	ND	0.2	0.06	ND	0.2	0.06	0.5	0.2	0.06	ND	1	0.28	ND	1	0.28	ND	0.2	0.06
Pentachlorophenol	1	ND	0.8	0.19	ND	0.8	0.19	ND	0.8	0.19	ND	1.6	0.37	ND	0.8	0.19	ND	0.8	0.19	ND	0.8	0.19	ND	4	0.94	ND	4	0.94	ND	0.8	0.19
Hexachlorobenzene	0.04	ND	0.8	0.01	ND	0.8	0.01	ND	0.8	0.01	ND	1.6	0.03	ND	0.8	0.01	ND	0.8	0.01	ND	0.8	0.01	ND	4	0.07	ND	4	0.07	ND	0.8	0.01
Hexachloroethane	5	ND	0.8	0.07	ND	0.8	0.07	ND	0.8	0.07	ND	1.6	0.13	ND	0.8	0.07	ND	0.8	0.07	ND	0.8	0.07	ND	4	0.32	ND	4	0.32	ND	0.8	0.07

Notes:
Bold and highlighted indicates the value exceeds the corresponding Class GA value.
J - Estimated value
MDL - Method detection limit
NA - Not Analyzed
NC - No criterion
ND - Compound not detected
RL - Reporting limit
µg/L - Micrograms per liter
* Benzo(a)pyrene exceedance is any concentration above the detection limit

Table 3
The Port Authority of New York and New Jersey
Howland Hook Marine Terminal - Port Ivory Facility - Site 1
Staten Island, New York
Summary of Results of Analysis of Groundwater for Metals

SAMPLE ID		PRW-01-WG-201409231216						PRW-02-WG-201409231226						PRW-03-WG-201409231351					
SAMPLING DATE		9/23/2014						9/23/2014						9/23/2014					
LAB SAMPLE ID		L1422287-01						L1422287-02						L1422287-03					
SAMPLE MATRIX		WATER						WATER						WATER					
SAMPLE PREPARATION		FILTERED			UNFILTERED			FILTERED			UNFILTERED			FILTERED			UNFILTERED		
METALS	Class GA Value (µg/L)	Result (µg/L)	RL	MDL	Result (µg/L)	RL	MDL	Result (µg/L)	RL	MDL	Result (µg/L)	RL	MDL	Result (µg/L)	RL	MDL	Result (µg/L)	RL	MDL
Antimony	3	1.01J	6	0.06	**3.53J**	6	0.06	0.83J	6	0.06	1.85J	6	0.06	1.07J	6	0.06	1.73J	6	0.06
Arsenic	25	**100.7**	2	0.12	**115.9**	2	0.12	4.87	2	0.12	3.99	2	0.12	22	2	0.12	18.27	2	0.12
Beryllium	3	ND	0.5	0.15	0.36J	0.5	0.15	ND	0.5	0.15	ND	0.5	0.15	ND	0.5	0.15	ND	0.5	0.15
Cadmium	5	ND	0.2	0.05	0.33	0.2	0.05	ND	0.2	0.05	ND	0.2	0.05	ND	0.2	0.05	ND	0.2	0.05
Chromium	50	0.83J	1	0.25	7.74	1	0.25	0.82J	1	0.25	1.29	1	0.25	0.9J	1	0.25	1.16	1	0.25
Copper	200	0.53J	1	0.26	63.66	1	0.26	0.69J	1	0.26	2.18	1	0.26	0.65J	1	0.26	1.88	1	0.26
Lead	25	ND	1	0.12	**58.76**	1	0.12	0.14J	1	0.12	1.12	1	0.12	ND	1	0.12	0.44J	1	0.12
Mercury	0.7	ND	0.2	0.06	0.16J	0.2	0.06	ND	0.2	0.06	ND	0.2	0.06	ND	0.2	0.06	ND	0.2	0.06
Nickel	100	3.25	2	0.08	16.88	2	0.08	2.84	2	0.08	3.01	2	0.08	4.27	2	0.08	4.39	2	0.08
Selenium	10	3.41J	5	1	2.31J	5	1	2.18J	5	1	1.76J	5	1	2.76J	5	1	2.16J	5	1
Silver	50	ND	0.4	0.07	0.35J	0.4	0.07	ND	0.4	0.07	ND	0.4	0.07	ND	0.4	0.07	ND	0.4	0.07
Thallium	0.5	ND	0.5	0.05	0.24J	0.5	0.05	ND	0.5	0.05	ND	0.5	0.05	ND	0.5	0.05	ND	0.5	0.05
Zinc	2000	ND	10	2.56	851.4	200	51.2	3.41J	10	2.56	9.09J	10	2.56	2.87J	10	2.56	6.03J	10	2.56

Notes:

Bold and highlighted indicates the value exceeds the corresponding Class GA value.

J - Estimated value

MDL - Method detection limit

NA - Not Analyzed

NC - No criterion

ND - Compound not detected

RL - Reporting limit

µg/L - Micrograms per liter

Table 3
The Port Authority of New York and New Jersey
Howland Hook Marine Terminal - Port Ivory Facility - Site 1
Staten Island, New York
Summary of Results of Analysis of Groundwater for Metals

SAMPLE ID		PRW-04-WG-201410141021						PRW-05-WG-201409231101						PRW-06-WG-201409231106						PRW-07-WG-201409231351					
SAMPLING DATE		10/14/2014						9/23/2014						9/23/2014						9/23/2014					
LAB SAMPLE ID		L1424399-01						L1422287-04						L1422287-05						L1422287-06					
SAMPLE MATRIX		WATER						WATER						WATER						WATER					
SAMPLE PREPARATION		FILTERED			UNFILTERED			FILTERED			UNFILTERED			FILTERED			UNFILTERED			FILTERED			UNFILTERED		
METALS	Class GA Value (µg/L)	Result (µg/L)	RL	MDL	Result (µg/L)	RL	MDL	Result (µg/L)	RL	MDL	Result (µg/L)	RL	MDL	Result (µg/L)	RL	MDL	Result (µg/L)	RL	MDL	Result (µg/L)	RL	MDL	Result (µg/L)	RL	MDL
Antimony	3	0.4J	0.5	0.1	1.7	0.5	0.1	0.52J	6	0.06	1.21J	6	0.06	0.45J	6	0.06	0.98J	6	0.06	0.57J	6	0.06	0.89J	6	0.06
Arsenic	25	4.2	0.5	0.1	5.7	0.5	0.1	**49.37**	2	0.12	**47.25**	2	0.12	4.53	2	0.12	4.39	2	0.12	5.65	2	0.12	4.46	2	0.12
Beryllium	3	ND	0.5	0.2	ND	0.5	0.2	ND	0.5	0.15	ND	0.5	0.15	ND	0.5	0.15	ND	0.5	0.15	ND	0.5	0.15	ND	0.5	0.15
Cadmium	5	ND	0.2	0.1	ND	0.2	0.1	ND	0.2	0.05	ND	0.2	0.05	ND	0.2	0.05	0.09J	0.2	0.05	ND	0.2	0.05	ND	0.2	0.05
Chromium	50	1.9J	2	0.3	2.1	1	0.3	1.19	1	0.25	0.96J	1	0.25	0.97J	1	0.25	1.61	1	0.25	1.05	1	0.25	2.8	1	0.25
Copper	200	0.4J	1	0.3	3.7	1	0.3	0.58J	1	0.26	1.66	1	0.26	0.54J	1	0.26	5.33	1	0.26	0.39J	1	0.26	1.51	1	0.26
Lead	25	1.2	1	0.1	2.6	1	0.1	ND	1	0.12	0.62J	1	0.12	ND	1	0.12	2.47	1	0.12	ND	1	0.12	1.95	1	0.12
Mercury	0.7	ND	0.2	0.06	0.15J	0.2	0.06	ND	0.2	0.06	ND	0.2	0.06	ND	0.2	0.06	ND	0.2	0.06	ND	0.2	0.06	ND	0.2	0.06
Nickel	100	35.2	1	0.1	39	1	0.1	3.22	2	0.08	3.03	2	0.08	3.22	2	0.08	6.11	2	0.08	4.97	2	0.08	5.61	2	0.08
Selenium	10	10	5	1	1J	5	1	2.54J	5	1	1.61J	5	1	2.71J	5	1	1.72J	5	1	2.57J	5	1	1.39J	5	1
Silver	50	ND	0.3	0.1	ND	0.3	0.1	ND	0.4	0.07	ND	0.4	0.07	ND	0.4	0.07	ND	0.4	0.07	ND	0.4	0.07	ND	0.4	0.07
Thallium	0.5	ND	0.2	0.1	ND	0.2	0.1	ND	0.5	0.05	ND	0.5	0.05	ND	0.5	0.05	0.06J	0.5	0.05	ND	0.5	0.05	ND	0.5	0.05
Zinc	2000	15.1	10	2.6	194.8	10	2.6	5.17J	10	2.56	5.52J	10	2.56	3.55J	10	2.56	35.71	10	2.56	3.29J	10	2.56	5.66J	10	2.56

Notes:

Bold and highlighted indicates the value exceeds the corresponding Class GA value.

J - Estimated value

MDL - Method detection limit

NA - Not Analyzed

NC - No criterion

ND - Compound not detected

RL - Reporting limit

µg/L - Micrograms per liter

Table 3
The Port Authority of New York and New Jersey
Howland Hook Marine Terminal - Port Ivory Facility - Site 1
Staten Island, New York
Summary of Results of Analysis of Groundwater for Metals

SAMPLE ID		PRW-07-WG-201501061316						WQ-201501061316-FD-1 (Duplicate of PRW-07)						WQ-201409231300-FB-1 (Field Blank)					
SAMPLING DATE		1/6/2015						1/6/2015						9/23/2014					
LAB SAMPLE ID		L1500236-04						L1500236-01						L1422287-10					
SAMPLE MATRIX		WATER						WATER						WATER					
SAMPLE PREPARATION		FILTERED			UNFILTERED			FILTERED			UNFILTERED			FILTERED			UNFILTERED		
METALS	Class GA Value (µg/L)	Result (µg/L)	RL	MDL	Result (µg/L)	RL	MDL	Result (µg/L)	RL	MDL	Result (µg/L)	RL	MDL	Result (µg/L)	RL	MDL	Result (µg/L)	RL	MDL
Antimony	3	NA			0.8 J	2	0.06	NA			0.89 J	2	0.06	1.13J	6	0.06	0.72J	6	0.06
Arsenic	25	NA			2.82	0.5	0.12	NA			2.54	0.5	0.12	1.87J	2	0.12	1.65J	2	0.12
Beryllium	3	NA			ND	0.5	0.15	NA			ND	0.5	0.15	ND	0.5	0.15	ND	0.5	0.15
Cadmium	5	NA			ND	0.2	0.05	NA			0.12 J	0.2	0.05	ND	0.2	0.05	ND	0.2	0.05
Chromium	50	NA			14.82	2	0.25	NA			3.08	2	0.25	0.55J	1	0.25	0.41J	1	0.25
Copper	200	NA			1.84	1	0.26	NA			1.1	1	0.26	ND	1	0.26	0.3J	1	0.26
Lead	25	NA			1.4	1	0.12	NA			0.97 J	1	0.12	ND	1	0.12	ND	1	0.12
Mercury	0.7	NA			**2.74**	0.2	0.06	NA			ND	0.2	0.06	ND	0.2	0.06	ND	0.2	0.06
Nickel	100	NA			17.18	1	0.08	NA			11.94	1	0.08	1.1J	2	0.08	1.22J	2	0.08
Selenium	10	NA			ND	5	1	NA			ND	5	1	1.67J	5	1	ND	5	1
Silver	50	NA			ND	0.4	0.07	NA			ND	0.4	0.07	ND	0.4	0.07	ND	0.4	0.07
Thallium	0.5	NA			ND	0.5	0.05	NA			ND	0.5	0.05	ND	0.5	0.05	ND	0.5	0.05
Zinc	2000	NA			22.27	10	2.56	NA			15.74	10	2.56	ND	10	2.56	ND	10	2.56

Notes:

Bold and highlighted indicates the value exceeds the corresponding Class GA value.

J - Estimated value

MDL - Method detection limit

NA - Not Analyzed

NC - No criterion

ND - Compound not detected

RL - Reporting limit

µg/L - Micrograms per liter

Table 4
The Port Authority of New York and New Jersey
Howland Hook Marine Terminal - Port Ivory Facility - Site 1
Staten Island, New York
Summary of Results of Analysis of Groundwater for Pesticides

SAMPLE ID		PRW-01-WG-201409231216			PRW-02-WG-201409231226			PRW-03-WG-201409231351			PRW-04-WG-201410141021			PRW-05-WG-201409231101		
SAMPLING DATE		9/23/2014			9/23/2014			9/23/2014			10/14/2014			9/23/2014		
LAB SAMPLE ID		L1422287-01			L1422287-02			L1422287-03			L1424399-01			L1422287-04		
SAMPLE MATRIX		WATER			WATER			WATER			WATER			WATER		
PESTICIDES	Class GA Value (µg/L)	Result (µg/L)	RL	MDL	Result (µg/L)	RL	MDL	Result (µg/L)	RL	MDL	Result (µg/L)	RL	MDL	Result (µg/L)	RL	MDL
Delta-BHC	0.04	ND	0.02	0.005	ND	0.02	0.005	ND	0.02	0.005	ND	0.1	0.023	ND	0.02	0.005
Lindane	NC	ND	0.02	0.004	ND	0.02	0.004	ND	0.02	0.004	ND	0.1	0.022	ND	0.02	0.004
Alpha-BHC	0.01	ND	0.02	0.004	ND	0.02	0.004	ND	0.02	0.004	ND	0.1	0.022	ND	0.02	0.004
Beta-BHC	0.04	ND	0.02	0.006	ND	0.02	0.006	ND	0.02	0.006	ND	0.1	0.028	ND	0.02	0.006
Heptachlor	0.04	ND	0.02	0.003	ND	0.02	0.003	ND	0.02	0.003	ND	0.1	0.016	ND	0.02	0.003
Aldrin	NC	ND	0.02	0.002	ND	0.02	0.002	ND	0.02	0.002	ND	0.1	0.011	ND	0.02	0.002
Heptachlor epoxide	0.03	ND	0.02	0.004	ND	0.02	0.004	ND	0.02	0.004	ND	0.1	0.021	ND	0.02	0.004
Endrin	NC	ND	0.04	0.004	ND	0.04	0.004	ND	0.04	0.004	ND	0.2	0.021	ND	0.04	0.004
Endrin ketone	5	ND	0.04	0.005	ND	0.04	0.005	ND	0.04	0.005	ND	0.2	0.024	ND	0.04	0.005
Dieldrin	0.004	ND	0.04	0.004	ND	0.04	0.004	ND	0.04	0.004	ND	0.2	0.021	ND	0.04	0.004
4,4'-DDE	0.2	ND	0.04	0.004	ND	0.04	0.004	ND	0.04	0.004	ND	0.2	0.019	ND	0.04	0.004
4,4'-DDD	0.3	ND	0.04	0.005	ND	0.04	0.005	ND	0.04	0.005	ND	0.2	0.023	ND	0.04	0.005
4,4'-DDT	0.2	ND	0.04	0.004	ND	0.04	0.004	ND	0.04	0.004	ND	0.2	0.022	ND	0.04	0.004
Endosulfan I	NC	ND	0.02	0.003	ND	0.02	0.003	ND	0.02	0.003	ND	0.1	0.017	ND	0.02	0.003
Endosulfan II	NC	ND	0.04	0.005	ND	0.04	0.005	ND	0.04	0.005	ND	0.2	0.026	ND	0.04	0.005
Endosulfan sulfate	NC	ND	0.04	0.005	ND	0.04	0.005	ND	0.04	0.005	ND	0.2	0.024	ND	0.04	0.005
Methoxychlor	35	ND	0.2	0.007	ND	0.2	0.007	ND	0.2	0.007	ND	1	0.034	ND	0.2	0.007
Toxaphene	0.06	ND	0.2	0.063	ND	0.2	0.063	ND	0.2	0.063	ND	1	0.314	ND	0.2	0.063
cis-Chlordane	NC	ND	0.02	0.007	ND	0.02	0.007	ND	0.02	0.007	ND	0.1	0.033	ND	0.02	0.007
trans-Chlordane	NC	ND	0.02	0.006	ND	0.02	0.006	ND	0.02	0.006	ND	0.1	0.031	0.007JPI	0.02	0.006
Chlordane	0.05	ND	0.2	0.046	ND	0.2	0.046	ND	0.2	0.046	ND	1	0.232	ND	0.2	0.046

Notes:
I - The lower value for the two columns has been reported due to obvious interference.
J - Estimated value
MDL - Method detection limit
NC - No criterion
ND - Compound not detected

P - The Relative Percent Difference between the results for the two columns exceeds the method-specified criteria
RL - Reporting limit
µg/L - Micrograms per liter

Table 4
The Port Authority of New York and New Jersey
Howland Hook Marine Terminal - Port Ivory Facility - Site 1
Staten Island, New York
Summary of Results of Analysis of Groundwater for Pesticides

SAMPLE ID		PRW-06-WG-201409231106			PRW-07-WG-201409231351			PRW-07-WG-201501061316			WG-201501061316-FD-1 (Duplicate of PRW-07)			WQ-201409231300-FB-1 (Field Blank)		
SAMPLING DATE		9/23/2014			9/23/2014			1/6/2015			1/6/2015			9/23/2014		
LAB SAMPLE ID		L1422287-05			L1422287-06			L1500236-04			L1500236-01			L1422287-10		
SAMPLE MATRIX		WATER			WATER			WATER			WATER			WATER		
PESTICIDES	Class GA Value (µg/L)	Result (µg/L)	RL	MDL	Result (µg/L)	RL	MDL	Result (µg/L)	RL	MDL	Result (µg/L)	RL	MDL	Result (µg/L)	RL	MDL
Delta-BHC	0.04	ND	0.02	0.005	ND	0.02	0.005	ND	0.02	0.005	ND	0.02	0.005	ND	0.02	0.005
Lindane	NC	ND	0.02	0.004	ND	0.02	0.004	ND	0.02	0.004	ND	0.02	0.004	ND	0.02	0.004
Alpha-BHC	0.01	ND	0.02	0.004	ND	0.02	0.004	ND	0.02	0.004	ND	0.02	0.004	ND	0.02	0.004
Beta-BHC	0.04	ND	0.02	0.006	ND	0.02	0.006	ND	0.02	0.006	ND	0.02	0.006	ND	0.02	0.006
Heptachlor	0.04	ND	0.02	0.003	ND	0.02	0.003	ND	0.02	0.003	ND	0.02	0.003	ND	0.02	0.003
Aldrin	NC	ND	0.02	0.002	ND	0.02	0.002	ND	0.02	0.002	ND	0.02	0.002	ND	0.02	0.002
Heptachlor epoxide	0.03	ND	0.02	0.004	ND	0.02	0.004	ND	0.02	0.004	ND	0.02	0.004	ND	0.02	0.004
Endrin	NC	ND	0.04	0.004	ND	0.04	0.004	ND	0.04	0.004	ND	0.04	0.004	ND	0.04	0.004
Endrin ketone	5	ND	0.04	0.005	ND	0.04	0.005	ND	0.04	0.005	ND	0.04	0.005	ND	0.04	0.005
Dieldrin	0.004	ND	0.04	0.004	ND	0.04	0.004	ND	0.04	0.004	ND	0.04	0.004	ND	0.04	0.004
4,4'-DDE	0.2	ND	0.04	0.004	ND	0.04	0.004	ND	0.04	0.004	ND	0.04	0.004	ND	0.04	0.004
4,4'-DDD	0.3	ND	0.04	0.005	ND	0.04	0.005	ND	0.04	0.005	ND	0.04	0.005	ND	0.04	0.005
4,4'-DDT	0.2	ND	0.04	0.004	ND	0.04	0.004	ND	0.04	0.004	ND	0.04	0.004	ND	0.04	0.004
Endosulfan I	NC	ND	0.02	0.003	ND	0.02	0.003	ND	0.02	0.003	ND	0.02	0.003	ND	0.02	0.003
Endosulfan II	NC	ND	0.04	0.005	ND	0.04	0.005	ND	0.04	0.005	ND	0.04	0.005	ND	0.04	0.005
Endosulfan sulfate	NC	ND	0.04	0.005	ND	0.04	0.005	ND	0.04	0.005	ND	0.04	0.005	ND	0.04	0.005
Methoxychlor	35	ND	0.2	0.007	ND	0.2	0.007	ND	0.2	0.007	ND	0.2	0.007	ND	0.2	0.007
Toxaphene	0.06	ND	0.2	0.063	ND	0.2	0.063	ND	0.2	0.063	ND	0.2	0.063	ND	0.2	0.063
cis-Chlordane	NC	ND	0.02	0.007	ND	0.02	0.007	ND	0.02	0.007	ND	0.02	0.007	0.01J	0.02	0.007
trans-Chlordane	NC	ND	0.02	0.006	0.01JPI	0.02	0.006	ND	0.02	0.006	ND	0.02	0.006	0.008JPI	0.02	0.006
Chlordane	0.05	ND	0.2	0.046	ND	0.2	0.046	ND	0.2	0.046	ND	0.2	0.046	ND	0.2	0.046

Notes:
I - The lower value for the two columns has been reported due to obvious interference.
J - Estimated value
MDL - Method detection limit
NC - No criterion
ND - Compound not detected

P - The Relative Percent Difference between the results for the two columns exceeds the method-specified criteria
RL - Reporting limit
µg/L - Micrograms per liter

Table 5
The Port Authority of New York and New Jersey
Howland Hook Marine Terminal - Port Ivory Facility - Site 1
Staten Island, New York
Summary of Results of Analysis of Groundwater for PCBs and Cyanide

SAMPLE ID		PRW-01-WG-201409231216			PRW-02-WG-201409231226			PRW-03-WG-201409231351			PRW-04-WG-201410141021			PRW-05-WG-201409231101			PRW-06-WG-201409231106			PRW-07-WG-201409231351			PRW-07-WG-201501061316			WG-201501061316-FD-1 (Duplicate of PRW-07)			WQ-201409231300-FB-1 (Field Blank)		
SAMPLING DATE		9/23/2014			9/23/2014			9/23/2014			10/14/2014			9/23/2014			9/23/2014			9/23/2014			1/6/2015			1/6/2015			9/23/2014		
LAB SAMPLE ID		L1422287-01			L1422287-02			L1422287-03			L1424399-01			L1422287-04			L1422287-05			L1422287-06			L1500236-04			L1500236-01			L1422287-10		
SAMPLE MATRIX		WATER			WATER			WATER			WATER			WATER			WATER			WATER			WATER			WATER			WATER		
POLYCHLORINATED BIPHENYLS (PCBs)	Class GA Value (µg/L)	Result (µg/L)	RL	MDL	Result (µg/L)	RL	MDL	Result (µg/L)	RL	MDL	Result (µg/L)	RL	MDL	Result (µg/L)	RL	MDL	Result (µg/L)	RL	MDL	Result (µg/L)	RL	MDL	Result (µg/L)	RL	MDL	Result (µg/L)	RL	MDL	Result (µg/L)	RL	MDL
Aroclor 1016	NC	ND	0.083	0.055	ND	0.083	0.055	ND	0.083	0.055	ND	0.083	0.055	ND	0.083	0.055	ND	0.083	0.055	ND	0.083	0.055	ND	0.083	0.055	ND	0.083	0.055	ND	0.083	0.055
Aroclor 1221	NC	ND	0.083	0.053	ND	0.083	0.053	ND	0.083	0.053	ND	0.083	0.053	ND	0.083	0.053	ND	0.083	0.053	ND	0.083	0.053	ND	0.083	0.053	ND	0.083	0.053	ND	0.083	0.053
Aroclor 1232	NC	ND	0.083	0.031	ND	0.083	0.031	ND	0.083	0.031	ND	0.083	0.031	ND	0.083	0.031	ND	0.083	0.031	ND	0.083	0.031	ND	0.083	0.031	ND	0.083	0.031	ND	0.083	0.031
Aroclor 1242	NC	ND	0.083	0.06	ND	0.083	0.06	ND	0.083	0.06	ND	0.083	0.06	ND	0.083	0.06	ND	0.083	0.06	ND	0.083	0.06	ND	0.083	0.06	ND	0.083	0.06	ND	0.083	0.06
Aroclor 1248	NC	ND	0.083	0.051	ND	0.083	0.051	ND	0.083	0.051	ND	0.083	0.051	ND	0.083	0.051	ND	0.083	0.051	ND	0.083	0.051	ND	0.083	0.051	ND	0.083	0.051	ND	0.083	0.051
Aroclor 1254	NC	ND	0.083	0.034	ND	0.083	0.034	ND	0.083	0.034	ND	0.083	0.034	ND	0.083	0.034	ND	0.083	0.034	ND	0.083	0.034	ND	0.083	0.034	ND	0.083	0.034	ND	0.083	0.034
Aroclor 1260	NC	ND	0.083	0.032	ND	0.083	0.032	ND	0.083	0.032	ND	0.083	0.032	ND	0.083	0.032	ND	0.083	0.032	ND	0.083	0.032	ND	0.083	0.032	ND	0.083	0.032	ND	0.083	0.032
Aroclor 1262	NC	ND	0.083	0.029	ND	0.083	0.029	ND	0.083	0.029	ND	0.083	0.029	ND	0.083	0.029	ND	0.083	0.029	ND	0.083	0.029	ND	0.083	0.029	ND	0.083	0.029	ND	0.083	0.029
Aroclor 1268	NC	ND	0.083	0.038	ND	0.083	0.038	ND	0.083	0.038	ND	0.083	0.038	ND	0.083	0.038	ND	0.083	0.038	ND	0.083	0.038	ND	0.083	0.038	ND	0.083	0.038	ND	0.083	0.038
PCBs, Total	0.09	ND	0.083	0.029	ND	0.083	0.029	ND	0.083	0.029	ND	0.083	0.029	ND	0.083	0.029	ND	0.083	0.029	ND	0.083	0.029	ND	0.083	0.029	ND	0.083	0.029	ND	0.083	0.029
CYANIDE	Class GA Value (µg/L)	Result (µg/L)	RL	MDL	Result (µg/L)	RL	MDL	Result (µg/L)	RL	MDL	Result (µg/L)	RL	MDL	Result (µg/L)	RL	MDL	Result (µg/L)	RL	MDL	Result (µg/L)	RL	MDL	Result (µg/L)	RL	MDL	Result (µg/L)	RL	MDL	Result (µg/L)	RL	MDL
Cyanide, Total	200	16	5	1	97	5	1	69	5	1	12	5	1	1J	5	1	10	5	1	6	5	1	2 J	5	1	2 J	5	1	ND	5	1

Notes:
J - Estimated value
MDL - Method detection limit
NC - No criterion
ND - Compound not detected
RL - Reporting limit
µg/L - Micrograms per liter

Table 6
The Port Authority of New York and New Jersey
Howland Hook Marine Terminal - Port Ivory Facility - Site 1
Staten Island, New York
Summary of Results of Analysis of Surface Water for Volatile Organic Compounds

SAMPLE ID		SW-4-WS-201409231530			SW-5-WS-201409231515			WS-201409231515-FD-1		
SAMPLING DATE		9/23/2014			9/23/2014			9/23/2014		
LAB SAMPLE ID		L1422287-07			L1422287-08			L1422287-11		
SAMPLE MATRIX		WATER			WATER			WATER		
DILUTION FACTOR		1			1			1		
VOLATILE ORGANIC COMPOUNDS (VOCs)	New York State AWQSGV for Class SD Saline Surface Water (µg/L)	Result (µg/L)	RL	MDL	Result (µg/L)	RL	MDL	Result (µg/L)	RL	MDL
Methylene chloride	200	ND	2.5	0.7	ND	2.5	0.7	ND	2.5	0.7
1,1-Dichloroethane	NC	ND	2.5	0.7	ND	2.5	0.7	ND	2.5	0.7
Chloroform	NC	ND	2.5	0.7	ND	2.5	0.7	ND	2.5	0.7
Carbon tetrachloride	NC	ND	10	0.7	ND	10	0.7	ND	10	0.7
1,2-Dichloropropane	NC	ND	0.5	0.13	ND	0.5	0.13	ND	0.5	0.13
Dibromochloromethane	NC	ND	1	0.13	ND	1	0.13	ND	1	0.13
1,1,2-Trichloroethane	NC	ND	0.5	0.15	ND	0.5	0.15	ND	0.5	0.15
2-Chloroethylvinyl ether	NC	ND	1.5	0.5	ND	1.5	0.5	ND	1.5	0.5
Tetrachloroethene	1	ND	0.5	0.18	ND	0.5	0.18	ND	0.5	0.18
Chlorobenzene	50	ND	2.5	0.7	ND	2.5	0.7	ND	2.5	0.7
1,2-Dichloroethane	NC	ND	0.5	0.13	ND	0.5	0.13	ND	0.5	0.13
1,1,1-Trichloroethane	NC	ND	2.5	0.7	ND	2.5	0.7	ND	2.5	0.7
Bromodichloromethane	NC	ND	0.5	0.19	ND	0.5	0.19	ND	0.5	0.19
trans-1,3-Dichloropropene	NC	ND	0.5	0.16	ND	0.5	0.16	ND	0.5	0.16
cis-1,3-Dichloropropene	NC	ND	0.5	0.14	ND	0.5	0.14	ND	0.5	0.14
1,3-Dichloropropene, Total	NC	ND	0.5	0.14	ND	0.5	0.14	ND	0.5	0.14
Bromoform	NC	ND	2	0.65	ND	2	0.65	ND	2	0.65
1,1,2,2-Tetrachloroethane	NC	ND	0.5	0.14	ND	0.5	0.14	ND	0.5	0.14
Benzene	10	ND	0.5	0.16	ND	0.5	0.16	ND	0.5	0.16
Toluene	430	ND	2.5	0.7	ND	2.5	0.7	ND	2.5	0.7
Ethylbenzene	41	ND	2.5	0.7	ND	2.5	0.7	ND	2.5	0.7
Chloromethane	NC	ND	2.5	0.7	ND	2.5	0.7	ND	2.5	0.7
Bromomethane	NC	ND	2.5	0.7	ND	2.5	0.7	ND	2.5	0.7
Vinyl chloride	NC	ND	1	0.33	ND	1	0.33	ND	1	0.33
Chloroethane	NC	ND	2.5	0.7	ND	2.5	0.7	ND	2.5	0.7
1,1-Dichloroethene	NC	ND	0.5	0.14	ND	0.5	0.14	ND	0.5	0.14
trans-1,2-Dichloroethene	NC	ND	2.5	0.7	ND	2.5	0.7	ND	2.5	0.7
Trichloroethene	40	ND	0.5	0.18	ND	0.5	0.18	ND	0.5	0.18
1,2-Dichlorobenzene	50*	ND	2.5	0.7	ND	2.5	0.7	ND	2.5	0.7
1,3-Dichlorobenzene	50*	ND	2.5	0.7	ND	2.5	0.7	ND	2.5	0.7
1,4-Dichlorobenzene	50*	ND	2.5	0.7	ND	2.5	0.7	ND	2.5	0.7
Acrolein	NC	ND	5	1.5	ND	5	1.5	ND	5	1.5
Acrylonitrile	NC	ND	5	0.63	ND	5	0.63	ND	5	0.63

Notes:

AWQSGV = Ambient Water Quality Standards and Guidance Values for SD water classification as published in the Division of Water Technical and Operational Guidance Series (1.1.1).
RL - Reporting limit
NC - No criterion
ND - Compound not detected
MDL - Method detection limit
µg/L - Micrograms per liter
* Applies to the sum of 1,2-, 1-3-, and 1,4-dichlorobenzene.
WS-201409231515-FD-1 is a duplicate of sample SW-5

Table 7
The Port Authority of New York and New Jersey
Howland Hook Marine Terminal - Port Ivory Facility - Site 1
Staten Island, New York
Summary of Results of Analysis of Surface Water for Semi-Volatile Organic Compounds

SAMPLE ID		SW-4-WS-201409231530			SW-5-WS-201409231515			WS-201409231515-FD-1		
SAMPLING DATE		9/23/2014			9/23/2014			9/23/2014		
LAB SAMPLE ID		L1422287-07			L1422287-08			L1422287-11		
SAMPLE MATRIX		WATER			WATER			WATER		
DILUTION FACTOR		1			1			1		
SEMI-VOLATILE ORGANIC COMPOUNDS (SVOCs)	New York State AWQSGV for Class SD Saline Surface Water (µg/L)	Result (µg/L)	RL	MDL	Result (µg/L)	RL	MDL	Result (µg/L)	RL	MDL
1,2,4-Trichlorobenzene	50	ND	5	0.21	ND	5	0.21	ND	5	0.21
Benzidine	NC	ND	20	5.2	ND	20	5.2	ND	20	5.2
Bis(2-chloroethyl)ether	NC	ND	2	0.41	ND	2	0.41	ND	2	0.41
3,3'-Dichlorobenzidine	NC	ND	5	0.48	ND	5	0.48	ND	5	0.48
2,4-Dinitrotoluene	NC	ND	5	1	ND	5	1	ND	5	1
2,6-Dinitrotoluene	NC	ND	5	0.89	ND	5	0.89	ND	5	0.89
(Hydr)Azobenzene	NC	ND	2	0.54	ND	2	0.54	ND	2	0.54
4-Chlorophenyl phenyl ether	NC	ND	2	0.36	ND	2	0.36	ND	2	0.36
4-Bromophenyl phenyl ether	NC	ND	2	0.43	ND	2	0.43	ND	2	0.43
Bis(2-chloroisopropyl)ether	NC	ND	2	0.6	ND	2	0.6	ND	2	0.6
Bis(2-chloroethoxy)methane	NC	ND	5	0.6	ND	5	0.6	ND	5	0.6
Hexachlorocyclopentadiene	NC	ND	20	0.58	ND	20	0.58	ND	20	0.58
Isophorone	NC	ND	5	0.79	ND	5	0.79	ND	5	0.79
Nitrobenzene	NC	ND	2	0.4	ND	2	0.4	ND	2	0.4
NDPA/DPA	NC	ND	2	0.34	ND	2	0.34	ND	2	0.34
n-Nitrosodi-n-propylamine	NC	ND	5	0.64	ND	5	0.64	ND	5	0.64
Bis(2-ethylhexyl)phthalate	NC	ND	3	0.93	ND	3	0.93	ND	3	0.93
Butyl benzyl phthalate	NC	ND	5	1.1	ND	5	1.1	ND	5	1.1
Di-n-butylphthalate	NC	ND	5	0.77	ND	5	0.77	ND	5	0.77
Di-n-octylphthalate	NC	ND	5	1.2	ND	5	1.2	ND	5	1.2
Diethyl phthalate	NC	ND	5	0.39	ND	5	0.39	ND	5	0.39
Dimethyl phthalate	NC	ND	5	0.33	ND	5	0.33	ND	5	0.33
n-Nitrosodimethylamine	NC	ND	2	0.5	ND	2	0.5	ND	2	0.5
2,4,6-Trichlorophenol	NC	ND	5	0.78	ND	5	0.78	ND	5	0.78
p-Chloro-m-cresol	NC	ND	2	0.54	ND	2	0.54	ND	2	0.54
2-Chlorophenol	NC	ND	2	0.58	ND	2	0.58	ND	2	0.58
2,4-Dichlorophenol	NC	ND	5	0.56	ND	5	0.56	ND	5	0.56
2,4-Dimethylphenol	1,000	ND	5	0.58	ND	5	0.58	ND	5	0.58
2-Nitrophenol	NC	ND	10	1	ND	10	1	ND	10	1
4-Nitrophenol	NC	ND	10	1.1	ND	10	1.1	ND	10	1.1
2,4-Dinitrophenol	400	ND	20	1.4	ND	20	1.4	ND	20	1.4
4,6-Dinitro-o-cresol	NC	ND	10	1.4	ND	10	1.4	ND	10	1.4
Phenol	NC	ND	5	0.27	ND	5	0.27	ND	5	0.27
Acenaphthene	60	0.1J	0.2	0.06	0.07J	0.2	0.06	ND	0.4	0.13
2-Chloronaphthalene	NC	ND	0.2	0.07	ND	0.2	0.07	ND	0.4	0.13
Fluoranthene	NC	ND	0.2	0.04	ND	0.2	0.04	ND	0.4	0.09
Hexachlorobutadiene	0.01	ND	0.5	0.07	ND	0.5	0.07	ND	1	0.14
Naphthalene	140	ND	0.2	0.06	ND	0.2	0.06	ND	0.4	0.13
Benzo(a)anthracene	NC	ND	0.2	0.06	ND	0.2	0.06	ND	0.4	0.11
Benzo(a)pyrene	0.0006	ND	0.2	0.07	ND	0.2	0.07	ND	0.4	0.14
Benzo(b)fluoranthene	NC	ND	0.2	0.07	ND	0.2	0.07	ND	0.4	0.14
Benzo(k)fluoranthene	NC	ND	0.2	0.07	ND	0.2	0.07	ND	0.4	0.14
Chrysene	NC	ND	0.2	0.05	ND	0.2	0.05	ND	0.4	0.1
Acenaphthylene	NC	ND	0.2	0.05	ND	0.2	0.05	ND	0.4	0.1
Anthracene	50	ND	0.2	0.06	ND	0.2	0.06	ND	0.4	0.13
Benzo(ghi)perylene	NC	ND	0.2	0.07	ND	0.2	0.07	ND	0.4	0.14
Fluorene	23	ND	0.2	0.06	ND	0.2	0.06	ND	0.4	0.11
Phenanthrene	14	ND	0.2	0.06	ND	0.2	0.06	ND	0.4	0.13
Dibenzo(a,h)anthracene	NC	ND	0.2	0.07	ND	0.2	0.07	ND	0.4	0.15
Indeno(1,2,3-cd)Pyrene	NC	ND	0.2	0.08	ND	0.2	0.08	ND	0.4	0.16
Pyrene	NC	ND	0.2	0.06	ND	0.2	0.06	ND	0.4	0.11
Pentachlorophenol	NC	ND	0.8	0.19	ND	0.8	0.19	ND	1.6	0.37
Hexachlorobenzene	0.00003	ND	0.8	0.01	ND	0.8	0.01	ND	1.6	0.03
Hexachloroethane	0.6	ND	0.8	0.07	ND	0.8	0.07	ND	1.6	0.13

Notes:
AWQSGV = Ambient Water Quality Standards and Guidance Values for SD water classification as published in the Division of Water Technical and Operational Guidance Series (1.1.1).
J - Estimated value
MDL - Method detection limit
NC - No criterion
ND - Compound not detected
RL - Reporting limit
µg/L - Micrograms per liter
WS-201409231515-FD-1 is a duplicate of sample SW-5

Table 8
The Port Authority of New York and New Jersey
Howland Hook Marine Terminal - Port Ivory Facility - Site 1
Staten Island, New York
Summary of Results of Analysis of Surface Water for Metals

SAMPLE ID		SW-4-WS-201409231530						SW-5-WS-201409231515						WS-201409231515-FD-1					
SAMPLING DATE		9/23/2014						9/23/2014						9/23/2014					
LAB SAMPLE ID		L1422287-07						L1422287-08						L1422287-11					
SAMPLE MATRIX		WATER						WATER						WATER					
SAMPLE PREPARATION		DISSOLVED			TOTAL			DISSOLVED			TOTAL			DISSOLVED			TOTAL		
METALS	New York State AWQSGV for Class SD Saline Surface Water (µg/L)	Result (µg/L)	RL	MDL	Result (µg/L)	RL	MDL	Result (µg/L)	RL	MDL	Result (µg/L)	RL	MDL	Result (µg/L)	RL	MDL	Result (µg/L)	RL	MDL
Antimony	NC	5.89J	6	0.06	7.48	6	0.06	4.3J	6	0.06	4.9J	6	0.06	3.66J	6	0.06	4.63J	6	0.06
Arsenic	120*	21.9	2	0.12	21.9	2	0.12	21.84	2	0.12	22.69	2	0.12	22.52	2	0.12	23.64	2	0.12
Beryllium	NC	ND	0.5	0.15	ND	0.5	0.15	ND	0.5	0.15	ND	0.5	0.15	ND	0.5	0.15	ND	0.5	0.15
Cadmium	21	ND	0.2	0.05	0.08J	0.2	0.05	0.06J	0.2	0.05	0.08J	0.2	0.05	ND	0.2	0.05	0.11J	0.2	0.05
Chromium	NC	1.42	1	0.25	3.29	1	0.25	2.33	1	0.25	3.68	1	0.25	1.79	1	0.25	2.97	1	0.25
Copper	4.8	3.77	1	0.26	**7.04**	1	0.26	**5.83**	1	0.26	**7.63**	1	0.26	**5.44**	1	0.26	**8.27**	1	0.26
Lead	204	0.82J	1	0.12	6.08	1	0.12	3.98	1	0.12	6.88	1	0.12	2.27	1	0.12	7.86	1	0.12
Mercury	0.0007*	ND	0.2	0.06	ND	0.2	0.06	ND	0.2	0.06	ND	0.2	0.06	ND	0.2	0.06	ND	0.2	0.06
Nickel	74	11.98	2	0.08	13.41	2	0.08	12.11	2	0.08	13.36	2	0.08	12.75	2	0.08	13.33	2	0.08
Selenium	NC	11.1	5	1	12.8	5	1	10.8	5	1	8.62	5	1	13.3	5	1	10.6	5	1
Silver	2.3	ND	0.4	0.07	ND	0.4	0.07	ND	0.4	0.07	ND	0.4	0.07	ND	0.4	0.07	ND	0.4	0.07
Thallium	NC	ND	0.5	0.05	ND	0.5	0.05	ND	0.5	0.05	ND	0.5	0.05	ND	0.5	0.05	ND	0.5	0.05
Zinc	95	16.53	10	2.56	34.32	10	2.56	30.72	10	2.56	40.68	10	2.56	21.97	10	2.56	48.57	10	2.56

Notes:
AWQSGV = Ambient Water Quality Standards and Guidance Values for SD water classification as published in the Division of Water Technical and Operational Guidance Series (1.1.1).
J - Estimated value
NC - No criterion
ND - Compound not detected
MDL - Method detection limit
RL - Reporting limit
µg/L - Micrograms per liter
* Applies to dissolved only
Bold concentrations in shaded cells exceed the AWQSGVs.
WS-201409231515-FD-1 is a duplicate of sample SW-5

Table 9
The Port Authority of New York and New Jersey
Howland Hook Marine Terminal - Port Ivory Facility - Site 1
Staten Island, New York
Summary of Results of Analysis of Surface Water for Pesticides

SAMPLE ID		SW-4-WS-201409231530			SW-5-WS-201409231515			WS-201409231515-FD-1		
SAMPLING DATE		9/23/2014			9/23/2014			9/23/2014		
LAB SAMPLE ID		L1422287-07			L1422287-08			L1422287-11		
SAMPLE MATRIX		WATER			WATER			WATER		
PESTICIDES	New York State AWQSGV for Class SD Saline Surface Water (µg/L)	Result (µg/L)	RL	MDL	Result (µg/L)	RL	MDL	Result (µg/L)	RL	MDL
Delta-BHC	0.008	ND	0.02	0.005	ND	0.02	0.005	ND	0.02	0.005
Lindane	0.008	ND	0.02	0.004	ND	0.02	0.004	ND	0.02	0.004
Alpha-BHC	0.002	ND	0.02	0.004	ND	0.02	0.004	ND	0.02	0.004
Beta-BHC	0.007	ND	0.02	0.006	ND	0.02	0.006	ND	0.02	0.006
Heptachlor	0.0002	**0.012J**	0.02	0.003	ND	0.02	0.003	ND	0.02	0.003
Aldrin	NC	ND	0.02	0.002	ND	0.02	0.002	ND	0.02	0.002
Heptachlor epoxide	0.0003	ND	0.02	0.004	ND	0.02	0.004	ND	0.02	0.004
Endrin	0.002	ND	0.04	0.004	ND	0.04	0.004	ND	0.04	0.004
Endrin ketone	NC	ND	0.04	0.005	ND	0.04	0.005	ND	0.04	0.005
Dieldrin	0.001	ND	0.04	0.004	ND	0.04	0.004	ND	0.04	0.004
4,4'-DDE	0.000011*	ND	0.04	0.004	ND	0.04	0.004	ND	0.04	0.004
4,4'-DDD	0.000011*	ND	0.04	0.005	**0.01J**	0.04	0.005	**0.008J**	0.04	0.005
4,4'-DDT	0.000011*	ND	0.04	0.004	ND	0.04	0.004	ND	0.04	0.004
Endosulfan I	NC	ND	0.02	0.003	ND	0.02	0.003	ND	0.02	0.003
Endosulfan II	NC	ND	0.04	0.005	ND	0.04	0.005	ND	0.04	0.005
Endosulfan sulfate	NC	ND	0.04	0.005	ND	0.04	0.005	ND	0.04	0.005
Methoxychlor	NC	ND	0.2	0.007	ND	0.2	0.007	ND	0.2	0.007
Toxaphene	0.000006	ND	0.2	0.063	ND	0.2	0.063	ND	0.2	0.063
cis-Chlordane	NC	ND	0.02	0.007	ND	0.02	0.007	ND	0.02	0.007
trans-Chlordane	NC	0.007JPI	0.02	0.006	ND	0.02	0.006	ND	0.02	0.006
Chlordane	0.0002	ND	0.2	0.046	ND	0.2	0.046	ND	0.2	0.046

Notes:

AWQSGV = Ambient Water Quality Standards and Guidance Values for SD water classification as published in the Division of Water Technical and Operational Guidance Series (1.1.1).

I - The lower value for the two columns has been reported due to obvious interference.

J - Estimated value

MDL - Method detection limit

NC - No criterion

ND - Compound not detected

P - The Relative Percent Difference between the results for the two columns exceeds the method-specified criteria

RL - Reporting limit

µg/L - Micrograms per liter

** Applies to the sum of 4,4'-DDE, 4,4'-DDD, and 4'4-DDT.

WS-201409231515-FD-1 is a duplicate of sample SW-5

Table 10
The Port Authority of New York and New Jersey
Howland Hook Marine Terminal - Port Ivory Facility - Site 1
Staten Island, New York
Summary of Results of Analysis of Surface Water for PCBs and Cyanide

SAMPLE ID		SW-4-WS-201409231530			SW-5-WS-201409231515			WS-201409231515-FD-1		
SAMPLING DATE		9/23/2014			9/23/2014			9/23/2014		
LAB SAMPLE ID		L1422287-07			L1422287-08			L1422287-11		
SAMPLE MATRIX		WATER			WATER			WATER		
POLYCHLORINATED BIPHENYLS (PCBs)	New York State AWQSGV for Class SD Saline Surface Water (µg/L)	Result (µg/L)	RL	MDL	Result (µg/L)	RL	MDL	Result (µg/L)	RL	MDL
Aroclor 1016	NC	ND	0.08	0.06	ND	0.08	0.06	ND	0.083	0.055
Aroclor 1221	NC	ND	0.08	0.05	ND	0.08	0.05	ND	0.083	0.053
Aroclor 1232	NC	ND	0.08	0.03	ND	0.08	0.03	ND	0.083	0.031
Aroclor 1242	NC	ND	0.08	0.06	ND	0.08	0.06	ND	0.083	0.06
Aroclor 1248	NC	ND	0.08	0.05	ND	0.08	0.05	ND	0.083	0.051
Aroclor 1254	NC	ND	0.08	0.03	ND	0.08	0.03	ND	0.083	0.034
Aroclor 1260	NC	ND	0.08	0.03	ND	0.08	0.03	ND	0.083	0.032
Aroclor 1262	NC	ND	0.08	0.03	ND	0.08	0.03	ND	0.083	0.029
Aroclor 1268	NC	ND	0.08	0.04	ND	0.08	0.04	ND	0.083	0.038
Total PCBs	0.00012*	ND	0.08	0.03	ND	0.08	0.03	ND	0.083	0.029
CYANIDE		Result (µg/L)	RL	MDL	Result (µg/L)	RL	MDL	Result (µg/L)	RL	MDL
Cyanide, Total	9,000	ND	5	1	2J	5	1	ND	5	1

Notes:
AWQSGV = Ambient Water Quality Standards and Guidance Values for SD water classification as published in the Division of Water Technical and Operational Guidance Series (1.1.1).
J - Estimated value
NC - No criterion
ND - Compound not detected
MDL - Method detection limit
RL - Reporting limit
µg/L - Micrograms per liter
* Applies to the sum of PCBs
WS-201409231515-FD-1 is a duplicate of sample SW-5

ATTACHMENT A
PHOTOGRAPH LOG

Attachment A
Photograph Log – March 19, 2014

Photo 1: Railroad track excavation work in Site 1 taken facing northeast.

Photo 2: Crushed stone cover in Site 1 taken facing east.

Photo 3: Crushed stone cover in Site 1 taken facing northwest.

Photo 4: Crushed stone cover and location of PRW-2 taken facing west.

Photo 5: Crushed stone cover in Site 1 taken facing south.

Photo 6: Crushed stone cover and container storage in Site 1 taken facing north.

TRC Job No.	Photographs Taken By:	Page No.	Client:	Site Name & Address:	
208889.1000 .0000	L. Metcalf	1 of 1	The Port Authority of New York and New Jersey	Site 1 – 40 Western Ave Staten Island, New York	TRC

Attachment A
Photograph Log – September 29, 2014

Photo 1: Crushed stone cover in Site 1 taken facing east.

Photo 2: Concrete and crushed stone cover in Site 1 taken facing southeast.

Photo 3: Crushed stone cover and newly installed railroad track taken facing north.

Photo 4: Crushed stone cover and container storage in Site 1 taken facing northwest.

Photo 5: Container storage area and crushed stone cover in Site 1 taken facing west.

Photo 6: Crushed stone cover and container storage in Site 1 taken facing north.

TRC Job No.	Photographs Taken By:	Page No.	Client:	Site Name & Address:	
208889.1000 .0000	L. Metcalf / G. Guder	1 of 2	The Port Authority of New York and New Jersey	Port Ivory – Site 1 40 Western Avenue Staten Island, New York	TRC

ATTACHMENT B
WELL CONSTRUCTION LOGS

Project: SITE12_SMP_SO_2014	**X Coordinate:** 580045.30	**Borehole ID:** PRW-01
Contract No.: P11-955.502	**Y Coordinate:** 657243.91	**Date Start/Finish:** 3/11/2014 / 3/11/2014
Subfacility: VCP Site 1	**Borehole Diameter:** 8 IN	**Drilling Company:** CRAIG DRILLING
Location: As laid out	**Total Depth:** 14 FT	**Driller's Name:** C. COHEN
Hole Type: MONITOR WELL	**Spoon:** SPLIT SPOON	**Drilling Method:** HOLLOW STEM AUGER
Hammer Type: AUTO	**Hammer Wt (lbs):** 130	**Contractor:** MEU
Surface Completion: FLUSH MOUNT	**Hammer Fall (in):** 30	**Inspector:** J. ZARKS

Depth (feet)	Sample ID	Recovery Length (in)	Open Borehole WL	Blow Counts / 6"	PID Readings/6" (ppm)	Well Construction	Sample Description and Remarks
0	PRW-01-WG-201403191041		⊠	HAND AUGER	0		(0.00- 2.00') FILL, Brown C-F SAND & GRAVEL, trace SILT
2				HAND AUGER	0		(2.00- 4.00') FILL, Brown C-F SAND & GRAVEL, trace SILT
4				HAND AUGER	0		(4.00- 6.00') MISC-FILL, Black C-F SAND & GRAVEL, trace CINDERS, trace SILT
6		12		3,3,4,6	0		(6.00- 8.00') MISC-FILL, Black C-F SAND & GRAVEL, trace CINDERS, trace SILT
8		20		3,5,4,5	0		(8.00- 10.00') MISC-FILL, Black C-F SAND & GRAVEL, trace CINDERS, trace SILT
10		12		3,2	3.9		(10.00- 11.00') MISC-FILL, Black C-F SAND & GRAVEL, trace CINDERS, trace SILT
11		12		2,2	0		(11.00- 12.00') Grey White TALC
12		20		1,1,WOH,WOH	0		(12.00- 14.00') Brown PEAT
14							

THE PORT AUTHORITY OF NY & NJ

Remarks:

Coordinates provided in State Plane NAD83.

Date: 6/4/2014 Created/Edited by: EarthSoft EDGE

Project: SITE12_SMP_SO_2014	**X Coordinate:** 580150.36	**Borehole ID:** PRW-02
Contract No.: P11-955.502	**Y Coordinate:** 657604.55	**Date Start/Finish:** 3/11/2014 / 3/11/2014
Subfacility: VCP Site 1	**Borehole Diameter:** 8 IN	**Drilling Company:** CRAIG DRILLING
Location: As laid out	**Total Depth:** 15.4 FT	**Driller's Name:** C. COHEN
Hole Type: MONITOR WELL	**Spoon:** SPLIT SPOON	**Drilling Method:** HOLLOW STEM AUGER
Hammer Type: AUTO	**Hammer Wt (lbs):** 130	**Contractor:** MEU
Surface Completion: FLUSH MOUNT	**Hammer Fall (in):** 30	**Inspector:** J. ZARKS

Depth (feet)	Sample ID	Recovery Length (in)	Open Borehole WL	Blow Counts / 6"	PID Readings/6" (ppm)	Well Construction	Sample Description and Remarks
0	PRW-02-WG-201403191041		▽	HAND AUGER	0		(0.00- 2.50') MISC-FILL, Brown C-F SAND & GRAVEL, some CRUSHED ROCK, little SILT
1							
2							
3				HAND AUGER	0		(2.50- 5.00') MISC-FILL, Black CINDERS & CRUSHED ROCK
4							
5				HAND AUGER	0		(5.00- 6.00') White Grey TALC
6		15		4,3,3,3	0		(6.00- 8.00') White Grey TALC
7							
8		18		2,2,1,1	0		(8.00- 10.00') White Grey TALC
9							
10		15		1,WOH,WOH,WOH	0		(10.00- 12.00') White Grey TALC
11							
12		15		2,1,1,1	0		(12.00- 14.00') White Grey TALC
13							
14		12		WOH,WOH	0		(14.00- 15.40') White Grey TALC
15							

THE PORT AUTHORITY OF NY & NJ

Remarks:

Coordinates provided in State Plane NAD83.

Project: SITE12_SMP_SO_2014	**X Coordinate:** 580237.97	**Borehole ID:** PRW-03
Contract No.: P11-955.502	**Y Coordinate:** 657867.70	**Date Start/Finish:** 3/12/2014 / 3/12/2014
Subfacility: VCP Site 1	**Borehole Diameter:** 8 IN	**Drilling Company:** CRAIG DRILLING
Location: As laid out	**Total Depth:** 16 FT	**Driller's Name:** C. COHEN
Hole Type: MONITOR WELL	**Spoon:** SPLIT SPOON	**Drilling Method:** HOLLOW STEM AUGER
Hammer Type: AUTO	**Hammer Wt (lbs):** 130	**Contractor:** MEU
Surface Completion: FLUSH MOUNT	**Hammer Fall (in):** 30	**Inspector:** J. ZARKS

Depth (feet)	Sample ID	Recovery Length (in)	Open Borehole WL	Blow Counts / 6"	PID Readings/6" (ppm)	Well Construction	Sample Description and Remarks
0	PRW-03-WG-201403191041		⊠	HAND AUGER	0		(0.00- 2.00') MISC-FILL, Red Brown C-F SAND & GRAVEL, some COBBLES, some BRICK, little SILT
1							
2				HAND AUGER	0		(2.00- 3.00') MISC-FILL, Red Brown C-F SAND & GRAVEL, some COBBLES, some BRICK, little SILT
3				HAND AUGER	0		(3.00- 6.00') MISC-FILL, Grey White Black TALC and C-F SAND, some GRAVEL, trace WOOD, trace CINDERS
4							
5							
6				WOH,WOH,WOH,WOH	0		(6.00- 8.00') Grey White TALC
7		15					
8				WOH,WOH,WOH,4	0		(8.00- 10.00') Grey White TALC
9		24					
10				7,34,17,15	0		(10.00- 12.00') Grey White TALC and COAL
11		24					
12				17,17,5,2	0		(12.00- 14.00') Grey White TALC and COAL
13		24					
14				WOH,WOH,WOH,WOH	0		(14.00- 16.00') Brown PEAT
15		24					
16							

THE PORT AUTHORITY OF NY & NJ

Remarks:

Coordinates provided in State Plane NAD83.

Project: SITE12_SMP_SO_2014	**X Coordinate:** 658337.40	**Borehole ID:** PRW-04
Contract No.: P11-955.502	**Y Coordinate:** 658337.40	**Date Start/Finish:** 3/10/2014 / 3/11/2014
Subfacility: VCP Site 1	**Borehole Diameter:** 8 IN	**Drilling Company:** CRAIG DRILLING
Location: 16' east of surveyed location	**Total Depth:** 16.4 FT	**Driller's Name:** C. COHEN
Hole Type: MONITOR WELL	**Spoon:** SPLIT SPOON	**Drilling Method:** HOLLOW STEM AUGER
Hammer Type: AUTO	**Hammer Wt (lbs):** 130	**Contractor:** TECTONIC
Surface Completion: FLUSH MOUNT	**Hammer Fall (in):** 30	**Inspector:** K. LOTT

Depth (feet)	Sample ID	Recovery Length (in)	Open Borehole WL	Blow Counts / 6"	PID Readings/6" (ppm)	Well Construction	Sample Description and Remarks
0	PRW-04-WG-201403191041			HAND AUGER	0		(0.00- 2.00') MISC-FILL, Brown C-F SAND, some GRAVEL, little SILT, trace BRICKS
2				HAND AUGER	0		(2.00- 4.00') MISC-FILL, Brown C-F SAND, some GRAVEL, little SILT, trace BRICKS
4				HAND AUGER	0		(4.00- 6.00') MISC-FILL, Brown C-F SAND, some GRAVEL, little BRICKS, little SILT
6		12	⊠	6,3,3,2	0		(6.00- 7.00') FILL, Black C-F SAND, some SILT, little GRAVEL
7		12		6,3,3,2	0		(7.00- 8.00') White TALC
8		24		1,1,1,1	0		(8.00- 10.00') White TALC
10		24		WOH,WOH,WOH,WOH	0		(10.00- 12.00') White TALC
12		24		WOH,WOH,WOH,WOH	0		(12.00- 14.00') White TALC
14		24		WOH,WOH,WOH,WOH	0		(14.00- 16.40') White TALC
16							

THE PORT AUTHORITY OF NY & NJ

Remarks:

Coordinates provided in State Plane NAD83.

SL 102
1/06

Engineering Department
Materials Engineering

Well Installation Report

PROJECT: HHMT Port Ivory Facility Site 2A/2B		**CONTRACT NO.** 426-12-014	
LOCATION: Laid out as per drawing		**CONTRACTOR** Craig	
WELL NO. PRW-05	**WELL TYPE** A	**DATE:** 4/10/12	
DRILLER: K. Parent	**INSPECTOR:** J. Zarks		

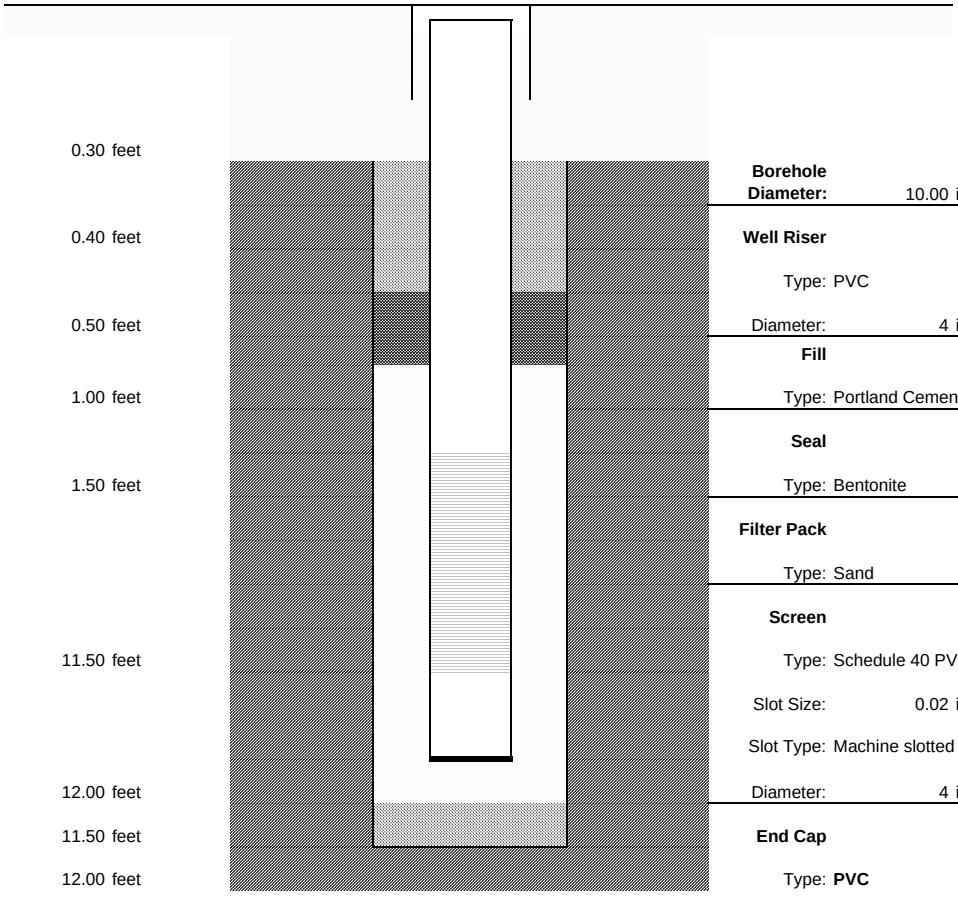
Well Development Report (NOTE: WATER LEVEL READINGS FROM TOP OF PVC)

DATE:	**WATER LEVEL BEFORE:**	**WATER LEVEL AFTER:**
TAKEN	**MINUTES AFTER DEVELOPMENT**	

Protective Cover Type: **Steel**

Top of Protective Cover: 0.00 feet

Well Cap Type: **PVC**



Top of Well Riser: 0.30 feet

Top of Fill: 0.40 feet

Top of Seal: 0.50 feet

Top of Filter: 1.00 feet

Top of Screen: 1.50 feet

Base of Screen: 11.50 feet

Base of Filter: 12.00 feet

Total Depth Well: 11.50 feet

Total Depth Boring: 12.00 feet

Borehole Diameter: 10.00 inches

Well Riser
Type: PVC
Diameter: 4 inches

Fill
Type: Portland Cement

Seal
Type: Bentonite

Filter Pack
Type: Sand

Screen
Type: Schedule 40 PVC Pipe
Slot Size: 0.02 inches
Slot Type: Machine slotted
Diameter: 4 inches

End Cap
Type: **PVC**

SL 102
1/06

Engineering Department
Materials Engineering

Well Installation Report

PROJECT: HHMT Port Ivory Facility Site 2A/2B		**CONTRACT NO.** 426-12-014	
LOCATION: Laid out as per drawing		**CONTRACTOR** Craig	
WELL NO. PRW-06	**WELL TYPE** "A"Monitoring	**DATE:** 4/17/12	
DRILLER: K. Parent	**INSPECTOR:** J. Zarks		

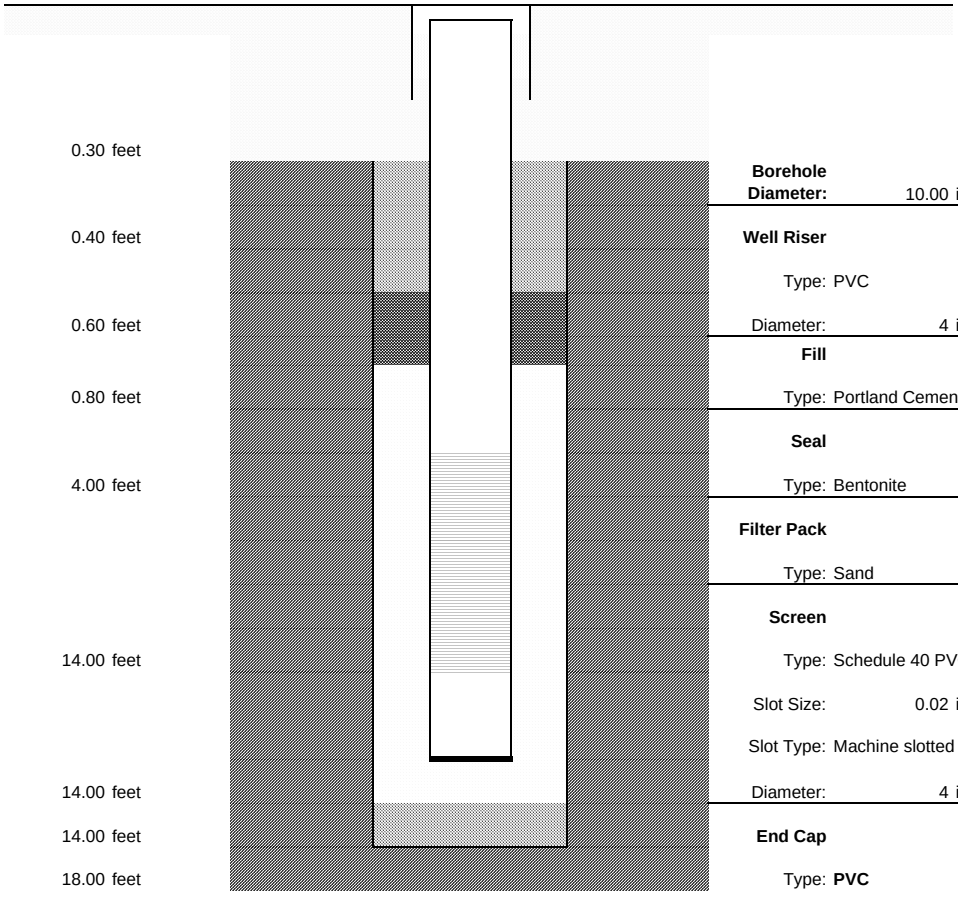
Well Development Report (NOTE: WATER LEVEL READINGS FROM TOP OF PVC)

DATE:	**WATER LEVEL BEFORE:**	**WATER LEVEL AFTER:**
TAKEN	**MINUTES AFTER DEVELOPMENT**	

Protective Cover Type: **Steel**

Top of Protective Cover: 0.00 feet

Well Cap Type: **PVC**



Top of Well Riser: 0.30 feet

Top of Fill: 0.40 feet

Top of Seal: 0.60 feet

Top of Filter: 0.80 feet

Top of Screen: 4.00 feet

Base of Screen: 14.00 feet

Base of Filter: 14.00 feet

Total Depth Well: 14.00 feet

Total Depth Boring: 18.00 feet

Borehole Diameter: 10.00 inches

Well Riser
Type: PVC
Diameter: 4 inches

Fill
Type: Portland Cement

Seal
Type: Bentonite

Filter Pack
Type: Sand

Screen
Type: Schedule 40 PVC Pipe
Slot Size: 0.02 inches
Slot Type: Machine slotted
Diameter: 4 inches

End Cap
Type: **PVC**

SL 102
1/06

Engineering Department
Materials Engineering

Well Installation Report

PROJECT: HHMT Port Ivory Facility Site 2A/2B		**CONTRACT NO.** 426-12-014	
LOCATION: Laid out as per drawing		**CONTRACTOR** Craig	
WELL NO. PRW-07	**WELL TYPE** "A"Monitoring	**DATE:** 4/16/12	
DRILLER: K. Parent	**INSPECTOR:** J. Zarks		

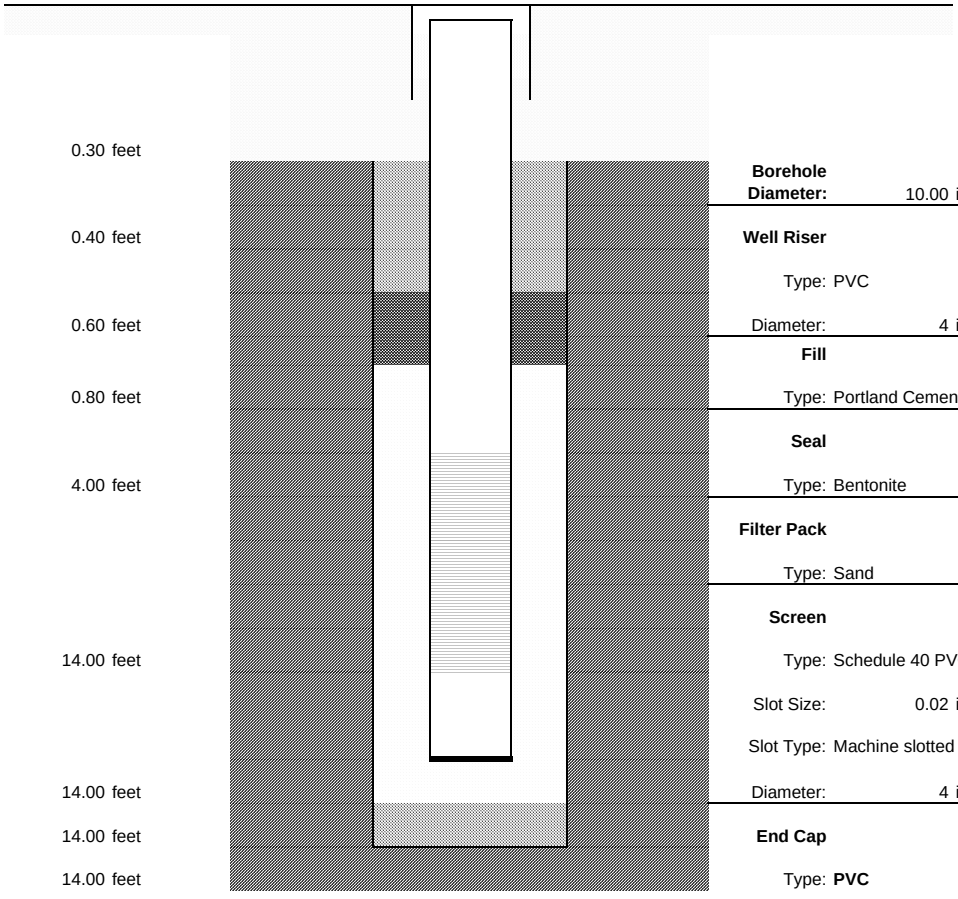
Well Development Report (NOTE: WATER LEVEL READINGS FROM TOP OF PVC)

DATE:	**WATER LEVEL BEFORE:**	**WATER LEVEL AFTER:**
TAKEN	**MINUTES AFTER DEVELOPMENT**	

Protective Cover Type: **Steel**

Top of Protective Cover: 0.00 feet

Well Cap Type: **PVC**



Top of Well Riser: 0.30 feet

Top of Fill: 0.40 feet

Top of Seal: 0.60 feet

Top of Filter: 0.80 feet

Top of Screen: 4.00 feet

Base of Screen: 14.00 feet

Base of Filter: 14.00 feet

Total Depth Well: 14.00 feet

Total Depth Boring: 14.00 feet

Borehole Diameter: 10.00 inches

Well Riser
Type: PVC
Diameter: 4 inches

Fill
Type: Portland Cement

Seal
Type: Bentonite

Filter Pack
Type: Sand

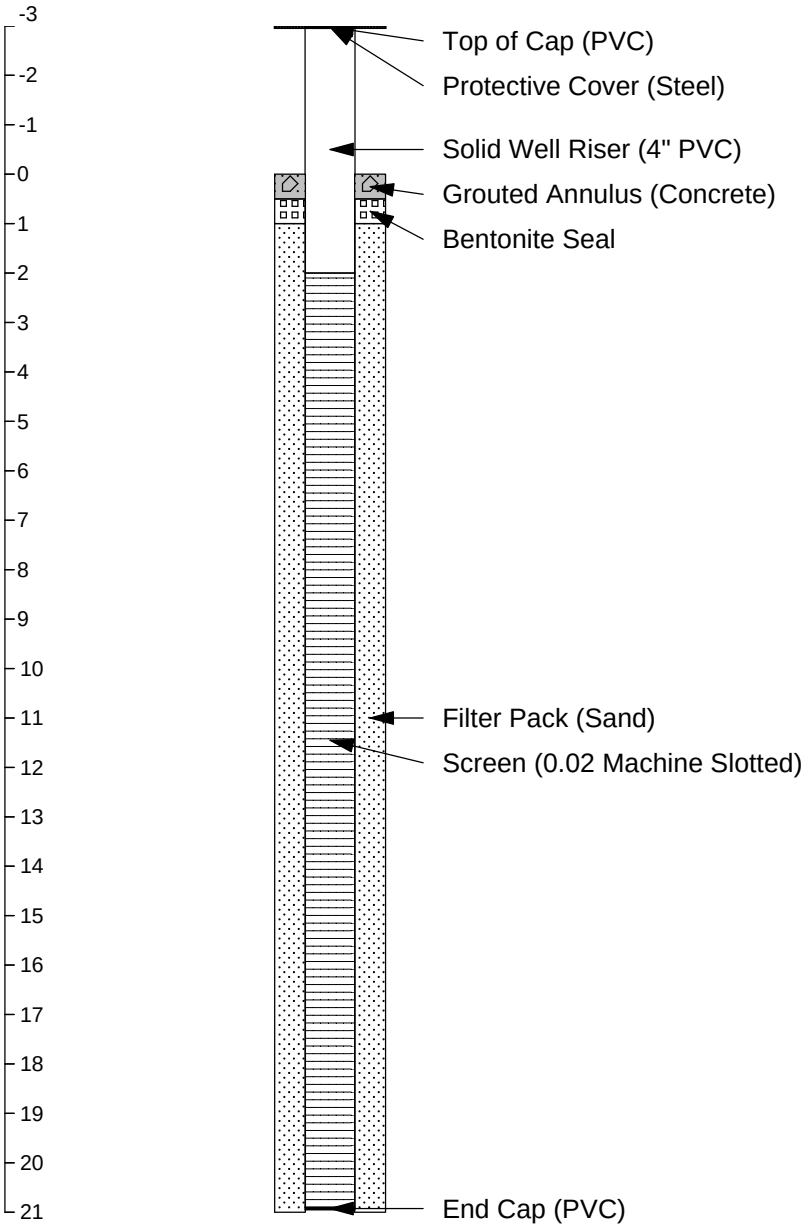
Screen
Type: Schedule 40 PVC Pipe
Slot Size: 0.02 inches
Slot Type: Machine slotted
Diameter: 4 inches

End Cap
Type: **PVC**

Project:	**Borehole Diameter (in):** 9	**Contractor:** CRAIG DRILLING
Site 1_PRW7_SO_2014	**Well Depth (ft):** 20.9	**Well Installation Date:** 12/17/2014
Location: As laid out in field	**Inspector:** K. LOTT	**Well Development Report:** Water Level Readings From Top of PVC
Well ID: PRW-07	**Driller's Name:** JEFF CRAIG JR.	**Top of Screen (ft bg):** 2
Well Type: A	**Well Diameter (in):** 4	**Well Screen Length (ft):** 18.9

Depth (feet)

Well Construction



THE PORT AUTHORITY OF NY & NJ

Remarks:

ATTACHMENT C

GROUNDWATER SAMPLING LOGS

	Project	Project Number:	Date/Time:	Sheet 1 of 8
Groundwater Sampling Data Record Form	HHMT Port Ivory - Site 1	208889.1000.0000	9/23/14 12:16	
	Well Identification:	PRW-01		
	Personnel:	EST Associates		

WELL INTEGRITY

	YES	NO
Protect. Casing Secure	x	
Concrete Collar Intact	x	
PVC Stick-up Intact		
Well Cap Present	x	
Security Lock Present		x

Protective Casing Stick-up: (from Ground) NA

WELL DIAMETER: 2 inch; x 4 inch; 6 inch

WELL MATERIAL: x PVC; SS; ___

Well Depth (ft.):	12.3
Depth to Water (ft):	6.12
Height of water column (ft.):	6.18

Reference Point: x top of riser; top of casing; _____

x high pt; historical; measured:; notch; north side; pen mark

.16 gal/ft (2 in.); x .65 gal/ft (4 in.); ____ gal/ft (__in.)

Volume of Water in Well (gal):	4.03
Total Gallons Purged:	2.1
[Vol. = $r^2h(0.163)$]	

Depth to NAPL (ft.):	NA
Thickness of NAPL (ft.):	NA

FIELD WATER QUALITY MEASUREMENTS

Time	11:40	11:45	11:50	11:55	12:00	12:05	12:10	12:15	
Temp. (C.)	20.11	20.52	20.64	20.78	20.81	20.93	21.03	21.09	
Conduct.(umhos/com)	5717	5538	5427	5368	5271	5008	4959	4918	
DO (mg/L)	0.33	0.25	0.22	0.18	0.16	0.13	0.12	0.12	
pH (Std.Units)	7.26	7.31	7.33	7.34	7.35	7.36	7.37	7.38	
ORP (millivolts)	-138.4	-137.6	-133.4	-129.6	-135.8	-144.2	-147.1	-148.9	
Turb. (NTU)	63.8	51.4	43.2	35.1	33.7	31.8	31.1	31.4	
Flow (ml/min)-approx.	250	250	250	250	250	250	250	250	
Depth to water (ft)	6.12	6.14	6.16	6.18	6.19	6.2	6.22	6.23	
Comments									

Analytical Parameters	Time Collected	Sample ID
VOCs, SVOCs, metals (filtered and unfiltered), PCBs, pesticides, cyanide	12:16	PRW-01-WG-201409231216

REMARKS: _____

Groundwater Sampling Data Record Form	**Project** HHMT Port Ivory - Site 1	**Project Number:** 208889.1000.0000	**Date/Time:** 9/23/14 12:26	**Sheet_2_of_8_**
	Well Identification:	PRW-02		
	Personnel:	EST Associates		

WELL INTEGRITY

	YES	NO
Protect. Casing Secure	x	
Concrete Collar Intact	x	
PVC Stick-up Intact		
Well Cap Present	x	
Security Lock Present		x

Protective Casing Stick-up: (from Ground) NA

WELL DIAMETER: 2 inch; x 4 inch; 6 inch

WELL MATERIAL: x PVC; SS; ___

Well Depth (ft.):	15.3
Depth to Water (ft):	6.06
Height of water column (ft.):	9.24

Reference Point: x top of riser; top of casing; _____

x high pt; historical; measured:; notch; north side; pen mark

.16 gal/ft (2 in.); x .65 gal/ft (4 in.); ____ gal/ft (__in.)

Volume of Water in Well (gal):	6.02
Total Gallons Purged:	1.9
[Vol. = $r^2h(0.163)$]	

Depth to NAPL (ft.):	NA
Thickness of NAPL (ft.):	NA

FIELD WATER QUALITY MEASUREMENTS

Time	11:45	11:50	11:55	12:00	12:05	12:10	12:15	12:20	12:25
Temp. (C.)	20.49	20.42	20.60	20.73	21.02	21.08	21.18	21.19	21.20
Conduct.(umhos/com)	3336	3378	3414	3443	3496	3508	3562	3560	3557
DO (mg/L)	0.43	0.41	0.40	0.41	0.41	0.35	0.33	0.32	0.31
pH (Std.Units)	7.16	7.16	7.17	7.17	7.18	7.19	7.19	7.19	7.20
ORP (millivolts)	-180.6	-189.3	-187.7	-180.5	-196.5	-202.9	-206.1	-209.4	-208.0
Turb. (NTU)	13.00	8.56	13.60	13.00	7.82	11.20	7.59	7.71	7.84
Flow (ml/min)-approx.	200	200	200	200	200	200	200	200	200
Depth to water (ft)	6.06	6.05	6.05	6.05	6.05	6.05	6.05	6.05	6.05
Comments									

Analytical Parameters	Time Collected	Sample ID
VOCs, SVOCs, metals (filtered and unfiltered), PCBs, pesticides, cyanide	12:26	PRW-02-WG-201409231226

REMARKS: _____

Groundwater Sampling Data Record Form	**Project** HHMT Port Ivory - Site 1	**Project Number:** 208889.1000.0000	**Date/Time:** 9/23/14 13:51	**Sheet_3_of_8_**
	Well Identification:	PRW-03		
	Personnel:	EST Associates		

WELL INTEGRITY

	YES	NO
Protect. Casing Secure	x	
Concrete Collar Intact	x	
PVC Stick-up Intact		
Well Cap Present	x	
Security Lock Present		x

Protective Casing Stick-up: (from Ground) NA.

WELL DIAMETER:

	2 inch
x	4 inch
	6 inch

WELL MATERIAL

x		
PVC	SS	___

Well Depth (ft.):	14.3
Depth to Water (ft):	9.77
Height of water column (ft.):	4.53

Reference Point:

X	top of riser
	top of casing
	_____

	historical
	measured:
	notch
	north side
X	high pt
	pen mark

	.16 gal/ft (2 in.)
X	.65 gal/ft (4 in.)
	____ gal/ft (__in.)

Volume of Water in Well (gal):	2.95
Total Gallons Purged:	1.8

[Vol. = $r^2h(0.163)$]

Depth to NAPL (ft.):	NA
Thickness of NAPL (ft.):	NA

FIELD WATER QUALITY MEASUREMENTS

Time	13:20	13:25	13:30	13:35	13:40	13:45	13:50		
Temp. (C.)	20.21	20.52	20.48	20.45	20.28	20.33	20.41		
Conduct.(umhos/com)	2367	2284	2087	2004	1958	1904	1884		
DO (mg/L)	0.47	0.24	0.20	0.17	0.12	0.12	0.12		
pH (Std.Units)	7.51	7.56	7.63	7.75	8.00	8.08	8.09		
ORP (millivolts)	-139.4	-144	-153.2	-160.9	-177.3	-179.4	-182.1		
Turb. (NTU)	23.4	19.9	17.5	15.7	14.0	13.8	13.1		
Flow (ml/min)-approx.	250	250	250	250	250	250	250		
Depth to water (ft)	9.77	9.87	9.95	10.07	10.18	10.26	13.34		
Comments									

Analytical Parameters	Time Collected	Sample ID
VOCs, SVOCs, metals (filtered and unfiltered), PCBs, pesticides, cyanide	13:51	PRW-03-WG-201409231351

REMARKS: _____

	Project	Project Number:	Date/Time:	Sheet_4_of_8_
Groundwater Sampling Data Record Form	HHMT Port Ivory - Site 1	208889.1000.0000	10/14/14 10:21	
	Well Identification:	PRW-04		
	Personnel:	EST Associates		

WELL INTEGRITY

	YES	NO
Protect. Casing Secure	x	
Concrete Collar Intact	x	
PVC Stick-up Intact		
Well Cap Present	x	
Security Lock Present		x

Protective Casing Stick-up: (from Ground) NA.

WELL DIAMETER: 2 inch; x 4 inch; 6 inch

WELL MATERIAL: x PVC; SS; ___

Well Depth (ft.):	16.3
Depth to Water (ft):	5.49
Height of water column (ft.):	10.81

Reference Point: x top of riser; top of casing; _____

x high pt; historical; measured:; notch; north side; pen mark

x .65 gal/ft (4 in.); .16 gal/ft (2 in.); ____ gal/ft (__in.)

Volume of Water in Well (gal):	7.05
Total Gallons Purged:	1.8
[Vol. = $r^2h(0.163)$]	

Depth to NAPL (ft.):	NA
Thickness of NAPL (ft.):	NA

FIELD WATER QUALITY MEASUREMENTS

Time	9:50	9:55	10:00	10:05	10:10	10:15	10:20		
Temp. (C.)	19.43	19.50	19.55	19.63	19.68	19.74	19.84		
Conduct.(umhos/com)	12366	12411	12449	12048	11974	11912	11896		
DO (mg/L)	0.71	0.52	0.4	0.24	0.22	0.21	0.22		
pH (Std.Units)	13.02	13.03	13.03	13.05	13.05	13.06	13.06		
ORP (millivolts)	-300.4	-296.3	-291	-269.5	-267.8	-267.1	-265.4		
Turb. (NTU)	94.3	89.7	86.1	79.2	76.8	75.6	73.5		
Flow (ml/min)-approx.	250	250	250	250	250	250	250		
Depth to water (ft)	5.49	5.62	5.75	5.87	5.98	6.01	6.11		
Comments									

Analytical Parameters	Time Collected	Sample ID
VOCs, SVOCs, metals (filtered and unfiltered), PCBs, pesticides, cyanide	10:21	PRW-04-WG-201410141021

REMARKS: _____

Groundwater Sampling Data Record Form

Project	Project Number:	Date/Time:	Sheet_5_of_8_
HHMT Port Ivory - Site 1	208889.1000.0000	9/23/14 11:01	

Well Identification: PRW-05

Personnel: EST Associates

WELL INTEGRITY

	YES	NO
Protect. Casing Secure	x	
Concrete Collar Intact	x	
PVC Stick-up Intact		
Well Cap Present	x	
Security Lock Present		x

Protective Casing Stick-up: (from Ground) NA

WELL DIAMETER:

	2 inch
x	4 inch
	6 inch

WELL MATERIAL

x		
PVC	SS	___

Well Depth (ft.):	12
Depth to Water (ft):	4.32
Height of water column (ft.):	7.68

Reference Point:

x	top of riser
	top of casing
	_____

	historical
	measured:
	notch
	north side
x	high pt
	pen mark

	.16 gal/ft (2 in.)
x	.65 gal/ft (4 in.)
	____ gal/ft (__in.)

Volume of Water in Well (gal):	5.01
Total Gallons Purged:	1.8

[Vol. = $r^2h(0.163)$]

Depth to NAPL (ft.):	NA
Thickness of NAPL (ft.):	NA

FIELD WATER QUALITY MEASUREMENTS

Time	10:30	10:35	10:40	10:45	10:50	10:55	11:00		
Temp. (C.)	19.99	20.18	20.33	20.28	19.92	19.94	19.96		
Conduct.(umhos/com)	3740	3749	3758	3768	3781	3796	3788		
DO (mg/L)	1.43	0.89	0.43	0.46	0.36	0.35	0.33		
pH (Std.Units)	6.35	6.34	6.33	6.33	6.34	6.34	6.33		
ORP (millivolts)	-62.2	-61.8	-61.3	-66	-67.4	-68.8	-70.4		
Turb. (NTU)	17.1	11.7	8.53	8.11	7.96	7.73	7.41		
Flow (ml/min)-approx.	250	250	250	250	250	250	250		
Depth to water (ft)	4.32	4.32	4.32	4.32	4.32	4.32	4.32		
Comments									

Analytical Parameters	Time Collected	Sample ID
VOCs, SVOCs, metals (filtered and unfiltered), PCBs, pesticides, cyanide	11:01	PRW-05-WG-201409231101

REMARKS: _____

Groundwater Sampling Data Record Form	**Project** HHMT Port Ivory - Site 1	**Project Number:** 208889.1000.0000	**Date/Time:** 9/23/14 11:06	**Sheet_6_of_8_**
	Well Identification:	PRW-06		
	Personnel:	EST Associates		

WELL INTEGRITY

	YES	NO
Protect. Casing Secure	x	
Concrete Collar Intact	x	
PVC Stick-up Intact		
Well Cap Present	x	
Security Lock Present		x

Protective Casing Stick-up: (from Ground) NA

WELL DIAMETER:

	2 inch
x	4 inch
	6 inch

WELL MATERIAL

x		
PVC	SS	___

Well Depth (ft.):	18
Depth to Water (ft):	5.99
Height of water column (ft.):	12.01

Reference Point:

X	top of riser
	top of casing
	_____

	historical
	measured:
	notch
	north side
X	high pt
	pen mark

	.16 gal/ft (2 in.)
X	.65 gal/ft (4 in.)
	____ gal/ft (__in.)

Volume of Water in Well (gal):	7.83
Total Gallons Purged:	1.7

[Vol. = $r^2h(0.163)$]

Depth to NAPL (ft.):	NA
Thickness of NAPL (ft.):	NA

FIELD WATER QUALITY MEASUREMENTS

Time	10:25	10:30	10:35	10:40	10:45	10:50	10:55	11:00	
Temp. (C.)	18.31	18.48	18.62	18.85	18.93	18.88	19.00	19.09	
Conduct.(umhos/com)	3660	3650	3551	3477	3405	3303	3288	3264	
DO (mg/L)	2.59	3.6	3.25	2.39	1.73	1.17	1.16	1.15	
pH (Std.Units)	6.78	6.78	6.78	6.79	6.8	6.79	6.79	6.78	
ORP (millivolts)	-76.3	-89.2	-94.2	-97.7	-98.7	-104.1	-105.4	-107.2	
Turb. (NTU)	18.0	14.8	13.6	13.5	14.1	13.8	14.0	14.5	
Flow (ml/min)-approx.	200	200	200	200	200	200	200	200	
Depth to water (ft)	5.8	5.90	5.95	5.95	5.99	6.02	6.08	6.1	
Comments									

Analytical Parameters	Time Collected	Sample ID
VOCs, SVOCs, metals (filtered and unfiltered), PCBs, pesticides, cyanide	11:06	PRW-06-WG-201409231106

REMARKS: _____

	Project	Project Number:	Date/Time:	Sheet_7_of_8_
Groundwater Sampling Data Record Form	HHMT Port Ivory - Site 1	208889.1000.0000	9/23/14 13:51	
	Well Identification:	PRW-07		
	Personnel:	EST Associates		

WELL INTEGRITY

	YES	NO
Protect. Casing Secure	x	
Concrete Collar Intact	x	
PVC Stick-up Intact		
Well Cap Present	x	
Security Lock Present		x

Protective Casing Stick-up: (from Ground) NA

WELL DIAMETER: 2 inch; x 4 inch; 6 inch

WELL MATERIAL: x PVC; SS; ___

Well Depth (ft.):	14
Depth to Water (ft):	11

Reference Point: x top of riser; top of casing; _____

x high pt

historical; measured:; notch; north side; high pt; pen mark

Height of water column (ft.):	3

x .65 gal/ft (4 in.)

.16 gal/ft (2 in.); ____ gal/ft (__in.)

Volume of Water in Well (gal):	1.96
Total Gallons Purged:	2.4

[Vol. = $r^2h(0.163)$]

Depth to NAPL (ft.):	NA
Thickness of NAPL (ft.):	NA

FIELD WATER QUALITY MEASUREMENTS

Time	12:50	12:50	13:25	13:25	13:30	13:30	13:35	13:35	13:40
Temp. (C.)	20.86	20.86	20.57	20.57	20.58	20.58	20.78	20.78	20.81
Conduct.(umhos/com)	2483	2483	2764	2764	2670	2670	2613	2613	2556
DO (mg/L)	0.22	0.22	0.41	0.41	0.35	0.35	0.28	0.28	0.23
pH (Std.Units)	7.03	7.03	7.15	7.15	7.09	7.09	7.07	7.07	7.05
ORP (millivolts)	-191.6	-191.6	-187.3	-187.3	-184.4	-184.4	-188.3	-188.3	-182.6
Turb. (NTU)	12.6	12.6	14	14	11.2	11.2	9.77	9.77	11.5
Flow (ml/min)-approx.	200	200	200	200	200	200	200	200	200
Depth to water (ft)	11.00	11.00	10.90	10.90	10.98	10.98	11.00	11.00	11.00
Comments									
Time	13:40	13:45	13:45						
Temp. (C.)	20.81	20.80	20.80						
Conduct.(umhos/com)	2556	2516	2516						
DO (mg/L)	0.23	0.21	0.21						
pH (Std.Units)	7.05	7.04	7.04						
ORP (millivolts)	-182.6	-186.5	-186.5						
Turb. (NTU)	11.5	12.2	12.2						
Flow (ml/min)-approx.	200	200	200						
Depth to water (ft)	11.00	11.00	11.00						
Comments									

Analytical Parameters	Time Collected	Sample ID
VOCs, SVOCs, metals (filtered and unfiltered), PCBs, pesticides, cyanide	13:51	PRW-07-WG-201409231351

REMARKS: _____

Groundwater Sampling Data Record Form	**Project** HHMT Port Ivory - Site 1	**Project Number:** 208889.1000.0000	**Date/Time:** 11/25/14 9:31	**Sheet_8_of_8_**
	Well Identification:	PRW-07		
	Personnel:	EST Associates		

WELL INTEGRITY

	YES	NO
Protect. Casing Secure	x	
Concrete Collar Intact	x	
PVC Stick-up Intact		
Well Cap Present	x	
Security Lock Present		x

Protective Casing Stick-up: (from Ground) NA

WELL DIAMETER: 2 inch; x 4 inch; 6 inch

WELL MATERIAL: x PVC; SS; ___

Well Depth (ft.):	14
Depth to Water (ft):	10.88
Height of water column (ft.):	3.12
Volume of Water in Well (gal):	2.03
Total Gallons Purged:	1.5

[Vol. = $r^2h(0.163)$]

Reference Point:

	historical
	measured:
x	top of riser
	notch
	top of casing
	north side
_____	
x	high pt
	pen mark

	.16 gal/ft (2 in.)
x	.65 gal/ft (4 in.)
	____ gal/ft (__in.)

Depth to NAPL (ft.):	NA
Thickness of NAPL (ft.):	NA

FIELD WATER QUALITY MEASUREMENTS

Time	9:05	9:05	9:10	9:10	9:15	9:15	9:20	9:20	9:25
Temp. (C.)	15.79	15.79	15.83	15.83	15.80	15.80	16.12	16.12	16.21
Conduct.(umhos/com)	2152	2152	2175	2175	2175	2175	2165	2165	2165
DO (mg/L)	0.58	0.58	0.46	0.46	0.35	0.35	0.31	0.31	0.31
pH (Std.Units)	7.09	7.09	7.10	7.10	7.11	7.11	7.11	7.11	7.10
ORP (millivolts)	-140.7	-140.7	-141.1	-141.1	-142	-142	-120.2	-120.2	-118.6
Turb. (NTU)	29.3	29.3	33.4	33.4	36.7	36.7	35.9	35.9	35.0
Flow (ml/min)-approx.	250	250	250	250	250	250	250	250	250
Depth to water (ft)	10.88	10.88	10.90	10.90	10.92	10.92	10.95	10.95	10.97
Comments									
Time	9:25	9:30	9:30						
Temp. (C.)	16.21	16.17	16.17						
Conduct.(umhos/com)	2165	2167	2167						
DO (mg/L)	0.31	0.30	0.30						
pH (Std.Units)	7.1	7.09	7.09						
ORP (millivolts)	-118.6	-121.4	-121.4						
Turb. (NTU)	35.0	35.5	35.5						
Flow (ml/min)-approx.	250	250	250						
Depth to water (ft)	10.97	11.00	11.00						
Comments									

Analytical Parameters	Time Collected	Sample ID
VOCs, SVOCs, metals (filtered and unfiltered), PCBs, pesticides, cyanide	9:31	PRW-07-WG-20141125-0931

REMARKS: _____

ATTACHMENT D

LABORATORY ANALYTICAL DATA REPORTS

ANALYTICAL REPORT

Lab Number:	L1422287
Client:	Port Authority of New York/New Jersey Materials Engineering-Chemical/Env Lab 241 Erie Street-Room 210 Jersey City, NJ 07310
ATTN:	Angelos Zafirelis
Phone:	(201) 216-2960
Project Name:	SITE1_SMP_2014
Project Number:	SITE1_SMP_2014
Report Date:	09/30/14

Certifications & Approvals: MA (M-MA086), NY (11148), CT (PH-0574), NH (2003), NJ NELAP (MA935), RI (LAO00065), ME (MA00086), PA (68-03671), USDA (Permit #P-330-11-00240), NC (666), TX (T104704476), DOD (L2217), US Army Corps of Engineers.

Eight Walkup Drive, Westborough, MA 01581-1019
508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com

Project Name: SITE1_SMP_2014
Project Number: SITE1_SMP_2014

Lab Number: L1422287
Report Date: 09/30/14

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L1422287-01	PRW-01-WG-201409231216	WATER	HOWLAND HOOK MARINE/PORT IVORY	09/23/14 12:16	09/23/14
L1422287-02	PRW-02-WG-201409231226	WATER	HOWLAND HOOK MARINE/PORT IVORY	09/23/14 12:26	09/23/14
L1422287-03	PRW-03-WG-201409231351	WATER	HOWLAND HOOK MARINE/PORT IVORY	09/23/14 13:51	09/23/14
L1422287-04	PRW-05-WG-201409231101	WATER	HOWLAND HOOK MARINE/PORT IVORY	09/23/14 11:01	09/23/14
L1422287-05	PRW-06-WG-201409231106	WATER	HOWLAND HOOK MARINE/PORT IVORY	09/23/14 11:06	09/23/14
L1422287-06	PRW-07-WG-201409231351	WATER	HOWLAND HOOK MARINE/PORT IVORY	09/23/14 13:51	09/23/14
L1422287-07	SW-4-WS-201409231530	WATER	HOWLAND HOOK MARINE/PORT IVORY	09/23/14 15:30	09/23/14
L1422287-08	SW-5-WS-201409231515	WATER	HOWLAND HOOK MARINE/PORT IVORY	09/23/14 15:15	09/23/14
L1422287-09	WQ-201409230000-TB-1	WATER	HOWLAND HOOK MARINE/PORT IVORY	09/23/14 00:00	09/23/14
L1422287-10	WQ-201409231300-FB-1	WATER	HOWLAND HOOK MARINE/PORT IVORY	09/23/14 13:00	09/23/14
L1422287-11	WS-201409231515-FD-1	WATER	HOWLAND HOOK MARINE/PORT IVORY	09/23/14 15:15	09/23/14

Project Name: SITE1_SMP_2014 **Lab Number:** L1422287
Project Number: SITE1_SMP_2014 **Report Date:** 09/30/14

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet all of the requirements of NELAC, for all NELAC accredited parameters. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively. When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. All specific QC information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications. Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances the specific failure is not narrated but noted in the associated QC table. The information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications.

Please see the associated ADEx data file for a comparison of laboratory reporting limits that were achieved with the regulatory Numerical Standards requested on the Chain of Custody.

HOLD POLICY
For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Client Service Representative and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Client Services at 800-624-9220 with any questions.

Project Name: SITE1_SMP_2014 **Lab Number:** L1422287
Project Number: SITE1_SMP_2014 **Report Date:** 09/30/14

Case Narrative (continued)

Report Submission

All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column.

Sample Receipt

L1422287-04 and -11 were received above the appropriate pH for the Dissolved Metals analysis. The laboratory added additional HNO3 to a pH <2.

L1422287-08 and -11 were received below the appropriate pH for the Total Cyanide analysis. The laboratory added additional NaOH to a pH >12.

L1422287-01 through -08, -10, and -11 were field filtered for Dissolved Metals.

Volatile Organics

The WG726024-4/-5 MS/MSD recoveries, performed on L1422287-07, are below the acceptance criteria for 2-chloroethylvinyl ether (0%/0%) due to the concentration of this compound falling below the reported detection limit.

The WG726024-4/-5 MS/MSD recoveries, performed on L1422287-07, are below the acceptance criteria for 2-chloromethane (40%/43%) and bromomethane (12%/19%); however, the associated LCS/LCSD recoveries are within overall method allowances. In addition, the MS/MSD RPD is above the acceptance criteria for bromomethane (45%).

Semivolatile Organics

The WG725464-2/-3 LCS/LCSD recoveries, associated with L1422287-11, are below the acceptance criteria for benzidine (3%/1%); however, it has been identified as a "difficult" analyte. The results of the associated sample are reported.

The WG725362-4/-5 MS/MSD recoveryies, performed on L1422287-07, are below the acceptance criteria for benzidine (0%/0%) and 3,3'-dichlorobenzidine (0%/0%) due to the concentrations of these compounds falling below the reported detection limits.

The WG725362-4/-5 MS/MSD RPD is above the acceptance criteria for 2,4-dimethylphenol (53%).

Project Name: SITE1_SMP_2014 **Lab Number:** L1422287
Project Number: SITE1_SMP_2014 **Report Date:** 09/30/14

Case Narrative (continued)

The WG725362-4/-5 MS/MSD recoveries, performed on L1422287-07, are below the acceptance criteria for 4-chloroaniline (35%/35%), 2-nitroaniline (45%/40%), 3-nitroaniline (3%/4%), and 4-nitroaniline (4%/4%).

Semivolatile Organics by SIM

L1422287-11 has elevated detection limits due to the dilution required by the sample matrix.

Total Metals

The WG726208-3/-4 MS/MSD recoveries, performed on L1422287-07, are outside the acceptance criteria for selenium (128%/133%) and thallium (48%/54%). A post digestion spike was performed and was within acceptance criteria.

Dissolved Metals

The WG726292-3/-4 MS/MSD recoveries, performed on L1422287-07, are outside the acceptance criteria for antimony (MS 137%), selenium (136%/134%), and thallium (51%/59%). A post digestion spike was performed and was within acceptance criteria.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature:  Kelly Stenstrom

Title: Technical Director/Representative Date: 09/30/14

ORGANICS

VOLATILES

Project Name: SITE1_SMP_2014 **Lab Number:** L1422287

Project Number: SITE1_SMP_2014 **Report Date:** 09/30/14

SAMPLE RESULTS

Lab ID: L1422287-01
Client ID: PRW-01-WG-201409231216
Sample Location: HOWLAND HOOK MARINE/PORT IVORY
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 09/27/14 19:41
Analyst: PD

Date Collected: 09/23/14 12:16
Date Received: 09/23/14
Field Prep: See Narrative

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	2.5	0.70	1
1,1-Dichloroethane	ND		ug/l	2.5	0.70	1
Chloroform	ND		ug/l	2.5	0.70	1
2-Chloroethylvinyl ether	ND		ug/l	10	0.70	1
Carbon tetrachloride	ND		ug/l	0.50	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.13	1
Dibromochloromethane	ND		ug/l	0.50	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50	1
Tetrachloroethene	ND		ug/l	0.50	0.18	1
Chlorobenzene	ND		ug/l	2.5	0.70	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70	1
Bromodichloromethane	ND		ug/l	0.50	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14	1
Bromoform	ND		ug/l	2.0	0.65	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.14	1
Benzene	0.20	J	ug/l	0.50	0.16	1
Toluene	ND		ug/l	2.5	0.70	1
Ethylbenzene	ND		ug/l	2.5	0.70	1
Chloromethane	ND		ug/l	2.5	0.70	1
Bromomethane	ND		ug/l	2.5	0.70	1
Vinyl chloride	ND		ug/l	1.0	0.33	1
Chloroethane	ND		ug/l	2.5	0.70	1
1,1-Dichloroethene	ND		ug/l	0.50	0.14	1
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
Trichloroethene	ND		ug/l	0.50	0.18	1
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70	1
1,3-Dichlorobenzene	ND		ug/l	2.5	0.70	1

Project Name: SITE1_SMP_2014 **Lab Number:** L1422287

Project Number: SITE1_SMP_2014 **Report Date:** 09/30/14

SAMPLE RESULTS

Lab ID: L1422287-01 Date Collected: 09/23/14 12:16

Client ID: PRW-01-WG-201409231216 Date Received: 09/23/14

Sample Location: HOWLAND HOOK MARINE/PORT IVORY Field Prep: See Narrative

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,4-Dichlorobenzene	ND		ug/l	2.5	0.70	1
Acrylonitrile	ND		ug/l	5.0	1.5	1
Acrolein	ND		ug/l	5.0	0.63	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	102		70-130
Toluene-d8	94		70-130
4-Bromofluorobenzene	93		70-130
Dibromofluoromethane	99		70-130

Project Name: SITE1_SMP_2014 **Lab Number:** L1422287

Project Number: SITE1_SMP_2014 **Report Date:** 09/30/14

SAMPLE RESULTS

Lab ID: L1422287-02
Client ID: PRW-02-WG-201409231226
Sample Location: HOWLAND HOOK MARINE/PORT IVORY
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 09/27/14 20:12
Analyst: PD

Date Collected: 09/23/14 12:26
Date Received: 09/23/14
Field Prep: See Narrative

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	2.5	0.70	1
1,1-Dichloroethane	ND		ug/l	2.5	0.70	1
Chloroform	ND		ug/l	2.5	0.70	1
2-Chloroethylvinyl ether	ND		ug/l	10	0.70	1
Carbon tetrachloride	ND		ug/l	0.50	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.13	1
Dibromochloromethane	ND		ug/l	0.50	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50	1
Tetrachloroethene	ND		ug/l	0.50	0.18	1
Chlorobenzene	ND		ug/l	2.5	0.70	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70	1
Bromodichloromethane	ND		ug/l	0.50	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14	1
Bromoform	ND		ug/l	2.0	0.65	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.14	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	2.5	0.70	1
Ethylbenzene	ND		ug/l	2.5	0.70	1
Chloromethane	ND		ug/l	2.5	0.70	1
Bromomethane	ND		ug/l	2.5	0.70	1
Vinyl chloride	ND		ug/l	1.0	0.33	1
Chloroethane	ND		ug/l	2.5	0.70	1
1,1-Dichloroethene	ND		ug/l	0.50	0.14	1
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
Trichloroethene	ND		ug/l	0.50	0.18	1
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70	1
1,3-Dichlorobenzene	ND		ug/l	2.5	0.70	1

Project Name: SITE1_SMP_2014 **Lab Number:** L1422287

Project Number: SITE1_SMP_2014 **Report Date:** 09/30/14

SAMPLE RESULTS

Lab ID: L1422287-02 Date Collected: 09/23/14 12:26

Client ID: PRW-02-WG-201409231226 Date Received: 09/23/14

Sample Location: HOWLAND HOOK MARINE/PORT IVORY Field Prep: See Narrative

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,4-Dichlorobenzene	ND		ug/l	2.5	0.70	1
Acrylonitrile	ND		ug/l	5.0	1.5	1
Acrolein	ND		ug/l	5.0	0.63	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	100		70-130
Toluene-d8	95		70-130
4-Bromofluorobenzene	93		70-130
Dibromofluoromethane	105		70-130

Project Name: SITE1_SMP_2014 **Lab Number:** L1422287

Project Number: SITE1_SMP_2014 **Report Date:** 09/30/14

SAMPLE RESULTS

Lab ID: L1422287-03
Client ID: PRW-03-WG-201409231351
Sample Location: HOWLAND HOOK MARINE/PORT IVORY
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 09/27/14 20:43
Analyst: PD

Date Collected: 09/23/14 13:51
Date Received: 09/23/14
Field Prep: See Narrative

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	2.5	0.70	1
1,1-Dichloroethane	ND		ug/l	2.5	0.70	1
Chloroform	ND		ug/l	2.5	0.70	1
2-Chloroethylvinyl ether	ND		ug/l	10	0.70	1
Carbon tetrachloride	ND		ug/l	0.50	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.13	1
Dibromochloromethane	ND		ug/l	0.50	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50	1
Tetrachloroethene	ND		ug/l	0.50	0.18	1
Chlorobenzene	ND		ug/l	2.5	0.70	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70	1
Bromodichloromethane	ND		ug/l	0.50	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14	1
Bromoform	ND		ug/l	2.0	0.65	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.14	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	2.5	0.70	1
Ethylbenzene	ND		ug/l	2.5	0.70	1
Chloromethane	ND		ug/l	2.5	0.70	1
Bromomethane	ND		ug/l	2.5	0.70	1
Vinyl chloride	ND		ug/l	1.0	0.33	1
Chloroethane	ND		ug/l	2.5	0.70	1
1,1-Dichloroethene	ND		ug/l	0.50	0.14	1
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
Trichloroethene	ND		ug/l	0.50	0.18	1
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70	1
1,3-Dichlorobenzene	ND		ug/l	2.5	0.70	1

Project Name: SITE1_SMP_2014 **Lab Number:** L1422287

Project Number: SITE1_SMP_2014 **Report Date:** 09/30/14

SAMPLE RESULTS

Lab ID: L1422287-03 Date Collected: 09/23/14 13:51

Client ID: PRW-03-WG-201409231351 Date Received: 09/23/14

Sample Location: HOWLAND HOOK MARINE/PORT IVORY Field Prep: See Narrative

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,4-Dichlorobenzene	ND		ug/l	2.5	0.70	1
Acrylonitrile	ND		ug/l	5.0	1.5	1
Acrolein	ND		ug/l	5.0	0.63	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	102		70-130
Toluene-d8	93		70-130
4-Bromofluorobenzene	95		70-130
Dibromofluoromethane	105		70-130

Project Name: SITE1_SMP_2014 **Lab Number:** L1422287

Project Number: SITE1_SMP_2014 **Report Date:** 09/30/14

SAMPLE RESULTS

Lab ID: L1422287-04
Client ID: PRW-05-WG-201409231101
Sample Location: HOWLAND HOOK MARINE/PORT IVORY
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 09/27/14 21:14
Analyst: PD

Date Collected: 09/23/14 11:01
Date Received: 09/23/14
Field Prep: See Narrative

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	2.5	0.70	1
1,1-Dichloroethane	ND		ug/l	2.5	0.70	1
Chloroform	ND		ug/l	2.5	0.70	1
2-Chloroethylvinyl ether	ND		ug/l	10	0.70	1
Carbon tetrachloride	ND		ug/l	0.50	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.13	1
Dibromochloromethane	ND		ug/l	0.50	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50	1
Tetrachloroethene	ND		ug/l	0.50	0.18	1
Chlorobenzene	ND		ug/l	2.5	0.70	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70	1
Bromodichloromethane	ND		ug/l	0.50	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14	1
Bromoform	ND		ug/l	2.0	0.65	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.14	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	2.5	0.70	1
Ethylbenzene	ND		ug/l	2.5	0.70	1
Chloromethane	ND		ug/l	2.5	0.70	1
Bromomethane	ND		ug/l	2.5	0.70	1
Vinyl chloride	ND		ug/l	1.0	0.33	1
Chloroethane	ND		ug/l	2.5	0.70	1
1,1-Dichloroethene	ND		ug/l	0.50	0.14	1
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
Trichloroethene	ND		ug/l	0.50	0.18	1
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70	1
1,3-Dichlorobenzene	ND		ug/l	2.5	0.70	1

Project Name: SITE1_SMP_2014 **Lab Number:** L1422287

Project Number: SITE1_SMP_2014 **Report Date:** 09/30/14

SAMPLE RESULTS

Lab ID: L1422287-04 Date Collected: 09/23/14 11:01

Client ID: PRW-05-WG-201409231101 Date Received: 09/23/14

Sample Location: HOWLAND HOOK MARINE/PORT IVORY Field Prep: See Narrative

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,4-Dichlorobenzene	ND		ug/l	2.5	0.70	1
Acrylonitrile	ND		ug/l	5.0	1.5	1
Acrolein	ND		ug/l	5.0	0.63	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	100		70-130
Toluene-d8	94		70-130
4-Bromofluorobenzene	92		70-130
Dibromofluoromethane	103		70-130

Project Name: SITE1_SMP_2014 **Lab Number:** L1422287

Project Number: SITE1_SMP_2014 **Report Date:** 09/30/14

SAMPLE RESULTS

Lab ID: L1422287-05
Client ID: PRW-06-WG-201409231106
Sample Location: HOWLAND HOOK MARINE/PORT IVORY
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 09/27/14 21:45
Analyst: PD

Date Collected: 09/23/14 11:06
Date Received: 09/23/14
Field Prep: See Narrative

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	2.5	0.70	1
1,1-Dichloroethane	ND		ug/l	2.5	0.70	1
Chloroform	ND		ug/l	2.5	0.70	1
2-Chloroethylvinyl ether	ND		ug/l	10	0.70	1
Carbon tetrachloride	ND		ug/l	0.50	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.13	1
Dibromochloromethane	ND		ug/l	0.50	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50	1
Tetrachloroethene	ND		ug/l	0.50	0.18	1
Chlorobenzene	ND		ug/l	2.5	0.70	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70	1
Bromodichloromethane	ND		ug/l	0.50	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14	1
Bromoform	ND		ug/l	2.0	0.65	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.14	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	2.5	0.70	1
Ethylbenzene	ND		ug/l	2.5	0.70	1
Chloromethane	ND		ug/l	2.5	0.70	1
Bromomethane	ND		ug/l	2.5	0.70	1
Vinyl chloride	ND		ug/l	1.0	0.33	1
Chloroethane	ND		ug/l	2.5	0.70	1
1,1-Dichloroethene	ND		ug/l	0.50	0.14	1
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
Trichloroethene	ND		ug/l	0.50	0.18	1
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70	1
1,3-Dichlorobenzene	ND		ug/l	2.5	0.70	1

Project Name: SITE1_SMP_2014 **Lab Number:** L1422287

Project Number: SITE1_SMP_2014 **Report Date:** 09/30/14

SAMPLE RESULTS

Lab ID: L1422287-05 Date Collected: 09/23/14 11:06

Client ID: PRW-06-WG-201409231106 Date Received: 09/23/14

Sample Location: HOWLAND HOOK MARINE/PORT IVORY Field Prep: See Narrative

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,4-Dichlorobenzene	ND		ug/l	2.5	0.70	1
Acrylonitrile	ND		ug/l	5.0	1.5	1
Acrolein	ND		ug/l	5.0	0.63	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	107		70-130
Toluene-d8	94		70-130
4-Bromofluorobenzene	93		70-130
Dibromofluoromethane	107		70-130

Project Name: SITE1_SMP_2014 **Lab Number:** L1422287

Project Number: SITE1_SMP_2014 **Report Date:** 09/30/14

SAMPLE RESULTS

Lab ID: L1422287-06 D
Client ID: PRW-07-WG-201409231351
Sample Location: HOWLAND HOOK MARINE/PORT IVORY
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 09/27/14 23:49
Analyst: PD

Date Collected: 09/23/14 13:51
Date Received: 09/23/14
Field Prep: See Narrative

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	5000	1400	2000
1,1-Dichloroethane	ND		ug/l	5000	1400	2000
Chloroform	ND		ug/l	5000	1400	2000
2-Chloroethylvinyl ether	ND		ug/l	20000	1400	2000
Carbon tetrachloride	ND		ug/l	1000	270	2000
1,2-Dichloropropane	ND		ug/l	2000	270	2000
Dibromochloromethane	ND		ug/l	1000	300	2000
1,1,2-Trichloroethane	ND		ug/l	3000	1000	2000
Tetrachloroethene	ND		ug/l	1000	360	2000
Chlorobenzene	ND		ug/l	5000	1400	2000
1,2-Dichloroethane	ND		ug/l	1000	260	2000
1,1,1-Trichloroethane	ND		ug/l	5000	1400	2000
Bromodichloromethane	ND		ug/l	1000	380	2000
trans-1,3-Dichloropropene	ND		ug/l	1000	330	2000
cis-1,3-Dichloropropene	ND		ug/l	1000	290	2000
1,3-Dichloropropene, Total	ND		ug/l	1000	290	2000
Bromoform	ND		ug/l	4000	1300	2000
1,1,2,2-Tetrachloroethane	ND		ug/l	1000	290	2000
Benzene	ND		ug/l	1000	320	2000
Toluene	120000		ug/l	5000	1400	2000
Ethylbenzene	ND		ug/l	5000	1400	2000
Chloromethane	ND		ug/l	5000	1400	2000
Bromomethane	ND		ug/l	5000	1400	2000
Vinyl chloride	ND		ug/l	2000	660	2000
Chloroethane	ND		ug/l	5000	1400	2000
1,1-Dichloroethene	ND		ug/l	1000	280	2000
trans-1,2-Dichloroethene	ND		ug/l	5000	1400	2000
Trichloroethene	ND		ug/l	1000	350	2000
1,2-Dichlorobenzene	ND		ug/l	5000	1400	2000
1,3-Dichlorobenzene	ND		ug/l	5000	1400	2000

Project Name: SITE1_SMP_2014 **Lab Number:** L1422287

Project Number: SITE1_SMP_2014 **Report Date:** 09/30/14

SAMPLE RESULTS

Lab ID: L1422287-06 D Date Collected: 09/23/14 13:51

Client ID: PRW-07-WG-201409231351 Date Received: 09/23/14

Sample Location: HOWLAND HOOK MARINE/PORT IVORY Field Prep: See Narrative

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,4-Dichlorobenzene	ND		ug/l	5000	1400	2000
Acrylonitrile	ND		ug/l	10000	3000	2000
Acrolein	ND		ug/l	10000	1300	2000

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	104		70-130
Toluene-d8	93		70-130
4-Bromofluorobenzene	93		70-130
Dibromofluoromethane	99		70-130

Project Name: SITE1_SMP_2014 **Lab Number:** L1422287

Project Number: SITE1_SMP_2014 **Report Date:** 09/30/14

SAMPLE RESULTS

Lab ID: L1422287-07
Client ID: SW-4-WS-201409231530
Sample Location: HOWLAND HOOK MARINE/PORT IVORY
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 09/27/14 22:16
Analyst: PD

Date Collected: 09/23/14 15:30
Date Received: 09/23/14
Field Prep: See Narrative

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	2.5	0.70	1
1,1-Dichloroethane	ND		ug/l	2.5	0.70	1
Chloroform	ND		ug/l	2.5	0.70	1
2-Chloroethylvinyl ether	ND		ug/l	10	0.70	1
Carbon tetrachloride	ND		ug/l	0.50	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.13	1
Dibromochloromethane	ND		ug/l	0.50	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50	1
Tetrachloroethene	ND		ug/l	0.50	0.18	1
Chlorobenzene	ND		ug/l	2.5	0.70	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70	1
Bromodichloromethane	ND		ug/l	0.50	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14	1
Bromoform	ND		ug/l	2.0	0.65	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.14	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	2.5	0.70	1
Ethylbenzene	ND		ug/l	2.5	0.70	1
Chloromethane	ND		ug/l	2.5	0.70	1
Bromomethane	ND		ug/l	2.5	0.70	1
Vinyl chloride	ND		ug/l	1.0	0.33	1
Chloroethane	ND		ug/l	2.5	0.70	1
1,1-Dichloroethene	ND		ug/l	0.50	0.14	1
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
Trichloroethene	ND		ug/l	0.50	0.18	1
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70	1
1,3-Dichlorobenzene	ND		ug/l	2.5	0.70	1

Project Name: SITE1_SMP_2014 **Lab Number:** L1422287

Project Number: SITE1_SMP_2014 **Report Date:** 09/30/14

SAMPLE RESULTS

Lab ID: L1422287-07 Date Collected: 09/23/14 15:30

Client ID: SW-4-WS-201409231530 Date Received: 09/23/14

Sample Location: HOWLAND HOOK MARINE/PORT IVORY Field Prep: See Narrative

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,4-Dichlorobenzene	ND		ug/l	2.5	0.70	1
Acrylonitrile	ND		ug/l	5.0	1.5	1
Acrolein	ND		ug/l	5.0	0.63	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	106		70-130
Toluene-d8	94		70-130
4-Bromofluorobenzene	94		70-130
Dibromofluoromethane	105		70-130

Project Name: SITE1_SMP_2014 **Lab Number:** L1422287

Project Number: SITE1_SMP_2014 **Report Date:** 09/30/14

SAMPLE RESULTS

Lab ID: L1422287-08
Client ID: SW-5-WS-201409231515
Sample Location: HOWLAND HOOK MARINE/PORT IVORY
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 09/27/14 22:47
Analyst: PD

Date Collected: 09/23/14 15:15
Date Received: 09/23/14
Field Prep: See Narrative

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	2.5	0.70	1
1,1-Dichloroethane	ND		ug/l	2.5	0.70	1
Chloroform	ND		ug/l	2.5	0.70	1
2-Chloroethylvinyl ether	ND		ug/l	10	0.70	1
Carbon tetrachloride	ND		ug/l	0.50	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.13	1
Dibromochloromethane	ND		ug/l	0.50	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50	1
Tetrachloroethene	ND		ug/l	0.50	0.18	1
Chlorobenzene	ND		ug/l	2.5	0.70	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70	1
Bromodichloromethane	ND		ug/l	0.50	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14	1
Bromoform	ND		ug/l	2.0	0.65	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.14	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	2.5	0.70	1
Ethylbenzene	ND		ug/l	2.5	0.70	1
Chloromethane	ND		ug/l	2.5	0.70	1
Bromomethane	ND		ug/l	2.5	0.70	1
Vinyl chloride	ND		ug/l	1.0	0.33	1
Chloroethane	ND		ug/l	2.5	0.70	1
1,1-Dichloroethene	ND		ug/l	0.50	0.14	1
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
Trichloroethene	ND		ug/l	0.50	0.18	1
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70	1
1,3-Dichlorobenzene	ND		ug/l	2.5	0.70	1

Project Name: SITE1_SMP_2014 **Lab Number:** L1422287

Project Number: SITE1_SMP_2014 **Report Date:** 09/30/14

SAMPLE RESULTS

Lab ID: L1422287-08 Date Collected: 09/23/14 15:15

Client ID: SW-5-WS-201409231515 Date Received: 09/23/14

Sample Location: HOWLAND HOOK MARINE/PORT IVORY Field Prep: See Narrative

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,4-Dichlorobenzene	ND		ug/l	2.5	0.70	1
Acrylonitrile	ND		ug/l	5.0	1.5	1
Acrolein	ND		ug/l	5.0	0.63	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	106		70-130
Toluene-d8	95		70-130
4-Bromofluorobenzene	93		70-130
Dibromofluoromethane	104		70-130

Project Name: SITE1_SMP_2014 **Lab Number:** L1422287

Project Number: SITE1_SMP_2014 **Report Date:** 09/30/14

SAMPLE RESULTS

Lab ID: L1422287-09
Client ID: WQ-201409230000-TB-1
Sample Location: HOWLAND HOOK MARINE/PORT IVORY
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 09/27/14 18:39
Analyst: PD

Date Collected: 09/23/14 00:00
Date Received: 09/23/14
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	2.5	0.70	1
1,1-Dichloroethane	ND		ug/l	2.5	0.70	1
Chloroform	ND		ug/l	2.5	0.70	1
2-Chloroethylvinyl ether	ND		ug/l	10	0.70	1
Carbon tetrachloride	ND		ug/l	0.50	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.13	1
Dibromochloromethane	ND		ug/l	0.50	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50	1
Tetrachloroethene	ND		ug/l	0.50	0.18	1
Chlorobenzene	ND		ug/l	2.5	0.70	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70	1
Bromodichloromethane	ND		ug/l	0.50	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14	1
Bromoform	ND		ug/l	2.0	0.65	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.14	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	2.5	0.70	1
Ethylbenzene	ND		ug/l	2.5	0.70	1
Chloromethane	ND		ug/l	2.5	0.70	1
Bromomethane	ND		ug/l	2.5	0.70	1
Vinyl chloride	ND		ug/l	1.0	0.33	1
Chloroethane	ND		ug/l	2.5	0.70	1
1,1-Dichloroethene	ND		ug/l	0.50	0.14	1
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
Trichloroethene	ND		ug/l	0.50	0.18	1
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70	1
1,3-Dichlorobenzene	ND		ug/l	2.5	0.70	1

Project Name: SITE1_SMP_2014 **Lab Number:** L1422287

Project Number: SITE1_SMP_2014 **Report Date:** 09/30/14

SAMPLE RESULTS

Lab ID: L1422287-09 Date Collected: 09/23/14 00:00

Client ID: WQ-201409230000-TB-1 Date Received: 09/23/14

Sample Location: HOWLAND HOOK MARINE/PORT IVORY Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,4-Dichlorobenzene	ND		ug/l	2.5	0.70	1
Acrylonitrile	ND		ug/l	5.0	1.5	1
Acrolein	ND		ug/l	5.0	0.63	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	99		70-130
Toluene-d8	95		70-130
4-Bromofluorobenzene	94		70-130
Dibromofluoromethane	98		70-130

Project Name: SITE1_SMP_2014 **Lab Number:** L1422287

Project Number: SITE1_SMP_2014 **Report Date:** 09/30/14

SAMPLE RESULTS

Lab ID: L1422287-10
Client ID: WQ-201409231300-FB-1
Sample Location: HOWLAND HOOK MARINE/PORT IVORY
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 09/27/14 19:10
Analyst: PD

Date Collected: 09/23/14 13:00
Date Received: 09/23/14
Field Prep: See Narrative

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	2.5	0.70	1
1,1-Dichloroethane	ND		ug/l	2.5	0.70	1
Chloroform	ND		ug/l	2.5	0.70	1
2-Chloroethylvinyl ether	ND		ug/l	10	0.70	1
Carbon tetrachloride	ND		ug/l	0.50	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.13	1
Dibromochloromethane	ND		ug/l	0.50	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50	1
Tetrachloroethene	ND		ug/l	0.50	0.18	1
Chlorobenzene	ND		ug/l	2.5	0.70	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70	1
Bromodichloromethane	ND		ug/l	0.50	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14	1
Bromoform	ND		ug/l	2.0	0.65	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.14	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	2.5	0.70	1
Ethylbenzene	ND		ug/l	2.5	0.70	1
Chloromethane	ND		ug/l	2.5	0.70	1
Bromomethane	ND		ug/l	2.5	0.70	1
Vinyl chloride	ND		ug/l	1.0	0.33	1
Chloroethane	ND		ug/l	2.5	0.70	1
1,1-Dichloroethene	ND		ug/l	0.50	0.14	1
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
Trichloroethene	ND		ug/l	0.50	0.18	1
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70	1
1,3-Dichlorobenzene	ND		ug/l	2.5	0.70	1

Project Name: SITE1_SMP_2014 **Lab Number:** L1422287

Project Number: SITE1_SMP_2014 **Report Date:** 09/30/14

SAMPLE RESULTS

Lab ID: L1422287-10 Date Collected: 09/23/14 13:00

Client ID: WQ-201409231300-FB-1 Date Received: 09/23/14

Sample Location: HOWLAND HOOK MARINE/PORT IVORY Field Prep: See Narrative

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,4-Dichlorobenzene	ND		ug/l	2.5	0.70	1
Acrylonitrile	ND		ug/l	5.0	1.5	1
Acrolein	ND		ug/l	5.0	0.63	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	102		70-130
Toluene-d8	94		70-130
4-Bromofluorobenzene	94		70-130
Dibromofluoromethane	98		70-130

Project Name: SITE1_SMP_2014 **Lab Number:** L1422287

Project Number: SITE1_SMP_2014 **Report Date:** 09/30/14

SAMPLE RESULTS

Lab ID: L1422287-11
Client ID: WS-201409231515-FD-1
Sample Location: HOWLAND HOOK MARINE/PORT IVORY
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 09/27/14 23:18
Analyst: PD

Date Collected: 09/23/14 15:15
Date Received: 09/23/14
Field Prep: See Narrative

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	2.5	0.70	1
1,1-Dichloroethane	ND		ug/l	2.5	0.70	1
Chloroform	ND		ug/l	2.5	0.70	1
2-Chloroethylvinyl ether	ND		ug/l	10	0.70	1
Carbon tetrachloride	ND		ug/l	0.50	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.13	1
Dibromochloromethane	ND		ug/l	0.50	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50	1
Tetrachloroethene	ND		ug/l	0.50	0.18	1
Chlorobenzene	ND		ug/l	2.5	0.70	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70	1
Bromodichloromethane	ND		ug/l	0.50	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14	1
Bromoform	ND		ug/l	2.0	0.65	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.14	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	2.5	0.70	1
Ethylbenzene	ND		ug/l	2.5	0.70	1
Chloromethane	ND		ug/l	2.5	0.70	1
Bromomethane	ND		ug/l	2.5	0.70	1
Vinyl chloride	ND		ug/l	1.0	0.33	1
Chloroethane	ND		ug/l	2.5	0.70	1
1,1-Dichloroethene	ND		ug/l	0.50	0.14	1
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
Trichloroethene	ND		ug/l	0.50	0.18	1
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70	1
1,3-Dichlorobenzene	ND		ug/l	2.5	0.70	1

Project Name: SITE1_SMP_2014 **Lab Number:** L1422287

Project Number: SITE1_SMP_2014 **Report Date:** 09/30/14

SAMPLE RESULTS

Lab ID: L1422287-11 Date Collected: 09/23/14 15:15

Client ID: WS-201409231515-FD-1 Date Received: 09/23/14

Sample Location: HOWLAND HOOK MARINE/PORT IVORY Field Prep: See Narrative

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,4-Dichlorobenzene	ND		ug/l	2.5	0.70	1
Acrylonitrile	ND		ug/l	5.0	1.5	1
Acrolein	ND		ug/l	5.0	0.63	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	107		70-130
Toluene-d8	94		70-130
4-Bromofluorobenzene	92		70-130
Dibromofluoromethane	104		70-130

Project Name: SITE1_SMP_2014 **Lab Number:** L1422287

Project Number: SITE1_SMP_2014 **Report Date:** 09/30/14

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 09/27/14 18:07
Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-11 Batch: WG726024-3					
Methylene chloride	ND		ug/l	2.5	0.70
1,1-Dichloroethane	ND		ug/l	2.5	0.70
Chloroform	ND		ug/l	2.5	0.70
2-Chloroethylvinyl ether	ND		ug/l	10	0.70
Carbon tetrachloride	ND		ug/l	0.50	0.13
1,2-Dichloropropane	ND		ug/l	1.0	0.13
Dibromochloromethane	ND		ug/l	0.50	0.15
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50
Tetrachloroethene	ND		ug/l	0.50	0.18
Chlorobenzene	ND		ug/l	2.5	0.70
1,2-Dichloroethane	ND		ug/l	0.50	0.13
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70
Bromodichloromethane	ND		ug/l	0.50	0.19
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14
Bromoform	ND		ug/l	2.0	0.65
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.14
Benzene	ND		ug/l	0.50	0.16
Toluene	ND		ug/l	2.5	0.70
Ethylbenzene	ND		ug/l	2.5	0.70
Chloromethane	ND		ug/l	2.5	0.70
Bromomethane	ND		ug/l	2.5	0.70
Vinyl chloride	ND		ug/l	1.0	0.33
Chloroethane	ND		ug/l	2.5	0.70
1,1-Dichloroethene	ND		ug/l	0.50	0.14
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70
Trichloroethene	ND		ug/l	0.50	0.18
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70

Project Name: SITE1_SMP_2014 **Lab Number:** L1422287

Project Number: SITE1_SMP_2014 **Report Date:** 09/30/14

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 09/27/14 18:07
Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-11 Batch: WG726024-3					
1,3-Dichlorobenzene	ND		ug/l	2.5	0.70
1,4-Dichlorobenzene	ND		ug/l	2.5	0.70
Acrylonitrile	ND		ug/l	5.0	1.5
Acrolein	ND		ug/l	5.0	0.63

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	101		70-130
Toluene-d8	95		70-130
4-Bromofluorobenzene	93		70-130
Dibromofluoromethane	98		70-130

Lab Control Sample Analysis
Batch Quality Control

Project Name: SITE1_SMP_2014
Project Number: SITE1_SMP_2014

Lab Number: L1422287
Report Date: 09/30/14

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-11 Batch: WG726024-1 WG726024-2								
Methylene chloride	100		101		70-130	1		20
1,1-Dichloroethane	99		99		70-130	0		20
Chloroform	101		100		70-130	1		20
2-Chloroethylvinyl ether	96		96		70-130	0		20
Carbon tetrachloride	104		101		63-132	3		20
1,2-Dichloropropane	100		100		70-130	0		20
Dibromochloromethane	94		94		63-130	0		20
1,1,2-Trichloroethane	98		97		70-130	1		20
Tetrachloroethene	100		99		70-130	1		20
Chlorobenzene	99		98		75-130	1		20
Trichlorofluoromethane	102		98		62-150	4		20
1,2-Dichloroethane	100		100		70-130	0		20
1,1,1-Trichloroethane	103		102		67-130	1		20
Bromodichloromethane	100		100		67-130	0		20
trans-1,3-Dichloropropene	94		94		70-130	0		20
cis-1,3-Dichloropropene	102		101		70-130	1		20
1,1-Dichloropropene	101		99		70-130	2		20
Bromoform	96		95		54-136	1		20
1,1,2,2-Tetrachloroethane	95		93		67-130	2		20
Benzene	99		99		70-130	0		20
Toluene	95		95		70-130	0		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: SITE1_SMP_2014
Project Number: SITE1_SMP_2014

Lab Number: L1422287
Report Date: 09/30/14

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-11 Batch: WG726024-1 WG726024-2								
Ethylbenzene	99		98		70-130	1		20
Chloromethane	**61**	Q	**60**	Q	64-130	2		20
Bromomethane	48		46		39-139	4		20
Vinyl chloride	96		97		55-140	1		20
Chloroethane	**139**	Q	124		55-138	11		20
1,1-Dichloroethene	100		98		61-145	2		20
trans-1,2-Dichloroethene	99		98		70-130	1		20
Trichloroethene	105		105		70-130	0		20
1,2-Dichlorobenzene	96		97		70-130	1		20
1,3-Dichlorobenzene	97		97		70-130	0		20
1,4-Dichlorobenzene	98		97		70-130	1		20
Methyl tert butyl ether	99		99		63-130	0		20
p/m-Xylene	104		103		70-130	1		20
o-Xylene	106		105		70-130	1		20
cis-1,2-Dichloroethene	101		100		70-130	1		20
Dibromomethane	98		97		70-130	1		20
1,2,3-Trichloropropane	100		96		64-130	4		20
Acrylonitrile	100		96		70-130	4		20
Isopropyl Ether	99		98		70-130	1		20
tert-Butyl Alcohol	108		102		70-130	6		20
Styrene	108		107		70-130	1		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: SITE1_SMP_2014
Project Number: SITE1_SMP_2014

Lab Number: L1422287
Report Date: 09/30/14

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-11 Batch: WG726024-1 WG726024-2								
Dichlorodifluoromethane	56		54		36-147	4		20
Acetone	100		98		58-148	2		20
Carbon disulfide	97		95		51-130	2		20
2-Butanone	99		94		63-138	5		20
Vinyl acetate	98		95		70-130	3		20
4-Methyl-2-pentanone	105		100		59-130	5		20
2-Hexanone	96		90		57-130	6		20
Acrolein	96		93		40-160	3		20
Bromochloromethane	109		110		70-130	1		20
2,2-Dichloropropane	107		105		63-133	2		20
1,2-Dibromoethane	94		95		70-130	1		20
1,3-Dichloropropane	95		94		70-130	1		20
1,1,1,2-Tetrachloroethane	98		98		64-130	0		20
Bromobenzene	96		96		70-130	0		20
n-Butylbenzene	96		94		53-136	2		20
sec-Butylbenzene	99		97		70-130	2		20
tert-Butylbenzene	99		98		70-130	1		20
o-Chlorotoluene	98		97		70-130	1		20
p-Chlorotoluene	98		97		70-130	1		20
1,2-Dibromo-3-chloropropane	90		88		41-144	2		20
Hexachlorobutadiene	92		90		63-130	2		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: SITE1_SMP_2014
Project Number: SITE1_SMP_2014

Lab Number: L1422287
Report Date: 09/30/14

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-11 Batch: WG726024-1 WG726024-2								
Isopropylbenzene	98		96		70-130	2		20
p-Isopropyltoluene	98		96		70-130	2		20
Naphthalene	90		88		70-130	2		20
n-Propylbenzene	99		97		69-130	2		20
1,2,3-Trichlorobenzene	89		90		70-130	1		20
1,2,4-Trichlorobenzene	89		89		70-130	0		20
1,3,5-Trimethylbenzene	100		100		64-130	0		20
1,2,4-Trimethylbenzene	99		97		70-130	2		20
Methyl Acetate	100		97		70-130	3		20
Ethyl Acetate	95		91		70-130	4		20
Cyclohexane	101		98		70-130	3		20
Ethyl-Tert-Butyl-Ether	101		101		70-130	0		20
Tertiary-Amyl Methyl Ether	101		101		66-130	0		20
1,1,2-Trichloro-1,2,2-Trifluoroethane	102		98		70-130	4		20
1,4-Diethylbenzene	99		97		70-130	2		20
4-Ethyltoluene	100		98		70-130	2		20
1,2,4,5-Tetramethylbenzene	93		92		70-130	1		20
Ethyl ether	97		97		59-134	0		20
trans-1,4-Dichloro-2-butene	90		84		70-130	7		20
Methyl cyclohexane	104		101		70-130	3		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: SITE1_SMP_2014
Project Number: SITE1_SMP_2014

Lab Number: L1422287
Report Date: 09/30/14

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-11 Batch: WG726024-1 WG726024-2								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	102		100		70-130
Toluene-d8	95		96		70-130
4-Bromofluorobenzene	95		95		70-130
Dibromofluoromethane	103		104		70-130

Matrix Spike Analysis
Batch Quality Control

Project Name: SITE1_SMP_2014
Project Number: SITE1_SMP_2014

Lab Number: L1422287
Report Date: 09/30/14

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-11 QC Batch ID: WG726024-4 WG726024-5 QC Sample: L1422287-07 Client ID: SW-4-WS-201409231530												
Methylene chloride	ND	10	11	108		11	111		70-130	0		20
1,1-Dichloroethane	ND	10	11	112		11	112		70-130	0		20
Chloroform	ND	10	12	116		12	119		70-130	0		20
2-Chloroethylvinyl ether	ND	10	ND	**0**	Q	ND	**0**	Q	70-130	NC		20
Carbon tetrachloride	ND	10	13	129		13	132		63-132	0		20
1,2-Dichloropropane	ND	10	11	107		11	109		70-130	0		20
Dibromochloromethane	ND	10	11	108		11	107		63-130	0		20
1,1,2-Trichloroethane	ND	10	11	107		11	108		70-130	0		20
Tetrachloroethene	ND	10	12	116		12	117		70-130	0		20
Chlorobenzene	ND	10	11	111		11	112		75-130	0		20
Trichlorofluoromethane	ND	10	12	117		12	121		62-150	0		20
1,2-Dichloroethane	ND	10	12	120		12	120		70-130	0		20
1,1,1-Trichloroethane	ND	10	12	124		12	126		67-130	0		20
Bromodichloromethane	ND	10	11	114		12	116		67-130	9		20
trans-1,3-Dichloropropene	ND	10	10	101		10	104		70-130	0		20
cis-1,3-Dichloropropene	ND	10	11	107		11	110		70-130	0		20
1,1-Dichloropropene	ND	10	12	116		12	117		70-130	0		20
Bromoform	ND	10	10	105		10	106		54-136	0		20
1,1,2,2-Tetrachloroethane	ND	10	10	104		10	102		67-130	0		20
Benzene	ND	10	11	112		11	113		70-130	0		20
Toluene	ND	10	11	107		11	108		70-130	0		20

Matrix Spike Analysis
Batch Quality Control

Project Name: SITE1_SMP_2014
Project Number: SITE1_SMP_2014

Lab Number: L1422287
Report Date: 09/30/14

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-11 QC Batch ID: WG726024-4 WG726024-5 QC Sample: L1422287-07 Client ID: SW-4-WS-201409231530												
Ethylbenzene	ND	10	11	112		11	113		70-130	0		20
Chloromethane	ND	10	4.0	**40**	Q	4.3	**43**	Q	64-130	7		20
Bromomethane	ND	10	1.2J	**12**	Q	1.9J	**19**	Q	39-139	**45**	Q	20
Vinyl chloride	ND	10	6.6	66		7.7	77		55-140	15		20
Chloroethane	ND	10	13	132		14	138		55-138	7		20
1,1-Dichloroethene	ND	10	11	113		11	114		61-145	0		20
trans-1,2-Dichloroethene	ND	10	11	113		11	115		70-130	0		20
Trichloroethene	ND	10	12	123		12	123		70-130	0		20
1,2-Dichlorobenzene	ND	10	10	104		11	107		70-130	10		20
1,3-Dichlorobenzene	ND	10	10	106		11	108		70-130	10		20
1,4-Dichlorobenzene	ND	10	11	106		11	108		70-130	0		20
Methyl tert butyl ether	ND	10	11	112		11	113		63-130	0		20
p/m-Xylene	ND	20	24	118		24	119		70-130	0		20
o-Xylene	ND	20	24	118		24	120		70-130	0		20
cis-1,2-Dichloroethene	ND	10	12	115		12	115		70-130	0		20
Dibromomethane	ND	10	11	112		11	113		70-130	0		20
1,2,3-Trichloropropane	ND	10	11	111		11	110		64-130	0		20
Acrylonitrile	ND	10	10	105		10	101		70-130	0		20
Isopropyl Ether	ND	10	10	103		10	104		70-130	0		20
tert-Butyl Alcohol	ND	50	62	125		63	127		70-130	2		20
Styrene	ND	20	23	117		24	119		70-130	4		20

Matrix Spike Analysis
Batch Quality Control

Project Name: SITE1_SMP_2014
Project Number: SITE1_SMP_2014

Lab Number: L1422287
Report Date: 09/30/14

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-11 QC Batch ID: WG726024-4 WG726024-5 QC Sample: L1422287-07 Client ID: SW-4-WS-201409231530												
Dichlorodifluoromethane	ND	10	5.1	51		5.2	52		36-147	2		20
Acetone	3.5J	10	14	144		14	139		58-148	0		20
Carbon disulfide	ND	10	11	108		11	109		51-130	0		20
2-Butanone	ND	10	11	114		10	105		63-138	10		20
Vinyl acetate	ND	10	11	110		11	106		70-130	0		20
4-Methyl-2-pentanone	ND	10	13	129		12	124		59-130	8		20
2-Hexanone	ND	10	11	114		11	111		57-130	0		20
Acrolein	ND	10	9.9	99		9.4	94		40-160	5		20
Bromochloromethane	ND	10	12	120		13	128		70-130	8		20
2,2-Dichloropropane	ND	10	11	114		11	113		63-133	0		20
1,2-Dibromoethane	ND	10	11	107		11	107		70-130	0		20
1,3-Dichloropropane	ND	10	10	105		10	106		70-130	0		20
1,1,1,2-Tetrachloroethane	ND	10	11	111		11	113		64-130	0		20
Bromobenzene	ND	10	11	106		11	107		70-130	0		20
n-Butylbenzene	ND	10	9.9	99		9.8	98		53-136	1		20
sec-Butylbenzene	ND	10	11	107		11	106		70-130	0		20
tert-Butylbenzene	ND	10	11	110		11	110		70-130	0		20
o-Chlorotoluene	ND	10	11	107		11	108		70-130	0		20
p-Chlorotoluene	ND	10	11	106		11	108		70-130	0		20
1,2-Dibromo-3-chloropropane	ND	10	9.9	99		10	101		41-144	1		20
Hexachlorobutadiene	ND	10	7.8	78		8.0	80		63-130	3		20

Matrix Spike Analysis
Batch Quality Control

Project Name: SITE1_SMP_2014
Project Number: SITE1_SMP_2014

Lab Number: L1422287
Report Date: 09/30/14

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-11 QC Batch ID: WG726024-4 WG726024-5 QC Sample: L1422287-07 Client ID: SW-4-WS-201409231530												
Isopropylbenzene	ND	10	11	108		11	109		70-130	0		20
p-Isopropyltoluene	ND	10	11	106		10	105		70-130	10		20
Naphthalene	ND	10	10	103		10	103		70-130	0		20
n-Propylbenzene	ND	10	11	107		11	108		69-130	0		20
1,2,3-Trichlorobenzene	ND	10	9.3	93		9.5	95		70-130	2		20
1,2,4-Trichlorobenzene	ND	10	9.2	92		9.4	94		70-130	2		20
1,3,5-Trimethylbenzene	ND	10	11	110		11	112		64-130	0		20
1,2,4-Trimethylbenzene	ND	10	11	108		11	109		70-130	0		20
Methyl Acetate	ND	10	10	105		10	100		70-130	0		20
Ethyl Acetate	ND	10	10	100		9.8J	98		70-130	2		20
Cyclohexane	ND	10	10	103		11	106		70-130	10		20
Ethyl-Tert-Butyl-Ether	ND	10	11	112		11	113		70-130	0		20
Tertiary-Amyl Methyl Ether	ND	10	11	113		11	115		66-130	0		20
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	11	106		11	112		70-130	0		20
1,4-Diethylbenzene	ND	10	10	105		10	104		70-130	0		20
4-Ethyltoluene	ND	10	11	110		11	110		70-130	0		20
1,2,4,5-Tetramethylbenzene	ND	10	9.8	98		10	100		70-130	2		20
Ethyl ether	ND	10	10	103		10	105		59-134	0		20
trans-1,4-Dichloro-2-butene	ND	10	8.8	88		8.6	86		70-130	2		20
Methyl cyclohexane	ND	10	11	107		11	110		70-130	0		20

Matrix Spike Analysis
Batch Quality Control

Project Name: SITE1_SMP_2014
Project Number: SITE1_SMP_2014

Lab Number: L1422287
Report Date: 09/30/14

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-11 QC Batch ID: WG726024-4 WG726024-5 QC Sample: L1422287-07 Client ID: SW-4-WS-201409231530												

Surrogate	MS % Recovery	MS Qualifier	MSD % Recovery	MSD Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	107		108		70-130
4-Bromofluorobenzene	93		95		70-130
Dibromofluoromethane	107		107		70-130
Toluene-d8	94		94		70-130

SEMIVOLATILES

Project Name: SITE1_SMP_2014 **Lab Number:** L1422287

Project Number: SITE1_SMP_2014 **Report Date:** 09/30/14

SAMPLE RESULTS

Lab ID:	L1422287-01	Date Collected:	09/23/14 12:16
Client ID:	PRW-01-WG-201409231216	Date Received:	09/23/14
Sample Location:	HOWLAND HOOK MARINE/PORT IVORY	Field Prep:	See Narrative
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8270D	Extraction Date:	09/25/14 16:23
Analytical Date:	09/30/14 04:13		
Analyst:	JB		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.21	1
Benzidine	ND		ug/l	20	5.2	1
n-Nitrosodimethylamine	ND		ug/l	2.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.41	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	0.48	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.0	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.89	1
Azobenzene	ND		ug/l	2.0	0.54	1
4-Chlorophenyl phenyl ether	ND		ug/l	2.0	0.36	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.43	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.60	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.60	1
Hexachlorocyclopentadiene	ND		ug/l	20	0.58	1
Isophorone	ND		ug/l	5.0	0.79	1
Nitrobenzene	ND		ug/l	2.0	0.40	1
NDPA/DPA	ND		ug/l	2.0	0.34	1
n-Nitrosodi-n-propylamine	ND		ug/l	5.0	0.64	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	0.93	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.1	1
Di-n-butylphthalate	ND		ug/l	5.0	0.77	1
Di-n-octylphthalate	ND		ug/l	5.0	1.2	1
Diethyl phthalate	ND		ug/l	5.0	0.39	1
Dimethyl phthalate	ND		ug/l	5.0	0.33	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.78	1
p-Chloro-m-cresol	ND		ug/l	2.0	0.54	1
2-Chlorophenol	ND		ug/l	2.0	0.58	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.56	1
2,4-Dimethylphenol	ND		ug/l	5.0	0.58	1
2-Nitrophenol	ND		ug/l	10	1.0	1
4-Nitrophenol	ND		ug/l	10	1.1	1

Project Name: SITE1_SMP_2014 **Lab Number:** L1422287

Project Number: SITE1_SMP_2014 **Report Date:** 09/30/14

SAMPLE RESULTS

Lab ID: L1422287-01 Date Collected: 09/23/14 12:16

Client ID: PRW-01-WG-201409231216 Date Received: 09/23/14

Sample Location: HOWLAND HOOK MARINE/PORT IVORY Field Prep: See Narrative

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
2,4-Dinitrophenol	ND		ug/l	20	1.4	1
4,6-Dinitro-o-cresol	ND		ug/l	10	1.4	1
Phenol	ND		ug/l	5.0	0.27	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	37		21-120
Phenol-d6	27		10-120
Nitrobenzene-d5	68		23-120
2-Fluorobiphenyl	67		15-120
2,4,6-Tribromophenol	64		10-120
4-Terphenyl-d14	61		41-149

Project Name: SITE1_SMP_2014 **Lab Number:** L1422287

Project Number: SITE1_SMP_2014 **Report Date:** 09/30/14

SAMPLE RESULTS

Lab ID:	L1422287-01	Date Collected:	09/23/14 12:16
Client ID:	PRW-01-WG-201409231216	Date Received:	09/23/14
Sample Location:	HOWLAND HOOK MARINE/PORT IVORY	Field Prep:	See Narrative
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8270D-SIM	Extraction Date:	09/25/14 16:28
Analytical Date:	09/26/14 19:25		
Analyst:	KR		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS-SIM - Westborough Lab						
Acenaphthene	1.4		ug/l	0.20	0.06	1
2-Chloronaphthalene	ND		ug/l	0.20	0.07	1
Fluoranthene	0.20		ug/l	0.20	0.04	1
Hexachlorobutadiene	ND		ug/l	0.50	0.07	1
Naphthalene	ND		ug/l	0.20	0.06	1
Benzo(a)anthracene	0.10	J	ug/l	0.20	0.06	1
Benzo(a)pyrene	0.08	J	ug/l	0.20	0.07	1
Benzo(b)fluoranthene	ND		ug/l	0.20	0.07	1
Benzo(k)fluoranthene	ND		ug/l	0.20	0.07	1
Chrysene	0.16	J	ug/l	0.20	0.05	1
Acenaphthylene	ND		ug/l	0.20	0.05	1
Anthracene	0.59		ug/l	0.20	0.06	1
Benzo(ghi)perylene	ND		ug/l	0.20	0.07	1
Fluorene	0.43		ug/l	0.20	0.06	1
Phenanthrene	ND		ug/l	0.20	0.06	1
Dibenzo(a,h)anthracene	ND		ug/l	0.20	0.07	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.20	0.08	1
Pyrene	0.79		ug/l	0.20	0.06	1
Pentachlorophenol	ND		ug/l	0.80	0.19	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.07	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	46		21-120
Phenol-d6	33		10-120
Nitrobenzene-d5	86		23-120
2-Fluorobiphenyl	89		15-120
2,4,6-Tribromophenol	92		10-120
4-Terphenyl-d14	107		41-149

Project Name: SITE1_SMP_2014 **Lab Number:** L1422287

Project Number: SITE1_SMP_2014 **Report Date:** 09/30/14

SAMPLE RESULTS

Lab ID:	L1422287-02	Date Collected:	09/23/14 12:26
Client ID:	PRW-02-WG-201409231226	Date Received:	09/23/14
Sample Location:	HOWLAND HOOK MARINE/PORT IVORY	Field Prep:	See Narrative
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8270D	Extraction Date:	09/25/14 16:23
Analytical Date:	09/29/14 16:31		
Analyst:	JB		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.21	1
Benzidine	ND		ug/l	20	5.2	1
n-Nitrosodimethylamine	ND		ug/l	2.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.41	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	0.48	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.0	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.89	1
Azobenzene	ND		ug/l	2.0	0.54	1
4-Chlorophenyl phenyl ether	ND		ug/l	2.0	0.36	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.43	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.60	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.60	1
Hexachlorocyclopentadiene	ND		ug/l	20	0.58	1
Isophorone	ND		ug/l	5.0	0.79	1
Nitrobenzene	ND		ug/l	2.0	0.40	1
NDPA/DPA	ND		ug/l	2.0	0.34	1
n-Nitrosodi-n-propylamine	ND		ug/l	5.0	0.64	1
Bis(2-ethylhexyl)phthalate	4.2		ug/l	3.0	0.93	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.1	1
Di-n-butylphthalate	ND		ug/l	5.0	0.77	1
Di-n-octylphthalate	ND		ug/l	5.0	1.2	1
Diethyl phthalate	ND		ug/l	5.0	0.39	1
Dimethyl phthalate	ND		ug/l	5.0	0.33	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.78	1
p-Chloro-m-cresol	ND		ug/l	2.0	0.54	1
2-Chlorophenol	ND		ug/l	2.0	0.58	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.56	1
2,4-Dimethylphenol	ND		ug/l	5.0	0.58	1
2-Nitrophenol	ND		ug/l	10	1.0	1
4-Nitrophenol	ND		ug/l	10	1.1	1

Project Name: SITE1_SMP_2014 **Lab Number:** L1422287

Project Number: SITE1_SMP_2014 **Report Date:** 09/30/14

SAMPLE RESULTS

Lab ID: L1422287-02 Date Collected: 09/23/14 12:26

Client ID: PRW-02-WG-201409231226 Date Received: 09/23/14

Sample Location: HOWLAND HOOK MARINE/PORT IVORY Field Prep: See Narrative

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
2,4-Dinitrophenol	ND		ug/l	20	1.4	1
4,6-Dinitro-o-cresol	ND		ug/l	10	1.4	1
Phenol	ND		ug/l	5.0	0.27	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	45		21-120
Phenol-d6	32		10-120
Nitrobenzene-d5	66		23-120
2-Fluorobiphenyl	66		15-120
2,4,6-Tribromophenol	88		10-120
4-Terphenyl-d14	80		41-149

Project Name: SITE1_SMP_2014 **Lab Number:** L1422287

Project Number: SITE1_SMP_2014 **Report Date:** 09/30/14

SAMPLE RESULTS

Lab ID:	L1422287-02	Date Collected:	09/23/14 12:26
Client ID:	PRW-02-WG-201409231226	Date Received:	09/23/14
Sample Location:	HOWLAND HOOK MARINE/PORT IVORY	Field Prep:	See Narrative
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8270D-SIM	Extraction Date:	09/25/14 16:28
Analytical Date:	09/26/14 19:55		
Analyst:	KR		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS-SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.20	0.06	1
2-Chloronaphthalene	ND		ug/l	0.20	0.07	1
Fluoranthene	ND		ug/l	0.20	0.04	1
Hexachlorobutadiene	ND		ug/l	0.50	0.07	1
Naphthalene	ND		ug/l	0.20	0.06	1
Benzo(a)anthracene	ND		ug/l	0.20	0.06	1
Benzo(a)pyrene	ND		ug/l	0.20	0.07	1
Benzo(b)fluoranthene	ND		ug/l	0.20	0.07	1
Benzo(k)fluoranthene	ND		ug/l	0.20	0.07	1
Chrysene	ND		ug/l	0.20	0.05	1
Acenaphthylene	ND		ug/l	0.20	0.05	1
Anthracene	ND		ug/l	0.20	0.06	1
Benzo(ghi)perylene	ND		ug/l	0.20	0.07	1
Fluorene	ND		ug/l	0.20	0.06	1
Phenanthrene	ND		ug/l	0.20	0.06	1
Dibenzo(a,h)anthracene	ND		ug/l	0.20	0.07	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.20	0.08	1
Pyrene	ND		ug/l	0.20	0.06	1
Pentachlorophenol	ND		ug/l	0.80	0.19	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.07	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	48		21-120
Phenol-d6	37		10-120
Nitrobenzene-d5	84		23-120
2-Fluorobiphenyl	84		15-120
2,4,6-Tribromophenol	90		10-120
4-Terphenyl-d14	98		41-149

Project Name: SITE1_SMP_2014 **Lab Number:** L1422287

Project Number: SITE1_SMP_2014 **Report Date:** 09/30/14

SAMPLE RESULTS

Lab ID:	L1422287-03	Date Collected:	09/23/14 13:51
Client ID:	PRW-03-WG-201409231351	Date Received:	09/23/14
Sample Location:	HOWLAND HOOK MARINE/PORT IVORY	Field Prep:	See Narrative
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8270D	Extraction Date:	09/25/14 16:23
Analytical Date:	09/29/14 16:59		
Analyst:	JB		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.21	1
Benzidine	ND		ug/l	20	5.2	1
n-Nitrosodimethylamine	ND		ug/l	2.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.41	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	0.48	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.0	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.89	1
Azobenzene	ND		ug/l	2.0	0.54	1
4-Chlorophenyl phenyl ether	ND		ug/l	2.0	0.36	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.43	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.60	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.60	1
Hexachlorocyclopentadiene	ND		ug/l	20	0.58	1
Isophorone	ND		ug/l	5.0	0.79	1
Nitrobenzene	ND		ug/l	2.0	0.40	1
NDPA/DPA	ND		ug/l	2.0	0.34	1
n-Nitrosodi-n-propylamine	ND		ug/l	5.0	0.64	1
Bis(2-ethylhexyl)phthalate	4.2		ug/l	3.0	0.93	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.1	1
Di-n-butylphthalate	ND		ug/l	5.0	0.77	1
Di-n-octylphthalate	ND		ug/l	5.0	1.2	1
Diethyl phthalate	ND		ug/l	5.0	0.39	1
Dimethyl phthalate	ND		ug/l	5.0	0.33	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.78	1
p-Chloro-m-cresol	ND		ug/l	2.0	0.54	1
2-Chlorophenol	ND		ug/l	2.0	0.58	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.56	1
2,4-Dimethylphenol	ND		ug/l	5.0	0.58	1
2-Nitrophenol	ND		ug/l	10	1.0	1
4-Nitrophenol	ND		ug/l	10	1.1	1

Project Name: SITE1_SMP_2014 **Lab Number:** L1422287

Project Number: SITE1_SMP_2014 **Report Date:** 09/30/14

SAMPLE RESULTS

Lab ID: L1422287-03 Date Collected: 09/23/14 13:51

Client ID: PRW-03-WG-201409231351 Date Received: 09/23/14

Sample Location: HOWLAND HOOK MARINE/PORT IVORY Field Prep: See Narrative

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
2,4-Dinitrophenol	ND		ug/l	20	1.4	1
4,6-Dinitro-o-cresol	ND		ug/l	10	1.4	1
Phenol	ND		ug/l	5.0	0.27	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	36		21-120
Phenol-d6	25		10-120
Nitrobenzene-d5	59		23-120
2-Fluorobiphenyl	61		15-120
2,4,6-Tribromophenol	82		10-120
4-Terphenyl-d14	71		41-149

Project Name: SITE1_SMP_2014 **Lab Number:** L1422287

Project Number: SITE1_SMP_2014 **Report Date:** 09/30/14

SAMPLE RESULTS

Lab ID:	L1422287-03	Date Collected:	09/23/14 13:51
Client ID:	PRW-03-WG-201409231351	Date Received:	09/23/14
Sample Location:	HOWLAND HOOK MARINE/PORT IVORY	Field Prep:	See Narrative
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8270D-SIM	Extraction Date:	09/25/14 16:28
Analytical Date:	09/26/14 20:24		
Analyst:	KR		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS-SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.20	0.06	1
2-Chloronaphthalene	ND		ug/l	0.20	0.07	1
Fluoranthene	0.06	J	ug/l	0.20	0.04	1
Hexachlorobutadiene	ND		ug/l	0.50	0.07	1
Naphthalene	ND		ug/l	0.20	0.06	1
Benzo(a)anthracene	ND		ug/l	0.20	0.06	1
Benzo(a)pyrene	ND		ug/l	0.20	0.07	1
Benzo(b)fluoranthene	ND		ug/l	0.20	0.07	1
Benzo(k)fluoranthene	ND		ug/l	0.20	0.07	1
Chrysene	ND		ug/l	0.20	0.05	1
Acenaphthylene	ND		ug/l	0.20	0.05	1
Anthracene	0.30		ug/l	0.20	0.06	1
Benzo(ghi)perylene	ND		ug/l	0.20	0.07	1
Fluorene	ND		ug/l	0.20	0.06	1
Phenanthrene	ND		ug/l	0.20	0.06	1
Dibenzo(a,h)anthracene	ND		ug/l	0.20	0.07	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.20	0.08	1
Pyrene	0.06	J	ug/l	0.20	0.06	1
Pentachlorophenol	ND		ug/l	0.80	0.19	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.07	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	41		21-120
Phenol-d6	31		10-120
Nitrobenzene-d5	81		23-120
2-Fluorobiphenyl	82		15-120
2,4,6-Tribromophenol	84		10-120
4-Terphenyl-d14	97		41-149

Project Name: SITE1_SMP_2014 **Lab Number:** L1422287

Project Number: SITE1_SMP_2014 **Report Date:** 09/30/14

SAMPLE RESULTS

Lab ID:	L1422287-04	Date Collected:	09/23/14 11:01
Client ID:	PRW-05-WG-201409231101	Date Received:	09/23/14
Sample Location:	HOWLAND HOOK MARINE/PORT IVORY	Field Prep:	See Narrative
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8270D	Extraction Date:	09/25/14 16:23
Analytical Date:	09/29/14 17:27		
Analyst:	JB		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.21	1
Benzidine	ND		ug/l	20	5.2	1
n-Nitrosodimethylamine	ND		ug/l	2.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.41	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	0.48	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.0	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.89	1
Azobenzene	ND		ug/l	2.0	0.54	1
4-Chlorophenyl phenyl ether	ND		ug/l	2.0	0.36	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.43	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.60	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.60	1
Hexachlorocyclopentadiene	ND		ug/l	20	0.58	1
Isophorone	ND		ug/l	5.0	0.79	1
Nitrobenzene	ND		ug/l	2.0	0.40	1
NDPA/DPA	ND		ug/l	2.0	0.34	1
n-Nitrosodi-n-propylamine	ND		ug/l	5.0	0.64	1
Bis(2-ethylhexyl)phthalate	3.2		ug/l	3.0	0.93	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.1	1
Di-n-butylphthalate	ND		ug/l	5.0	0.77	1
Di-n-octylphthalate	ND		ug/l	5.0	1.2	1
Diethyl phthalate	ND		ug/l	5.0	0.39	1
Dimethyl phthalate	ND		ug/l	5.0	0.33	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.78	1
p-Chloro-m-cresol	ND		ug/l	2.0	0.54	1
2-Chlorophenol	ND		ug/l	2.0	0.58	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.56	1
2,4-Dimethylphenol	ND		ug/l	5.0	0.58	1
2-Nitrophenol	ND		ug/l	10	1.0	1
4-Nitrophenol	ND		ug/l	10	1.1	1

Project Name: SITE1_SMP_2014 **Lab Number:** L1422287

Project Number: SITE1_SMP_2014 **Report Date:** 09/30/14

SAMPLE RESULTS

Lab ID: L1422287-04 Date Collected: 09/23/14 11:01

Client ID: PRW-05-WG-201409231101 Date Received: 09/23/14

Sample Location: HOWLAND HOOK MARINE/PORT IVORY Field Prep: See Narrative

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
2,4-Dinitrophenol	ND		ug/l	20	1.4	1
4,6-Dinitro-o-cresol	ND		ug/l	10	1.4	1
Phenol	ND		ug/l	5.0	0.27	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	33		21-120
Phenol-d6	22		10-120
Nitrobenzene-d5	50		23-120
2-Fluorobiphenyl	50		15-120
2,4,6-Tribromophenol	62		10-120
4-Terphenyl-d14	58		41-149

Project Name: SITE1_SMP_2014 **Lab Number:** L1422287

Project Number: SITE1_SMP_2014 **Report Date:** 09/30/14

SAMPLE RESULTS

Lab ID:	L1422287-04	Date Collected:	09/23/14 11:01
Client ID:	PRW-05-WG-201409231101	Date Received:	09/23/14
Sample Location:	HOWLAND HOOK MARINE/PORT IVORY	Field Prep:	See Narrative
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8270D-SIM	Extraction Date:	09/25/14 16:28
Analytical Date:	09/26/14 20:53		
Analyst:	KR		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS-SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.20	0.06	1
2-Chloronaphthalene	ND		ug/l	0.20	0.07	1
Fluoranthene	ND		ug/l	0.20	0.04	1
Hexachlorobutadiene	ND		ug/l	0.50	0.07	1
Naphthalene	ND		ug/l	0.20	0.06	1
Benzo(a)anthracene	ND		ug/l	0.20	0.06	1
Benzo(a)pyrene	ND		ug/l	0.20	0.07	1
Benzo(b)fluoranthene	ND		ug/l	0.20	0.07	1
Benzo(k)fluoranthene	ND		ug/l	0.20	0.07	1
Chrysene	ND		ug/l	0.20	0.05	1
Acenaphthylene	ND		ug/l	0.20	0.05	1
Anthracene	ND		ug/l	0.20	0.06	1
Benzo(ghi)perylene	ND		ug/l	0.20	0.07	1
Fluorene	ND		ug/l	0.20	0.06	1
Phenanthrene	ND		ug/l	0.20	0.06	1
Dibenzo(a,h)anthracene	ND		ug/l	0.20	0.07	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.20	0.08	1
Pyrene	ND		ug/l	0.20	0.06	1
Pentachlorophenol	ND		ug/l	0.80	0.19	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.07	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	35		21-120
Phenol-d6	25		10-120
Nitrobenzene-d5	66		23-120
2-Fluorobiphenyl	63		15-120
2,4,6-Tribromophenol	48		10-120
4-Terphenyl-d14	62		41-149

Project Name: SITE1_SMP_2014 **Lab Number:** L1422287

Project Number: SITE1_SMP_2014 **Report Date:** 09/30/14

SAMPLE RESULTS

Lab ID:	L1422287-05	Date Collected:	09/23/14 11:06
Client ID:	PRW-06-WG-201409231106	Date Received:	09/23/14
Sample Location:	HOWLAND HOOK MARINE/PORT IVORY	Field Prep:	See Narrative
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8270D	Extraction Date:	09/25/14 16:23
Analytical Date:	09/29/14 15:35		
Analyst:	JB		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.21	1
Benzidine	ND		ug/l	20	5.2	1
n-Nitrosodimethylamine	ND		ug/l	2.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.41	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	0.48	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.0	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.89	1
Azobenzene	ND		ug/l	2.0	0.54	1
4-Chlorophenyl phenyl ether	ND		ug/l	2.0	0.36	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.43	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.60	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.60	1
Hexachlorocyclopentadiene	ND		ug/l	20	0.58	1
Isophorone	ND		ug/l	5.0	0.79	1
Nitrobenzene	ND		ug/l	2.0	0.40	1
NDPA/DPA	ND		ug/l	2.0	0.34	1
n-Nitrosodi-n-propylamine	ND		ug/l	5.0	0.64	1
Bis(2-ethylhexyl)phthalate	3.2		ug/l	3.0	0.93	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.1	1
Di-n-butylphthalate	ND		ug/l	5.0	0.77	1
Di-n-octylphthalate	ND		ug/l	5.0	1.2	1
Diethyl phthalate	ND		ug/l	5.0	0.39	1
Dimethyl phthalate	ND		ug/l	5.0	0.33	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.78	1
p-Chloro-m-cresol	ND		ug/l	2.0	0.54	1
2-Chlorophenol	ND		ug/l	2.0	0.58	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.56	1
2,4-Dimethylphenol	ND		ug/l	5.0	0.58	1
2-Nitrophenol	ND		ug/l	10	1.0	1
4-Nitrophenol	ND		ug/l	10	1.1	1

Project Name: SITE1_SMP_2014 **Lab Number:** L1422287

Project Number: SITE1_SMP_2014 **Report Date:** 09/30/14

SAMPLE RESULTS

Lab ID: L1422287-05 Date Collected: 09/23/14 11:06

Client ID: PRW-06-WG-201409231106 Date Received: 09/23/14

Sample Location: HOWLAND HOOK MARINE/PORT IVORY Field Prep: See Narrative

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
2,4-Dinitrophenol	ND		ug/l	20	1.4	1
4,6-Dinitro-o-cresol	ND		ug/l	10	1.4	1
Phenol	ND		ug/l	5.0	0.27	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	43		21-120
Phenol-d6	33		10-120
Nitrobenzene-d5	66		23-120
2-Fluorobiphenyl	68		15-120
2,4,6-Tribromophenol	79		10-120
4-Terphenyl-d14	83		41-149

Project Name: SITE1_SMP_2014 **Lab Number:** L1422287

Project Number: SITE1_SMP_2014 **Report Date:** 09/30/14

SAMPLE RESULTS

Lab ID:	L1422287-05	Date Collected:	09/23/14 11:06
Client ID:	PRW-06-WG-201409231106	Date Received:	09/23/14
Sample Location:	HOWLAND HOOK MARINE/PORT IVORY	Field Prep:	See Narrative
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8270D-SIM	Extraction Date:	09/25/14 16:28
Analytical Date:	09/26/14 18:53		
Analyst:	KR		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS-SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.20	0.06	1
2-Chloronaphthalene	ND		ug/l	0.20	0.07	1
Fluoranthene	ND		ug/l	0.20	0.04	1
Hexachlorobutadiene	ND		ug/l	0.50	0.07	1
Naphthalene	ND		ug/l	0.20	0.06	1
Benzo(a)anthracene	ND		ug/l	0.20	0.06	1
Benzo(a)pyrene	ND		ug/l	0.20	0.07	1
Benzo(b)fluoranthene	ND		ug/l	0.20	0.07	1
Benzo(k)fluoranthene	ND		ug/l	0.20	0.07	1
Chrysene	ND		ug/l	0.20	0.05	1
Acenaphthylene	ND		ug/l	0.20	0.05	1
Anthracene	ND		ug/l	0.20	0.06	1
Benzo(ghi)perylene	ND		ug/l	0.20	0.07	1
Fluorene	ND		ug/l	0.20	0.06	1
Phenanthrene	ND		ug/l	0.20	0.06	1
Dibenzo(a,h)anthracene	ND		ug/l	0.20	0.07	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.20	0.08	1
Pyrene	ND		ug/l	0.20	0.06	1
Pentachlorophenol	ND		ug/l	0.80	0.19	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.07	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	45		21-120
Phenol-d6	33		10-120
Nitrobenzene-d5	76		23-120
2-Fluorobiphenyl	78		15-120
2,4,6-Tribromophenol	90		10-120
4-Terphenyl-d14	88		41-149

Project Name: SITE1_SMP_2014 **Lab Number:** L1422287

Project Number: SITE1_SMP_2014 **Report Date:** 09/30/14

SAMPLE RESULTS

Lab ID:	L1422287-06	Date Collected:	09/23/14 13:51
Client ID:	PRW-07-WG-201409231351	Date Received:	09/23/14
Sample Location:	HOWLAND HOOK MARINE/PORT IVORY	Field Prep:	See Narrative
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8270D	Extraction Date:	09/25/14 16:23
Analytical Date:	09/29/14 16:03		
Analyst:	JB		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.21	1
Benzidine	ND		ug/l	20	5.2	1
n-Nitrosodimethylamine	ND		ug/l	2.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.41	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	0.48	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.0	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.89	1
Azobenzene	ND		ug/l	2.0	0.54	1
4-Chlorophenyl phenyl ether	ND		ug/l	2.0	0.36	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.43	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.60	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.60	1
Hexachlorocyclopentadiene	ND		ug/l	20	0.58	1
Isophorone	ND		ug/l	5.0	0.79	1
Nitrobenzene	ND		ug/l	2.0	0.40	1
NDPA/DPA	ND		ug/l	2.0	0.34	1
n-Nitrosodi-n-propylamine	ND		ug/l	5.0	0.64	1
Bis(2-ethylhexyl)phthalate	9.7		ug/l	3.0	0.93	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.1	1
Di-n-butylphthalate	ND		ug/l	5.0	0.77	1
Di-n-octylphthalate	ND		ug/l	5.0	1.2	1
Diethyl phthalate	5.0		ug/l	5.0	0.39	1
Dimethyl phthalate	ND		ug/l	5.0	0.33	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.78	1
p-Chloro-m-cresol	ND		ug/l	2.0	0.54	1
2-Chlorophenol	ND		ug/l	2.0	0.58	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.56	1
2,4-Dimethylphenol	ND		ug/l	5.0	0.58	1
2-Nitrophenol	ND		ug/l	10	1.0	1
4-Nitrophenol	ND		ug/l	10	1.1	1

Project Name: SITE1_SMP_2014 **Lab Number:** L1422287

Project Number: SITE1_SMP_2014 **Report Date:** 09/30/14

SAMPLE RESULTS

Lab ID: L1422287-06 Date Collected: 09/23/14 13:51

Client ID: PRW-07-WG-201409231351 Date Received: 09/23/14

Sample Location: HOWLAND HOOK MARINE/PORT IVORY Field Prep: See Narrative

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
2,4-Dinitrophenol	ND		ug/l	20	1.4	1
4,6-Dinitro-o-cresol	ND		ug/l	10	1.4	1
Phenol	2.7	J	ug/l	5.0	0.27	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	38		21-120
Phenol-d6	27		10-120
Nitrobenzene-d5	63		23-120
2-Fluorobiphenyl	64		15-120
2,4,6-Tribromophenol	90		10-120
4-Terphenyl-d14	78		41-149

Project Name: SITE1_SMP_2014 **Lab Number:** L1422287

Project Number: SITE1_SMP_2014 **Report Date:** 09/30/14

SAMPLE RESULTS

Lab ID:	L1422287-06	Date Collected:	09/23/14 13:51
Client ID:	PRW-07-WG-201409231351	Date Received:	09/23/14
Sample Location:	HOWLAND HOOK MARINE/PORT IVORY	Field Prep:	See Narrative
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8270D-SIM	Extraction Date:	09/25/14 16:28
Analytical Date:	09/26/14 19:17		
Analyst:	KR		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS-SIM - Westborough Lab						
Acenaphthene	2.0		ug/l	0.20	0.06	1
2-Chloronaphthalene	ND		ug/l	0.20	0.07	1
Fluoranthene	0.77		ug/l	0.20	0.04	1
Hexachlorobutadiene	ND		ug/l	0.50	0.07	1
Naphthalene	2.6		ug/l	0.20	0.06	1
Benzo(a)anthracene	ND		ug/l	0.20	0.06	1
Benzo(a)pyrene	ND		ug/l	0.20	0.07	1
Benzo(b)fluoranthene	ND		ug/l	0.20	0.07	1
Benzo(k)fluoranthene	ND		ug/l	0.20	0.07	1
Chrysene	ND		ug/l	0.20	0.05	1
Acenaphthylene	ND		ug/l	0.20	0.05	1
Anthracene	0.71		ug/l	0.20	0.06	1
Benzo(ghi)perylene	ND		ug/l	0.20	0.07	1
Fluorene	1.6		ug/l	0.20	0.06	1
Phenanthrene	4.4		ug/l	0.20	0.06	1
Dibenzo(a,h)anthracene	ND		ug/l	0.20	0.07	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.20	0.08	1
Pyrene	0.50		ug/l	0.20	0.06	1
Pentachlorophenol	ND		ug/l	0.80	0.19	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.07	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	38		21-120
Phenol-d6	29		10-120
Nitrobenzene-d5	71		23-120
2-Fluorobiphenyl	78		15-120
2,4,6-Tribromophenol	76		10-120
4-Terphenyl-d14	96		41-149

Project Name: SITE1_SMP_2014 **Lab Number:** L1422287

Project Number: SITE1_SMP_2014 **Report Date:** 09/30/14

SAMPLE RESULTS

Lab ID:	L1422287-07	Date Collected:	09/23/14 15:30
Client ID:	SW-4-WS-201409231530	Date Received:	09/23/14
Sample Location:	HOWLAND HOOK MARINE/PORT IVORY	Field Prep:	See Narrative
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8270D	Extraction Date:	09/25/14 16:23
Analytical Date:	09/29/14 13:10		
Analyst:	JB		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.21	1
Benzidine	ND		ug/l	20	5.2	1
n-Nitrosodimethylamine	ND		ug/l	2.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.41	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	0.48	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.0	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.89	1
Azobenzene	ND		ug/l	2.0	0.54	1
4-Chlorophenyl phenyl ether	ND		ug/l	2.0	0.36	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.43	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.60	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.60	1
Hexachlorocyclopentadiene	ND		ug/l	20	0.58	1
Isophorone	ND		ug/l	5.0	0.79	1
Nitrobenzene	ND		ug/l	2.0	0.40	1
NDPA/DPA	ND		ug/l	2.0	0.34	1
n-Nitrosodi-n-propylamine	ND		ug/l	5.0	0.64	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	0.93	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.1	1
Di-n-butylphthalate	ND		ug/l	5.0	0.77	1
Di-n-octylphthalate	ND		ug/l	5.0	1.2	1
Diethyl phthalate	ND		ug/l	5.0	0.39	1
Dimethyl phthalate	ND		ug/l	5.0	0.33	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.78	1
p-Chloro-m-cresol	ND		ug/l	2.0	0.54	1
2-Chlorophenol	ND		ug/l	2.0	0.58	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.56	1
2,4-Dimethylphenol	ND		ug/l	5.0	0.58	1
2-Nitrophenol	ND		ug/l	10	1.0	1
4-Nitrophenol	ND		ug/l	10	1.1	1

Project Name: SITE1_SMP_2014 **Lab Number:** L1422287

Project Number: SITE1_SMP_2014 **Report Date:** 09/30/14

SAMPLE RESULTS

Lab ID: L1422287-07 Date Collected: 09/23/14 15:30

Client ID: SW-4-WS-201409231530 Date Received: 09/23/14

Sample Location: HOWLAND HOOK MARINE/PORT IVORY Field Prep: See Narrative

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
2,4-Dinitrophenol	ND		ug/l	20	1.4	1
4,6-Dinitro-o-cresol	ND		ug/l	10	1.4	1
Phenol	ND		ug/l	5.0	0.27	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	43		21-120
Phenol-d6	30		10-120
Nitrobenzene-d5	73		23-120
2-Fluorobiphenyl	68		15-120
2,4,6-Tribromophenol	81		10-120
4-Terphenyl-d14	70		41-149

Project Name: SITE1_SMP_2014 **Lab Number:** L1422287

Project Number: SITE1_SMP_2014 **Report Date:** 09/30/14

SAMPLE RESULTS

Lab ID:	L1422287-07	Date Collected:	09/23/14 15:30
Client ID:	SW-4-WS-201409231530	Date Received:	09/23/14
Sample Location:	HOWLAND HOOK MARINE/PORT IVORY	Field Prep:	See Narrative
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8270D-SIM	Extraction Date:	09/25/14 16:28
Analytical Date:	09/26/14 19:41		
Analyst:	KR		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS-SIM - Westborough Lab						
Acenaphthene	0.10	J	ug/l	0.20	0.06	1
2-Chloronaphthalene	ND		ug/l	0.20	0.07	1
Fluoranthene	ND		ug/l	0.20	0.04	1
Hexachlorobutadiene	ND		ug/l	0.50	0.07	1
Naphthalene	ND		ug/l	0.20	0.06	1
Benzo(a)anthracene	ND		ug/l	0.20	0.06	1
Benzo(a)pyrene	ND		ug/l	0.20	0.07	1
Benzo(b)fluoranthene	ND		ug/l	0.20	0.07	1
Benzo(k)fluoranthene	ND		ug/l	0.20	0.07	1
Chrysene	ND		ug/l	0.20	0.05	1
Acenaphthylene	ND		ug/l	0.20	0.05	1
Anthracene	ND		ug/l	0.20	0.06	1
Benzo(ghi)perylene	ND		ug/l	0.20	0.07	1
Fluorene	ND		ug/l	0.20	0.06	1
Phenanthrene	ND		ug/l	0.20	0.06	1
Dibenzo(a,h)anthracene	ND		ug/l	0.20	0.07	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.20	0.08	1
Pyrene	ND		ug/l	0.20	0.06	1
Pentachlorophenol	ND		ug/l	0.80	0.19	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.07	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	48		21-120
Phenol-d6	35		10-120
Nitrobenzene-d5	79		23-120
2-Fluorobiphenyl	85		15-120
2,4,6-Tribromophenol	99		10-120
4-Terphenyl-d14	98		41-149

Project Name: SITE1_SMP_2014 **Lab Number:** L1422287

Project Number: SITE1_SMP_2014 **Report Date:** 09/30/14

SAMPLE RESULTS

Lab ID:	L1422287-08	Date Collected:	09/23/14 15:15
Client ID:	SW-5-WS-201409231515	Date Received:	09/23/14
Sample Location:	HOWLAND HOOK MARINE/PORT IVORY	Field Prep:	See Narrative
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8270D	Extraction Date:	09/25/14 16:23
Analytical Date:	09/29/14 13:36		
Analyst:	JB		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.21	1
Benzidine	ND		ug/l	20	5.2	1
n-Nitrosodimethylamine	ND		ug/l	2.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.41	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	0.48	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.0	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.89	1
Azobenzene	ND		ug/l	2.0	0.54	1
4-Chlorophenyl phenyl ether	ND		ug/l	2.0	0.36	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.43	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.60	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.60	1
Hexachlorocyclopentadiene	ND		ug/l	20	0.58	1
Isophorone	ND		ug/l	5.0	0.79	1
Nitrobenzene	ND		ug/l	2.0	0.40	1
NDPA/DPA	ND		ug/l	2.0	0.34	1
n-Nitrosodi-n-propylamine	ND		ug/l	5.0	0.64	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	0.93	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.1	1
Di-n-butylphthalate	ND		ug/l	5.0	0.77	1
Di-n-octylphthalate	ND		ug/l	5.0	1.2	1
Diethyl phthalate	ND		ug/l	5.0	0.39	1
Dimethyl phthalate	ND		ug/l	5.0	0.33	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.78	1
p-Chloro-m-cresol	ND		ug/l	2.0	0.54	1
2-Chlorophenol	ND		ug/l	2.0	0.58	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.56	1
2,4-Dimethylphenol	ND		ug/l	5.0	0.58	1
2-Nitrophenol	ND		ug/l	10	1.0	1
4-Nitrophenol	ND		ug/l	10	1.1	1

Project Name: SITE1_SMP_2014 **Lab Number:** L1422287

Project Number: SITE1_SMP_2014 **Report Date:** 09/30/14

SAMPLE RESULTS

Lab ID: L1422287-08 Date Collected: 09/23/14 15:15

Client ID: SW-5-WS-201409231515 Date Received: 09/23/14

Sample Location: HOWLAND HOOK MARINE/PORT IVORY Field Prep: See Narrative

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
2,4-Dinitrophenol	ND		ug/l	20	1.4	1
4,6-Dinitro-o-cresol	ND		ug/l	10	1.4	1
Phenol	ND		ug/l	5.0	0.27	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	42		21-120
Phenol-d6	30		10-120
Nitrobenzene-d5	70		23-120
2-Fluorobiphenyl	68		15-120
2,4,6-Tribromophenol	74		10-120
4-Terphenyl-d14	72		41-149

Project Name: SITE1_SMP_2014 **Lab Number:** L1422287

Project Number: SITE1_SMP_2014 **Report Date:** 09/30/14

SAMPLE RESULTS

Lab ID:	L1422287-08	Date Collected:	09/23/14 15:15
Client ID:	SW-5-WS-201409231515	Date Received:	09/23/14
Sample Location:	HOWLAND HOOK MARINE/PORT IVORY	Field Prep:	See Narrative
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8270D-SIM	Extraction Date:	09/25/14 16:28
Analytical Date:	09/26/14 20:05		
Analyst:	KR		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS-SIM - Westborough Lab						
Acenaphthene	0.07	J	ug/l	0.20	0.06	1
2-Chloronaphthalene	ND		ug/l	0.20	0.07	1
Fluoranthene	ND		ug/l	0.20	0.04	1
Hexachlorobutadiene	ND		ug/l	0.50	0.07	1
Naphthalene	ND		ug/l	0.20	0.06	1
Benzo(a)anthracene	ND		ug/l	0.20	0.06	1
Benzo(a)pyrene	ND		ug/l	0.20	0.07	1
Benzo(b)fluoranthene	ND		ug/l	0.20	0.07	1
Benzo(k)fluoranthene	ND		ug/l	0.20	0.07	1
Chrysene	ND		ug/l	0.20	0.05	1
Acenaphthylene	ND		ug/l	0.20	0.05	1
Anthracene	ND		ug/l	0.20	0.06	1
Benzo(ghi)perylene	ND		ug/l	0.20	0.07	1
Fluorene	ND		ug/l	0.20	0.06	1
Phenanthrene	ND		ug/l	0.20	0.06	1
Dibenzo(a,h)anthracene	ND		ug/l	0.20	0.07	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.20	0.08	1
Pyrene	ND		ug/l	0.20	0.06	1
Pentachlorophenol	ND		ug/l	0.80	0.19	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.07	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	46		21-120
Phenol-d6	34		10-120
Nitrobenzene-d5	77		23-120
2-Fluorobiphenyl	82		15-120
2,4,6-Tribromophenol	92		10-120
4-Terphenyl-d14	96		41-149

Project Name: SITE1_SMP_2014 **Lab Number:** L1422287

Project Number: SITE1_SMP_2014 **Report Date:** 09/30/14

SAMPLE RESULTS

Lab ID:	L1422287-10	Date Collected:	09/23/14 13:00
Client ID:	WQ-201409231300-FB-1	Date Received:	09/23/14
Sample Location:	HOWLAND HOOK MARINE/PORT IVORY	Field Prep:	See Narrative
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8270D	Extraction Date:	09/25/14 16:23
Analytical Date:	09/29/14 14:02		
Analyst:	JB		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.21	1
Benzidine	ND		ug/l	20	5.2	1
n-Nitrosodimethylamine	ND		ug/l	2.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.41	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	0.48	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.0	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.89	1
Azobenzene	ND		ug/l	2.0	0.54	1
4-Chlorophenyl phenyl ether	ND		ug/l	2.0	0.36	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.43	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.60	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.60	1
Hexachlorocyclopentadiene	ND		ug/l	20	0.58	1
Isophorone	ND		ug/l	5.0	0.79	1
Nitrobenzene	ND		ug/l	2.0	0.40	1
NDPA/DPA	ND		ug/l	2.0	0.34	1
n-Nitrosodi-n-propylamine	ND		ug/l	5.0	0.64	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	0.93	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.1	1
Di-n-butylphthalate	ND		ug/l	5.0	0.77	1
Di-n-octylphthalate	ND		ug/l	5.0	1.2	1
Diethyl phthalate	ND		ug/l	5.0	0.39	1
Dimethyl phthalate	ND		ug/l	5.0	0.33	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.78	1
p-Chloro-m-cresol	ND		ug/l	2.0	0.54	1
2-Chlorophenol	ND		ug/l	2.0	0.58	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.56	1
2,4-Dimethylphenol	ND		ug/l	5.0	0.58	1
2-Nitrophenol	ND		ug/l	10	1.0	1
4-Nitrophenol	ND		ug/l	10	1.1	1

Project Name: SITE1_SMP_2014 **Lab Number:** L1422287

Project Number: SITE1_SMP_2014 **Report Date:** 09/30/14

SAMPLE RESULTS

Lab ID: L1422287-10 Date Collected: 09/23/14 13:00

Client ID: WQ-201409231300-FB-1 Date Received: 09/23/14

Sample Location: HOWLAND HOOK MARINE/PORT IVORY Field Prep: See Narrative

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
2,4-Dinitrophenol	ND		ug/l	20	1.4	1
4,6-Dinitro-o-cresol	ND		ug/l	10	1.4	1
Phenol	ND		ug/l	5.0	0.27	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	33		21-120
Phenol-d6	23		10-120
Nitrobenzene-d5	62		23-120
2-Fluorobiphenyl	60		15-120
2,4,6-Tribromophenol	72		10-120
4-Terphenyl-d14	74		41-149

Project Name: SITE1_SMP_2014 **Lab Number:** L1422287

Project Number: SITE1_SMP_2014 **Report Date:** 09/30/14

SAMPLE RESULTS

Lab ID:	L1422287-10	Date Collected:	09/23/14 13:00
Client ID:	WQ-201409231300-FB-1	Date Received:	09/23/14
Sample Location:	HOWLAND HOOK MARINE/PORT IVORY	Field Prep:	See Narrative
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8270D-SIM	Extraction Date:	09/25/14 16:28
Analytical Date:	09/26/14 20:30		
Analyst:	KR		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS-SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.20	0.06	1
2-Chloronaphthalene	ND		ug/l	0.20	0.07	1
Fluoranthene	ND		ug/l	0.20	0.04	1
Hexachlorobutadiene	ND		ug/l	0.50	0.07	1
Naphthalene	ND		ug/l	0.20	0.06	1
Benzo(a)anthracene	ND		ug/l	0.20	0.06	1
Benzo(a)pyrene	ND		ug/l	0.20	0.07	1
Benzo(b)fluoranthene	ND		ug/l	0.20	0.07	1
Benzo(k)fluoranthene	ND		ug/l	0.20	0.07	1
Chrysene	ND		ug/l	0.20	0.05	1
Acenaphthylene	ND		ug/l	0.20	0.05	1
Anthracene	ND		ug/l	0.20	0.06	1
Benzo(ghi)perylene	ND		ug/l	0.20	0.07	1
Fluorene	ND		ug/l	0.20	0.06	1
Phenanthrene	ND		ug/l	0.20	0.06	1
Dibenzo(a,h)anthracene	ND		ug/l	0.20	0.07	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.20	0.08	1
Pyrene	ND		ug/l	0.20	0.06	1
Pentachlorophenol	ND		ug/l	0.80	0.19	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.07	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	38		21-120
Phenol-d6	27		10-120
Nitrobenzene-d5	69		23-120
2-Fluorobiphenyl	75		15-120
2,4,6-Tribromophenol	88		10-120
4-Terphenyl-d14	97		41-149

Project Name: SITE1_SMP_2014 **Lab Number:** L1422287

Project Number: SITE1_SMP_2014 **Report Date:** 09/30/14

SAMPLE RESULTS

Lab ID:	L1422287-11	Date Collected:	09/23/14 15:15
Client ID:	WS-201409231515-FD-1	Date Received:	09/23/14
Sample Location:	HOWLAND HOOK MARINE/PORT IVORY	Field Prep:	See Narrative
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8270D	Extraction Date:	09/26/14 01:19
Analytical Date:	09/30/14 04:39		
Analyst:	JB		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.21	1
Benzidine	ND		ug/l	20	5.2	1
n-Nitrosodimethylamine	ND		ug/l	2.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.41	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	0.48	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.0	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.89	1
Azobenzene	ND		ug/l	2.0	0.54	1
4-Chlorophenyl phenyl ether	ND		ug/l	2.0	0.36	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.43	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.60	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.60	1
Hexachlorocyclopentadiene	ND		ug/l	20	0.58	1
Isophorone	ND		ug/l	5.0	0.79	1
Nitrobenzene	ND		ug/l	2.0	0.40	1
NDPA/DPA	ND		ug/l	2.0	0.34	1
n-Nitrosodi-n-propylamine	ND		ug/l	5.0	0.64	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	0.93	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.1	1
Di-n-butylphthalate	ND		ug/l	5.0	0.77	1
Di-n-octylphthalate	ND		ug/l	5.0	1.2	1
Diethyl phthalate	ND		ug/l	5.0	0.39	1
Dimethyl phthalate	ND		ug/l	5.0	0.33	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.78	1
p-Chloro-m-cresol	ND		ug/l	2.0	0.54	1
2-Chlorophenol	ND		ug/l	2.0	0.58	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.56	1
2,4-Dimethylphenol	ND		ug/l	5.0	0.58	1
2-Nitrophenol	ND		ug/l	10	1.0	1
4-Nitrophenol	ND		ug/l	10	1.1	1

Project Name: SITE1_SMP_2014 **Lab Number:** L1422287

Project Number: SITE1_SMP_2014 **Report Date:** 09/30/14

SAMPLE RESULTS

Lab ID: L1422287-11 Date Collected: 09/23/14 15:15

Client ID: WS-201409231515-FD-1 Date Received: 09/23/14

Sample Location: HOWLAND HOOK MARINE/PORT IVORY Field Prep: See Narrative

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
2,4-Dinitrophenol	ND		ug/l	20	1.4	1
4,6-Dinitro-o-cresol	ND		ug/l	10	1.4	1
Phenol	ND		ug/l	5.0	0.27	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	27		21-120
Phenol-d6	20		10-120
Nitrobenzene-d5	58		23-120
2-Fluorobiphenyl	57		15-120
2,4,6-Tribromophenol	63		10-120
4-Terphenyl-d14	51		41-149

Project Name: SITE1_SMP_2014 **Lab Number:** L1422287

Project Number: SITE1_SMP_2014 **Report Date:** 09/30/14

SAMPLE RESULTS

Lab ID: L1422287-11 D
Client ID: WS-201409231515-FD-1
Sample Location: HOWLAND HOOK MARINE/PORT IVORY
Matrix: Water
Analytical Method: 1,8270D-SIM
Analytical Date: 09/28/14 05:16
Analyst: MW

Date Collected: 09/23/14 15:15
Date Received: 09/23/14
Field Prep: See Narrative
Extraction Method: EPA 3510C
Extraction Date: 09/26/14 01:17

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS-SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.40	0.13	2
2-Chloronaphthalene	ND		ug/l	0.40	0.13	2
Fluoranthene	ND		ug/l	0.40	0.09	2
Hexachlorobutadiene	ND		ug/l	1.0	0.14	2
Naphthalene	ND		ug/l	0.40	0.13	2
Benzo(a)anthracene	ND		ug/l	0.40	0.11	2
Benzo(a)pyrene	ND		ug/l	0.40	0.14	2
Benzo(b)fluoranthene	ND		ug/l	0.40	0.14	2
Benzo(k)fluoranthene	ND		ug/l	0.40	0.14	2
Chrysene	ND		ug/l	0.40	0.10	2
Acenaphthylene	ND		ug/l	0.40	0.10	2
Anthracene	ND		ug/l	0.40	0.13	2
Benzo(ghi)perylene	ND		ug/l	0.40	0.14	2
Fluorene	ND		ug/l	0.40	0.11	2
Phenanthrene	ND		ug/l	0.40	0.13	2
Dibenzo(a,h)anthracene	ND		ug/l	0.40	0.15	2
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.40	0.16	2
Pyrene	ND		ug/l	0.40	0.11	2
Pentachlorophenol	ND		ug/l	1.6	0.37	2
Hexachlorobenzene	ND		ug/l	1.6	0.03	2
Hexachloroethane	ND		ug/l	1.6	0.13	2

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	34		21-120
Phenol-d6	25		10-120
Nitrobenzene-d5	71		23-120
2-Fluorobiphenyl	77		15-120
2,4,6-Tribromophenol	91		10-120
4-Terphenyl-d14	77		41-149

Project Name: SITE1_SMP_2014 **Lab Number:** L1422287

Project Number: SITE1_SMP_2014 **Report Date:** 09/30/14

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270D
Analytical Date: 09/30/14 13:09
Analyst: JB

Extraction Method: EPA 3510C
Extraction Date: 09/25/14 16:23

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01-08,10 Batch: WG725362-1					
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.21
Benzidine	ND		ug/l	20	5.2
n-Nitrosodimethylamine	ND		ug/l	2.0	0.50
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.41
3,3'-Dichlorobenzidine	ND		ug/l	5.0	0.48
2,4-Dinitrotoluene	ND		ug/l	5.0	1.0
2,6-Dinitrotoluene	ND		ug/l	5.0	0.89
Azobenzene	ND		ug/l	2.0	0.54
4-Chlorophenyl phenyl ether	ND		ug/l	2.0	0.36
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.43
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.60
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.60
Hexachlorocyclopentadiene	ND		ug/l	20	0.58
Isophorone	ND		ug/l	5.0	0.79
Nitrobenzene	ND		ug/l	2.0	0.40
NDPA/DPA	ND		ug/l	2.0	0.34
n-Nitrosodi-n-propylamine	ND		ug/l	5.0	0.64
Bis(2-ethylhexyl)phthalate	2.4	J	ug/l	3.0	0.93
Butyl benzyl phthalate	ND		ug/l	5.0	1.1
Di-n-butylphthalate	ND		ug/l	5.0	0.77
Di-n-octylphthalate	ND		ug/l	5.0	1.2
Diethyl phthalate	ND		ug/l	5.0	0.39
Dimethyl phthalate	ND		ug/l	5.0	0.33
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.78
p-Chloro-m-cresol	ND		ug/l	2.0	0.54
2-Chlorophenol	ND		ug/l	2.0	0.58
2,4-Dichlorophenol	ND		ug/l	5.0	0.56
2,4-Dimethylphenol	ND		ug/l	5.0	0.58
2-Nitrophenol	ND		ug/l	10	1.0

Project Name: SITE1_SMP_2014
Project Number: SITE1_SMP_2014

Lab Number: L1422287
Report Date: 09/30/14

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270D
Analytical Date: 09/30/14 13:09
Analyst: JB

Extraction Method: EPA 3510C
Extraction Date: 09/25/14 16:23

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01-08,10 Batch: WG725362-1					
4-Nitrophenol	ND		ug/l	10	1.1
2,4-Dinitrophenol	ND		ug/l	20	1.4
4,6-Dinitro-o-cresol	ND		ug/l	10	1.4
Phenol	ND		ug/l	5.0	0.27

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	29		21-120
Phenol-d6	21		10-120
Nitrobenzene-d5	56		23-120
2-Fluorobiphenyl	50		15-120
2,4,6-Tribromophenol	54		10-120
4-Terphenyl-d14	57		41-149

Project Name: SITE1_SMP_2014 **Lab Number:** L1422287

Project Number: SITE1_SMP_2014 **Report Date:** 09/30/14

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270D-SIM
Analytical Date: 09/26/14 16:51
Analyst: KR

Extraction Method: EPA 3510C
Extraction Date: 09/25/14 16:28

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS-SIM - Westborough Lab for sample(s): 01-08,10 Batch: WG725366-1					
Acenaphthene	ND		ug/l	0.20	0.06
2-Chloronaphthalene	ND		ug/l	0.20	0.07
Fluoranthene	ND		ug/l	0.20	0.04
Hexachlorobutadiene	ND		ug/l	0.50	0.07
Naphthalene	ND		ug/l	0.20	0.06
Benzo(a)anthracene	ND		ug/l	0.20	0.06
Benzo(a)pyrene	ND		ug/l	0.20	0.07
Benzo(b)fluoranthene	ND		ug/l	0.20	0.07
Benzo(k)fluoranthene	ND		ug/l	0.20	0.07
Chrysene	ND		ug/l	0.20	0.05
Acenaphthylene	ND		ug/l	0.20	0.05
Anthracene	ND		ug/l	0.20	0.06
Benzo(ghi)perylene	ND		ug/l	0.20	0.07
Fluorene	ND		ug/l	0.20	0.06
Phenanthrene	ND		ug/l	0.20	0.06
Dibenzo(a,h)anthracene	ND		ug/l	0.20	0.07
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.20	0.08
Pyrene	ND		ug/l	0.20	0.06
Pentachlorophenol	ND		ug/l	0.80	0.19
Hexachlorobenzene	ND		ug/l	0.80	0.01
Hexachloroethane	ND		ug/l	0.80	0.07

Project Name: SITE1_SMP_2014 **Lab Number:** L1422287

Project Number: SITE1_SMP_2014 **Report Date:** 09/30/14

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270D-SIM
Analytical Date: 09/26/14 16:51
Analyst: KR

Extraction Method: EPA 3510C
Extraction Date: 09/25/14 16:28

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS-SIM - Westborough Lab for sample(s): 01-08,10 Batch: WG725366-1					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	35		21-120
Phenol-d6	25		10-120
Nitrobenzene-d5	64		23-120
2-Fluorobiphenyl	63		15-120
2,4,6-Tribromophenol	77		10-120
4-Terphenyl-d14	79		41-149

Project Name: SITE1_SMP_2014 **Lab Number:** L1422287

Project Number: SITE1_SMP_2014 **Report Date:** 09/30/14

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270D
Analytical Date: 09/28/14 12:54
Analyst: JB

Extraction Method: EPA 3510C
Extraction Date: 09/26/14 01:19

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 11 Batch: WG725464-1					
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.21
Benzidine	ND		ug/l	20	5.2
n-Nitrosodimethylamine	ND		ug/l	2.0	0.50
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.41
3,3'-Dichlorobenzidine	ND		ug/l	5.0	0.48
2,4-Dinitrotoluene	ND		ug/l	5.0	1.0
2,6-Dinitrotoluene	ND		ug/l	5.0	0.89
Azobenzene	ND		ug/l	2.0	0.54
4-Chlorophenyl phenyl ether	ND		ug/l	2.0	0.36
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.43
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.60
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.60
Hexachlorocyclopentadiene	ND		ug/l	20	0.58
Isophorone	ND		ug/l	5.0	0.79
Nitrobenzene	ND		ug/l	2.0	0.40
NDPA/DPA	ND		ug/l	2.0	0.34
n-Nitrosodi-n-propylamine	ND		ug/l	5.0	0.64
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	0.93
Butyl benzyl phthalate	ND		ug/l	5.0	1.1
Di-n-butylphthalate	ND		ug/l	5.0	0.77
Di-n-octylphthalate	ND		ug/l	5.0	1.2
Diethyl phthalate	ND		ug/l	5.0	0.39
Dimethyl phthalate	ND		ug/l	5.0	0.33
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.78
p-Chloro-m-cresol	ND		ug/l	2.0	0.54
2-Chlorophenol	ND		ug/l	2.0	0.58
2,4-Dichlorophenol	ND		ug/l	5.0	0.56
2,4-Dimethylphenol	ND		ug/l	5.0	0.58
2-Nitrophenol	ND		ug/l	10	1.0

Project Name: SITE1_SMP_2014 **Lab Number:** L1422287

Project Number: SITE1_SMP_2014 **Report Date:** 09/30/14

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270D
Analytical Date: 09/28/14 12:54
Analyst: JB

Extraction Method: EPA 3510C
Extraction Date: 09/26/14 01:19

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 11 Batch: WG725464-1					
4-Nitrophenol	ND		ug/l	10	1.1
2,4-Dinitrophenol	ND		ug/l	20	1.4
4,6-Dinitro-o-cresol	ND		ug/l	10	1.4
Phenol	ND		ug/l	5.0	0.27

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	31		21-120
Phenol-d6	21		10-120
Nitrobenzene-d5	65		23-120
2-Fluorobiphenyl	67		15-120
2,4,6-Tribromophenol	81		10-120
4-Terphenyl-d14	71		41-149

Project Name: SITE1_SMP_2014
Project Number: SITE1_SMP_2014
Lab Number: L1422287
Report Date: 09/30/14

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270D-SIM
Analytical Date: 09/27/14 22:47
Analyst: MW

Extraction Method: EPA 3510C
Extraction Date: 09/26/14 01:17

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS-SIM - Westborough Lab for sample(s): 11 Batch: WG725465-1					
Acenaphthene	ND		ug/l	0.20	0.06
2-Chloronaphthalene	ND		ug/l	0.20	0.07
Fluoranthene	ND		ug/l	0.20	0.04
Hexachlorobutadiene	ND		ug/l	0.50	0.07
Naphthalene	ND		ug/l	0.20	0.06
Benzo(a)anthracene	ND		ug/l	0.20	0.06
Benzo(a)pyrene	ND		ug/l	0.20	0.07
Benzo(b)fluoranthene	ND		ug/l	0.20	0.07
Benzo(k)fluoranthene	ND		ug/l	0.20	0.07
Chrysene	ND		ug/l	0.20	0.05
Acenaphthylene	ND		ug/l	0.20	0.05
Anthracene	ND		ug/l	0.20	0.06
Benzo(ghi)perylene	ND		ug/l	0.20	0.07
Fluorene	ND		ug/l	0.20	0.06
Phenanthrene	ND		ug/l	0.20	0.06
Dibenzo(a,h)anthracene	ND		ug/l	0.20	0.07
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.20	0.08
Pyrene	ND		ug/l	0.20	0.06
Pentachlorophenol	ND		ug/l	0.80	0.19
Hexachlorobenzene	ND		ug/l	0.80	0.01
Hexachloroethane	ND		ug/l	0.80	0.07

Project Name: SITE1_SMP_2014 **Lab Number:** L1422287

Project Number: SITE1_SMP_2014 **Report Date:** 09/30/14

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270D-SIM
Analytical Date: 09/27/14 22:47
Analyst: MW

Extraction Method: EPA 3510C
Extraction Date: 09/26/14 01:17

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS-SIM - Westborough Lab for sample(s): 11 Batch: WG725465-1					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	30		21-120
Phenol-d6	20		10-120
Nitrobenzene-d5	67		23-120
2-Fluorobiphenyl	67		15-120
2,4,6-Tribromophenol	73		10-120
4-Terphenyl-d14	74		41-149

Lab Control Sample Analysis
Batch Quality Control

Project Name: SITE1_SMP_2014
Project Number: SITE1_SMP_2014

Lab Number: L1422287
Report Date: 09/30/14

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-08,10 Batch: WG725362-2 WG725362-3								
1,2,4-Trichlorobenzene	43		48		39-98	11		30
Benzidine	36		38			5		30
n-Nitrosodimethylamine	32		34			6		30
Bis(2-chloroethyl)ether	52		58		40-140	11		30
1,2-Dichlorobenzene	**39**	Q	45		40-140	14		30
1,3-Dichlorobenzene	**36**	Q	42		40-140	15		30
1,4-Dichlorobenzene	37		43		36-97	15		30
3,3'-Dichlorobenzidine	76		81		40-140	6		30
2,4-Dinitrotoluene	72		76		24-96	5		30
2,6-Dinitrotoluene	63		66		40-140	5		30
Azobenzene	59		63		40-140	7		30
4-Chlorophenyl phenyl ether	61		66		40-140	8		30
4-Bromophenyl phenyl ether	67		71		40-140	6		30
Bis(2-chloroisopropyl)ether	50		56		40-140	11		30
Bis(2-chloroethoxy)methane	56		61		40-140	9		30
Hexachlorocyclopentadiene	46		53		40-140	14		30
Isophorone	58		63		40-140	8		30
Nitrobenzene	62		67		40-140	8		30
NDPA/DPA	69		74		40-140	7		30
n-Nitrosodi-n-propylamine	61		66		29-132	8		30
Bis(2-ethylhexyl)phthalate	67		72		40-140	7		30

Lab Control Sample Analysis
Batch Quality Control

Project Name: SITE1_SMP_2014
Project Number: SITE1_SMP_2014

Lab Number: L1422287
Report Date: 09/30/14

Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-08,10 Batch: WG725362-2 WG725362-3

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Butyl benzyl phthalate	72		78		40-140	8		30
Di-n-butylphthalate	75		81		40-140	8		30
Di-n-octylphthalate	58		62		40-140	7		30
Diethyl phthalate	70		74		40-140	6		30
Dimethyl phthalate	69		72		40-140	4		30
Biphenyl	65		71			9		30
4-Chloroaniline	62		60		40-140	3		30
2-Nitroaniline	69		72		52-143	4		30
3-Nitroaniline	68		70		25-145	3		30
4-Nitroaniline	66		70		51-143	6		30
Dibenzofuran	61		66		40-140	8		30
1,2,4,5-Tetrachlorobenzene	59		65		2-134	10		30
Acetophenone	71		77		39-129	8		30
2,4,6-Trichlorophenol	74		80		30-130	8		30
p-Chloro-m-cresol	71		76		23-97	7		30
2-Chlorophenol	55		62		27-123	12		30
2,4-Dichlorophenol	72		76		30-130	5		30
2,4-Dimethylphenol	65		72		30-130	10		30
2-Nitrophenol	61		67		30-130	9		30
4-Nitrophenol	36		38		10-80	5		30
2,4-Dinitrophenol	67		70		20-130	4		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: SITE1_SMP_2014
Project Number: SITE1_SMP_2014

Lab Number: L1422287
Report Date: 09/30/14

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-08,10 Batch: WG725362-2 WG725362-3								
4,6-Dinitro-o-cresol	66		71		20-164	7		30
Phenol	27		29		12-110	7		30
2-Methylphenol	53		60		30-130	12		30
3-Methylphenol/4-Methylphenol	49		55		30-130	12		30
2,4,5-Trichlorophenol	73		78		30-130	7		30
Benzoic Acid	25		25			0		30
Benzyl Alcohol	54		58			7		30
Carbazole	70		74		55-144	6		30
Benzaldehyde	73		80		40-140	9		30
Caprolactam	22		22		10-130	0		30
Atrazine	90		95		40-140	5		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	38		43		21-120
Phenol-d6	28		30		10-120
Nitrobenzene-d5	57		65		23-120
2-Fluorobiphenyl	61		66		15-120
2,4,6-Tribromophenol	86		90		10-120
4-Terphenyl-d14	71		76		41-149

Lab Control Sample Analysis
Batch Quality Control

Project Name: SITE1_SMP_2014
Project Number: SITE1_SMP_2014

Lab Number: L1422287
Report Date: 09/30/14

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS-SIM - Westborough Lab Associated sample(s): 01-08,10 Batch: WG725366-2 WG725366-3								
Acenaphthene	78		77		37-111	1		40
2-Chloronaphthalene	78		78		40-140	0		40
Fluoranthene	90		94		40-140	4		40
Hexachlorobutadiene	64		60		40-140	6		40
Naphthalene	73		70		40-140	4		40
Benzo(a)anthracene	88		93		40-140	6		40
Benzo(a)pyrene	90		95		40-140	5		40
Benzo(b)fluoranthene	88		92		40-140	4		40
Benzo(k)fluoranthene	83		88		40-140	6		40
Chrysene	81		85		40-140	5		40
Acenaphthylene	84		83		40-140	1		40
Anthracene	85		86		40-140	1		40
Benzo(ghi)perylene	90		94		40-140	4		40
Fluorene	84		85		40-140	1		40
Phenanthrene	83		84		40-140	1		40
Dibenzo(a,h)anthracene	92		97		40-140	5		40
Indeno(1,2,3-cd)pyrene	92		97		40-140	5		40
Pyrene	90		93		26-127	3		40
2-Methylnaphthalene	80		80		40-140	0		40
Pentachlorophenol	80		86		9-103	7		40
Hexachlorobenzene	84		87		40-140	4		40

Lab Control Sample Analysis

Batch Quality Control

Project Name: SITE1_SMP_2014
Project Number: SITE1_SMP_2014

Lab Number: L1422287
Report Date: 09/30/14

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS-SIM - Westborough Lab Associated sample(s): 01-08,10 Batch: WG725366-2 WG725366-3								
Hexachloroethane	63		52		40-140	19		40

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	44		40		21-120
Phenol-d6	32		32		10-120
Nitrobenzene-d5	76		71		23-120
2-Fluorobiphenyl	75		74		15-120
2,4,6-Tribromophenol	91		93		10-120
4-Terphenyl-d14	89		93		41-149

Lab Control Sample Analysis

Batch Quality Control

Project Name: SITE1_SMP_2014

Project Number: SITE1_SMP_2014

Lab Number: L1422287

Report Date: 09/30/14

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 11 Batch: WG725464-2 WG725464-3								
Acenaphthene	48		47		37-111	2		30
1,2,4-Trichlorobenzene	40		40		39-98	0		30
Benzidine	3	Q	1	Q		**96**	Q	30
n-Nitrosodimethylamine	28		27			4		30
Hexachlorobenzene	55		55		40-140	0		30
Bis(2-chloroethyl)ether	50		50		40-140	0		30
2-Chloronaphthalene	44		43		40-140	2		30
1,2-Dichlorobenzene	41		**39**	Q	40-140	5		30
1,3-Dichlorobenzene	40		40		40-140	0		30
1,4-Dichlorobenzene	40		39		36-97	3		30
3,3'-Dichlorobenzidine	47		48		40-140	2		30
2,4-Dinitrotoluene	55		54		24-96	2		30
2,6-Dinitrotoluene	54		53		40-140	2		30
Azobenzene	54		51		40-140	6		30
Fluoranthene	57		57		40-140	0		30
4-Chlorophenyl phenyl ether	51		50		40-140	2		30
4-Bromophenyl phenyl ether	56		56		40-140	0		30
Bis(2-chloroisopropyl)ether	46		48		40-140	4		30
Bis(2-chloroethoxy)methane	51		51		40-140	0		30
Hexachlorobutadiene	**36**	Q	**36**	Q	40-140	0		30
Hexachlorocyclopentadiene	**19**	Q	**19**	Q	40-140	0		30

Lab Control Sample Analysis
Batch Quality Control

Project Name: SITE1_SMP_2014
Project Number: SITE1_SMP_2014

Lab Number: L1422287
Report Date: 09/30/14

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 11 Batch: WG725464-2 WG725464-3								
Hexachloroethane	**34**	Q	**32**	Q	40-140	6		30
Isophorone	51		50		40-140	2		30
Naphthalene	42		44		40-140	5		30
Nitrobenzene	51		49		40-140	4		30
NitrosoDiPhenylAmine(NDPA)/DPA	55		54		40-140	2		30
n-Nitrosodi-n-propylamine	54		54		29-132	0		30
Bis(2-Ethylhexyl)phthalate	55		56		40-140	2		30
Butyl benzyl phthalate	54		54		40-140	0		30
Di-n-butylphthalate	55		55		40-140	0		30
Di-n-octylphthalate	57		58		40-140	2		30
Diethyl phthalate	55		54		40-140	2		30
Dimethyl phthalate	55		54		40-140	2		30
Benzo(a)anthracene	53		53		40-140	0		30
Benzo(a)pyrene	52		52		40-140	0		30
Benzo(b)fluoranthene	56		57		40-140	2		30
Benzo(k)fluoranthene	54		52		40-140	4		30
Chrysene	52		53		40-140	2		30
Acenaphthylene	47		47		45-123	0		30
Anthracene	52		52		40-140	0		30
Benzo(ghi)perylene	52		52		40-140	0		30
Fluorene	52		51		40-140	2		30

Lab Control Sample Analysis
Batch Quality Control

Project Name: SITE1_SMP_2014
Project Number: SITE1_SMP_2014

Lab Number: L1422287
Report Date: 09/30/14

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 11 Batch: WG725464-2 WG725464-3								
Phenanthrene	54		54		40-140	0		30
Dibenzo(a,h)anthracene	53		54		40-140	2		30
Indeno(1,2,3-cd)Pyrene	53		54		40-140	2		30
Pyrene	55		54		26-127	2		30
Biphenyl	47		47			0		30
Aniline	**28**	Q	**28**	Q	40-140	0		30
4-Chloroaniline	50		49		40-140	2		30
2-Nitroaniline	59		58		52-143	2		30
3-Nitroaniline	46		47		25-145	2		30
4-Nitroaniline	55		51		51-143	8		30
Dibenzofuran	54		51		40-140	6		30
2-Methylnaphthalene	45		44		40-140	2		30
1,2,4,5-Tetrachlorobenzene	43		42		2-134	2		30
Acetophenone	57		55		39-129	4		30
2,4,6-Trichlorophenol	59		59		30-130	0		30
P-Chloro-M-Cresol	53		53		23-97	0		30
2-Chlorophenol	51		50		27-123	2		30
2,4-Dichlorophenol	59		58		30-130	2		30
2,4-Dimethylphenol	41		32		30-130	25		30
2-Nitrophenol	61		57		30-130	7		30
4-Nitrophenol	21		23		10-80	9		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: SITE1_SMP_2014

Project Number: SITE1_SMP_2014

Lab Number: L1422287

Report Date: 09/30/14

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 11 Batch: WG725464-2 WG725464-3								
2,4-Dinitrophenol	50		52		20-130	4		30
4,6-Dinitro-o-cresol	65		64		20-164	2		30
Pentachlorophenol	54		54		9-103	0		30
Phenol	19		20		12-110	5		30
2-Methylphenol	41		38		30-130	8		30
3-Methylphenol/4-Methylphenol	38		38		30-130	0		30
2,4,5-Trichlorophenol	58		56		30-130	4		30
Benzoic Acid	3		7			**73**	Q	30
Benzyl Alcohol	41		40			2		30
Carbazole	59		58		55-144	2		30
Pyridine	16		19		10-66	17		30
Benzaldehyde	60		58		40-140	3		30
Caprolactam	11		13		10-130	17		30
Atrazine	58		61		40-140	5		30
2,3,4,6-Tetrachlorophenol	56		56		54-145	0		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: SITE1_SMP_2014
Project Number: SITE1_SMP_2014

Lab Number: L1422287
Report Date: 09/30/14

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 11 Batch: WG725464-2 WG725464-3								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	28		30		21-120
Phenol-d6	19		19		10-120
Nitrobenzene-d5	56		57		23-120
2-Fluorobiphenyl	56		53		15-120
2,4,6-Tribromophenol	64		62		10-120
4-Terphenyl-d14	57		56		41-149

Lab Control Sample Analysis
Batch Quality Control

Project Name: SITE1_SMP_2014
Project Number: SITE1_SMP_2014

Lab Number: L1422287
Report Date: 09/30/14

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS-SIM - Westborough Lab Associated sample(s): 11 Batch: WG725465-2 WG725465-3								
Acenaphthene	66		74		37-111	11		40
2-Chloronaphthalene	66		74		40-140	11		40
Fluoranthene	78		87		40-140	11		40
Hexachlorobutadiene	51		56		40-140	9		40
Naphthalene	61		67		40-140	9		40
Benzo(a)anthracene	74		82		40-140	10		40
Benzo(a)pyrene	74		82		40-140	10		40
Benzo(b)fluoranthene	75		86		40-140	14		40
Benzo(k)fluoranthene	72		79		40-140	9		40
Chrysene	71		78		40-140	9		40
Acenaphthylene	70		79		40-140	12		40
Anthracene	71		80		40-140	12		40
Benzo(ghi)perylene	75		84		40-140	11		40
Fluorene	72		82		40-140	13		40
Phenanthrene	70		79		40-140	12		40
Dibenzo(a,h)anthracene	78		86		40-140	10		40
Indeno(1,2,3-cd)pyrene	77		86		40-140	11		40
Pyrene	78		87		26-127	11		40
2-Methylnaphthalene	68		76		40-140	11		40
Pentachlorophenol	48		51		9-103	6		40
Hexachlorobenzene	70		81		40-140	15		40

Lab Control Sample Analysis

Batch Quality Control

Project Name: SITE1_SMP_2014

Project Number: SITE1_SMP_2014

Lab Number: L1422287

Report Date: 09/30/14

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS-SIM - Westborough Lab Associated sample(s): 11 Batch: WG725465-2 WG725465-3								
Hexachloroethane	49		55		40-140	12		40

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	31		32		21-120
Phenol-d6	22		23		10-120
Nitrobenzene-d5	65		72		23-120
2-Fluorobiphenyl	66		75		15-120
2,4,6-Tribromophenol	78		80		10-120
4-Terphenyl-d14	79		89		41-149

Matrix Spike Analysis
Batch Quality Control

Project Name: SITE1_SMP_2014
Project Number: SITE1_SMP_2014

Lab Number: L1422287
Report Date: 09/30/14

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-08,10 QC Batch ID: WG725362-4 WG725362-5 QC Sample: L1422287-07 Client ID: SW-4-WS-201409231530												
1,2,4-Trichlorobenzene	ND	40	23	58		22	55		39-98	4		30
Benzidine	ND	40	ND	0	Q	ND	0	Q		NC		30
n-Nitrosodimethylamine	ND	40	12	30		14	35			15		30
Bis(2-chloroethyl)ether	ND	40	25	63		25	63		40-140	0		30
1,2-Dichlorobenzene	ND	40	20	50		20	50		40-140	0		30
1,3-Dichlorobenzene	ND	40	19	48		19	48		40-140	0		30
1,4-Dichlorobenzene	ND	40	19	48		20	50		36-97	5		30
3,3'-Dichlorobenzidine	ND	40	ND	**0**	Q	ND	**0**	Q	40-140	NC		30
2,4-Dinitrotoluene	ND	40	34	85		33	83		24-96	3		30
2,6-Dinitrotoluene	ND	40	32	80		31	78		40-140	3		30
Azobenzene	ND	40	29	73		27	68		40-140	7		30
4-Chlorophenyl phenyl ether	ND	40	30	75		29	73		40-140	3		30
4-Bromophenyl phenyl ether	ND	40	33	83		31	78		40-140	6		30
Bis(2-chloroisopropyl)ether	ND	40	24	60		24	60		40-140	0		30
Bis(2-chloroethoxy)methane	ND	40	28	70		27	68		40-140	4		30
Hexachlorocyclopentadiene	ND	40	24	60		24	60		40-140	0		30
Isophorone	ND	40	30	75		29	73		40-140	3		30
Nitrobenzene	ND	40	34	85		35	88		40-140	3		30
NDPA/DPA	ND	40	32	80		32	80		40-140	0		30
n-Nitrosodi-n-propylamine	ND	40	30	75		29	73		29-132	3		30
Bis(2-ethylhexyl)phthalate	ND	40	31	78		32	80		40-140	3		30

Matrix Spike Analysis
Batch Quality Control

Project Name: SITE1_SMP_2014
Project Number: SITE1_SMP_2014

Lab Number: L1422287
Report Date: 09/30/14

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-08,10 QC Batch ID: WG725362-4 WG725362-5 QC Sample: L1422287-07 Client ID: SW-4-WS-201409231530												
Butyl benzyl phthalate	ND	40	39	98		38	95		40-140	3		30
Di-n-butylphthalate	ND	40	37	93		36	90		40-140	3		30
Di-n-octylphthalate	ND	40	31	78		31	78		40-140	0		30
Diethyl phthalate	ND	40	33	83		32	80		40-140	3		30
Dimethyl phthalate	ND	40	31	78		30	75		40-140	3		30
Biphenyl	ND	40	33	83		32	80			3		30
4-Chloroaniline	ND	40	14	**35**	Q	14	**35**	Q	40-140	0		30
2-Nitroaniline	ND	40	18	**45**	Q	16	**40**	Q	52-143	12		30
3-Nitroaniline	ND	40	1.2J	**3**	Q	1.6J	**4**	Q	25-145	29		30
4-Nitroaniline	ND	40	1.6J	**4**	Q	1.7J	**4**	Q	51-143	6		30
Dibenzofuran	ND	40	29	73		28	70		40-140	4		30
1,2,4,5-Tetrachlorobenzene	ND	40	31	78		30	75		2-134	3		30
Acetophenone	ND	40	34	85		35	88		39-129	3		30
2,4,6-Trichlorophenol	ND	40	36	90		35	88		30-130	3		30
p-Chloro-m-cresol	ND	40	34	85		35	88		23-97	3		30
2-Chlorophenol	ND	40	27	68		28	70		27-123	4		30
2,4-Dichlorophenol	ND	40	33	83		33	83		30-130	0		30
2,4-Dimethylphenol	ND	40	14	35		24	60		30-130	**53**	Q	30
2-Nitrophenol	ND	40	29	73		29	73		30-130	0		30
4-Nitrophenol	ND	40	21	53		21	53		10-80	0		30
2,4-Dinitrophenol	ND	40	29	73		30	75		20-130	3		30

Matrix Spike Analysis
Batch Quality Control

Project Name: SITE1_SMP_2014
Project Number: SITE1_SMP_2014

Lab Number: L1422287
Report Date: 09/30/14

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-08,10 QC Batch ID: WG725362-4 WG725362-5 QC Sample: L1422287-07 Client ID: SW-4-WS-201409231530												
4,6-Dinitro-o-cresol	ND	40	33	83		32	80		20-164	3		30
Phenol	ND	40	14	35		15	38		12-110	7		30
2-Methylphenol	ND	40	25	63		27	68		30-130	8		30
3-Methylphenol/4-Methylphenol	ND	40	24	60		26	65		30-130	8		30
2,4,5-Trichlorophenol	ND	40	37	93		36	90		30-130	3		30
Benzoic Acid	ND	40	14J	35		17.J	43			19		30
Benzyl Alcohol	ND	40	25	63		26	65			4		30
Carbazole	ND	40	32	80		31	78		55-144	3		30
Benzaldehyde	ND	40	36	90		38	95		40-140	5		30
Caprolactam	ND	40	9.8J	25		11	28		10-130	12		30
Atrazine	ND	40	41	100		40	100		40-140	2		30

Surrogate	MS % Recovery	MS Qualifier	MSD % Recovery	MSD Qualifier	Acceptance Criteria
2,4,6-Tribromophenol	88		88		10-120
2-Fluorobiphenyl	75		74		15-120
2-Fluorophenol	46		51		21-120
4-Terphenyl-d14	88		87		41-149
Nitrobenzene-d5	71		71		23-120
Phenol-d6	36		41		10-120

Matrix Spike Analysis
Batch Quality Control

Project Name: SITE1_SMP_2014
Project Number: SITE1_SMP_2014

Lab Number: L1422287
Report Date: 09/30/14

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS-SIM - Westborough Lab Associated sample(s): 01-08,10 QC Batch ID: WG725366-4 WG725366-5 QC Sample: L1422287-07 Client ID: SW-4-WS-201409231530												
Acenaphthene	0.10J	40	34	85		31	78		37-111	9		40
2-Chloronaphthalene	ND	40	33	83		31	78		40-140	6		40
Fluoranthene	ND	40	39	98		35	88		40-140	11		40
Hexachlorobutadiene	ND	40	23	58		21	53		40-140	9		40
Naphthalene	ND	40	28	70		27	68		40-140	4		40
Benzo(a)anthracene	ND	40	37	93		34	85		40-140	8		40
Benzo(a)pyrene	ND	40	37	93		34	85		40-140	8		40
Benzo(b)fluoranthene	ND	40	37	93		33	83		40-140	11		40
Benzo(k)fluoranthene	ND	40	36	90		32	80		40-140	12		40
Chrysene	ND	40	35	88		32	80		40-140	9		40
Acenaphthylene	ND	40	35	88		33	83		40-140	6		40
Anthracene	ND	40	36	90		33	83		40-140	9		40
Benzo(ghi)perylene	ND	40	38	95		34	85		40-140	11		40
Fluorene	ND	40	37	93		34	85		40-140	8		40
Phenanthrene	ND	40	36	90		33	83		40-140	9		40
Dibenzo(a,h)anthracene	ND	40	39	98		35	88		40-140	11		40
Indeno(1,2,3-cd)pyrene	ND	40	39	98		35	88		40-140	11		40
Pyrene	ND	40	39	98		35	88		26-127	11		40
2-Methylnaphthalene	ND	40	33	83		31	78		40-140	6		40
Pentachlorophenol	ND	40	36	90		32	80		9-103	12		40
Hexachlorobenzene	ND	40	37	93		34	85		40-140	8		40

Matrix Spike Analysis
Batch Quality Control

Project Name: SITE1_SMP_2014
Project Number: SITE1_SMP_2014

Lab Number: L1422287
Report Date: 09/30/14

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS-SIM - Westborough Lab Associated sample(s): 01-08,10 QC Batch ID: WG725366-4 WG725366-5 QC Sample: L1422287-07 Client ID: SW-4-WS-201409231530												
Hexachloroethane	ND	40	22	55		20	50		40-140	10		40

Surrogate	MS % Recovery	MS Qualifier	MSD % Recovery	MSD Qualifier	Acceptance Criteria
2,4,6-Tribromophenol	100		93		10-120
2-Fluorobiphenyl	87		80		15-120
2-Fluorophenol	51		51		21-120
4-Terphenyl-d14	90		82		41-149
Nitrobenzene-d5	84		80		23-120
Phenol-d6	39		40		10-120

PCBS

Project Name: SITE1_SMP_2014 **Lab Number:** L1422287

Project Number: SITE1_SMP_2014 **Report Date:** 09/30/14

SAMPLE RESULTS

Lab ID:	L1422287-01	Date Collected:	09/23/14 12:16
Client ID:	PRW-01-WG-201409231216	Date Received:	09/23/14
Sample Location:	HOWLAND HOOK MARINE/PORT IVORY	Field Prep:	See Narrative
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8082A	Extraction Date:	09/26/14 15:52
Analytical Date:	09/27/14 18:28	Cleanup Method:	EPA 3665A
Analyst:	JW	Cleanup Date:	09/27/14
		Cleanup Method:	EPA 3660B
		Cleanup Date:	09/27/14

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/l	0.083	0.055	1	A
Aroclor 1221	ND		ug/l	0.083	0.053	1	A
Aroclor 1232	ND		ug/l	0.083	0.031	1	A
Aroclor 1242	ND		ug/l	0.083	0.060	1	A
Aroclor 1248	ND		ug/l	0.083	0.051	1	A
Aroclor 1254	ND		ug/l	0.083	0.034	1	A
Aroclor 1260	ND		ug/l	0.083	0.032	1	A
Aroclor 1262	ND		ug/l	0.083	0.029	1	A
Aroclor 1268	ND		ug/l	0.083	0.038	1	A
PCBs, Total	ND		ug/l	0.083	0.029	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	69		30-150	B
Decachlorobiphenyl	63		30-150	B
2,4,5,6-Tetrachloro-m-xylene	62		30-150	A
Decachlorobiphenyl	59		30-150	A

Project Name: SITE1_SMP_2014 **Lab Number:** L1422287

Project Number: SITE1_SMP_2014 **Report Date:** 09/30/14

SAMPLE RESULTS

Lab ID:	L1422287-02	Date Collected:	09/23/14 12:26
Client ID:	PRW-02-WG-201409231226	Date Received:	09/23/14
Sample Location:	HOWLAND HOOK MARINE/PORT IVORY	Field Prep:	See Narrative
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8082A	Extraction Date:	09/26/14 15:52
Analytical Date:	09/27/14 18:44	Cleanup Method:	EPA 3665A
Analyst:	JW	Cleanup Date:	09/27/14
		Cleanup Method:	EPA 3660B
		Cleanup Date:	09/27/14

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/l	0.083	0.055	1	A
Aroclor 1221	ND		ug/l	0.083	0.053	1	A
Aroclor 1232	ND		ug/l	0.083	0.031	1	A
Aroclor 1242	ND		ug/l	0.083	0.060	1	A
Aroclor 1248	ND		ug/l	0.083	0.051	1	A
Aroclor 1254	ND		ug/l	0.083	0.034	1	A
Aroclor 1260	ND		ug/l	0.083	0.032	1	A
Aroclor 1262	ND		ug/l	0.083	0.029	1	A
Aroclor 1268	ND		ug/l	0.083	0.038	1	A
PCBs, Total	ND		ug/l	0.083	0.029	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	63		30-150	B
Decachlorobiphenyl	63		30-150	B
2,4,5,6-Tetrachloro-m-xylene	63		30-150	A
Decachlorobiphenyl	57		30-150	A

Project Name: SITE1_SMP_2014 **Lab Number:** L1422287

Project Number: SITE1_SMP_2014 **Report Date:** 09/30/14

SAMPLE RESULTS

Lab ID:	L1422287-03	Date Collected:	09/23/14 13:51
Client ID:	PRW-03-WG-201409231351	Date Received:	09/23/14
Sample Location:	HOWLAND HOOK MARINE/PORT IVORY	Field Prep:	See Narrative
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8082A	Extraction Date:	09/26/14 15:52
Analytical Date:	09/27/14 19:00	Cleanup Method:	EPA 3665A
Analyst:	JW	Cleanup Date:	09/27/14
		Cleanup Method:	EPA 3660B
		Cleanup Date:	09/27/14

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/l	0.083	0.055	1	A
Aroclor 1221	ND		ug/l	0.083	0.053	1	A
Aroclor 1232	ND		ug/l	0.083	0.031	1	A
Aroclor 1242	ND		ug/l	0.083	0.060	1	A
Aroclor 1248	ND		ug/l	0.083	0.051	1	A
Aroclor 1254	ND		ug/l	0.083	0.034	1	A
Aroclor 1260	ND		ug/l	0.083	0.032	1	A
Aroclor 1262	ND		ug/l	0.083	0.029	1	A
Aroclor 1268	ND		ug/l	0.083	0.038	1	A
PCBs, Total	ND		ug/l	0.083	0.029	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	53		30-150	B
Decachlorobiphenyl	56		30-150	B
2,4,5,6-Tetrachloro-m-xylene	53		30-150	A
Decachlorobiphenyl	50		30-150	A

Project Name: SITE1_SMP_2014 **Lab Number:** L1422287

Project Number: SITE1_SMP_2014 **Report Date:** 09/30/14

SAMPLE RESULTS

Lab ID:	L1422287-04	Date Collected:	09/23/14 11:01
Client ID:	PRW-05-WG-201409231101	Date Received:	09/23/14
Sample Location:	HOWLAND HOOK MARINE/PORT IVORY	Field Prep:	See Narrative
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8082A	Extraction Date:	09/26/14 15:52
Analytical Date:	09/27/14 19:16	Cleanup Method:	EPA 3665A
Analyst:	JW	Cleanup Date:	09/27/14
		Cleanup Method:	EPA 3660B
		Cleanup Date:	09/27/14

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/l	0.083	0.055	1	A
Aroclor 1221	ND		ug/l	0.083	0.053	1	A
Aroclor 1232	ND		ug/l	0.083	0.031	1	A
Aroclor 1242	ND		ug/l	0.083	0.060	1	A
Aroclor 1248	ND		ug/l	0.083	0.051	1	A
Aroclor 1254	ND		ug/l	0.083	0.034	1	A
Aroclor 1260	ND		ug/l	0.083	0.032	1	A
Aroclor 1262	ND		ug/l	0.083	0.029	1	A
Aroclor 1268	ND		ug/l	0.083	0.038	1	A
PCBs, Total	ND		ug/l	0.083	0.029	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	66		30-150	B
Decachlorobiphenyl	60		30-150	B
2,4,5,6-Tetrachloro-m-xylene	66		30-150	A
Decachlorobiphenyl	50		30-150	A

Project Name: SITE1_SMP_2014 **Lab Number:** L1422287

Project Number: SITE1_SMP_2014 **Report Date:** 09/30/14

SAMPLE RESULTS

Lab ID:	L1422287-05	Date Collected:	09/23/14 11:06
Client ID:	PRW-06-WG-201409231106	Date Received:	09/23/14
Sample Location:	HOWLAND HOOK MARINE/PORT IVORY	Field Prep:	See Narrative
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8082A	Extraction Date:	09/26/14 15:52
Analytical Date:	09/27/14 19:32	Cleanup Method:	EPA 3665A
Analyst:	JW	Cleanup Date:	09/27/14
		Cleanup Method:	EPA 3660B
		Cleanup Date:	09/27/14

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/l	0.083	0.055	1	A
Aroclor 1221	ND		ug/l	0.083	0.053	1	A
Aroclor 1232	ND		ug/l	0.083	0.031	1	A
Aroclor 1242	ND		ug/l	0.083	0.060	1	A
Aroclor 1248	ND		ug/l	0.083	0.051	1	A
Aroclor 1254	ND		ug/l	0.083	0.034	1	A
Aroclor 1260	ND		ug/l	0.083	0.032	1	A
Aroclor 1262	ND		ug/l	0.083	0.029	1	A
Aroclor 1268	ND		ug/l	0.083	0.038	1	A
PCBs, Total	ND		ug/l	0.083	0.029	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	57		30-150	B
Decachlorobiphenyl	59		30-150	B
2,4,5,6-Tetrachloro-m-xylene	58		30-150	A
Decachlorobiphenyl	51		30-150	A

Project Name: SITE1_SMP_2014 **Lab Number:** L1422287

Project Number: SITE1_SMP_2014 **Report Date:** 09/30/14

SAMPLE RESULTS

Lab ID:	L1422287-06	Date Collected:	09/23/14 13:51
Client ID:	PRW-07-WG-201409231351	Date Received:	09/23/14
Sample Location:	HOWLAND HOOK MARINE/PORT IVORY	Field Prep:	See Narrative
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8082A	Extraction Date:	09/26/14 15:52
Analytical Date:	09/27/14 19:47	Cleanup Method:	EPA 3665A
Analyst:	JW	Cleanup Date:	09/27/14
		Cleanup Method:	EPA 3660B
		Cleanup Date:	09/27/14

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/l	0.083	0.055	1	A
Aroclor 1221	ND		ug/l	0.083	0.053	1	A
Aroclor 1232	ND		ug/l	0.083	0.031	1	A
Aroclor 1242	ND		ug/l	0.083	0.060	1	A
Aroclor 1248	ND		ug/l	0.083	0.051	1	A
Aroclor 1254	ND		ug/l	0.083	0.034	1	A
Aroclor 1260	ND		ug/l	0.083	0.032	1	A
Aroclor 1262	ND		ug/l	0.083	0.029	1	A
Aroclor 1268	ND		ug/l	0.083	0.038	1	A
PCBs, Total	ND		ug/l	0.083	0.029	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	61		30-150	B
Decachlorobiphenyl	54		30-150	B
2,4,5,6-Tetrachloro-m-xylene	59		30-150	A
Decachlorobiphenyl	48		30-150	A

Project Name: SITE1_SMP_2014 **Lab Number:** L1422287

Project Number: SITE1_SMP_2014 **Report Date:** 09/30/14

SAMPLE RESULTS

Lab ID:	L1422287-07	Date Collected:	09/23/14 15:30
Client ID:	SW-4-WS-201409231530	Date Received:	09/23/14
Sample Location:	HOWLAND HOOK MARINE/PORT IVORY	Field Prep:	See Narrative
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8082A	Extraction Date:	09/26/14 15:52
Analytical Date:	09/27/14 20:51	Cleanup Method:	EPA 3665A
Analyst:	JW	Cleanup Date:	09/27/14
		Cleanup Method:	EPA 3660B
		Cleanup Date:	09/27/14

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/l	0.083	0.055	1	A
Aroclor 1221	ND		ug/l	0.083	0.053	1	A
Aroclor 1232	ND		ug/l	0.083	0.031	1	A
Aroclor 1242	ND		ug/l	0.083	0.060	1	A
Aroclor 1248	ND		ug/l	0.083	0.051	1	A
Aroclor 1254	ND		ug/l	0.083	0.034	1	A
Aroclor 1260	ND		ug/l	0.083	0.032	1	A
Aroclor 1262	ND		ug/l	0.083	0.029	1	A
Aroclor 1268	ND		ug/l	0.083	0.038	1	A
PCBs, Total	ND		ug/l	0.083	0.029	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	62		30-150	B
Decachlorobiphenyl	65		30-150	B
2,4,5,6-Tetrachloro-m-xylene	64		30-150	A
Decachlorobiphenyl	65		30-150	A

Project Name: SITE1_SMP_2014 **Lab Number:** L1422287

Project Number: SITE1_SMP_2014 **Report Date:** 09/30/14

SAMPLE RESULTS

Lab ID:	L1422287-08	Date Collected:	09/23/14 15:15
Client ID:	SW-5-WS-201409231515	Date Received:	09/23/14
Sample Location:	HOWLAND HOOK MARINE/PORT IVORY	Field Prep:	See Narrative
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8082A	Extraction Date:	09/26/14 15:52
Analytical Date:	09/27/14 20:03	Cleanup Method:	EPA 3665A
Analyst:	JW	Cleanup Date:	09/27/14
		Cleanup Method:	EPA 3660B
		Cleanup Date:	09/27/14

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/l	0.083	0.055	1	A
Aroclor 1221	ND		ug/l	0.083	0.053	1	A
Aroclor 1232	ND		ug/l	0.083	0.031	1	A
Aroclor 1242	ND		ug/l	0.083	0.060	1	A
Aroclor 1248	ND		ug/l	0.083	0.051	1	A
Aroclor 1254	ND		ug/l	0.083	0.034	1	A
Aroclor 1260	ND		ug/l	0.083	0.032	1	A
Aroclor 1262	ND		ug/l	0.083	0.029	1	A
Aroclor 1268	ND		ug/l	0.083	0.038	1	A
PCBs, Total	ND		ug/l	0.083	0.029	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	61		30-150	B
Decachlorobiphenyl	69		30-150	B
2,4,5,6-Tetrachloro-m-xylene	63		30-150	A
Decachlorobiphenyl	60		30-150	A

Project Name: SITE1_SMP_2014 **Lab Number:** L1422287

Project Number: SITE1_SMP_2014 **Report Date:** 09/30/14

SAMPLE RESULTS

Lab ID:	L1422287-10	Date Collected:	09/23/14 13:00
Client ID:	WQ-201409231300-FB-1	Date Received:	09/23/14
Sample Location:	HOWLAND HOOK MARINE/PORT IVORY	Field Prep:	See Narrative
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8082A	Extraction Date:	09/26/14 15:52
Analytical Date:	09/27/14 20:19	Cleanup Method:	EPA 3665A
Analyst:	JW	Cleanup Date:	09/27/14
		Cleanup Method:	EPA 3660B
		Cleanup Date:	09/27/14

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/l	0.083	0.055	1	A
Aroclor 1221	ND		ug/l	0.083	0.053	1	A
Aroclor 1232	ND		ug/l	0.083	0.031	1	A
Aroclor 1242	ND		ug/l	0.083	0.060	1	A
Aroclor 1248	ND		ug/l	0.083	0.051	1	A
Aroclor 1254	ND		ug/l	0.083	0.034	1	A
Aroclor 1260	ND		ug/l	0.083	0.032	1	A
Aroclor 1262	ND		ug/l	0.083	0.029	1	A
Aroclor 1268	ND		ug/l	0.083	0.038	1	A
PCBs, Total	ND		ug/l	0.083	0.029	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	58		30-150	B
Decachlorobiphenyl	69		30-150	B
2,4,5,6-Tetrachloro-m-xylene	60		30-150	A
Decachlorobiphenyl	59		30-150	A

Project Name: SITE1_SMP_2014 **Lab Number:** L1422287

Project Number: SITE1_SMP_2014 **Report Date:** 09/30/14

SAMPLE RESULTS

Lab ID:	L1422287-11	Date Collected:	09/23/14 15:15
Client ID:	WS-201409231515-FD-1	Date Received:	09/23/14
Sample Location:	HOWLAND HOOK MARINE/PORT IVORY	Field Prep:	See Narrative
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8082A	Extraction Date:	09/26/14 15:52
Analytical Date:	09/27/14 20:35	Cleanup Method:	EPA 3665A
Analyst:	JW	Cleanup Date:	09/27/14
		Cleanup Method:	EPA 3660B
		Cleanup Date:	09/27/14

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/l	0.083	0.055	1	A
Aroclor 1221	ND		ug/l	0.083	0.053	1	A
Aroclor 1232	ND		ug/l	0.083	0.031	1	A
Aroclor 1242	ND		ug/l	0.083	0.060	1	A
Aroclor 1248	ND		ug/l	0.083	0.051	1	A
Aroclor 1254	ND		ug/l	0.083	0.034	1	A
Aroclor 1260	ND		ug/l	0.083	0.032	1	A
Aroclor 1262	ND		ug/l	0.083	0.029	1	A
Aroclor 1268	ND		ug/l	0.083	0.038	1	A
PCBs, Total	ND		ug/l	0.083	0.029	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	60		30-150	B
Decachlorobiphenyl	68		30-150	B
2,4,5,6-Tetrachloro-m-xylene	62		30-150	A
Decachlorobiphenyl	63		30-150	A

Project Name: SITE1_SMP_2014 **Lab Number:** L1422287

Project Number: SITE1_SMP_2014 **Report Date:** 09/30/14

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8082A
Analytical Date: 09/27/14 21:38
Analyst: JW

Extraction Method: EPA 3510C
Extraction Date: 09/26/14 15:52
Cleanup Method: EPA 3665A
Cleanup Date: 09/27/14
Cleanup Method: EPA 3660B
Cleanup Date: 09/27/14

Parameter	Result	Qualifier	Units	RL	MDL	Column
Polychlorinated Biphenyls by GC - Westborough Lab for sample(s): 01-08,10-11 Batch: WG725721-1						
Aroclor 1016	ND		ug/l	0.083	0.055	A
Aroclor 1221	ND		ug/l	0.083	0.053	A
Aroclor 1232	ND		ug/l	0.083	0.031	A
Aroclor 1242	ND		ug/l	0.083	0.060	A
Aroclor 1248	ND		ug/l	0.083	0.051	A
Aroclor 1254	ND		ug/l	0.083	0.034	A
Aroclor 1260	ND		ug/l	0.083	0.032	A
Aroclor 1262	ND		ug/l	0.083	0.029	A
Aroclor 1268	ND		ug/l	0.083	0.038	A
PCBs, Total	ND		ug/l	0.083	0.029	A

Surrogate	%Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	39		30-150	B
Decachlorobiphenyl	57		30-150	B
2,4,5,6-Tetrachloro-m-xylene	38		30-150	A
Decachlorobiphenyl	62		30-150	A

Matrix Spike Analysis
Batch Quality Control

Project Name: SITE1_SMP_2014
Project Number: SITE1_SMP_2014

Lab Number: L1422287
Report Date: 09/30/14

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits	Column
Polychlorinated Biphenyls by GC - Westborough Lab Associated sample(s): 01-08,10-11 QC Batch ID: WG725721-4 WG725721-5 QC Sample: L1422287-07 Client ID: SW-4-WS-201409231530													
Aroclor 1016	ND	2.6	1.68	64		1.95	75		40-140	15		50	A
Aroclor 1260	ND	2.6	1.79	69		2.11	81		40-140	16		50	A

Surrogate	MS % Recovery	MS Qualifier	MSD % Recovery	MSD Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	52		62		30-150	B
Decachlorobiphenyl	59		71		30-150	B
2,4,5,6-Tetrachloro-m-xylene	54		63		30-150	A
Decachlorobiphenyl	58		70		30-150	A

Lab Control Sample Analysis

Batch Quality Control

Project Name: SITE1_SMP_2014

Project Number: SITE1_SMP_2014

Lab Number: L1422287

Report Date: 09/30/14

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
Polychlorinated Biphenyls by GC - Westborough Lab Associated sample(s): 01-08,10-11 Batch: WG725721-2 WG725721-3									
Aroclor 1016	59		68		40-140	14		50	A
Aroclor 1260	69		77		40-140	11		50	A

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	41		53		30-150	B
Decachlorobiphenyl	64		56		30-150	B
2,4,5,6-Tetrachloro-m-xylene	41		54		30-150	A
Decachlorobiphenyl	67		56		30-150	A

PESTICIDES

Project Name: SITE1_SMP_2014 **Lab Number:** L1422287

Project Number: SITE1_SMP_2014 **Report Date:** 09/30/14

SAMPLE RESULTS

Lab ID:	L1422287-01	Date Collected:	09/23/14 12:16
Client ID:	PRW-01-WG-201409231216	Date Received:	09/23/14
Sample Location:	HOWLAND HOOK MARINE/PORT IVORY	Field Prep:	See Narrative
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8081B	Extraction Date:	09/26/14 16:03
Analytical Date:	09/29/14 02:47	Cleanup Method:	EPA 3620B
Analyst:	JW	Cleanup Date:	09/28/14

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Organochlorine Pesticides by GC - Westborough Lab							
Delta-BHC	ND		ug/l	0.020	0.005	1	A
Lindane	ND		ug/l	0.020	0.004	1	A
Alpha-BHC	ND		ug/l	0.020	0.004	1	A
Beta-BHC	ND		ug/l	0.020	0.006	1	A
Heptachlor	ND		ug/l	0.020	0.003	1	A
Aldrin	ND		ug/l	0.020	0.002	1	A
Heptachlor epoxide	ND		ug/l	0.020	0.004	1	A
Endrin	ND		ug/l	0.040	0.004	1	A
Endrin ketone	ND		ug/l	0.040	0.005	1	A
Dieldrin	ND		ug/l	0.040	0.004	1	A
4,4'-DDE	ND		ug/l	0.040	0.004	1	A
4,4'-DDD	ND		ug/l	0.040	0.005	1	A
4,4'-DDT	ND		ug/l	0.040	0.004	1	A
Endosulfan I	ND		ug/l	0.020	0.003	1	A
Endosulfan II	ND		ug/l	0.040	0.005	1	A
Endosulfan sulfate	ND		ug/l	0.040	0.005	1	A
Methoxychlor	ND		ug/l	0.200	0.007	1	A
Toxaphene	ND		ug/l	0.200	0.063	1	A
cis-Chlordane	ND		ug/l	0.020	0.007	1	A
trans-Chlordane	ND		ug/l	0.020	0.006	1	A
Chlordane	ND		ug/l	0.200	0.046	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	85		30-150	A
Decachlorobiphenyl	65		30-150	A
2,4,5,6-Tetrachloro-m-xylene	56		30-150	B
Decachlorobiphenyl	58		30-150	B

Project Name: SITE1_SMP_2014 **Lab Number:** L1422287

Project Number: SITE1_SMP_2014 **Report Date:** 09/30/14

SAMPLE RESULTS

Lab ID:	L1422287-02	Date Collected:	09/23/14 12:26
Client ID:	PRW-02-WG-201409231226	Date Received:	09/23/14
Sample Location:	HOWLAND HOOK MARINE/PORT IVORY	Field Prep:	See Narrative
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8081B	Extraction Date:	09/26/14 16:03
Analytical Date:	09/29/14 03:00	Cleanup Method:	EPA 3620B
Analyst:	JW	Cleanup Date:	09/28/14

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Organochlorine Pesticides by GC - Westborough Lab							
Delta-BHC	ND		ug/l	0.020	0.005	1	A
Lindane	ND		ug/l	0.020	0.004	1	A
Alpha-BHC	ND		ug/l	0.020	0.004	1	A
Beta-BHC	ND		ug/l	0.020	0.006	1	A
Heptachlor	ND		ug/l	0.020	0.003	1	A
Aldrin	ND		ug/l	0.020	0.002	1	A
Heptachlor epoxide	ND		ug/l	0.020	0.004	1	A
Endrin	ND		ug/l	0.040	0.004	1	A
Endrin ketone	ND		ug/l	0.040	0.005	1	A
Dieldrin	ND		ug/l	0.040	0.004	1	A
4,4'-DDE	ND		ug/l	0.040	0.004	1	A
4,4'-DDD	ND		ug/l	0.040	0.005	1	A
4,4'-DDT	ND		ug/l	0.040	0.004	1	A
Endosulfan I	ND		ug/l	0.020	0.003	1	A
Endosulfan II	ND		ug/l	0.040	0.005	1	A
Endosulfan sulfate	ND		ug/l	0.040	0.005	1	A
Methoxychlor	ND		ug/l	0.200	0.007	1	A
Toxaphene	ND		ug/l	0.200	0.063	1	A
cis-Chlordane	ND		ug/l	0.020	0.007	1	A
trans-Chlordane	ND		ug/l	0.020	0.006	1	A
Chlordane	ND		ug/l	0.200	0.046	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	90		30-150	A
Decachlorobiphenyl	54		30-150	A
2,4,5,6-Tetrachloro-m-xylene	86		30-150	B
Decachlorobiphenyl	71		30-150	B

Project Name: SITE1_SMP_2014 **Lab Number:** L1422287

Project Number: SITE1_SMP_2014 **Report Date:** 09/30/14

SAMPLE RESULTS

Lab ID:	L1422287-03	Date Collected:	09/23/14 13:51
Client ID:	PRW-03-WG-201409231351	Date Received:	09/23/14
Sample Location:	HOWLAND HOOK MARINE/PORT IVORY	Field Prep:	See Narrative
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8081B	Extraction Date:	09/26/14 16:03
Analytical Date:	09/29/14 03:12	Cleanup Method:	EPA 3620B
Analyst:	JW	Cleanup Date:	09/28/14

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Organochlorine Pesticides by GC - Westborough Lab							
Delta-BHC	ND		ug/l	0.020	0.005	1	A
Lindane	ND		ug/l	0.020	0.004	1	A
Alpha-BHC	ND		ug/l	0.020	0.004	1	A
Beta-BHC	ND		ug/l	0.020	0.006	1	A
Heptachlor	ND		ug/l	0.020	0.003	1	A
Aldrin	ND		ug/l	0.020	0.002	1	A
Heptachlor epoxide	ND		ug/l	0.020	0.004	1	A
Endrin	ND		ug/l	0.040	0.004	1	A
Endrin ketone	ND		ug/l	0.040	0.005	1	A
Dieldrin	ND		ug/l	0.040	0.004	1	A
4,4'-DDE	ND		ug/l	0.040	0.004	1	A
4,4'-DDD	ND		ug/l	0.040	0.005	1	A
4,4'-DDT	ND		ug/l	0.040	0.004	1	A
Endosulfan I	ND		ug/l	0.020	0.003	1	A
Endosulfan II	ND		ug/l	0.040	0.005	1	A
Endosulfan sulfate	ND		ug/l	0.040	0.005	1	A
Methoxychlor	ND		ug/l	0.200	0.007	1	A
Toxaphene	ND		ug/l	0.200	0.063	1	A
cis-Chlordane	ND		ug/l	0.020	0.007	1	A
trans-Chlordane	ND		ug/l	0.020	0.006	1	A
Chlordane	ND		ug/l	0.200	0.046	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	111		30-150	A
Decachlorobiphenyl	99		30-150	A
2,4,5,6-Tetrachloro-m-xylene	97		30-150	B
Decachlorobiphenyl	102		30-150	B

Project Name: SITE1_SMP_2014 **Lab Number:** L1422287

Project Number: SITE1_SMP_2014 **Report Date:** 09/30/14

SAMPLE RESULTS

Lab ID:	L1422287-04	Date Collected:	09/23/14 11:01
Client ID:	PRW-05-WG-201409231101	Date Received:	09/23/14
Sample Location:	HOWLAND HOOK MARINE/PORT IVORY	Field Prep:	See Narrative
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8081B	Extraction Date:	09/26/14 16:03
Analytical Date:	09/29/14 03:25	Cleanup Method:	EPA 3620B
Analyst:	JW	Cleanup Date:	09/28/14

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Organochlorine Pesticides by GC - Westborough Lab							
Delta-BHC	ND		ug/l	0.020	0.005	1	A
Lindane	ND		ug/l	0.020	0.004	1	A
Alpha-BHC	ND		ug/l	0.020	0.004	1	A
Beta-BHC	ND		ug/l	0.020	0.006	1	A
Heptachlor	ND		ug/l	0.020	0.003	1	A
Aldrin	ND		ug/l	0.020	0.002	1	A
Heptachlor epoxide	ND		ug/l	0.020	0.004	1	A
Endrin	ND		ug/l	0.040	0.004	1	A
Endrin ketone	ND		ug/l	0.040	0.005	1	A
Dieldrin	ND		ug/l	0.040	0.004	1	A
4,4'-DDE	ND		ug/l	0.040	0.004	1	A
4,4'-DDD	ND		ug/l	0.040	0.005	1	A
4,4'-DDT	ND		ug/l	0.040	0.004	1	A
Endosulfan I	ND		ug/l	0.020	0.003	1	A
Endosulfan II	ND		ug/l	0.040	0.005	1	A
Endosulfan sulfate	ND		ug/l	0.040	0.005	1	A
Methoxychlor	ND		ug/l	0.200	0.007	1	A
Toxaphene	ND		ug/l	0.200	0.063	1	A
cis-Chlordane	ND		ug/l	0.020	0.007	1	A
trans-Chlordane	0.007	JPI	ug/l	0.020	0.006	1	A
Chlordane	ND		ug/l	0.200	0.046	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	78		30-150	A
Decachlorobiphenyl	77		30-150	A
2,4,5,6-Tetrachloro-m-xylene	80		30-150	B
Decachlorobiphenyl	91		30-150	B

Project Name: SITE1_SMP_2014 **Lab Number:** L1422287

Project Number: SITE1_SMP_2014 **Report Date:** 09/30/14

SAMPLE RESULTS

Lab ID:	L1422287-05	Date Collected:	09/23/14 11:06
Client ID:	PRW-06-WG-201409231106	Date Received:	09/23/14
Sample Location:	HOWLAND HOOK MARINE/PORT IVORY	Field Prep:	See Narrative
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8081B	Extraction Date:	09/26/14 16:03
Analytical Date:	09/29/14 03:38	Cleanup Method:	EPA 3620B
Analyst:	JW	Cleanup Date:	09/28/14

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Organochlorine Pesticides by GC - Westborough Lab							
Delta-BHC	ND		ug/l	0.020	0.005	1	A
Lindane	ND		ug/l	0.020	0.004	1	A
Alpha-BHC	ND		ug/l	0.020	0.004	1	A
Beta-BHC	ND		ug/l	0.020	0.006	1	A
Heptachlor	ND		ug/l	0.020	0.003	1	A
Aldrin	ND		ug/l	0.020	0.002	1	A
Heptachlor epoxide	ND		ug/l	0.020	0.004	1	A
Endrin	ND		ug/l	0.040	0.004	1	A
Endrin ketone	ND		ug/l	0.040	0.005	1	A
Dieldrin	ND		ug/l	0.040	0.004	1	A
4,4'-DDE	ND		ug/l	0.040	0.004	1	A
4,4'-DDD	ND		ug/l	0.040	0.005	1	A
4,4'-DDT	ND		ug/l	0.040	0.004	1	A
Endosulfan I	ND		ug/l	0.020	0.003	1	A
Endosulfan II	ND		ug/l	0.040	0.005	1	A
Endosulfan sulfate	ND		ug/l	0.040	0.005	1	A
Methoxychlor	ND		ug/l	0.200	0.007	1	A
Toxaphene	ND		ug/l	0.200	0.063	1	A
cis-Chlordane	ND		ug/l	0.020	0.007	1	A
trans-Chlordane	ND		ug/l	0.020	0.006	1	A
Chlordane	ND		ug/l	0.200	0.046	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	94		30-150	A
Decachlorobiphenyl	73		30-150	A
2,4,5,6-Tetrachloro-m-xylene	93		30-150	B
Decachlorobiphenyl	93		30-150	B

Project Name: SITE1_SMP_2014 **Lab Number:** L1422287

Project Number: SITE1_SMP_2014 **Report Date:** 09/30/14

SAMPLE RESULTS

Lab ID:	L1422287-06	Date Collected:	09/23/14 13:51
Client ID:	PRW-07-WG-201409231351	Date Received:	09/23/14
Sample Location:	HOWLAND HOOK MARINE/PORT IVORY	Field Prep:	See Narrative
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8081B	Extraction Date:	09/26/14 16:03
Analytical Date:	09/29/14 03:51	Cleanup Method:	EPA 3620B
Analyst:	JW	Cleanup Date:	09/28/14

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Organochlorine Pesticides by GC - Westborough Lab							
Delta-BHC	ND		ug/l	0.020	0.005	1	A
Lindane	ND		ug/l	0.020	0.004	1	A
Alpha-BHC	ND		ug/l	0.020	0.004	1	A
Beta-BHC	ND		ug/l	0.020	0.006	1	A
Heptachlor	ND		ug/l	0.020	0.003	1	A
Aldrin	ND		ug/l	0.020	0.002	1	A
Heptachlor epoxide	ND		ug/l	0.020	0.004	1	A
Endrin	ND		ug/l	0.040	0.004	1	A
Endrin ketone	ND		ug/l	0.040	0.005	1	A
Dieldrin	ND		ug/l	0.040	0.004	1	A
4,4'-DDE	ND		ug/l	0.040	0.004	1	A
4,4'-DDD	ND		ug/l	0.040	0.005	1	A
4,4'-DDT	ND		ug/l	0.040	0.004	1	A
Endosulfan I	ND		ug/l	0.020	0.003	1	A
Endosulfan II	ND		ug/l	0.040	0.005	1	A
Endosulfan sulfate	ND		ug/l	0.040	0.005	1	A
Methoxychlor	ND		ug/l	0.200	0.007	1	A
Toxaphene	ND		ug/l	0.200	0.063	1	A
cis-Chlordane	ND		ug/l	0.020	0.007	1	A
trans-Chlordane	0.010	JPI	ug/l	0.020	0.006	1	A
Chlordane	ND		ug/l	0.200	0.046	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	81		30-150	A
Decachlorobiphenyl	72		30-150	A
2,4,5,6-Tetrachloro-m-xylene	69		30-150	B
Decachlorobiphenyl	77		30-150	B

Project Name: SITE1_SMP_2014 **Lab Number:** L1422287

Project Number: SITE1_SMP_2014 **Report Date:** 09/30/14

SAMPLE RESULTS

Lab ID:	L1422287-07	Date Collected:	09/23/14 15:30
Client ID:	SW-4-WS-201409231530	Date Received:	09/23/14
Sample Location:	HOWLAND HOOK MARINE/PORT IVORY	Field Prep:	See Narrative
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8081B	Extraction Date:	09/26/14 16:03
Analytical Date:	09/29/14 02:34	Cleanup Method:	EPA 3620B
Analyst:	JW	Cleanup Date:	09/28/14

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Organochlorine Pesticides by GC - Westborough Lab							
Delta-BHC	ND		ug/l	0.020	0.005	1	A
Lindane	ND		ug/l	0.020	0.004	1	A
Alpha-BHC	ND		ug/l	0.020	0.004	1	A
Beta-BHC	ND		ug/l	0.020	0.006	1	A
Heptachlor	0.012	J	ug/l	0.020	0.003	1	B
Aldrin	ND		ug/l	0.020	0.002	1	A
Heptachlor epoxide	ND		ug/l	0.020	0.004	1	A
Endrin	ND		ug/l	0.040	0.004	1	A
Endrin ketone	ND		ug/l	0.040	0.005	1	A
Dieldrin	ND		ug/l	0.040	0.004	1	A
4,4'-DDE	ND		ug/l	0.040	0.004	1	A
4,4'-DDD	ND		ug/l	0.040	0.005	1	A
4,4'-DDT	ND		ug/l	0.040	0.004	1	A
Endosulfan I	ND		ug/l	0.020	0.003	1	A
Endosulfan II	ND		ug/l	0.040	0.005	1	A
Endosulfan sulfate	ND		ug/l	0.040	0.005	1	A
Methoxychlor	ND		ug/l	0.200	0.007	1	A
Toxaphene	ND		ug/l	0.200	0.063	1	A
cis-Chlordane	ND		ug/l	0.020	0.007	1	A
trans-Chlordane	0.007	JPI	ug/l	0.020	0.006	1	A
Chlordane	ND		ug/l	0.200	0.046	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	97		30-150	A
Decachlorobiphenyl	88		30-150	A
2,4,5,6-Tetrachloro-m-xylene	90		30-150	B
Decachlorobiphenyl	109		30-150	B

Project Name: SITE1_SMP_2014 **Lab Number:** L1422287

Project Number: SITE1_SMP_2014 **Report Date:** 09/30/14

SAMPLE RESULTS

Lab ID:	L1422287-08	Date Collected:	09/23/14 15:15
Client ID:	SW-5-WS-201409231515	Date Received:	09/23/14
Sample Location:	HOWLAND HOOK MARINE/PORT IVORY	Field Prep:	See Narrative
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8081B	Extraction Date:	09/26/14 16:03
Analytical Date:	09/29/14 04:04	Cleanup Method:	EPA 3620B
Analyst:	JW	Cleanup Date:	09/28/14

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Organochlorine Pesticides by GC - Westborough Lab							
Delta-BHC	ND		ug/l	0.020	0.005	1	A
Lindane	ND		ug/l	0.020	0.004	1	A
Alpha-BHC	ND		ug/l	0.020	0.004	1	A
Beta-BHC	ND		ug/l	0.020	0.006	1	A
Heptachlor	ND		ug/l	0.020	0.003	1	A
Aldrin	ND		ug/l	0.020	0.002	1	A
Heptachlor epoxide	ND		ug/l	0.020	0.004	1	A
Endrin	ND		ug/l	0.040	0.004	1	A
Endrin ketone	ND		ug/l	0.040	0.005	1	A
Dieldrin	ND		ug/l	0.040	0.004	1	A
4,4'-DDE	ND		ug/l	0.040	0.004	1	A
4,4'-DDD	0.010	J	ug/l	0.040	0.005	1	A
4,4'-DDT	ND		ug/l	0.040	0.004	1	A
Endosulfan I	ND		ug/l	0.020	0.003	1	A
Endosulfan II	ND		ug/l	0.040	0.005	1	A
Endosulfan sulfate	ND		ug/l	0.040	0.005	1	A
Methoxychlor	ND		ug/l	0.200	0.007	1	A
Toxaphene	ND		ug/l	0.200	0.063	1	A
cis-Chlordane	ND		ug/l	0.020	0.007	1	A
trans-Chlordane	ND		ug/l	0.020	0.006	1	A
Chlordane	ND		ug/l	0.200	0.046	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	102		30-150	A
Decachlorobiphenyl	81		30-150	A
2,4,5,6-Tetrachloro-m-xylene	90		30-150	B
Decachlorobiphenyl	99		30-150	B

Project Name: SITE1_SMP_2014 **Lab Number:** L1422287

Project Number: SITE1_SMP_2014 **Report Date:** 09/30/14

SAMPLE RESULTS

Lab ID:	L1422287-10	Date Collected:	09/23/14 13:00
Client ID:	WQ-201409231300-FB-1	Date Received:	09/23/14
Sample Location:	HOWLAND HOOK MARINE/PORT IVORY	Field Prep:	See Narrative
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8081B	Extraction Date:	09/26/14 16:03
Analytical Date:	09/29/14 04:16	Cleanup Method:	EPA 3620B
Analyst:	JW	Cleanup Date:	09/28/14

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Organochlorine Pesticides by GC - Westborough Lab							
Delta-BHC	ND		ug/l	0.020	0.005	1	A
Lindane	ND		ug/l	0.020	0.004	1	A
Alpha-BHC	ND		ug/l	0.020	0.004	1	A
Beta-BHC	ND		ug/l	0.020	0.006	1	A
Heptachlor	ND		ug/l	0.020	0.003	1	A
Aldrin	ND		ug/l	0.020	0.002	1	A
Heptachlor epoxide	ND		ug/l	0.020	0.004	1	A
Endrin	ND		ug/l	0.040	0.004	1	A
Endrin ketone	ND		ug/l	0.040	0.005	1	A
Dieldrin	ND		ug/l	0.040	0.004	1	A
4,4'-DDE	ND		ug/l	0.040	0.004	1	A
4,4'-DDD	ND		ug/l	0.040	0.005	1	A
4,4'-DDT	ND		ug/l	0.040	0.004	1	A
Endosulfan I	ND		ug/l	0.020	0.003	1	A
Endosulfan II	ND		ug/l	0.040	0.005	1	A
Endosulfan sulfate	ND		ug/l	0.040	0.005	1	A
Methoxychlor	ND		ug/l	0.200	0.007	1	A
Toxaphene	ND		ug/l	0.200	0.063	1	A
cis-Chlordane	0.010	J	ug/l	0.020	0.007	1	A
trans-Chlordane	0.008	JPI	ug/l	0.020	0.006	1	A
Chlordane	ND		ug/l	0.200	0.046	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	100		30-150	A
Decachlorobiphenyl	69		30-150	A
2,4,5,6-Tetrachloro-m-xylene	108		30-150	B
Decachlorobiphenyl	84		30-150	B

Project Name: SITE1_SMP_2014 **Lab Number:** L1422287

Project Number: SITE1_SMP_2014 **Report Date:** 09/30/14

SAMPLE RESULTS

Lab ID:	L1422287-11	Date Collected:	09/23/14 15:15
Client ID:	WS-201409231515-FD-1	Date Received:	09/23/14
Sample Location:	HOWLAND HOOK MARINE/PORT IVORY	Field Prep:	See Narrative
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8081B	Extraction Date:	09/26/14 16:03
Analytical Date:	09/29/14 04:29	Cleanup Method:	EPA 3620B
Analyst:	JW	Cleanup Date:	09/28/14

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Organochlorine Pesticides by GC - Westborough Lab							
Delta-BHC	ND		ug/l	0.020	0.005	1	A
Lindane	ND		ug/l	0.020	0.004	1	A
Alpha-BHC	ND		ug/l	0.020	0.004	1	A
Beta-BHC	ND		ug/l	0.020	0.006	1	A
Heptachlor	ND		ug/l	0.020	0.003	1	A
Aldrin	ND		ug/l	0.020	0.002	1	A
Heptachlor epoxide	ND		ug/l	0.020	0.004	1	A
Endrin	ND		ug/l	0.040	0.004	1	A
Endrin ketone	ND		ug/l	0.040	0.005	1	A
Dieldrin	ND		ug/l	0.040	0.004	1	A
4,4'-DDE	ND		ug/l	0.040	0.004	1	A
4,4'-DDD	0.008	J	ug/l	0.040	0.005	1	A
4,4'-DDT	ND		ug/l	0.040	0.004	1	A
Endosulfan I	ND		ug/l	0.020	0.003	1	A
Endosulfan II	ND		ug/l	0.040	0.005	1	A
Endosulfan sulfate	ND		ug/l	0.040	0.005	1	A
Methoxychlor	ND		ug/l	0.200	0.007	1	A
Toxaphene	ND		ug/l	0.200	0.063	1	A
cis-Chlordane	ND		ug/l	0.020	0.007	1	A
trans-Chlordane	ND		ug/l	0.020	0.006	1	A
Chlordane	ND		ug/l	0.200	0.046	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	98		30-150	A
Decachlorobiphenyl	91		30-150	A
2,4,5,6-Tetrachloro-m-xylene	92		30-150	B
Decachlorobiphenyl	108		30-150	B

Project Name: SITE1_SMP_2014
Project Number: SITE1_SMP_2014

Lab Number: L1422287
Report Date: 09/30/14

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8081B
Analytical Date: 09/29/14 01:30
Analyst: JW

Extraction Method: EPA 3510C
Extraction Date: 09/26/14 16:03
Cleanup Method: EPA 3620B
Cleanup Date: 09/28/14

Parameter	Result	Qualifier	Units	RL	MDL	Column
Organochlorine Pesticides by GC - Westborough Lab for sample(s): 01-08,10-11 Batch: WG725728-1						
Delta-BHC	ND		ug/l	0.020	0.005	A
Lindane	ND		ug/l	0.020	0.004	A
Alpha-BHC	ND		ug/l	0.020	0.004	A
Beta-BHC	ND		ug/l	0.020	0.006	A
Heptachlor	ND		ug/l	0.020	0.003	A
Aldrin	ND		ug/l	0.020	0.002	A
Heptachlor epoxide	ND		ug/l	0.020	0.004	A
Endrin	ND		ug/l	0.040	0.004	A
Endrin ketone	ND		ug/l	0.040	0.005	A
Dieldrin	ND		ug/l	0.040	0.004	A
4,4'-DDE	ND		ug/l	0.040	0.004	A
4,4'-DDD	ND		ug/l	0.040	0.005	A
4,4'-DDT	ND		ug/l	0.040	0.004	A
Endosulfan I	ND		ug/l	0.020	0.003	A
Endosulfan II	ND		ug/l	0.040	0.005	A
Endosulfan sulfate	ND		ug/l	0.040	0.005	A
Methoxychlor	ND		ug/l	0.200	0.007	A
Toxaphene	ND		ug/l	0.200	0.063	A
cis-Chlordane	0.015	J	ug/l	0.020	0.007	A
trans-Chlordane	0.009	JPI	ug/l	0.020	0.006	A
Chlordane	ND		ug/l	0.200	0.046	A

Project Name: SITE1_SMP_2014
Project Number: SITE1_SMP_2014

Lab Number: L1422287
Report Date: 09/30/14

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8081B
Analytical Date: 09/29/14 01:30
Analyst: JW

Extraction Method: EPA 3510C
Extraction Date: 09/26/14 16:03
Cleanup Method: EPA 3620B
Cleanup Date: 09/28/14

Parameter	Result	Qualifier	Units	RL	MDL
Organochlorine Pesticides by GC - Westborough Lab for sample(s): 01-08,10-11 Batch: WG725728-1					

Surrogate	%Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	78		30-150	A
Decachlorobiphenyl	92		30-150	A
2,4,5,6-Tetrachloro-m-xylene	87		30-150	B
Decachlorobiphenyl	128		30-150	B

Lab Control Sample Analysis

Batch Quality Control

Project Name: SITE1_SMP_2014

Project Number: SITE1_SMP_2014

Lab Number: L1422287

Report Date: 09/30/14

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
Organochlorine Pesticides by GC - Westborough Lab Associated sample(s): 01-08,10-11 Batch: WG725728-2 WG725728-3									
Delta-BHC	111		110		30-150	1		20	A
Lindane	122		123		30-150	1		20	A
Alpha-BHC	107		108		30-150	1		20	A
Beta-BHC	117		118		30-150	1		20	A
Heptachlor	95		97		30-150	2		20	A
Aldrin	109		96		30-150	13		20	A
Heptachlor epoxide	114		115		30-150	1		20	A
Endrin	130		130		30-150	0		20	A
Endrin ketone	103		102		30-150	1		20	A
Dieldrin	126		125		30-150	1		20	A
4,4'-DDE	117		117		30-150	0		20	A
4,4'-DDD	122		121		30-150	1		20	A
4,4'-DDT	114		112		30-150	2		20	A
Endosulfan I	114		114		30-150	0		20	A
Endosulfan II	107		106		30-150	1		20	A
Endosulfan sulfate	112		108		30-150	4		20	A
Methoxychlor	103		102		30-150	1		20	A
cis-Chlordane	110		110		30-150	0		20	A
trans-Chlordane	112		112		30-150	0		20	A

Lab Control Sample Analysis

Batch Quality Control

Project Name: SITE1_SMP_2014
Project Number: SITE1_SMP_2014

Lab Number: L1422287
Report Date: 09/30/14

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Organochlorine Pesticides by GC - Westborough Lab Associated sample(s): 01-08,10-11 Batch: WG725728-2 WG725728-3								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	75		76		30-150	A
Decachlorobiphenyl	92		91		30-150	A
2,4,5,6-Tetrachloro-m-xylene	81		79		30-150	B
Decachlorobiphenyl	120		117		30-150	B

Matrix Spike Analysis
Batch Quality Control

Project Name: SITE1_SMP_2014
Project Number: SITE1_SMP_2014

Lab Number: L1422287
Report Date: 09/30/14

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits	Column
Organochlorine Pesticides by GC - Westborough Lab Associated sample(s): 01-08,10-11 QC Batch ID: WG725728-4 WG725728-5 QC Sample: L1422287-07 Client ID: SW-4-WS-201409231530													
Delta-BHC	ND	0.5	0.585	117		0.593	119		30-150	1		30	A
Lindane	ND	0.5	0.660	132		0.633	127		30-150	4		30	A
Alpha-BHC	ND	0.5	0.571	114		0.556	111		30-150	3		30	A
Beta-BHC	ND	0.5	0.637	127		0.624	125		30-150	2		30	A
Heptachlor	ND	0.5	0.537	107		0.520	104		30-150	3		30	A
Aldrin	ND	0.5	0.543	109		0.526	105		30-150	3		30	A
Heptachlor epoxide	ND	0.5	0.601	120		0.577	115		30-150	4		30	A
Endrin	ND	0.5	0.690	138		0.673	135		30-150	2		30	A
Endrin ketone	ND	0.5	0.533	107		0.534	107		30-150	0		30	A
Dieldrin	ND	0.5	0.661	132		0.637	127		30-150	4		30	A
4,4'-DDE	ND	0.5	0.613	123		0.605	121		30-150	1		30	A
4,4'-DDD	ND	0.5	0.647	129		0.644	129		30-150	0		30	A
4,4'-DDT	ND	0.5	0.601	120		0.588	118		30-150	2		30	A
Endosulfan I	ND	0.5	0.595	119		0.582	116		30-150	2		30	A
Endosulfan II	ND	0.5	0.557	111		0.553	111		30-150	1		30	A
Endosulfan sulfate	ND	0.5	0.573	115		0.574	115		30-150	0		30	A
Methoxychlor	ND	0.5	0.519	104		0.507	101		30-150	2		30	A
cis-Chlordane	ND	0.5	0.574	115		0.558	112		30-150	3		30	A
trans-Chlordane	0.007J	0.5	0.599	120		0.578	116		30-150	4		30	A

Matrix Spike Analysis
Batch Quality Control

Project Name: SITE1_SMP_2014
Project Number: SITE1_SMP_2014

Lab Number: L1422287
Report Date: 09/30/14

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Organochlorine Pesticides by GC - Westborough Lab Associated sample(s): 01-08,10-11 QC Batch ID: WG725728-4 WG725728-5 QC Sample: L1422287-07 Client ID: SW-4-WS-201409231530												

Surrogate	MS % Recovery	MS Qualifier	MSD % Recovery	MSD Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	111		100		30-150	A
Decachlorobiphenyl	89		90		30-150	A
2,4,5,6-Tetrachloro-m-xylene	95		96		30-150	B
Decachlorobiphenyl	117		123		30-150	B

METALS

Project Name: SITE1_SMP_2014 **Lab Number:** L1422287

Project Number: SITE1_SMP_2014 **Report Date:** 09/30/14

SAMPLE RESULTS

Lab ID: L1422287-01 Date Collected: 09/23/14 12:16

Client ID: PRW-01-WG-201409231216 Date Received: 09/23/14

Sample Location: HOWLAND HOOK MARINE/PORT IVORY Field Prep: See Narrative

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Westborough Lab											
Antimony, Total	0.00353	J	mg/l	0.00600	0.00006	1	09/29/14 11:17	09/29/14 20:45	EPA 3005A	1,6020A	BM
Arsenic, Total	0.1159		mg/l	0.00200	0.00012	1	09/29/14 11:17	09/29/14 20:45	EPA 3005A	1,6020A	BM
Beryllium, Total	0.00036	J	mg/l	0.00050	0.00015	1	09/29/14 11:17	09/29/14 20:45	EPA 3005A	1,6020A	BM
Cadmium, Total	0.00033		mg/l	0.00020	0.00005	1	09/29/14 11:17	09/29/14 20:45	EPA 3005A	1,6020A	BM
Chromium, Total	0.00774		mg/l	0.00100	0.00025	1	09/29/14 11:17	09/29/14 20:45	EPA 3005A	1,6020A	BM
Copper, Total	0.06366		mg/l	0.00100	0.00026	1	09/29/14 11:17	09/29/14 20:45	EPA 3005A	1,6020A	BM
Lead, Total	0.05876		mg/l	0.00100	0.00012	1	09/29/14 11:17	09/29/14 20:45	EPA 3005A	1,6020A	BM
Mercury, Total	0.00016	J	mg/l	0.00020	0.00006	1	09/24/14 14:53	09/24/14 19:42	EPA 7470A	1,7470A	AK
Nickel, Total	0.01688		mg/l	0.00200	0.00008	1	09/29/14 11:17	09/29/14 20:45	EPA 3005A	1,6020A	BM
Selenium, Total	0.00231	J	mg/l	0.00500	0.00100	1	09/29/14 11:17	09/29/14 20:45	EPA 3005A	1,6020A	BM
Silver, Total	0.00035	J	mg/l	0.00040	0.00007	1	09/29/14 11:17	09/29/14 20:45	EPA 3005A	1,6020A	BM
Thallium, Total	0.00024	J	mg/l	0.00050	0.00005	1	09/29/14 11:17	09/29/14 20:45	EPA 3005A	1,6020A	BM
Zinc, Total	0.8514		mg/l	0.2000	0.05120	20	09/29/14 11:17	09/29/14 20:42	EPA 3005A	1,6020A	BM
Dissolved Metals - Westborough Lab											
Antimony, Dissolved	0.00101	J	mg/l	0.00600	0.00006	1	09/29/14 13:51	09/29/14 21:53	EPA 3005A	1,6020A	BM
Arsenic, Dissolved	0.1007		mg/l	0.00200	0.00012	1	09/29/14 13:51	09/29/14 21:53	EPA 3005A	1,6020A	BM
Beryllium, Dissolved	ND		mg/l	0.00050	0.00015	1	09/29/14 13:51	09/29/14 21:53	EPA 3005A	1,6020A	BM
Cadmium, Dissolved	ND		mg/l	0.00020	0.00005	1	09/29/14 13:51	09/29/14 21:53	EPA 3005A	1,6020A	BM
Chromium, Dissolved	0.00083	J	mg/l	0.00100	0.00025	1	09/29/14 13:51	09/29/14 21:53	EPA 3005A	1,6020A	BM
Copper, Dissolved	0.00053	J	mg/l	0.00100	0.00026	1	09/29/14 13:51	09/29/14 21:53	EPA 3005A	1,6020A	BM
Lead, Dissolved	ND		mg/l	0.00100	0.00012	1	09/29/14 13:51	09/29/14 21:53	EPA 3005A	1,6020A	BM
Mercury, Dissolved	ND		mg/l	0.00020	0.00006	1	09/25/14 10:41	09/25/14 17:11	EPA 7470A	1,7470A	AK
Nickel, Dissolved	0.00325		mg/l	0.00200	0.00008	1	09/29/14 13:51	09/29/14 21:53	EPA 3005A	1,6020A	BM
Selenium, Dissolved	0.00341	J	mg/l	0.00500	0.00100	1	09/29/14 13:51	09/29/14 21:53	EPA 3005A	1,6020A	BM
Silver, Dissolved	ND		mg/l	0.00040	0.00007	1	09/29/14 13:51	09/29/14 21:53	EPA 3005A	1,6020A	BM
Thallium, Dissolved	ND		mg/l	0.00050	0.00005	1	09/29/14 13:51	09/29/14 21:53	EPA 3005A	1,6020A	BM
Zinc, Dissolved	ND		mg/l	0.01000	0.00256	1	09/29/14 13:51	09/29/14 21:53	EPA 3005A	1,6020A	BM

Project Name: SITE1_SMP_2014 **Lab Number:** L1422287

Project Number: SITE1_SMP_2014 **Report Date:** 09/30/14

SAMPLE RESULTS

Lab ID: L1422287-02 Date Collected: 09/23/14 12:26

Client ID: PRW-02-WG-201409231226 Date Received: 09/23/14

Sample Location: HOWLAND HOOK MARINE/PORT IVORY Field Prep: See Narrative

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Westborough Lab											
Antimony, Total	0.00185	J	mg/l	0.00600	0.00006	1	09/29/14 11:17	09/29/14 20:49	EPA 3005A	1,6020A	BM
Arsenic, Total	0.00399		mg/l	0.00200	0.00012	1	09/29/14 11:17	09/29/14 20:49	EPA 3005A	1,6020A	BM
Beryllium, Total	ND		mg/l	0.00050	0.00015	1	09/29/14 11:17	09/29/14 20:49	EPA 3005A	1,6020A	BM
Cadmium, Total	ND		mg/l	0.00020	0.00005	1	09/29/14 11:17	09/29/14 20:49	EPA 3005A	1,6020A	BM
Chromium, Total	0.00129		mg/l	0.00100	0.00025	1	09/29/14 11:17	09/29/14 20:49	EPA 3005A	1,6020A	BM
Copper, Total	0.00218		mg/l	0.00100	0.00026	1	09/29/14 11:17	09/29/14 20:49	EPA 3005A	1,6020A	BM
Lead, Total	0.00112		mg/l	0.00100	0.00012	1	09/29/14 11:17	09/29/14 20:49	EPA 3005A	1,6020A	BM
Mercury, Total	ND		mg/l	0.00020	0.00006	1	09/24/14 14:53	09/24/14 19:44	EPA 7470A	1,7470A	AK
Nickel, Total	0.00301		mg/l	0.00200	0.00008	1	09/29/14 11:17	09/29/14 20:49	EPA 3005A	1,6020A	BM
Selenium, Total	0.00176	J	mg/l	0.00500	0.00100	1	09/29/14 11:17	09/29/14 20:49	EPA 3005A	1,6020A	BM
Silver, Total	ND		mg/l	0.00040	0.00007	1	09/29/14 11:17	09/29/14 20:49	EPA 3005A	1,6020A	BM
Thallium, Total	ND		mg/l	0.00050	0.00005	1	09/29/14 11:17	09/29/14 20:49	EPA 3005A	1,6020A	BM
Zinc, Total	0.00909	J	mg/l	0.01000	0.00256	1	09/29/14 11:17	09/29/14 20:49	EPA 3005A	1,6020A	BM
Dissolved Metals - Westborough Lab											
Antimony, Dissolved	0.00083	J	mg/l	0.00600	0.00006	1	09/29/14 13:51	09/29/14 21:57	EPA 3005A	1,6020A	BM
Arsenic, Dissolved	0.00487		mg/l	0.00200	0.00012	1	09/29/14 13:51	09/29/14 21:57	EPA 3005A	1,6020A	BM
Beryllium, Dissolved	ND		mg/l	0.00050	0.00015	1	09/29/14 13:51	09/29/14 21:57	EPA 3005A	1,6020A	BM
Cadmium, Dissolved	ND		mg/l	0.00020	0.00005	1	09/29/14 13:51	09/29/14 21:57	EPA 3005A	1,6020A	BM
Chromium, Dissolved	0.00082	J	mg/l	0.00100	0.00025	1	09/29/14 13:51	09/29/14 21:57	EPA 3005A	1,6020A	BM
Copper, Dissolved	0.00069	J	mg/l	0.00100	0.00026	1	09/29/14 13:51	09/29/14 21:57	EPA 3005A	1,6020A	BM
Lead, Dissolved	0.00014	J	mg/l	0.00100	0.00012	1	09/29/14 13:51	09/29/14 21:57	EPA 3005A	1,6020A	BM
Mercury, Dissolved	ND		mg/l	0.00020	0.00006	1	09/25/14 10:41	09/25/14 17:17	EPA 7470A	1,7470A	AK
Nickel, Dissolved	0.00284		mg/l	0.00200	0.00008	1	09/29/14 13:51	09/29/14 21:57	EPA 3005A	1,6020A	BM
Selenium, Dissolved	0.00218	J	mg/l	0.00500	0.00100	1	09/29/14 13:51	09/29/14 21:57	EPA 3005A	1,6020A	BM
Silver, Dissolved	ND		mg/l	0.00040	0.00007	1	09/29/14 13:51	09/29/14 21:57	EPA 3005A	1,6020A	BM
Thallium, Dissolved	ND		mg/l	0.00050	0.00005	1	09/29/14 13:51	09/29/14 21:57	EPA 3005A	1,6020A	BM
Zinc, Dissolved	0.00341	J	mg/l	0.01000	0.00256	1	09/29/14 13:51	09/29/14 21:57	EPA 3005A	1,6020A	BM

Project Name: SITE1_SMP_2014 **Lab Number:** L1422287

Project Number: SITE1_SMP_2014 **Report Date:** 09/30/14

SAMPLE RESULTS

Lab ID: L1422287-03 Date Collected: 09/23/14 13:51

Client ID: PRW-03-WG-201409231351 Date Received: 09/23/14

Sample Location: HOWLAND HOOK MARINE/PORT IVORY Field Prep: See Narrative

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Westborough Lab											
Antimony, Total	0.00173	J	mg/l	0.00600	0.00006	1	09/29/14 11:17	09/29/14 20:52	EPA 3005A	1,6020A	BM
Arsenic, Total	0.01827		mg/l	0.00200	0.00012	1	09/29/14 11:17	09/29/14 20:52	EPA 3005A	1,6020A	BM
Beryllium, Total	ND		mg/l	0.00050	0.00015	1	09/29/14 11:17	09/29/14 20:52	EPA 3005A	1,6020A	BM
Cadmium, Total	ND		mg/l	0.00020	0.00005	1	09/29/14 11:17	09/29/14 20:52	EPA 3005A	1,6020A	BM
Chromium, Total	0.00116		mg/l	0.00100	0.00025	1	09/29/14 11:17	09/29/14 20:52	EPA 3005A	1,6020A	BM
Copper, Total	0.00188		mg/l	0.00100	0.00026	1	09/29/14 11:17	09/29/14 20:52	EPA 3005A	1,6020A	BM
Lead, Total	0.00044	J	mg/l	0.00100	0.00012	1	09/29/14 11:17	09/29/14 20:52	EPA 3005A	1,6020A	BM
Mercury, Total	ND		mg/l	0.00020	0.00006	1	09/24/14 14:53	09/24/14 19:46	EPA 7470A	1,7470A	AK
Nickel, Total	0.00439		mg/l	0.00200	0.00008	1	09/29/14 11:17	09/29/14 20:52	EPA 3005A	1,6020A	BM
Selenium, Total	0.00216	J	mg/l	0.00500	0.00100	1	09/29/14 11:17	09/29/14 20:52	EPA 3005A	1,6020A	BM
Silver, Total	ND		mg/l	0.00040	0.00007	1	09/29/14 11:17	09/29/14 20:52	EPA 3005A	1,6020A	BM
Thallium, Total	ND		mg/l	0.00050	0.00005	1	09/29/14 11:17	09/29/14 20:52	EPA 3005A	1,6020A	BM
Zinc, Total	0.00603	J	mg/l	0.01000	0.00256	1	09/29/14 11:17	09/29/14 20:52	EPA 3005A	1,6020A	BM
Dissolved Metals - Westborough Lab											
Antimony, Dissolved	0.00107	J	mg/l	0.00600	0.00006	1	09/29/14 13:51	09/29/14 22:00	EPA 3005A	1,6020A	BM
Arsenic, Dissolved	0.02200		mg/l	0.00200	0.00012	1	09/29/14 13:51	09/29/14 22:00	EPA 3005A	1,6020A	BM
Beryllium, Dissolved	ND		mg/l	0.00050	0.00015	1	09/29/14 13:51	09/29/14 22:00	EPA 3005A	1,6020A	BM
Cadmium, Dissolved	ND		mg/l	0.00020	0.00005	1	09/29/14 13:51	09/29/14 22:00	EPA 3005A	1,6020A	BM
Chromium, Dissolved	0.00090	J	mg/l	0.00100	0.00025	1	09/29/14 13:51	09/29/14 22:00	EPA 3005A	1,6020A	BM
Copper, Dissolved	0.00065	J	mg/l	0.00100	0.00026	1	09/29/14 13:51	09/29/14 22:00	EPA 3005A	1,6020A	BM
Lead, Dissolved	ND		mg/l	0.00100	0.00012	1	09/29/14 13:51	09/29/14 22:00	EPA 3005A	1,6020A	BM
Mercury, Dissolved	ND		mg/l	0.00020	0.00006	1	09/25/14 10:41	09/25/14 17:19	EPA 7470A	1,7470A	AK
Nickel, Dissolved	0.00427		mg/l	0.00200	0.00008	1	09/29/14 13:51	09/29/14 22:00	EPA 3005A	1,6020A	BM
Selenium, Dissolved	0.00276	J	mg/l	0.00500	0.00100	1	09/29/14 13:51	09/29/14 22:00	EPA 3005A	1,6020A	BM
Silver, Dissolved	ND		mg/l	0.00040	0.00007	1	09/29/14 13:51	09/29/14 22:00	EPA 3005A	1,6020A	BM
Thallium, Dissolved	ND		mg/l	0.00050	0.00005	1	09/29/14 13:51	09/29/14 22:00	EPA 3005A	1,6020A	BM
Zinc, Dissolved	0.00287	J	mg/l	0.01000	0.00256	1	09/29/14 13:51	09/29/14 22:00	EPA 3005A	1,6020A	BM

Project Name: SITE1_SMP_2014 **Lab Number:** L1422287

Project Number: SITE1_SMP_2014 **Report Date:** 09/30/14

SAMPLE RESULTS

Lab ID: L1422287-04 Date Collected: 09/23/14 11:01

Client ID: PRW-05-WG-201409231101 Date Received: 09/23/14

Sample Location: HOWLAND HOOK MARINE/PORT IVORY Field Prep: See Narrative

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Westborough Lab											
Antimony, Total	0.00121	J	mg/l	0.00600	0.00006	1	09/29/14 11:17	09/29/14 20:55	EPA 3005A	1,6020A	BM
Arsenic, Total	0.04725		mg/l	0.00200	0.00012	1	09/29/14 11:17	09/29/14 20:55	EPA 3005A	1,6020A	BM
Beryllium, Total	ND		mg/l	0.00050	0.00015	1	09/29/14 11:17	09/29/14 20:55	EPA 3005A	1,6020A	BM
Cadmium, Total	ND		mg/l	0.00020	0.00005	1	09/29/14 11:17	09/29/14 20:55	EPA 3005A	1,6020A	BM
Chromium, Total	0.00096	J	mg/l	0.00100	0.00025	1	09/29/14 11:17	09/29/14 20:55	EPA 3005A	1,6020A	BM
Copper, Total	0.00166		mg/l	0.00100	0.00026	1	09/29/14 11:17	09/29/14 20:55	EPA 3005A	1,6020A	BM
Lead, Total	0.00062	J	mg/l	0.00100	0.00012	1	09/29/14 11:17	09/29/14 20:55	EPA 3005A	1,6020A	BM
Mercury, Total	ND		mg/l	0.00020	0.00006	1	09/24/14 14:53	09/24/14 19:49	EPA 7470A	1,7470A	AK
Nickel, Total	0.00303		mg/l	0.00200	0.00008	1	09/29/14 11:17	09/29/14 20:55	EPA 3005A	1,6020A	BM
Selenium, Total	0.00161	J	mg/l	0.00500	0.00100	1	09/29/14 11:17	09/29/14 20:55	EPA 3005A	1,6020A	BM
Silver, Total	ND		mg/l	0.00040	0.00007	1	09/29/14 11:17	09/29/14 20:55	EPA 3005A	1,6020A	BM
Thallium, Total	ND		mg/l	0.00050	0.00005	1	09/29/14 11:17	09/29/14 20:55	EPA 3005A	1,6020A	BM
Zinc, Total	0.00552	J	mg/l	0.01000	0.00256	1	09/29/14 11:17	09/29/14 20:55	EPA 3005A	1,6020A	BM
Dissolved Metals - Westborough Lab											
Antimony, Dissolved	0.00052	J	mg/l	0.00600	0.00006	1	09/29/14 13:51	09/29/14 22:03	EPA 3005A	1,6020A	BM
Arsenic, Dissolved	0.04937		mg/l	0.00200	0.00012	1	09/29/14 13:51	09/29/14 22:03	EPA 3005A	1,6020A	BM
Beryllium, Dissolved	ND		mg/l	0.00050	0.00015	1	09/29/14 13:51	09/29/14 22:03	EPA 3005A	1,6020A	BM
Cadmium, Dissolved	ND		mg/l	0.00020	0.00005	1	09/29/14 13:51	09/29/14 22:03	EPA 3005A	1,6020A	BM
Chromium, Dissolved	0.00119		mg/l	0.00100	0.00025	1	09/29/14 13:51	09/29/14 22:03	EPA 3005A	1,6020A	BM
Copper, Dissolved	0.00058	J	mg/l	0.00100	0.00026	1	09/29/14 13:51	09/29/14 22:03	EPA 3005A	1,6020A	BM
Lead, Dissolved	ND		mg/l	0.00100	0.00012	1	09/29/14 13:51	09/29/14 22:03	EPA 3005A	1,6020A	BM
Mercury, Dissolved	ND		mg/l	0.00020	0.00006	1	09/25/14 10:41	09/25/14 17:22	EPA 7470A	1,7470A	AK
Nickel, Dissolved	0.00322		mg/l	0.00200	0.00008	1	09/29/14 13:51	09/29/14 22:03	EPA 3005A	1,6020A	BM
Selenium, Dissolved	0.00254	J	mg/l	0.00500	0.00100	1	09/29/14 13:51	09/29/14 22:03	EPA 3005A	1,6020A	BM
Silver, Dissolved	ND		mg/l	0.00040	0.00007	1	09/29/14 13:51	09/29/14 22:03	EPA 3005A	1,6020A	BM
Thallium, Dissolved	ND		mg/l	0.00050	0.00005	1	09/29/14 13:51	09/29/14 22:03	EPA 3005A	1,6020A	BM
Zinc, Dissolved	0.00517	J	mg/l	0.01000	0.00256	1	09/29/14 13:51	09/29/14 22:03	EPA 3005A	1,6020A	BM

Project Name: SITE1_SMP_2014 **Lab Number:** L1422287

Project Number: SITE1_SMP_2014 **Report Date:** 09/30/14

SAMPLE RESULTS

Lab ID: L1422287-05 Date Collected: 09/23/14 11:06

Client ID: PRW-06-WG-201409231106 Date Received: 09/23/14

Sample Location: HOWLAND HOOK MARINE/PORT IVORY Field Prep: See Narrative

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Westborough Lab											
Antimony, Total	0.00098	J	mg/l	0.00600	0.00006	1	09/29/14 11:17	09/29/14 21:16	EPA 3005A	1,6020A	BM
Arsenic, Total	0.00439		mg/l	0.00200	0.00012	1	09/29/14 11:17	09/29/14 21:16	EPA 3005A	1,6020A	BM
Beryllium, Total	ND		mg/l	0.00050	0.00015	1	09/29/14 11:17	09/29/14 21:16	EPA 3005A	1,6020A	BM
Cadmium, Total	0.00009	J	mg/l	0.00020	0.00005	1	09/29/14 11:17	09/29/14 21:16	EPA 3005A	1,6020A	BM
Chromium, Total	0.00161		mg/l	0.00100	0.00025	1	09/29/14 11:17	09/29/14 21:16	EPA 3005A	1,6020A	BM
Copper, Total	0.00533		mg/l	0.00100	0.00026	1	09/29/14 11:17	09/29/14 21:16	EPA 3005A	1,6020A	BM
Lead, Total	0.00247		mg/l	0.00100	0.00012	1	09/29/14 11:17	09/29/14 21:16	EPA 3005A	1,6020A	BM
Mercury, Total	ND		mg/l	0.00020	0.00006	1	09/24/14 14:53	09/24/14 19:51	EPA 7470A	1,7470A	AK
Nickel, Total	0.00611		mg/l	0.00200	0.00008	1	09/29/14 11:17	09/29/14 21:16	EPA 3005A	1,6020A	BM
Selenium, Total	0.00172	J	mg/l	0.00500	0.00100	1	09/29/14 11:17	09/29/14 21:16	EPA 3005A	1,6020A	BM
Silver, Total	ND		mg/l	0.00040	0.00007	1	09/29/14 11:17	09/29/14 21:16	EPA 3005A	1,6020A	BM
Thallium, Total	0.00006	J	mg/l	0.00050	0.00005	1	09/29/14 11:17	09/29/14 21:16	EPA 3005A	1,6020A	BM
Zinc, Total	0.03571		mg/l	0.01000	0.00256	1	09/29/14 11:17	09/29/14 21:16	EPA 3005A	1,6020A	BM
Dissolved Metals - Westborough Lab											
Antimony, Dissolved	0.00045	J	mg/l	0.00600	0.00006	1	09/29/14 13:51	09/29/14 22:07	EPA 3005A	1,6020A	BM
Arsenic, Dissolved	0.00453		mg/l	0.00200	0.00012	1	09/29/14 13:51	09/29/14 22:07	EPA 3005A	1,6020A	BM
Beryllium, Dissolved	ND		mg/l	0.00050	0.00015	1	09/29/14 13:51	09/29/14 22:07	EPA 3005A	1,6020A	BM
Cadmium, Dissolved	ND		mg/l	0.00020	0.00005	1	09/29/14 13:51	09/29/14 22:07	EPA 3005A	1,6020A	BM
Chromium, Dissolved	0.00097	J	mg/l	0.00100	0.00025	1	09/29/14 13:51	09/29/14 22:07	EPA 3005A	1,6020A	BM
Copper, Dissolved	0.00054	J	mg/l	0.00100	0.00026	1	09/29/14 13:51	09/29/14 22:07	EPA 3005A	1,6020A	BM
Lead, Dissolved	ND		mg/l	0.00100	0.00012	1	09/29/14 13:51	09/29/14 22:07	EPA 3005A	1,6020A	BM
Mercury, Dissolved	ND		mg/l	0.00020	0.00006	1	09/25/14 10:41	09/25/14 17:24	EPA 7470A	1,7470A	AK
Nickel, Dissolved	0.00322		mg/l	0.00200	0.00008	1	09/29/14 13:51	09/29/14 22:07	EPA 3005A	1,6020A	BM
Selenium, Dissolved	0.00271	J	mg/l	0.00500	0.00100	1	09/29/14 13:51	09/29/14 22:07	EPA 3005A	1,6020A	BM
Silver, Dissolved	ND		mg/l	0.00040	0.00007	1	09/29/14 13:51	09/29/14 22:07	EPA 3005A	1,6020A	BM
Thallium, Dissolved	ND		mg/l	0.00050	0.00005	1	09/29/14 13:51	09/29/14 22:07	EPA 3005A	1,6020A	BM
Zinc, Dissolved	0.00355	J	mg/l	0.01000	0.00256	1	09/29/14 13:51	09/29/14 22:07	EPA 3005A	1,6020A	BM

Project Name: SITE1_SMP_2014 **Lab Number:** L1422287

Project Number: SITE1_SMP_2014 **Report Date:** 09/30/14

SAMPLE RESULTS

Lab ID: L1422287-06 Date Collected: 09/23/14 13:51

Client ID: PRW-07-WG-201409231351 Date Received: 09/23/14

Sample Location: HOWLAND HOOK MARINE/PORT IVORY Field Prep: See Narrative

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Westborough Lab											
Antimony, Total	0.00089	J	mg/l	0.00600	0.00006	1	09/29/14 11:17	09/29/14 21:19	EPA 3005A	1,6020A	BM
Arsenic, Total	0.00446		mg/l	0.00200	0.00012	1	09/29/14 11:17	09/29/14 21:19	EPA 3005A	1,6020A	BM
Beryllium, Total	ND		mg/l	0.00050	0.00015	1	09/29/14 11:17	09/29/14 21:19	EPA 3005A	1,6020A	BM
Cadmium, Total	ND		mg/l	0.00020	0.00005	1	09/29/14 11:17	09/29/14 21:19	EPA 3005A	1,6020A	BM
Chromium, Total	0.00280		mg/l	0.00100	0.00025	1	09/29/14 11:17	09/29/14 21:19	EPA 3005A	1,6020A	BM
Copper, Total	0.00151		mg/l	0.00100	0.00026	1	09/29/14 11:17	09/29/14 21:19	EPA 3005A	1,6020A	BM
Lead, Total	0.00195		mg/l	0.00100	0.00012	1	09/29/14 11:17	09/29/14 21:19	EPA 3005A	1,6020A	BM
Mercury, Total	ND		mg/l	0.00020	0.00006	1	09/24/14 14:53	09/24/14 19:57	EPA 7470A	1,7470A	AK
Nickel, Total	0.00561		mg/l	0.00200	0.00008	1	09/29/14 11:17	09/29/14 21:19	EPA 3005A	1,6020A	BM
Selenium, Total	0.00139	J	mg/l	0.00500	0.00100	1	09/29/14 11:17	09/29/14 21:19	EPA 3005A	1,6020A	BM
Silver, Total	ND		mg/l	0.00040	0.00007	1	09/29/14 11:17	09/29/14 21:19	EPA 3005A	1,6020A	BM
Thallium, Total	ND		mg/l	0.00050	0.00005	1	09/29/14 11:17	09/29/14 21:19	EPA 3005A	1,6020A	BM
Zinc, Total	0.00566	J	mg/l	0.01000	0.00256	1	09/29/14 11:17	09/29/14 21:19	EPA 3005A	1,6020A	BM
Dissolved Metals - Westborough Lab											
Antimony, Dissolved	0.00057	J	mg/l	0.00600	0.00006	1	09/29/14 13:51	09/29/14 22:10	EPA 3005A	1,6020A	BM
Arsenic, Dissolved	0.00565		mg/l	0.00200	0.00012	1	09/29/14 13:51	09/29/14 22:10	EPA 3005A	1,6020A	BM
Beryllium, Dissolved	ND		mg/l	0.00050	0.00015	1	09/29/14 13:51	09/29/14 22:10	EPA 3005A	1,6020A	BM
Cadmium, Dissolved	ND		mg/l	0.00020	0.00005	1	09/29/14 13:51	09/29/14 22:10	EPA 3005A	1,6020A	BM
Chromium, Dissolved	0.00105		mg/l	0.00100	0.00025	1	09/29/14 13:51	09/29/14 22:10	EPA 3005A	1,6020A	BM
Copper, Dissolved	0.00039	J	mg/l	0.00100	0.00026	1	09/29/14 13:51	09/29/14 22:10	EPA 3005A	1,6020A	BM
Lead, Dissolved	ND		mg/l	0.00100	0.00012	1	09/29/14 13:51	09/29/14 22:10	EPA 3005A	1,6020A	BM
Mercury, Dissolved	ND		mg/l	0.00020	0.00006	1	09/25/14 10:41	09/25/14 17:26	EPA 7470A	1,7470A	AK
Nickel, Dissolved	0.00497		mg/l	0.00200	0.00008	1	09/29/14 13:51	09/29/14 22:10	EPA 3005A	1,6020A	BM
Selenium, Dissolved	0.00257	J	mg/l	0.00500	0.00100	1	09/29/14 13:51	09/29/14 22:10	EPA 3005A	1,6020A	BM
Silver, Dissolved	ND		mg/l	0.00040	0.00007	1	09/29/14 13:51	09/29/14 22:10	EPA 3005A	1,6020A	BM
Thallium, Dissolved	ND		mg/l	0.00050	0.00005	1	09/29/14 13:51	09/29/14 22:10	EPA 3005A	1,6020A	BM
Zinc, Dissolved	0.00329	J	mg/l	0.01000	0.00256	1	09/29/14 13:51	09/29/14 22:10	EPA 3005A	1,6020A	BM

Project Name: SITE1_SMP_2014 **Lab Number:** L1422287

Project Number: SITE1_SMP_2014 **Report Date:** 09/30/14

SAMPLE RESULTS

Lab ID: L1422287-07 Date Collected: 09/23/14 15:30

Client ID: SW-4-WS-201409231530 Date Received: 09/23/14

Sample Location: HOWLAND HOOK MARINE/PORT IVORY Field Prep: See Narrative

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Westborough Lab											
Antimony, Total	0.00748		mg/l	0.00600	0.00006	1	09/29/14 11:17	09/29/14 20:29	EPA 3005A	1,6020A	BM
Arsenic, Total	0.02190		mg/l	0.00200	0.00012	1	09/29/14 11:17	09/29/14 20:29	EPA 3005A	1,6020A	BM
Beryllium, Total	ND		mg/l	0.00050	0.00015	1	09/29/14 11:17	09/29/14 20:29	EPA 3005A	1,6020A	BM
Cadmium, Total	0.00008	J	mg/l	0.00020	0.00005	1	09/29/14 11:17	09/29/14 20:29	EPA 3005A	1,6020A	BM
Chromium, Total	0.00329		mg/l	0.00100	0.00025	1	09/29/14 11:17	09/29/14 20:29	EPA 3005A	1,6020A	BM
Copper, Total	0.00704		mg/l	0.00100	0.00026	1	09/29/14 11:17	09/29/14 20:29	EPA 3005A	1,6020A	BM
Lead, Total	0.00608		mg/l	0.00100	0.00012	1	09/29/14 11:17	09/29/14 20:29	EPA 3005A	1,6020A	BM
Mercury, Total	ND		mg/l	0.00020	0.00006	1	09/24/14 14:53	09/24/14 19:19	EPA 7470A	1,7470A	AK
Nickel, Total	0.01341		mg/l	0.00200	0.00008	1	09/29/14 11:17	09/29/14 20:29	EPA 3005A	1,6020A	BM
Selenium, Total	0.0128		mg/l	0.00500	0.00100	1	09/29/14 11:17	09/29/14 20:29	EPA 3005A	1,6020A	BM
Silver, Total	ND		mg/l	0.00040	0.00007	1	09/29/14 11:17	09/29/14 20:29	EPA 3005A	1,6020A	BM
Thallium, Total	ND		mg/l	0.00050	0.00005	1	09/29/14 11:17	09/29/14 20:29	EPA 3005A	1,6020A	BM
Zinc, Total	0.03432		mg/l	0.01000	0.00256	1	09/29/14 11:17	09/29/14 20:29	EPA 3005A	1,6020A	BM
Dissolved Metals - Westborough Lab											
Antimony, Dissolved	0.00589	J	mg/l	0.00600	0.00006	1	09/29/14 13:51	09/29/14 21:50	EPA 3005A	1,6020A	BM
Arsenic, Dissolved	0.02190		mg/l	0.00200	0.00012	1	09/29/14 13:51	09/29/14 21:50	EPA 3005A	1,6020A	BM
Beryllium, Dissolved	ND		mg/l	0.00050	0.00015	1	09/29/14 13:51	09/29/14 21:50	EPA 3005A	1,6020A	BM
Cadmium, Dissolved	ND		mg/l	0.00020	0.00005	1	09/29/14 13:51	09/29/14 21:50	EPA 3005A	1,6020A	BM
Chromium, Dissolved	0.00142		mg/l	0.00100	0.00025	1	09/29/14 13:51	09/29/14 21:50	EPA 3005A	1,6020A	BM
Copper, Dissolved	0.00377		mg/l	0.00100	0.00026	1	09/29/14 13:51	09/29/14 21:50	EPA 3005A	1,6020A	BM
Lead, Dissolved	0.00082	J	mg/l	0.00100	0.00012	1	09/29/14 13:51	09/29/14 21:50	EPA 3005A	1,6020A	BM
Mercury, Dissolved	ND		mg/l	0.00020	0.00006	1	09/25/14 10:41	09/25/14 17:04	EPA 7470A	1,7470A	AK
Nickel, Dissolved	0.01198		mg/l	0.00200	0.00008	1	09/29/14 13:51	09/29/14 21:50	EPA 3005A	1,6020A	BM
Selenium, Dissolved	0.0111		mg/l	0.00500	0.00100	1	09/29/14 13:51	09/29/14 21:50	EPA 3005A	1,6020A	BM
Silver, Dissolved	ND		mg/l	0.00040	0.00007	1	09/29/14 13:51	09/29/14 21:50	EPA 3005A	1,6020A	BM
Thallium, Dissolved	ND		mg/l	0.00050	0.00005	1	09/29/14 13:51	09/29/14 21:50	EPA 3005A	1,6020A	BM
Zinc, Dissolved	0.01653		mg/l	0.01000	0.00256	1	09/29/14 13:51	09/29/14 21:50	EPA 3005A	1,6020A	BM

Project Name: SITE1_SMP_2014 **Lab Number:** L1422287

Project Number: SITE1_SMP_2014 **Report Date:** 09/30/14

SAMPLE RESULTS

Lab ID: L1422287-08 Date Collected: 09/23/14 15:15

Client ID: SW-5-WS-201409231515 Date Received: 09/23/14

Sample Location: HOWLAND HOOK MARINE/PORT IVORY Field Prep: See Narrative

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Westborough Lab											
Antimony, Total	0.00490	J	mg/l	0.00600	0.00006	1	09/29/14 11:17	09/29/14 21:22	EPA 3005A	1,6020A	BM
Arsenic, Total	0.02269		mg/l	0.00200	0.00012	1	09/29/14 11:17	09/29/14 21:22	EPA 3005A	1,6020A	BM
Beryllium, Total	ND		mg/l	0.00050	0.00015	1	09/29/14 11:17	09/29/14 21:22	EPA 3005A	1,6020A	BM
Cadmium, Total	0.00008	J	mg/l	0.00020	0.00005	1	09/29/14 11:17	09/29/14 21:22	EPA 3005A	1,6020A	BM
Chromium, Total	0.00368		mg/l	0.00100	0.00025	1	09/29/14 11:17	09/29/14 21:22	EPA 3005A	1,6020A	BM
Copper, Total	0.00763		mg/l	0.00100	0.00026	1	09/29/14 11:17	09/29/14 21:22	EPA 3005A	1,6020A	BM
Lead, Total	0.00688		mg/l	0.00100	0.00012	1	09/29/14 11:17	09/29/14 21:22	EPA 3005A	1,6020A	BM
Mercury, Total	ND		mg/l	0.00020	0.00006	1	09/24/14 14:53	09/24/14 19:59	EPA 7470A	1,7470A	AK
Nickel, Total	0.01336		mg/l	0.00200	0.00008	1	09/29/14 11:17	09/29/14 21:22	EPA 3005A	1,6020A	BM
Selenium, Total	0.00862		mg/l	0.00500	0.00100	1	09/29/14 11:17	09/29/14 21:22	EPA 3005A	1,6020A	BM
Silver, Total	ND		mg/l	0.00040	0.00007	1	09/29/14 11:17	09/29/14 21:22	EPA 3005A	1,6020A	BM
Thallium, Total	ND		mg/l	0.00050	0.00005	1	09/29/14 11:17	09/29/14 21:22	EPA 3005A	1,6020A	BM
Zinc, Total	0.04068		mg/l	0.01000	0.00256	1	09/29/14 11:17	09/29/14 21:22	EPA 3005A	1,6020A	BM
Dissolved Metals - Westborough Lab											
Antimony, Dissolved	0.00430	J	mg/l	0.00600	0.00006	1	09/29/14 13:51	09/29/14 22:33	EPA 3005A	1,6020A	BM
Arsenic, Dissolved	0.02184		mg/l	0.00200	0.00012	1	09/29/14 13:51	09/29/14 22:33	EPA 3005A	1,6020A	BM
Beryllium, Dissolved	ND		mg/l	0.00050	0.00015	1	09/29/14 13:51	09/29/14 22:33	EPA 3005A	1,6020A	BM
Cadmium, Dissolved	0.00006	J	mg/l	0.00020	0.00005	1	09/29/14 13:51	09/29/14 22:33	EPA 3005A	1,6020A	BM
Chromium, Dissolved	0.00233		mg/l	0.00100	0.00025	1	09/29/14 13:51	09/29/14 22:33	EPA 3005A	1,6020A	BM
Copper, Dissolved	0.00583		mg/l	0.00100	0.00026	1	09/29/14 13:51	09/29/14 22:33	EPA 3005A	1,6020A	BM
Lead, Dissolved	0.00398		mg/l	0.00100	0.00012	1	09/29/14 13:51	09/29/14 22:33	EPA 3005A	1,6020A	BM
Mercury, Dissolved	ND		mg/l	0.00020	0.00006	1	09/25/14 10:41	09/25/14 17:28	EPA 7470A	1,7470A	AK
Nickel, Dissolved	0.01211		mg/l	0.00200	0.00008	1	09/29/14 13:51	09/29/14 22:33	EPA 3005A	1,6020A	BM
Selenium, Dissolved	0.0108		mg/l	0.00500	0.00100	1	09/29/14 13:51	09/29/14 22:33	EPA 3005A	1,6020A	BM
Silver, Dissolved	ND		mg/l	0.00040	0.00007	1	09/29/14 13:51	09/29/14 22:33	EPA 3005A	1,6020A	BM
Thallium, Dissolved	ND		mg/l	0.00050	0.00005	1	09/29/14 13:51	09/29/14 22:33	EPA 3005A	1,6020A	BM
Zinc, Dissolved	0.03072		mg/l	0.01000	0.00256	1	09/29/14 13:51	09/29/14 22:33	EPA 3005A	1,6020A	BM

Project Name: SITE1_SMP_2014 **Lab Number:** L1422287

Project Number: SITE1_SMP_2014 **Report Date:** 09/30/14

SAMPLE RESULTS

Lab ID: L1422287-10 Date Collected: 09/23/14 13:00

Client ID: WQ-201409231300-FB-1 Date Received: 09/23/14

Sample Location: HOWLAND HOOK MARINE/PORT IVORY Field Prep: See Narrative

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Westborough Lab											
Antimony, Total	0.00072	J	mg/l	0.00600	0.00006	1	09/29/14 11:17	09/29/14 21:12	EPA 3005A	1,6020A	BM
Arsenic, Total	0.00165	J	mg/l	0.00200	0.00012	1	09/29/14 11:17	09/29/14 21:12	EPA 3005A	1,6020A	BM
Beryllium, Total	ND		mg/l	0.00050	0.00015	1	09/29/14 11:17	09/29/14 21:12	EPA 3005A	1,6020A	BM
Cadmium, Total	ND		mg/l	0.00020	0.00005	1	09/29/14 11:17	09/29/14 21:12	EPA 3005A	1,6020A	BM
Chromium, Total	0.00041	J	mg/l	0.00100	0.00025	1	09/29/14 11:17	09/29/14 21:12	EPA 3005A	1,6020A	BM
Copper, Total	0.00030	J	mg/l	0.00100	0.00026	1	09/29/14 11:17	09/29/14 21:12	EPA 3005A	1,6020A	BM
Lead, Total	ND		mg/l	0.00100	0.00012	1	09/29/14 11:17	09/29/14 21:12	EPA 3005A	1,6020A	BM
Mercury, Total	ND		mg/l	0.00020	0.00006	1	09/24/14 14:53	09/24/14 20:01	EPA 7470A	1,7470A	AK
Nickel, Total	0.00122	J	mg/l	0.00200	0.00008	1	09/29/14 11:17	09/29/14 21:12	EPA 3005A	1,6020A	BM
Selenium, Total	ND		mg/l	0.00500	0.00100	1	09/29/14 11:17	09/29/14 21:12	EPA 3005A	1,6020A	BM
Silver, Total	ND		mg/l	0.00040	0.00007	1	09/29/14 11:17	09/29/14 21:12	EPA 3005A	1,6020A	BM
Thallium, Total	ND		mg/l	0.00050	0.00005	1	09/29/14 11:17	09/29/14 21:12	EPA 3005A	1,6020A	BM
Zinc, Total	ND		mg/l	0.01000	0.00256	1	09/29/14 11:17	09/29/14 21:12	EPA 3005A	1,6020A	BM
Dissolved Metals - Westborough Lab											
Antimony, Dissolved	0.00113	J	mg/l	0.00600	0.00006	1	09/29/14 13:51	09/29/14 22:30	EPA 3005A	1,6020A	BM
Arsenic, Dissolved	0.00187	J	mg/l	0.00200	0.00012	1	09/29/14 13:51	09/29/14 22:30	EPA 3005A	1,6020A	BM
Beryllium, Dissolved	ND		mg/l	0.00050	0.00015	1	09/29/14 13:51	09/29/14 22:30	EPA 3005A	1,6020A	BM
Cadmium, Dissolved	ND		mg/l	0.00020	0.00005	1	09/29/14 13:51	09/29/14 22:30	EPA 3005A	1,6020A	BM
Chromium, Dissolved	0.00055	J	mg/l	0.00100	0.00025	1	09/29/14 13:51	09/29/14 22:30	EPA 3005A	1,6020A	BM
Copper, Dissolved	ND		mg/l	0.00100	0.00026	1	09/29/14 13:51	09/29/14 22:30	EPA 3005A	1,6020A	BM
Lead, Dissolved	ND		mg/l	0.00100	0.00012	1	09/29/14 13:51	09/29/14 22:30	EPA 3005A	1,6020A	BM
Mercury, Dissolved	ND		mg/l	0.00020	0.00006	1	09/25/14 10:41	09/25/14 17:31	EPA 7470A	1,7470A	AK
Nickel, Dissolved	0.00110	J	mg/l	0.00200	0.00008	1	09/29/14 13:51	09/29/14 22:30	EPA 3005A	1,6020A	BM
Selenium, Dissolved	0.00167	J	mg/l	0.00500	0.00100	1	09/29/14 13:51	09/29/14 22:30	EPA 3005A	1,6020A	BM
Silver, Dissolved	ND		mg/l	0.00040	0.00007	1	09/29/14 13:51	09/29/14 22:30	EPA 3005A	1,6020A	BM
Thallium, Dissolved	ND		mg/l	0.00050	0.00005	1	09/29/14 13:51	09/29/14 22:30	EPA 3005A	1,6020A	BM
Zinc, Dissolved	ND		mg/l	0.01000	0.00256	1	09/29/14 13:51	09/29/14 22:30	EPA 3005A	1,6020A	BM

Project Name: SITE1_SMP_2014 **Lab Number:** L1422287

Project Number: SITE1_SMP_2014 **Report Date:** 09/30/14

SAMPLE RESULTS

Lab ID: L1422287-11 Date Collected: 09/23/14 15:15

Client ID: WS-201409231515-FD-1 Date Received: 09/23/14

Sample Location: HOWLAND HOOK MARINE/PORT IVORY Field Prep: See Narrative

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Westborough Lab											
Antimony, Total	0.00463	J	mg/l	0.00600	0.00006	1	09/29/14 11:17	09/29/14 21:26	EPA 3005A	1,6020A	BM
Arsenic, Total	0.02364		mg/l	0.00200	0.00012	1	09/29/14 11:17	09/29/14 21:26	EPA 3005A	1,6020A	BM
Beryllium, Total	ND		mg/l	0.00050	0.00015	1	09/29/14 11:17	09/29/14 21:26	EPA 3005A	1,6020A	BM
Cadmium, Total	0.00011	J	mg/l	0.00020	0.00005	1	09/29/14 11:17	09/29/14 21:26	EPA 3005A	1,6020A	BM
Chromium, Total	0.00297		mg/l	0.00100	0.00025	1	09/29/14 11:17	09/29/14 21:26	EPA 3005A	1,6020A	BM
Copper, Total	0.00827		mg/l	0.00100	0.00026	1	09/29/14 11:17	09/29/14 21:26	EPA 3005A	1,6020A	BM
Lead, Total	0.00786		mg/l	0.00100	0.00012	1	09/29/14 11:17	09/29/14 21:26	EPA 3005A	1,6020A	BM
Mercury, Total	ND		mg/l	0.00020	0.00006	1	09/24/14 14:53	09/24/14 20:04	EPA 7470A	1,7470A	AK
Nickel, Total	0.01333		mg/l	0.00200	0.00008	1	09/29/14 11:17	09/29/14 21:26	EPA 3005A	1,6020A	BM
Selenium, Total	0.0106		mg/l	0.00500	0.00100	1	09/29/14 11:17	09/29/14 21:26	EPA 3005A	1,6020A	BM
Silver, Total	ND		mg/l	0.00040	0.00007	1	09/29/14 11:17	09/29/14 21:26	EPA 3005A	1,6020A	BM
Thallium, Total	ND		mg/l	0.00050	0.00005	1	09/29/14 11:17	09/29/14 21:26	EPA 3005A	1,6020A	BM
Zinc, Total	0.04857		mg/l	0.01000	0.00256	1	09/29/14 11:17	09/29/14 21:26	EPA 3005A	1,6020A	BM
Dissolved Metals - Westborough Lab											
Antimony, Dissolved	0.00366	J	mg/l	0.00600	0.00006	1	09/29/14 13:51	09/29/14 22:37	EPA 3005A	1,6020A	BM
Arsenic, Dissolved	0.02252		mg/l	0.00200	0.00012	1	09/29/14 13:51	09/29/14 22:37	EPA 3005A	1,6020A	BM
Beryllium, Dissolved	ND		mg/l	0.00050	0.00015	1	09/29/14 13:51	09/29/14 22:37	EPA 3005A	1,6020A	BM
Cadmium, Dissolved	ND		mg/l	0.00020	0.00005	1	09/29/14 13:51	09/29/14 22:37	EPA 3005A	1,6020A	BM
Chromium, Dissolved	0.00179		mg/l	0.00100	0.00025	1	09/29/14 13:51	09/29/14 22:37	EPA 3005A	1,6020A	BM
Copper, Dissolved	0.00544		mg/l	0.00100	0.00026	1	09/29/14 13:51	09/29/14 22:37	EPA 3005A	1,6020A	BM
Lead, Dissolved	0.00227		mg/l	0.00100	0.00012	1	09/29/14 13:51	09/29/14 22:37	EPA 3005A	1,6020A	BM
Mercury, Dissolved	ND		mg/l	0.00020	0.00006	1	09/25/14 10:41	09/25/14 17:33	EPA 7470A	1,7470A	AK
Nickel, Dissolved	0.01275		mg/l	0.00200	0.00008	1	09/29/14 13:51	09/29/14 22:37	EPA 3005A	1,6020A	BM
Selenium, Dissolved	0.0133		mg/l	0.00500	0.00100	1	09/29/14 13:51	09/29/14 22:37	EPA 3005A	1,6020A	BM
Silver, Dissolved	ND		mg/l	0.00040	0.00007	1	09/29/14 13:51	09/29/14 22:37	EPA 3005A	1,6020A	BM
Thallium, Dissolved	ND		mg/l	0.00050	0.00005	1	09/29/14 13:51	09/29/14 22:37	EPA 3005A	1,6020A	BM
Zinc, Dissolved	0.02197		mg/l	0.01000	0.00256	1	09/29/14 13:51	09/29/14 22:37	EPA 3005A	1,6020A	BM

Project Name: SITE1_SMP_2014 **Lab Number:** L1422287

Project Number: SITE1_SMP_2014 **Report Date:** 09/30/14

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Westborough Lab for sample(s): 01-08,10-11 Batch: WG724870-1										
Mercury, Total	ND		mg/l	0.00020	0.00006	1	09/24/14 14:53	09/24/14 19:15	1,7470A	AK

Prep Information

Digestion Method: EPA 7470A

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Dissolved Metals - Westborough Lab for sample(s): 01-08,10-11 Batch: WG725207-1										
Mercury, Dissolved	ND		mg/l	0.00020	0.00006	1	09/25/14 10:41	09/25/14 17:00	1,7470A	AK

Prep Information

Digestion Method: EPA 7470A

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Westborough Lab for sample(s): 01-08,10-11 Batch: WG726208-1										
Antimony, Total	0.00058	J	mg/l	0.00600	0.00006	1	09/29/14 11:17	09/29/14 19:48	1,6020A	BM
Arsenic, Total	0.00117	J	mg/l	0.00200	0.00012	1	09/29/14 11:17	09/29/14 19:48	1,6020A	BM
Beryllium, Total	ND		mg/l	0.00050	0.00015	1	09/29/14 11:17	09/29/14 19:48	1,6020A	BM
Cadmium, Total	ND		mg/l	0.00020	0.00005	1	09/29/14 11:17	09/29/14 19:48	1,6020A	BM
Chromium, Total	ND		mg/l	0.00100	0.00025	1	09/29/14 11:17	09/29/14 19:48	1,6020A	BM
Copper, Total	0.00069	J	mg/l	0.00100	0.00026	1	09/29/14 11:17	09/29/14 19:48	1,6020A	BM
Lead, Total	ND		mg/l	0.00100	0.00012	1	09/29/14 11:17	09/29/14 19:48	1,6020A	BM
Nickel, Total	0.00037	J	mg/l	0.00200	0.00008	1	09/29/14 11:17	09/29/14 19:48	1,6020A	BM
Selenium, Total	ND		mg/l	0.00500	0.00100	1	09/29/14 11:17	09/29/14 19:48	1,6020A	BM
Silver, Total	ND		mg/l	0.00040	0.00007	1	09/29/14 11:17	09/29/14 19:48	1,6020A	BM
Thallium, Total	ND		mg/l	0.00050	0.00005	1	09/29/14 11:17	09/29/14 19:48	1,6020A	BM
Zinc, Total	ND		mg/l	0.01000	0.00256	1	09/29/14 11:17	09/29/14 19:48	1,6020A	BM

Project Name: SITE1_SMP_2014 **Lab Number:** L1422287

Project Number: SITE1_SMP_2014 **Report Date:** 09/30/14

Method Blank Analysis
Batch Quality Control

Prep Information

Digestion Method: EPA 3005A

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Dissolved Metals - Westborough Lab for sample(s): 01-08,10-11 Batch: WG726292-1										
Antimony, Dissolved	0.00233	J	mg/l	0.00600	0.00006	1	09/29/14 13:51	09/29/14 21:09	1,6020A	BM
Arsenic, Dissolved	0.00154	J	mg/l	0.00200	0.00012	1	09/29/14 13:51	09/29/14 21:09	1,6020A	BM
Beryllium, Dissolved	ND		mg/l	0.00050	0.00015	1	09/29/14 13:51	09/29/14 21:09	1,6020A	BM
Cadmium, Dissolved	ND		mg/l	0.00020	0.00005	1	09/29/14 13:51	09/29/14 21:09	1,6020A	BM
Chromium, Dissolved	0.00060	J	mg/l	0.00100	0.00025	1	09/29/14 13:51	09/29/14 21:09	1,6020A	BM
Copper, Dissolved	0.00050	J	mg/l	0.00100	0.00026	1	09/29/14 13:51	09/29/14 21:09	1,6020A	BM
Lead, Dissolved	ND		mg/l	0.00100	0.00012	1	09/29/14 13:51	09/29/14 21:09	1,6020A	BM
Nickel, Dissolved	0.00108	J	mg/l	0.00200	0.00008	1	09/29/14 13:51	09/29/14 21:09	1,6020A	BM
Selenium, Dissolved	ND		mg/l	0.00500	0.00100	1	09/29/14 13:51	09/29/14 21:09	1,6020A	BM
Silver, Dissolved	ND		mg/l	0.00040	0.00007	1	09/29/14 13:51	09/29/14 21:09	1,6020A	BM
Thallium, Dissolved	ND		mg/l	0.00050	0.00005	1	09/29/14 13:51	09/29/14 21:09	1,6020A	BM
Zinc, Dissolved	0.00665	J	mg/l	0.01000	0.00256	1	09/29/14 13:51	09/29/14 21:09	1,6020A	BM

Prep Information

Digestion Method: EPA 3005A

Lab Control Sample Analysis

Batch Quality Control

Project Name: SITE1_SMP_2014

Project Number: SITE1_SMP_2014

Lab Number: L1422287

Report Date: 09/30/14

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Westborough Lab Associated sample(s): 01-08,10-11 Batch: WG724870-2								
Mercury, Total	100		-		80-120	-		
Dissolved Metals - Westborough Lab Associated sample(s): 01-08,10-11 Batch: WG725207-2								
Mercury, Dissolved	103		-		70-130	-		
Total Metals - Westborough Lab Associated sample(s): 01-08,10-11 Batch: WG726208-2								
Antimony, Total	100		-		80-120	-		
Arsenic, Total	104		-		80-120	-		
Beryllium, Total	102		-		80-120	-		
Cadmium, Total	108		-		80-120	-		
Chromium, Total	101		-		80-120	-		
Copper, Total	102		-		80-120	-		
Lead, Total	105		-		80-120	-		
Nickel, Total	101		-		80-120	-		
Selenium, Total	106		-		80-120	-		
Silver, Total	100		-		80-120	-		
Thallium, Total	90		-		80-120	-		
Zinc, Total	108		-		80-120	-		

Lab Control Sample Analysis

Batch Quality Control

Project Name: SITE1_SMP_2014

Project Number: SITE1_SMP_2014

Lab Number: L1422287

Report Date: 09/30/14

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Dissolved Metals - Westborough Lab Associated sample(s): 01-08,10-11 Batch: WG726292-2					
Antimony, Dissolved	94	-	80-120	-	
Arsenic, Dissolved	117	-	80-120	-	
Beryllium, Dissolved	100	-	80-120	-	
Cadmium, Dissolved	107	-	80-120	-	
Chromium, Dissolved	100	-	80-120	-	
Copper, Dissolved	102	-	80-120	-	
Lead, Dissolved	106	-	80-120	-	
Nickel, Dissolved	101	-	80-120	-	
Selenium, Dissolved	103	-	80-120	-	
Silver, Dissolved	98	-	80-120	-	
Thallium, Dissolved	90	-	80-120	-	
Zinc, Dissolved	108	-	80-120	-	

Matrix Spike Analysis
Batch Quality Control

Project Name: SITE1_SMP_2014
Project Number: SITE1_SMP_2014

Lab Number: L1422287
Report Date: 09/30/14

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Westborough Lab Associated sample(s): 01-08,10-11 QC Batch ID: WG724870-3 WG724870-4 QC Sample: L1422287-07 Client ID: SW-4-WS-201409231530												
Mercury, Total	ND	0.005	0.00489	98		0.00495	99		75-125	1		20
Total Metals - Westborough Lab Associated sample(s): 01-08,10-11 QC Batch ID: WG724870-5 WG724870-6 QC Sample: L1422288-07 Client ID: MS Sample												
Mercury, Total	ND	0.005	0.00178	**36**	Q	0.00178	**36**	Q	75-125	0		20
Dissolved Metals - Westborough Lab Associated sample(s): 01-08,10-11 QC Batch ID: WG725207-3 WG725207-4 QC Sample: L1422287-07 Client ID: SW-4-WS-201409231530												
Mercury, Dissolved	ND	0.005	0.00469	94		0.00481	96		75-125	3		20
Total Metals - Westborough Lab Associated sample(s): 01-08,10-11 QC Batch ID: WG726208-3 WG726208-4 QC Sample: L1422287-07 Client ID: SW-4-WS-201409231530												
Antimony, Total	0.00748	0.5	0.5870	116		0.5834	115		75-125	1		20
Arsenic, Total	0.02190	0.12	0.1592	114		0.1519	108		75-125	5		20
Beryllium, Total	ND	0.05	0.05028	100		0.05062	101		75-125	1		20
Cadmium, Total	0.00008J	0.051	0.05378	105		0.05420	106		75-125	1		20
Chromium, Total	0.00329	0.2	0.2050	101		0.2032	100		75-125	1		20
Copper, Total	0.00704	0.25	0.2558	100		0.2542	99		75-125	1		20
Lead, Total	0.00608	0.51	0.5618	109		0.5598	108		75-125	0		20
Nickel, Total	0.01341	0.5	0.5066	99		0.5032	98		75-125	1		20
Selenium, Total	0.0128	0.12	0.166	**128**	Q	0.172	**133**	Q	75-125	4		20
Silver, Total	ND	0.05	0.04848	97		0.04826	96		75-125	0		20
Thallium, Total	ND	0.12	0.05806	**48**	Q	0.06468	**54**	Q	75-125	11		20
Zinc, Total	0.03432	0.5	0.5460	102		0.5418	101		75-125	1		20

Matrix Spike Analysis
Batch Quality Control

Project Name: SITE1_SMP_2014
Project Number: SITE1_SMP_2014

Lab Number: L1422287
Report Date: 09/30/14

Parameter	Native Sample	MS Added	MS Found	MS %Recovery		MSD Found	MSD %Recovery		Recovery Limits	RPD	RPD Limits
Dissolved Metals - Westborough Lab Associated sample(s): 01-08,10-11 QC Batch ID: WG726292-3 WG726292-4 QC Sample: L1422287-07 Client ID: SW-4-WS-201409231530											
Antimony, Dissolved	0.00589J	0.5	0.6848	**137**	Q	0.6180	124		75-125	10	20
Arsenic, Dissolved	0.02190	0.12	0.1547	111		0.1622	117		75-125	5	20
Beryllium, Dissolved	ND	0.05	0.05248	105		0.05382	108		75-125	3	20
Cadmium, Dissolved	ND	0.051	0.05328	104		0.05586	110		75-125	5	20
Chromium, Dissolved	0.00142	0.2	0.2008	100		0.2042	101		75-125	2	20
Copper, Dissolved	0.00377	0.25	0.2510	99		0.2528	100		75-125	1	20
Lead, Dissolved	0.00082J	0.51	0.5638	110		0.5772	113		75-125	2	20
Nickel, Dissolved	0.01198	0.5	0.4980	97		0.4998	98		75-125	0	20
Selenium, Dissolved	0.0111	0.12	0.175	**136**	Q	0.172	**134**	Q	75-125	2	20
Silver, Dissolved	ND	0.05	0.04884	98		0.04982	100		75-125	2	20
Thallium, Dissolved	ND	0.12	0.06094	**51**	Q	0.07036	**59**	Q	75-125	14	20
Zinc, Dissolved	0.01653	0.5	0.5272	102		0.5422	105		75-125	3	20

INORGANICS
&
MISCELLANEOUS

Project Name: SITE1_SMP_2014
Project Number: SITE1_SMP_2014

Lab Number: L1422287
Report Date: 09/30/14

SAMPLE RESULTS

Lab ID: L1422287-01
Client ID: PRW-01-WG-201409231216
Sample Location: HOWLAND HOOK MARINE/PORT IVORY
Matrix: Water

Date Collected: 09/23/14 12:16
Date Received: 09/23/14
Field Prep: See Narrative

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Cyanide, Total	0.016		mg/l	0.005	0.001	1	09/25/14 08:52	09/25/14 13:00	1,9010C/9012B	JO

Project Name: SITE1_SMP_2014
Project Number: SITE1_SMP_2014

Lab Number: L1422287
Report Date: 09/30/14

SAMPLE RESULTS

Lab ID: L1422287-02
Client ID: PRW-02-WG-201409231226
Sample Location: HOWLAND HOOK MARINE/PORT IVORY
Matrix: Water

Date Collected: 09/23/14 12:26
Date Received: 09/23/14
Field Prep: See Narrative

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Cyanide, Total	0.097		mg/l	0.005	0.001	1	09/25/14 08:52	09/25/14 13:01	1,9010C/9012B	JO

Project Name: SITE1_SMP_2014
Project Number: SITE1_SMP_2014

Lab Number: L1422287
Report Date: 09/30/14

SAMPLE RESULTS

Lab ID: L1422287-03
Client ID: PRW-03-WG-201409231351
Sample Location: HOWLAND HOOK MARINE/PORT IVORY
Matrix: Water

Date Collected: 09/23/14 13:51
Date Received: 09/23/14
Field Prep: See Narrative

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Cyanide, Total	0.069		mg/l	0.005	0.001	1	09/25/14 08:52	09/25/14 13:01	1,9010C/9012B	JO

Project Name: SITE1_SMP_2014
Project Number: SITE1_SMP_2014

Lab Number: L1422287
Report Date: 09/30/14

SAMPLE RESULTS

Lab ID: L1422287-04
Client ID: PRW-05-WG-201409231101
Sample Location: HOWLAND HOOK MARINE/PORT IVORY
Matrix: Water

Date Collected: 09/23/14 11:01
Date Received: 09/23/14
Field Prep: See Narrative

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Cyanide, Total	0.001	J	mg/l	0.005	0.001	1	09/25/14 08:52	09/25/14 13:02	1,9010C/9012B	JO

Project Name: SITE1_SMP_2014
Project Number: SITE1_SMP_2014

Lab Number: L1422287
Report Date: 09/30/14

SAMPLE RESULTS

Lab ID: L1422287-05
Client ID: PRW-06-WG-201409231106
Sample Location: HOWLAND HOOK MARINE/PORT IVORY
Matrix: Water

Date Collected: 09/23/14 11:06
Date Received: 09/23/14
Field Prep: See Narrative

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Cyanide, Total	0.010		mg/l	0.005	0.001	1	09/25/14 08:52	09/25/14 13:03	1,9010C/9012B	JO

Project Name: SITE1_SMP_2014
Project Number: SITE1_SMP_2014

Lab Number: L1422287
Report Date: 09/30/14

SAMPLE RESULTS

Lab ID: L1422287-06
Client ID: PRW-07-WG-201409231351
Sample Location: HOWLAND HOOK MARINE/PORT IVORY
Matrix: Water

Date Collected: 09/23/14 13:51
Date Received: 09/23/14
Field Prep: See Narrative

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Cyanide, Total	0.006		mg/l	0.005	0.001	1	09/25/14 08:52	09/25/14 13:11	1,9010C/9012B	JO

Project Name: SITE1_SMP_2014
Project Number: SITE1_SMP_2014

Lab Number: L1422287
Report Date: 09/30/14

SAMPLE RESULTS

Lab ID: L1422287-07
Client ID: SW-4-WS-201409231530
Sample Location: HOWLAND HOOK MARINE/PORT IVORY
Matrix: Water

Date Collected: 09/23/14 15:30
Date Received: 09/23/14
Field Prep: See Narrative

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Cyanide, Total	ND		mg/l	0.005	0.001	1	09/25/14 08:52	09/25/14 13:05	1,9010C/9012B	JO

Project Name: SITE1_SMP_2014
Project Number: SITE1_SMP_2014

Lab Number: L1422287
Report Date: 09/30/14

SAMPLE RESULTS

Lab ID: L1422287-08
Client ID: SW-5-WS-201409231515
Sample Location: HOWLAND HOOK MARINE/PORT IVORY
Matrix: Water

Date Collected: 09/23/14 15:15
Date Received: 09/23/14
Field Prep: See Narrative

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Cyanide, Total	0.002	J	mg/l	0.005	0.001	1	09/25/14 08:52	09/25/14 13:07	1,9010C/9012B	JO

Project Name: SITE1_SMP_2014
Project Number: SITE1_SMP_2014

Lab Number: L1422287
Report Date: 09/30/14

SAMPLE RESULTS

Lab ID: L1422287-10
Client ID: WQ-201409231300-FB-1
Sample Location: HOWLAND HOOK MARINE/PORT IVORY
Matrix: Water

Date Collected: 09/23/14 13:00
Date Received: 09/23/14
Field Prep: See Narrative

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Cyanide, Total	ND		mg/l	0.005	0.001	1	09/25/14 08:52	09/25/14 13:09	1,9010C/9012B	JO

Project Name: SITE1_SMP_2014
Project Number: SITE1_SMP_2014

Lab Number: L1422287
Report Date: 09/30/14

SAMPLE RESULTS

Lab ID: L1422287-11
Client ID: WS-201409231515-FD-1
Sample Location: HOWLAND HOOK MARINE/PORT IVORY
Matrix: Water

Date Collected: 09/23/14 15:15
Date Received: 09/23/14
Field Prep: See Narrative

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Cyanide, Total	ND		mg/l	0.005	0.001	1	09/25/14 08:52	09/25/14 13:10	1,9010C/9012B	JO

Project Name: SITE1_SMP_2014 **Lab Number:** L1422287

Project Number: SITE1_SMP_2014 **Report Date:** 09/30/14

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab for sample(s): 01-08,10-11 Batch: WG725147-1										
Cyanide, Total	ND		mg/l	0.005	0.001	1	09/25/14 08:52	09/25/14 12:51	1,9010C/9012B	JO

Lab Control Sample Analysis

Batch Quality Control

Project Name: SITE1_SMP_2014

Project Number: SITE1_SMP_2014

Lab Number: L1422287

Report Date: 09/30/14

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-08,10-11 Batch: WG725147-2 WG725147-3								
Cyanide, Total	106		108		80-120	2		20

Matrix Spike Analysis
Batch Quality Control

Project Name: SITE1_SMP_2014
Project Number: SITE1_SMP_2014

Lab Number: L1422287
Report Date: 09/30/14

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-08,10-11 QC Batch ID: WG725147-4 WG725147-5 QC Sample: L1422287-07 Client ID: SW-4-WS-201409231530												
Cyanide, Total	ND	0.2	0.194	97		0.191	96		80-120	2		20

Project Name: SITE1_SMP_2014
Project Number: SITE1_SMP_2014

Lab Number: L1422287
Report Date: 09/30/14

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Reagent H2O Preserved Vials Frozen on: NA

Cooler Information Custody Seal

Cooler	
A	Absent
D	Absent
B	Absent
C	Absent
E	Absent
F	Absent
G	Absent

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1422287-01A	Vial HCl preserved	E	N/A	3.3	Y	Absent	NYTCL-8260(14)
L1422287-01B	Vial HCl preserved	E	N/A	3.3	Y	Absent	NYTCL-8260(14)
L1422287-01C	Vial HCl preserved	E	N/A	3.3	Y	Absent	NYTCL-8260(14)
L1422287-01D	Amber 1000ml unpreserved	E	8	3.3	Y	Absent	NYTCL-8270(7),NYTCL-8270-SIM(7)
L1422287-01E	Amber 1000ml unpreserved	E	8	3.3	Y	Absent	NYTCL-8270(7),NYTCL-8270-SIM(7)
L1422287-01F	Amber 1000ml unpreserved	E	8	3.3	Y	Absent	NYTCL-8082-1200ML(7)
L1422287-01G	Amber 1000ml unpreserved	E	8	3.3	Y	Absent	NYTCL-8082-1200ML(7)
L1422287-01H	Amber 500ml unpreserved	E	8	3.3	Y	Absent	NYTCL-8081(7)
L1422287-01I	Amber 500ml unpreserved	E	8	3.3	Y	Absent	NYTCL-8081(7)
L1422287-01J	Plastic 500ml HNO3 preserved	E	<2	3.3	Y	Absent	SE-6020T(180),TL-6020T(180),CR-6020T(180),NI-6020T(180),CU-6020T(180),ZN-6020T(180),PB-6020T(180),BE-6020T(180),AS-6020T(180),SB-6020T(180),AG-6020T(180),CD-6020T(180),HG-T(28)
L1422287-01K	Plastic 250ml NaOH preserved	E	>12	3.3	Y	Absent	TCN-9010(14)
L1422287-01W	Plastic 500ml HNO3 preserved	E	<2	3.3	Y	Absent	CU-6020S(180),SE-6020S(180),BE-6020S(180),ZN-6020S(180),CR-6020S(180),NI-6020S(180),PB-6020S(180),TL-6020S(180),AG-6020S(180),AS-6020S(180),SB-6020S(180),CD-6020S(180),HG-S(28)
L1422287-02A	Vial HCl preserved	C	N/A	2.2	Y	Absent	NYTCL-8260(14)

*Values in parentheses indicate holding time in days

Project Name: SITE1_SMP_2014
Project Number: SITE1_SMP_2014

Lab Number: L1422287
Report Date: 09/30/14

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1422287-02B	Vial HCl preserved	C	N/A	2.2	Y	Absent	NYTCL-8260(14)
L1422287-02C	Vial HCl preserved	C	N/A	2.2	Y	Absent	NYTCL-8260(14)
L1422287-02D	Amber 1000ml unpreserved	C	8	2.2	Y	Absent	NYTCL-8270(7),NYTCL-8270-SIM(7)
L1422287-02E	Amber 1000ml unpreserved	C	8	2.2	Y	Absent	NYTCL-8270(7),NYTCL-8270-SIM(7)
L1422287-02F	Amber 1000ml unpreserved	C	8	2.2	Y	Absent	NYTCL-8082-1200ML(7)
L1422287-02G	Amber 1000ml unpreserved	C	8	2.2	Y	Absent	NYTCL-8082-1200ML(7)
L1422287-02H	Amber 500ml unpreserved	C	8	2.2	Y	Absent	NYTCL-8081(7)
L1422287-02I	Amber 500ml unpreserved	C	8	2.2	Y	Absent	NYTCL-8081(7)
L1422287-02J	Plastic 500ml HNO3 preserved	C	<2	2.2	Y	Absent	SE-6020T(180),TL-6020T(180),CR-6020T(180),NI-6020T(180),CU-6020T(180),ZN-6020T(180),PB-6020T(180),BE-6020T(180),AS-6020T(180),SB-6020T(180),AG-6020T(180),CD-6020T(180),HG-T(28)
L1422287-02K	Plastic 250ml NaOH preserved	C	>12	2.2	Y	Absent	TCN-9010(14)
L1422287-02W	Plastic 500ml HNO3 preserved	C	<2	2.2	Y	Absent	CU-6020S(180),SE-6020S(180),BE-6020S(180),ZN-6020S(180),CR-6020S(180),NI-6020S(180),PB-6020S(180),TL-6020S(180),AG-6020S(180),AS-6020S(180),SB-6020S(180),CD-6020S(180),HG-S(28)
L1422287-03A	Vial HCl preserved	F	N/A	2.5	Y	Absent	NYTCL-8260(14)
L1422287-03B	Vial HCl preserved	F	N/A	2.5	Y	Absent	NYTCL-8260(14)
L1422287-03C	Vial HCl preserved	F	N/A	2.5	Y	Absent	NYTCL-8260(14)
L1422287-03D	Amber 1000ml unpreserved	F	9	2.5	Y	Absent	NYTCL-8270(7),NYTCL-8270-SIM(7)
L1422287-03E	Amber 1000ml unpreserved	F	9	2.5	Y	Absent	NYTCL-8270(7),NYTCL-8270-SIM(7)
L1422287-03F	Amber 1000ml unpreserved	F	9	2.5	Y	Absent	NYTCL-8082-1200ML(7)
L1422287-03G	Amber 1000ml unpreserved	F	9	2.5	Y	Absent	NYTCL-8082-1200ML(7)
L1422287-03H	Amber 500ml unpreserved	F	9	2.5	Y	Absent	NYTCL-8081(7)
L1422287-03I	Amber 500ml unpreserved	F	9	2.5	Y	Absent	NYTCL-8081(7)
L1422287-03J	Plastic 500ml HNO3 preserved	F	<2	2.5	Y	Absent	SE-6020T(180),TL-6020T(180),CR-6020T(180),NI-6020T(180),CU-6020T(180),ZN-6020T(180),PB-6020T(180),BE-6020T(180),AS-6020T(180),SB-6020T(180),AG-6020T(180),CD-6020T(180),HG-T(28)
L1422287-03K	Plastic 250ml NaOH preserved	F	>12	2.5	Y	Absent	TCN-9010(14)

*Values in parentheses indicate holding time in days

Project Name: SITE1_SMP_2014
Project Number: SITE1_SMP_2014

Lab Number: L1422287
Report Date: 09/30/14

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1422287-03W	Plastic 500ml HNO3 preserved	F	<2	2.5	Y	Absent	CU-6020S(180),SE-6020S(180),BE-6020S(180),CR-6020S(180),NI-6020S(180),PB-6020S(180),TL-6020S(180),AG-6020S(180),AS-6020S(180),SB-6020S(180),CD-6020S(180),HG-S(28)
L1422287-04A	Vial HCl preserved	E	N/A	3.3	Y	Absent	NYTCL-8260(14)
L1422287-04B	Vial HCl preserved	E	N/A	3.3	Y	Absent	NYTCL-8260(14)
L1422287-04C	Vial HCl preserved	E	N/A	3.3	Y	Absent	NYTCL-8260(14)
L1422287-04D	Amber 1000ml unpreserved	E	8	3.3	Y	Absent	NYTCL-8270(7),NYTCL-8270-SIM(7)
L1422287-04E	Amber 1000ml unpreserved	E	8	3.3	Y	Absent	NYTCL-8270(7),NYTCL-8270-SIM(7)
L1422287-04F	Amber 1000ml unpreserved	E	8	3.3	Y	Absent	NYTCL-8082-1200ML(7)
L1422287-04G	Amber 1000ml unpreserved	E	8	3.3	Y	Absent	NYTCL-8082-1200ML(7)
L1422287-04H	Amber 500ml unpreserved	E	8	3.3	Y	Absent	NYTCL-8081(7)
L1422287-04I	Amber 500ml unpreserved	E	8	3.3	Y	Absent	NYTCL-8081(7)
L1422287-04J	Plastic 500ml HNO3 preserved	E	<2	3.3	Y	Absent	SE-6020T(180),TL-6020T(180),CR-6020T(180),NI-6020T(180),CU-6020T(180),ZN-6020T(180),PB-6020T(180),BE-6020T(180),AS-6020T(180),SB-6020T(180),AG-6020T(180),CD-6020T(180),HG-T(28)
L1422287-04K	Plastic 250ml NaOH preserved	E	>12	3.3	Y	Absent	TCN-9010(14)
L1422287-04W	Plastic 500ml HNO3 preserved	E	<2	3.3	Y	Absent	CU-6020S(180),SE-6020S(180),BE-6020S(180),ZN-6020S(180),CR-6020S(180),NI-6020S(180),PB-6020S(180),TL-6020S(180),AG-6020S(180),AS-6020S(180),SB-6020S(180),CD-6020S(180),HG-S(28)
L1422287-05A	Vial HCl preserved	C	N/A	2.2	Y	Absent	NYTCL-8260(14)
L1422287-05B	Vial HCl preserved	C	N/A	2.2	Y	Absent	NYTCL-8260(14)
L1422287-05C	Vial HCl preserved	C	N/A	2.2	Y	Absent	NYTCL-8260(14)
L1422287-05D	Amber 1000ml unpreserved	C	8	2.2	Y	Absent	NYTCL-8270(7),NYTCL-8270-SIM(7)
L1422287-05E	Amber 1000ml unpreserved	C	8	2.2	Y	Absent	NYTCL-8270(7),NYTCL-8270-SIM(7)
L1422287-05F	Amber 1000ml unpreserved	C	8	2.2	Y	Absent	NYTCL-8082-1200ML(7)
L1422287-05G	Amber 1000ml unpreserved	C	8	2.2	Y	Absent	NYTCL-8082-1200ML(7)
L1422287-05H	Amber 500ml unpreserved	C	8	2.2	Y	Absent	NYTCL-8081(7)
L1422287-05I	Amber 500ml unpreserved	C	8	2.2	Y	Absent	NYTCL-8081(7)

*Values in parentheses indicate holding time in days

Project Name: SITE1_SMP_2014
Project Number: SITE1_SMP_2014

Lab Number: L1422287
Report Date: 09/30/14

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1422287-05J	Plastic 500ml HNO3 preserved	C	<2	2.2	Y	Absent	SE-6020T(180),TL-6020T(180),CR-6020T(180),NI-6020T(180),CU-6020T(180),ZN-6020T(180),PB-6020T(180),BE-6020T(180),AS-6020T(180),SB-6020T(180),AG-6020T(180),CD-6020T(180),HG-T(28)
L1422287-05K	Plastic 250ml NaOH preserved	C	>12	2.2	Y	Absent	TCN-9010(14)
L1422287-05W	Plastic 500ml HNO3 preserved	C	<2	2.2	Y	Absent	CU-6020S(180),SE-6020S(180),BE-6020S(180),ZN-6020S(180),CR-6020S(180),NI-6020S(180),PB-6020S(180),TL-6020S(180),AG-6020S(180),AS-6020S(180),SB-6020S(180),CD-6020S(180),HG-S(28)
L1422287-06A	Vial HCl preserved	G	N/A	2.5	Y	Absent	NYTCL-8260(14)
L1422287-06B	Vial HCl preserved	G	N/A	2.5	Y	Absent	NYTCL-8260(14)
L1422287-06C	Vial HCl preserved	G	N/A	2.5	Y	Absent	NYTCL-8260(14)
L1422287-06D	Amber 1000ml unpreserved	G	8	2.5	Y	Absent	NYTCL-8270(7),NYTCL-8270-SIM(7)
L1422287-06E	Amber 1000ml unpreserved	G	8	2.5	Y	Absent	NYTCL-8270(7),NYTCL-8270-SIM(7)
L1422287-06F	Amber 1000ml unpreserved	G	8	2.5	Y	Absent	NYTCL-8082-1200ML(7)
L1422287-06G	Amber 1000ml unpreserved	G	8	2.5	Y	Absent	NYTCL-8082-1200ML(7)
L1422287-06H	Amber 500ml unpreserved	G	8	2.5	Y	Absent	NYTCL-8081(7)
L1422287-06I	Amber 500ml unpreserved	G	8	2.5	Y	Absent	NYTCL-8081(7)
L1422287-06J	Plastic 500ml HNO3 preserved	G	<2	2.5	Y	Absent	SE-6020T(180),TL-6020T(180),CR-6020T(180),NI-6020T(180),CU-6020T(180),ZN-6020T(180),PB-6020T(180),BE-6020T(180),AS-6020T(180),SB-6020T(180),AG-6020T(180),CD-6020T(180),HG-T(28)
L1422287-06K	Plastic 250ml NaOH preserved	G	>12	2.5	Y	Absent	TCN-9010(14)
L1422287-06W	Plastic 500ml HNO3 preserved	G	<2	2.5	Y	Absent	CU-6020S(180),SE-6020S(180),BE-6020S(180),ZN-6020S(180),CR-6020S(180),NI-6020S(180),PB-6020S(180),TL-6020S(180),AG-6020S(180),AS-6020S(180),SB-6020S(180),CD-6020S(180),HG-S(28)
L1422287-07A	Vial HCl preserved	B	N/A	2.6	Y	Absent	NYTCL-8260(14)
L1422287-07A1	Vial HCl preserved	B	N/A	2.6	Y	Absent	NYTCL-8260(14)
L1422287-07A2	Vial HCl preserved	B	N/A	2.6	Y	Absent	NYTCL-8260(14)
L1422287-07B	Vial HCl preserved	B	N/A	2.6	Y	Absent	NYTCL-8260(14)
L1422287-07B1	Vial HCl preserved	B	N/A	2.6	Y	Absent	NYTCL-8260(14)
L1422287-07B2	Vial HCl preserved	B	N/A	2.6	Y	Absent	NYTCL-8260(14)
L1422287-07C	Vial HCl preserved	B	N/A	2.6	Y	Absent	NYTCL-8260(14)

*Values in parentheses indicate holding time in days

Project Name: SITE1_SMP_2014
Project Number: SITE1_SMP_2014

Lab Number: L1422287
Report Date: 09/30/14

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1422287-07C1	Vial HCl preserved	B	N/A	2.6	Y	Absent	NYTCL-8260(14)
L1422287-07C2	Vial HCl preserved	B	N/A	2.6	Y	Absent	NYTCL-8260(14)
L1422287-07D	Amber 1000ml unpreserved	D	8	2.6	Y	Absent	NYTCL-8270(7),NYTCL-8270-SIM(7)
L1422287-07D1	Amber 1000ml unpreserved	D	8	2.6	Y	Absent	NYTCL-8270(7),NYTCL-8270-SIM(7)
L1422287-07D2	Amber 1000ml unpreserved	G	8	2.5	Y	Absent	NYTCL-8270(7),NYTCL-8270-SIM(7)
L1422287-07E	Amber 1000ml unpreserved	D	8	2.6	Y	Absent	NYTCL-8270(7),NYTCL-8270-SIM(7)
L1422287-07E1	Amber 1000ml unpreserved	D	8	2.6	Y	Absent	NYTCL-8270(7),NYTCL-8270-SIM(7)
L1422287-07E2	Amber 1000ml unpreserved	G	8	2.5	Y	Absent	NYTCL-8270(7),NYTCL-8270-SIM(7)
L1422287-07F	Amber 1000ml unpreserved	D	8	2.6	Y	Absent	NYTCL-8082-1200ML(7)
L1422287-07F1	Amber 1000ml unpreserved	D	8	2.6	Y	Absent	NYTCL-8082-1200ML(7)
L1422287-07F2	Amber 1000ml unpreserved	G	8	2.5	Y	Absent	NYTCL-8082-1200ML(7)
L1422287-07G	Amber 1000ml unpreserved	D	8	2.6	Y	Absent	NYTCL-8082-1200ML(7)
L1422287-07G1	Amber 1000ml unpreserved	D	8	2.6	Y	Absent	NYTCL-8082-1200ML(7)
L1422287-07G2	Amber 1000ml unpreserved	G	8	2.5	Y	Absent	NYTCL-8082-1200ML(7)
L1422287-07H	Amber 500ml unpreserved	D	8	2.6	Y	Absent	NYTCL-8081(7)
L1422287-07H1	Amber 500ml unpreserved	D	8	2.6	Y	Absent	NYTCL-8081(7)
L1422287-07H2	Amber 500ml unpreserved	G	8	2.5	Y	Absent	NYTCL-8081(7)
L1422287-07I	Amber 500ml unpreserved	D	8	2.6	Y	Absent	NYTCL-8081(7)
L1422287-07I1	Amber 500ml unpreserved	D	8	2.6	Y	Absent	NYTCL-8081(7)
L1422287-07I2	Amber 500ml unpreserved	G	8	2.5	Y	Absent	NYTCL-8081(7)
L1422287-07J	Plastic 500ml HNO3 preserved	D	<2	2.6	Y	Absent	SE-6020T(180),TL-6020T(180),CR-6020T(180),NI-6020T(180),CU-6020T(180),ZN-6020T(180),PB-6020T(180),BE-6020T(180),AS-6020T(180),SB-6020T(180),AG-6020T(180),CD-6020T(180),HG-T(28)
L1422287-07J1	Plastic 500ml HNO3 preserved	D	<2	2.6	Y	Absent	SE-6020T(180),TL-6020T(180),CR-6020T(180),NI-6020T(180),CU-6020T(180),ZN-6020T(180),PB-6020T(180),BE-6020T(180),AS-6020T(180),SB-6020T(180),AG-6020T(180),CD-6020T(180),HG-T(28)
L1422287-07J2	Plastic 500ml HNO3 preserved	G	<2	2.5	Y	Absent	SE-6020T(180),TL-6020T(180),CR-6020T(180),NI-6020T(180),CU-6020T(180),ZN-6020T(180),PB-6020T(180),BE-6020T(180),AS-6020T(180),SB-6020T(180),AG-6020T(180),CD-6020T(180),HG-T(28)

*Values in parentheses indicate holding time in days

Project Name: SITE1_SMP_2014
Project Number: SITE1_SMP_2014

Lab Number: L1422287
Report Date: 09/30/14

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1422287-07K	Plastic 250ml NaOH preserved	D	>12	2.6	Y	Absent	TCN-9010(14)
L1422287-07K1	Plastic 250ml NaOH preserved	F	>12	2.5	Y	Absent	TCN-9010(14)
L1422287-07K2	Plastic 250ml NaOH preserved	D	>12	2.6	Y	Absent	TCN-9010(14)
L1422287-07W	Plastic 500ml HNO3 preserved	D	<2	2.6	Y	Absent	CU-6020S(180),SE-6020S(180),BE-6020S(180),ZN-6020S(180),CR-6020S(180),NI-6020S(180),PB-6020S(180),TL-6020S(180),AG-6020S(180),AS-6020S(180),SB-6020S(180),CD-6020S(180),HG-S(28)
L1422287-07W1	Plastic 500ml HNO3 preserved	D	<2	2.6	Y	Absent	CU-6020S(180),SE-6020S(180),BE-6020S(180),ZN-6020S(180),CR-6020S(180),NI-6020S(180),PB-6020S(180),TL-6020S(180),AG-6020S(180),AS-6020S(180),SB-6020S(180),CD-6020S(180),HG-S(28)
L1422287-07W2	Plastic 500ml HNO3 preserved	D	<2	2.6	Y	Absent	CU-6020S(180),SE-6020S(180),BE-6020S(180),ZN-6020S(180),CR-6020S(180),NI-6020S(180),PB-6020S(180),TL-6020S(180),AG-6020S(180),AS-6020S(180),SB-6020S(180),CD-6020S(180),HG-S(28)
L1422287-08A	Vial HCl preserved	B	N/A	2.6	Y	Absent	NYTCL-8260(14)
L1422287-08B	Vial HCl preserved	B	N/A	2.6	Y	Absent	NYTCL-8260(14)
L1422287-08C	Vial HCl preserved	B	N/A	2.6	Y	Absent	NYTCL-8260(14)
L1422287-08D	Amber 1000ml unpreserved	B	8	2.6	Y	Absent	NYTCL-8270(7),NYTCL-8270-SIM(7)
L1422287-08E	Amber 1000ml unpreserved	B	8	2.6	Y	Absent	NYTCL-8270(7),NYTCL-8270-SIM(7)
L1422287-08F	Amber 1000ml unpreserved	B	8	2.6	Y	Absent	NYTCL-8082-1200ML(7)
L1422287-08G	Amber 1000ml unpreserved	B	8	2.6	Y	Absent	NYTCL-8082-1200ML(7)
L1422287-08H	Amber 500ml unpreserved	B	8	2.6	Y	Absent	NYTCL-8081(7)
L1422287-08I	Amber 500ml unpreserved	B	8	2.6	Y	Absent	NYTCL-8081(7)
L1422287-08J	Plastic 500ml HNO3 preserved	B	<2	2.6	Y	Absent	SE-6020T(180),TL-6020T(180),CR-6020T(180),NI-6020T(180),CU-6020T(180),ZN-6020T(180),PB-6020T(180),BE-6020T(180),AS-6020T(180),SB-6020T(180),AG-6020T(180),CD-6020T(180),HG-T(28)
L1422287-08K	Plastic 250ml NaOH preserved	B	>12	2.6	Y	Absent	TCN-9010(14)
L1422287-08W	Plastic 500ml HNO3 preserved	B	<2	2.6	Y	Absent	CU-6020S(180),SE-6020S(180),BE-6020S(180),ZN-6020S(180),CR-6020S(180),NI-6020S(180),PB-6020S(180),TL-6020S(180),AG-6020S(180),AS-6020S(180),SB-6020S(180),CD-6020S(180),HG-S(28)
L1422287-09A	Vial HCl preserved	A	N/A	2.6	Y	Absent	NYTCL-8260(14)

*Values in parentheses indicate holding time in days

Project Name: SITE1_SMP_2014
Project Number: SITE1_SMP_2014

Lab Number: L1422287
Report Date: 09/30/14

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1422287-09B	Vial HCl preserved	A	N/A	2.6	Y	Absent	NYTCL-8260(14)
L1422287-10A	Vial HCl preserved	A	N/A	2.6	Y	Absent	NYTCL-8260(14)
L1422287-10B	Vial HCl preserved	A	N/A	2.6	Y	Absent	NYTCL-8260(14)
L1422287-10C	Vial HCl preserved	A	N/A	2.6	Y	Absent	NYTCL-8260(14)
L1422287-10D	Amber 1000ml unpreserved	A	8	2.6	Y	Absent	NYTCL-8270(7),NYTCL-8270-SIM(7)
L1422287-10E	Amber 1000ml unpreserved	A	8	2.6	Y	Absent	NYTCL-8270(7),NYTCL-8270-SIM(7)
L1422287-10F	Amber 1000ml unpreserved	A	8	2.6	Y	Absent	NYTCL-8082-1200ML(7)
L1422287-10G	Amber 1000ml unpreserved	A	8	2.6	Y	Absent	NYTCL-8082-1200ML(7)
L1422287-10H	Amber 500ml unpreserved	A	8	2.6	Y	Absent	NYTCL-8081(7)
L1422287-10I	Amber 500ml unpreserved	A	8	2.6	Y	Absent	NYTCL-8081(7)
L1422287-10J	Plastic 500ml HNO3 preserved	A	<2	2.6	Y	Absent	SE-6020T(180),TL-6020T(180),CR-6020T(180),NI-6020T(180),CU-6020T(180),ZN-6020T(180),PB-6020T(180),BE-6020T(180),AS-6020T(180),SB-6020T(180),AG-6020T(180),CD-6020T(180),HG-T(28)
L1422287-10K	Plastic 250ml NaOH preserved	A	>12	2.6	Y	Absent	TCN-9010(14)
L1422287-10W	Plastic 500ml HNO3 preserved	A	<2	2.6	Y	Absent	CU-6020S(180),SE-6020S(180),BE-6020S(180),ZN-6020S(180),CR-6020S(180),NI-6020S(180),PB-6020S(180),TL-6020S(180),AG-6020S(180),AS-6020S(180),SB-6020S(180),CD-6020S(180),HG-S(28)
L1422287-11A	Vial HCl preserved	E	N/A	3.3	Y	Absent	NYTCL-8260(14)
L1422287-11B	Vial HCl preserved	E	N/A	3.3	Y	Absent	NYTCL-8260(14)
L1422287-11C	Vial HCl preserved	E	N/A	3.3	Y	Absent	NYTCL-8260(14)
L1422287-11D	Amber 1000ml unpreserved	E	8	3.3	Y	Absent	NYTCL-8270(7),NYTCL-8270-SIM(7)
L1422287-11E	Amber 1000ml unpreserved	E	8	3.3	Y	Absent	NYTCL-8270(7),NYTCL-8270-SIM(7)
L1422287-11F	Amber 1000ml unpreserved	E	8	3.3	Y	Absent	NYTCL-8082-1200ML(7)
L1422287-11G	Amber 1000ml unpreserved	E	8	3.3	Y	Absent	NYTCL-8082-1200ML(7)
L1422287-11H	Amber 500ml unpreserved	E	8	3.3	Y	Absent	NYTCL-8081(7)
L1422287-11I	Amber 500ml unpreserved	E	8	3.3	Y	Absent	NYTCL-8081(7)
L1422287-11J	Plastic 500ml HNO3 preserved	E	<2	3.3	Y	Absent	SE-6020T(180),TL-6020T(180),CR-6020T(180),NI-6020T(180),CU-6020T(180),ZN-6020T(180),PB-6020T(180),BE-6020T(180),AS-6020T(180),SB-6020T(180),AG-6020T(180),CD-6020T(180),HG-T(28)
L1422287-11K	Plastic 250ml NaOH preserved	E	>12	3.3	Y	Absent	TCN-9010(14)

*Values in parentheses indicate holding time in days

Project Name: SITE1_SMP_2014
Project Number: SITE1_SMP_2014

Lab Number: L1422287
Report Date: 09/30/14

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1422287-11W	Plastic 500ml HNO3 preserved	E	<2	3.3	Y	Absent	CU-6020S(180),SE-6020S(180),BE-6020S(180),ZN-6020S(180),CR-6020S(180),NI-6020S(180),PB-6020S(180),TL-6020S(180),AG-6020S(180),AS-6020S(180),SB-6020S(180),CD-6020S(180),HG-S(28)

*Values in parentheses indicate holding time in days

Project Name:	SITE1_SMP_2014	**Lab Number:**	L1422287
Project Number:	SITE1_SMP_2014	**Report Date:**	09/30/14

GLOSSARY

Acronyms

EDL - Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).

EPA - Environmental Protection Agency.

LCS - Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LCSD - Laboratory Control Sample Duplicate: Refer to LCS.

LFB - Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

MDL - Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

MS - Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available.

MSD - Matrix Spike Sample Duplicate: Refer to MS.

NA - Not Applicable.

NC - Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.

NI - Not Ignitable.

RL - Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

RPD - Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.

SRM - Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.

Footnotes

1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Data Qualifiers

A - Spectra identified as "Aldol Condensation Product".

B - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).

C - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.

D - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.

E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

Report Format: DU Report with 'J' Qualifiers

Project Name:	SITE1_SMP_2014	**Lab Number:**	L1422287
Project Number:	SITE1_SMP_2014	**Report Date:**	09/30/14

Data Qualifiers

G - The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.

H - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

I - The lower value for the two columns has been reported due to obvious interference.

M - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

NJ - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.

P - The RPD between the results for the two columns exceeds the method-specified criteria.

Q - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

J - Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

ND - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.

Report Format: DU Report with 'J' Qualifiers

Project Name:	SITE1_SMP_2014	**Lab Number:**	L1422287
Project Number:	SITE1_SMP_2014	**Report Date:**	09/30/14

REFERENCES

1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IV, 2007.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.

Certification Information

Last revised April 15, 2014

The following analytes are not included in our NELAP Scope of Accreditation:

Westborough Facility
EPA 524.2: Acetone, 2-Butanone (Methyl ethyl ketone (MEK)), Tert-butyl alcohol, 2-Hexanone, Tetrahydrofuran, 1,3,5-Trichlorobenzene, 4-Methyl-2-pentanone (MIBK), Carbon disulfide, Diethyl ether.
EPA 8260C: 1,2,4,5-Tetramethylbenzene, 4-Ethyltoluene, Iodomethane (methyl iodide), Methyl methacrylate, Azobenzene.
EPA 8330A/B: PETN, Picric Acid, Nitroglycerine, 2,6-DANT, 2,4-DANT.
EPA 8270D: 1-Methylnaphthalene, Dimethylnaphthalene,1,4-Diphenylhydrazine.
EPA 625: 4-Chloroaniline, 4-Methylphenol.
SM4500: Soil: Total Phosphorus, TKN, NO2, NO3.
EPA 9071: Total Petroleum Hydrocarbons, Oil & Grease.

Mansfield Facility
EPA 8270D: Biphenyl.
EPA 2540D: TSS
EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.

The following analytes are included in our Massachusetts DEP Scope of Accreditation, Westborough Facility:

Drinking Water
EPA 200.8: Sb,As,Ba,Be,Cd,Cr,Cu,Pb,Ni,Se,Tl; **EPA 200.7**: Ba,Be,Ca,Cd,Cr,Cu,Na; **EPA 245.1:** Mercury;
EPA 300.0: Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B**
EPA 332: Perchlorate.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT, Enterolert-QT.**

Non-Potable Water
EPA 200.8: Al,Sb,As,Be,Cd,Cr,Cu,Pb,Mn,Ni,Se,Ag,Tl,Zn;
EPA 200.7: Al,Sb,As,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Mo,Ni,K,Se,Ag,Na,Sr,Ti,Tl,V,Zn;
EPA 245.1, SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2340B, SM2320B, SM4500CL-E, SM4500F-BC, SM426C, SM4500NH3-BH, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **SM4500NO3-F, EPA 353.2**: Nitrate-N**, SM4500NH3-BC-NES, EPA 351.1, SM4500P-E, SM4500P-B, E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, SM14 510AC, EPA 420.1, SM4500-CN-CE, SM2540D.**
EPA 624: Volatile Halocarbons & Aromatics,
EPA 608: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
EPA 625: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045**: PCB-Oil.
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9222D-MF**.

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

THE PORT AUTHORITY OF NY & NJ

CHAIN-OF-CUSTODY / Analytical Request Document
PORT IVORY SEPT 23 2014

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed and accurate.

L1422287

Serial_No:09301420:02

Cooler # ALPHA of

Task:	SITE1_SMP_2014
Total # of Samples: 12	Event Complete?
TAT	SDG

Notes: F= Field Filtered , H= Hold

Project Information:

Facility:	
Charge code	p11955502
Task Description	Site 1 SMP samples

Contact Name	Dorian Bailey / Angelos Zafirelis
Contact Phone No.	201-216-2963 / 201-216-2960
Contact Fax No.	201-216-2158
Contact Email	DBailey@panynj.gov / AZafirel@panynj.gov
Destination Laboratory	Alpha Labs

ITEM #	Field Sample No. /Identification	MATRIX CODE	G=GRAB C=COMP	SAMPLE DATE & TIME	#OF CONTAINERS	Composite Description	CL_PP-METALS-13-D	PP+40	PPVOA+15
1	PRW-01-WG-201409231216	WG	G	9/23/2014 12:16	12		X	X	
2	PRW-02-WG-201409231226	WG	G	9/23/2014 12:26	12		X	X	
3	PRW-03-WG-201409231351	WG	G	9/23/2014 13:51	12		X	X	
4	~~PRW-04-WG-20140923~~	~~WG~~	~~G~~	~~9/23/2014~~			~~X~~	~~X~~	
5	PRW-05-WG-201409231101	WG	G	9/23/2014 11:01	12		X	X	
6	PRW-06-WG-201409231106	WG	G	9/23/2014 11:06	12		X	X	
7	PRW-07-WG-201409231351	WG	G	9/23/2014 13:51	12		X	X	
8	SW-4-WS-201409231530	WS	G	9/23/2014 15:30	36		X	X	
9	SW-5-WS-201409231515	WS	G	9/23/2014 15:15	12		X	X	
10	WQ-201409230000-TB-1	WQ	G	9/23/2014 00:00	2				X
11	WQ-201409231300 -FB-1	WQ	G	9/23/2014 13:00	12		X	X	

Additional Comments/Special Instructions:

SW-4: MS/MSD

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
Mark Pasquarello ESI	9-23-14	1610	[illegible] AAL	9-23-14	1610
[illegible] AAL	9-23-14	1835	Tom [illegible]	9-23-14	1835
Tom [illegible]	9-23-14	00:10	[illegible]	9/23/14	00:10

Sample Receipt Conditions

Temp in 0C	Samples on Ice?	Sample intact?	Trip Blank?
	(Y)/N	(Y)/N	(Y)/N
	Y/N	Y/N	Y/N
	Y/N	Y/N	Y/N
	Y/N	Y/N	Y/N

Deliverables:

NAME OF SAMPLER: Mark Pasquarello DATE/TIME: 9/23/14 1600

SIGNATURE of SAMPLER: [illegible]

THE PORT AUTHORITY OF NY & NJ

CHAIN-OF-CUSTODY / Analytical Request Document

PORT IVORY SEPT 23 2014

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed and accurate.

L1472287 Page: 2 of 2 Cooler # ALPHA of

Task:	SITE1_SMP_2014	
Total # of Samples: 12	Event Complete?	
TAT		SDG

Notes: F= Field Filtered , H= Hold

Project Information:

Facility:	
Charge code	p11955502
Task Description	Site 1 SMP samples

Contact Name	Dorian Bailey / Angelos Zafirelis
Contact Phone No.	201-216-2983 / 201-216-2960
Contact Fax No.	201-216-2158
Contact Email	DBailey@panynj.gov / AZafirel@panynj.gov
Destination Laboratory	Alpha Lab

ITEM #	Field Sample No. /Identification	MATRIX CODE	G=GRAB C=COMP	SAMPLE DATE & TIME	#OF CONTAINERS	Composite Description	Preservative / Analysis: CL_PP-METALS-13-D	PP+40	PPVOA+15					
12	WS-20140923 1515 -FD-1	WS	G	9/23/2014 15:15	12		X	X						

ANALYTICAL REPORT

Lab Number:	L1428583
Client:	Port Authority of New York/New Jersey Materials Engineering-Chemical/Env Lab 241 Erie Street-Room 210 Jersey City, NJ 07310
ATTN:	Angelos Zafirelis
Phone:	(201) 216-2960
Project Name:	Not Specified
Project Number:	SITE1_SMP_2014
Report Date:	12/03/14

Certifications & Approvals: MA (M-MA086), NY (11148), CT (PH-0574), NH (2003), NJ NELAP (MA935), RI (LAO00065), ME (MA00086), PA (68-03671), USDA (Permit #P-330-11-00240), NC (666), TX (T104704476), DOD (L2217), US Army Corps of Engineers.

Eight Walkup Drive, Westborough, MA 01581-1019
508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com

Project Name: Not Specified
Project Number: SITE1_SMP_2014

Lab Number: L1428583
Report Date: 12/03/14

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L1428583-01	PRW-07-WG-20141125-0931	WATER	SITE 1 SMP SAMPLES	11/25/14 09:31	11/25/14
L1428583-02	WQ-201411250950-FB-1	WATER	SITE 1 SMP SAMPLES	11/25/14 09:50	11/25/14
L1428583-03	WQ-201411250000-TB-1	WATER	SITE 1 SMP SAMPLES	11/25/14 00:00	11/25/14

Project Name: Not Specified
Project Number: SITE1_SMP_2014

Lab Number: L1428583
Report Date: 12/03/14

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet all of the requirements of NELAC, for all NELAC accredited parameters. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively. When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. All specific QC information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications. Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances the specific failure is not narrated but noted in the associated QC table. The information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications.

Please see the associated ADEx data file for a comparison of laboratory reporting limits that were achieved with the regulatory Numerical Standards requested on the Chain of Custody.

HOLD POLICY
For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Client Service Representative and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Client Services at 800-624-9220 with any questions.

Project Name: Not Specified
Project Number: SITE1_SMP_2014

Lab Number: L1428583
Report Date: 12/03/14

Case Narrative (continued)

Report Submission

All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column.

Volatile Organics

L1428583-02 and -03: The pHs of the samples were less than two. It should be noted that 2-chloroethylvinyl ether breaks down under acidic conditions.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature: Kelly Stenstrom

Title: Technical Director/Representative

Date: 12/03/14

ORGANICS

VOLATILES

Project Name: Not Specified
Lab Number: L1428583
Project Number: SITE1_SMP_2014
Report Date: 12/03/14

SAMPLE RESULTS

Lab ID: L1428583-01 D2
Client ID: PRW-07-WG-20141125-0931
Sample Location: SITE 1 SMP SAMPLES
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 12/03/14 10:35
Analyst: PD

Date Collected: 11/25/14 09:31
Date Received: 11/25/14
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Toluene	130000		ug/l	5000	1400	2000

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	97		70-130
Toluene-d8	99		70-130
4-Bromofluorobenzene	78		70-130
Dibromofluoromethane	97		70-130

Project Name: Not Specified **Lab Number:** L1428583

Project Number: SITE1_SMP_2014 **Report Date:** 12/03/14

SAMPLE RESULTS

Lab ID: L1428583-01 D
Client ID: PRW-07-WG-20141125-0931
Sample Location: SITE 1 SMP SAMPLES
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 12/02/14 12:24
Analyst: PD

Date Collected: 11/25/14 09:31
Date Received: 11/25/14
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	500	140	200
1,1-Dichloroethane	ND		ug/l	500	140	200
Chloroform	ND		ug/l	500	140	200
2-Chloroethylvinyl ether	ND		ug/l	2000	140	200
Carbon tetrachloride	ND		ug/l	100	27.	200
1,2-Dichloropropane	ND		ug/l	200	27.	200
Dibromochloromethane	ND		ug/l	100	30.	200
1,1,2-Trichloroethane	ND		ug/l	300	100	200
Tetrachloroethene	ND		ug/l	100	36.	200
Chlorobenzene	ND		ug/l	500	140	200
1,2-Dichloroethane	ND		ug/l	100	26.	200
1,1,1-Trichloroethane	ND		ug/l	500	140	200
Bromodichloromethane	ND		ug/l	100	38.	200
trans-1,3-Dichloropropene	ND		ug/l	100	33.	200
cis-1,3-Dichloropropene	ND		ug/l	100	29.	200
1,3-Dichloropropene, Total	ND		ug/l	100	29.	200
Bromoform	ND		ug/l	400	130	200
1,1,2,2-Tetrachloroethane	ND		ug/l	100	29.	200
Benzene	ND		ug/l	100	32.	200
Toluene	130000	E	ug/l	500	140	200
Ethylbenzene	ND		ug/l	500	140	200
Chloromethane	ND		ug/l	500	140	200
Bromomethane	ND		ug/l	500	140	200
Vinyl chloride	ND		ug/l	200	66.	200
Chloroethane	ND		ug/l	500	140	200
1,1-Dichloroethene	ND		ug/l	100	28.	200
trans-1,2-Dichloroethene	ND		ug/l	500	140	200
Trichloroethene	ND		ug/l	100	35.	200
1,2-Dichlorobenzene	ND		ug/l	500	140	200
1,3-Dichlorobenzene	ND		ug/l	500	140	200

Project Name: Not Specified **Lab Number:** L1428583

Project Number: SITE1_SMP_2014 **Report Date:** 12/03/14

SAMPLE RESULTS

Lab ID: L1428583-01 D Date Collected: 11/25/14 09:31

Client ID: PRW-07-WG-20141125-0931 Date Received: 11/25/14

Sample Location: SITE 1 SMP SAMPLES Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,4-Dichlorobenzene	ND		ug/l	500	140	200
Acrylonitrile	ND		ug/l	1000	300	200
Acrolein	ND		ug/l	1000	130	200

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	105		70-130
Toluene-d8	94		70-130
4-Bromofluorobenzene	105		70-130
Dibromofluoromethane	107		70-130

Project Name: Not Specified
Lab Number: L1428583
Project Number: SITE1_SMP_2014
Report Date: 12/03/14

SAMPLE RESULTS

Lab ID: L1428583-02
Client ID: WQ-201411250950-FB-1
Sample Location: SITE 1 SMP SAMPLES
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 12/02/14 11:56
Analyst: PD

Date Collected: 11/25/14 09:50
Date Received: 11/25/14
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	2.5	0.70	1
1,1-Dichloroethane	ND		ug/l	2.5	0.70	1
Chloroform	ND		ug/l	2.5	0.70	1
2-Chloroethylvinyl ether	ND		ug/l	10	0.70	1
Carbon tetrachloride	ND		ug/l	0.50	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.13	1
Dibromochloromethane	ND		ug/l	0.50	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50	1
Tetrachloroethene	ND		ug/l	0.50	0.18	1
Chlorobenzene	ND		ug/l	2.5	0.70	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70	1
Bromodichloromethane	ND		ug/l	0.50	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14	1
Bromoform	ND		ug/l	2.0	0.65	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.14	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	2.5	0.70	1
Ethylbenzene	ND		ug/l	2.5	0.70	1
Chloromethane	ND		ug/l	2.5	0.70	1
Bromomethane	ND		ug/l	2.5	0.70	1
Vinyl chloride	ND		ug/l	1.0	0.33	1
Chloroethane	ND		ug/l	2.5	0.70	1
1,1-Dichloroethene	ND		ug/l	0.50	0.14	1
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
Trichloroethene	ND		ug/l	0.50	0.18	1
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70	1
1,3-Dichlorobenzene	ND		ug/l	2.5	0.70	1

Project Name: Not Specified **Lab Number:** L1428583

Project Number: SITE1_SMP_2014 **Report Date:** 12/03/14

SAMPLE RESULTS

Lab ID: L1428583-02 Date Collected: 11/25/14 09:50

Client ID: WQ-201411250950-FB-1 Date Received: 11/25/14

Sample Location: SITE 1 SMP SAMPLES Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,4-Dichlorobenzene	ND		ug/l	2.5	0.70	1
Acrylonitrile	ND		ug/l	5.0	1.5	1
Acrolein	ND		ug/l	5.0	0.63	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	102		70-130
Toluene-d8	98		70-130
4-Bromofluorobenzene	109		70-130
Dibromofluoromethane	106		70-130

Project Name: Not Specified
Lab Number: L1428583
Project Number: SITE1_SMP_2014
Report Date: 12/03/14

SAMPLE RESULTS

Lab ID: L1428583-03
Client ID: WQ-201411250000-TB-1
Sample Location: SITE 1 SMP SAMPLES
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 12/02/14 11:28
Analyst: PD

Date Collected: 11/25/14 00:00
Date Received: 11/25/14
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	2.5	0.70	1
1,1-Dichloroethane	ND		ug/l	2.5	0.70	1
Chloroform	ND		ug/l	2.5	0.70	1
2-Chloroethylvinyl ether	ND		ug/l	10	0.70	1
Carbon tetrachloride	ND		ug/l	0.50	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.13	1
Dibromochloromethane	ND		ug/l	0.50	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50	1
Tetrachloroethene	ND		ug/l	0.50	0.18	1
Chlorobenzene	ND		ug/l	2.5	0.70	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70	1
Bromodichloromethane	ND		ug/l	0.50	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14	1
Bromoform	ND		ug/l	2.0	0.65	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.14	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	2.5	0.70	1
Ethylbenzene	ND		ug/l	2.5	0.70	1
Chloromethane	ND		ug/l	2.5	0.70	1
Bromomethane	ND		ug/l	2.5	0.70	1
Vinyl chloride	ND		ug/l	1.0	0.33	1
Chloroethane	ND		ug/l	2.5	0.70	1
1,1-Dichloroethene	ND		ug/l	0.50	0.14	1
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
Trichloroethene	ND		ug/l	0.50	0.18	1
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70	1
1,3-Dichlorobenzene	ND		ug/l	2.5	0.70	1

Project Name: Not Specified **Lab Number:** L1428583

Project Number: SITE1_SMP_2014 **Report Date:** 12/03/14

SAMPLE RESULTS

Lab ID: L1428583-03 Date Collected: 11/25/14 00:00

Client ID: WQ-201411250000-TB-1 Date Received: 11/25/14

Sample Location: SITE 1 SMP SAMPLES Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,4-Dichlorobenzene	ND		ug/l	2.5	0.70	1
Acrylonitrile	ND		ug/l	5.0	1.5	1
Acrolein	ND		ug/l	5.0	0.63	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	103		70-130
Toluene-d8	97		70-130
4-Bromofluorobenzene	109		70-130
Dibromofluoromethane	107		70-130

Project Name: Not Specified
Project Number: SITE1_SMP_2014

Lab Number: L1428583
Report Date: 12/03/14

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 12/02/14 09:36
Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-03 Batch: WG744907-3					
Methylene chloride	ND		ug/l	2.5	0.70
1,1-Dichloroethane	ND		ug/l	2.5	0.70
Chloroform	ND		ug/l	2.5	0.70
2-Chloroethylvinyl ether	ND		ug/l	10	0.70
Carbon tetrachloride	ND		ug/l	0.50	0.13
1,2-Dichloropropane	ND		ug/l	1.0	0.13
Dibromochloromethane	ND		ug/l	0.50	0.15
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50
Tetrachloroethene	ND		ug/l	0.50	0.18
Chlorobenzene	ND		ug/l	2.5	0.70
1,2-Dichloroethane	ND		ug/l	0.50	0.13
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70
Bromodichloromethane	ND		ug/l	0.50	0.19
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14
Bromoform	ND		ug/l	2.0	0.65
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.14
Benzene	ND		ug/l	0.50	0.16
Toluene	ND		ug/l	2.5	0.70
Ethylbenzene	ND		ug/l	2.5	0.70
Chloromethane	ND		ug/l	2.5	0.70
Bromomethane	ND		ug/l	2.5	0.70
Vinyl chloride	ND		ug/l	1.0	0.33
Chloroethane	ND		ug/l	2.5	0.70
1,1-Dichloroethene	ND		ug/l	0.50	0.14
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70
Trichloroethene	ND		ug/l	0.50	0.18
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70

Project Name: Not Specified
Project Number: SITE1_SMP_2014

Lab Number: L1428583
Report Date: 12/03/14

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 12/02/14 09:36
Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-03 Batch: WG744907-3					
1,3-Dichlorobenzene	ND		ug/l	2.5	0.70
1,4-Dichlorobenzene	ND		ug/l	2.5	0.70
Acrylonitrile	ND		ug/l	5.0	1.5
Acrolein	ND		ug/l	5.0	0.63

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	104		70-130
Toluene-d8	98		70-130
4-Bromofluorobenzene	108		70-130
Dibromofluoromethane	106		70-130

Project Name: Not Specified
Project Number: SITE1_SMP_2014

Lab Number: L1428583
Report Date: 12/03/14

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 12/03/14 10:08
Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01 Batch: WG744907-6					
Methylene chloride	ND		ug/l	2.5	0.70
1,1-Dichloroethane	ND		ug/l	2.5	0.70
Chloroform	ND		ug/l	2.5	0.70
2-Chloroethylvinyl ether	ND		ug/l	10	0.70
Carbon tetrachloride	ND		ug/l	0.50	0.13
1,2-Dichloropropane	ND		ug/l	1.0	0.13
Dibromochloromethane	ND		ug/l	0.50	0.15
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50
Tetrachloroethene	ND		ug/l	0.50	0.18
Chlorobenzene	ND		ug/l	2.5	0.70
1,2-Dichloroethane	ND		ug/l	0.50	0.13
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70
Bromodichloromethane	ND		ug/l	0.50	0.19
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14
Bromoform	ND		ug/l	2.0	0.65
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.14
Benzene	ND		ug/l	0.50	0.16
Toluene	ND		ug/l	2.5	0.70
Ethylbenzene	ND		ug/l	2.5	0.70
Chloromethane	ND		ug/l	2.5	0.70
Bromomethane	ND		ug/l	2.5	0.70
Vinyl chloride	ND		ug/l	1.0	0.33
Chloroethane	ND		ug/l	2.5	0.70
1,1-Dichloroethene	ND		ug/l	0.50	0.14
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70
Trichloroethene	ND		ug/l	0.50	0.18
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70

Project Name: Not Specified
Project Number: SITE1_SMP_2014

Lab Number: L1428583
Report Date: 12/03/14

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 12/03/14 10:08
Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01 Batch: WG744907-6					
1,3-Dichlorobenzene	ND		ug/l	2.5	0.70
1,4-Dichlorobenzene	ND		ug/l	2.5	0.70
Acrylonitrile	ND		ug/l	5.0	1.5

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	95		70-130
Toluene-d8	99		70-130
4-Bromofluorobenzene	79		70-130
Dibromofluoromethane	97		70-130

Lab Control Sample Analysis
Batch Quality Control

Project Name: Not Specified
Project Number: SITE1_SMP_2014

Lab Number: L1428583
Report Date: 12/03/14

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-03 Batch: WG744907-1 WG744907-2								
Methylene chloride	118		112		70-130	5		20
1,1-Dichloroethane	122		116		70-130	5		20
Chloroform	118		113		70-130	4		20
2-Chloroethylvinyl ether	79		76		70-130	4		20
Carbon tetrachloride	113		108		63-132	5		20
1,2-Dichloropropane	124		116		70-130	7		20
Dibromochloromethane	111		108		63-130	3		20
1,1,2-Trichloroethane	116		113		70-130	3		20
Tetrachloroethene	112		106		70-130	6		20
Chlorobenzene	112		107		75-130	5		20
Trichlorofluoromethane	100		96		62-150	4		20
1,2-Dichloroethane	122		116		70-130	5		20
1,1,1-Trichloroethane	113		109		67-130	4		20
Bromodichloromethane	116		112		67-130	4		20
trans-1,3-Dichloropropene	112		106		70-130	6		20
cis-1,3-Dichloropropene	114		108		70-130	5		20
1,1-Dichloropropene	111		108		70-130	3		20
Bromoform	109		106		54-136	3		20
1,1,2,2-Tetrachloroethane	117		114		67-130	3		20
Benzene	117		111		70-130	5		20
Toluene	114		107		70-130	6		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: Not Specified
Project Number: SITE1_SMP_2014

Lab Number: L1428583
Report Date: 12/03/14

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-03 Batch: WG744907-1 WG744907-2								
Ethylbenzene	112		106		70-130	6		20
Chloromethane	90		84		64-130	7		20
Bromomethane	117		99		39-139	17		20
Vinyl chloride	89		84		55-140	6		20
Chloroethane	105		99		55-138	6		20
1,1-Dichloroethene	101		96		61-145	5		20
trans-1,2-Dichloroethene	113		109		70-130	4		20
Trichloroethene	116		113		70-130	3		20
1,2-Dichlorobenzene	110		105		70-130	5		20
1,3-Dichlorobenzene	110		104		70-130	6		20
1,4-Dichlorobenzene	108		103		70-130	5		20
Methyl tert butyl ether	111		109		63-130	2		20
p/m-Xylene	112		106		70-130	6		20
o-Xylene	111		106		70-130	5		20
cis-1,2-Dichloroethene	115		111		70-130	4		20
Dibromomethane	119		114		70-130	4		20
1,2,3-Trichloropropane	112		114		64-130	2		20
Acrylonitrile	**132**	Q	129		70-130	2		20
Isopropyl Ether	123		117		70-130	5		20
tert-Butyl Alcohol	120		125		70-130	4		20
Styrene	110		104		70-130	6		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: Not Specified
Project Number: SITE1_SMP_2014

Lab Number: L1428583
Report Date: 12/03/14

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-03 Batch: WG744907-1 WG744907-2								
Dichlorodifluoromethane	64		62		36-147	3		20
Acetone	69		68		58-148	1		20
Carbon disulfide	94		88		51-130	7		20
2-Butanone	114		111		63-138	3		20
Vinyl acetate	120		116		70-130	3		20
4-Methyl-2-pentanone	113		112		59-130	1		20
2-Hexanone	95		93		57-130	2		20
Acrolein	130		126		40-160	3		20
Bromochloromethane	124		119		70-130	4		20
2,2-Dichloropropane	120		115		63-133	4		20
1,2-Dibromoethane	112		107		70-130	5		20
1,3-Dichloropropane	114		110		70-130	4		20
1,1,1,2-Tetrachloroethane	113		109		64-130	4		20
Bromobenzene	112		106		70-130	6		20
n-Butylbenzene	106		100		53-136	6		20
sec-Butylbenzene	107		102		70-130	5		20
tert-Butylbenzene	108		102		70-130	6		20
o-Chlorotoluene	114		108		70-130	5		20
p-Chlorotoluene	112		106		70-130	6		20
1,2-Dibromo-3-chloropropane	109		106		41-144	3		20
Hexachlorobutadiene	99		91		63-130	8		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: Not Specified
Project Number: SITE1_SMP_2014

Lab Number: L1428583
Report Date: 12/03/14

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-03 Batch: WG744907-1 WG744907-2								
Isopropylbenzene	111		105		70-130	6		20
p-Isopropyltoluene	105		100		70-130	5		20
Naphthalene	84		91		70-130	8		20
n-Propylbenzene	111		106		69-130	5		20
1,2,3-Trichlorobenzene	94		100		70-130	6		20
1,2,4-Trichlorobenzene	90		93		70-130	3		20
1,3,5-Trimethylbenzene	111		104		64-130	7		20
1,2,4-Trimethylbenzene	110		104		70-130	6		20
Methyl Acetate	126		124		70-130	2		20
Ethyl Acetate	113		117		70-130	3		20
Cyclohexane	116		112		70-130	4		20
Ethyl-Tert-Butyl-Ether	116		113		70-130	3		20
Tertiary-Amyl Methyl Ether	111		107		66-130	4		20
1,4-Dioxane	102		103		56-162	1		20
1,1,2-Trichloro-1,2,2-Trifluoroethane	106		99		70-130	7		20
1,4-Diethylbenzene	103		97		70-130	6		20
4-Ethyltoluene	111		104		70-130	7		20
1,2,4,5-Tetramethylbenzene	108		102		70-130	6		20
Ethyl ether	111		106		59-134	5		20
trans-1,4-Dichloro-2-butene	114		112		70-130	2		20
Iodomethane	99		97		70-130	2		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: Not Specified

Project Number: SITE1_SMP_2014

Lab Number: L1428583

Report Date: 12/03/14

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-03 Batch: WG744907-1 WG744907-2								
Methyl cyclohexane	111		106		70-130	5		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	100		100		70-130
Toluene-d8	98		98		70-130
4-Bromofluorobenzene	99		99		70-130
Dibromofluoromethane	103		101		70-130

Lab Control Sample Analysis
Batch Quality Control

Project Name: Not Specified
Project Number: SITE1_SMP_2014

Lab Number: L1428583
Report Date: 12/03/14

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01 Batch: WG744907-4 WG744907-5								
Methylene chloride	91		89		70-130	2		20
1,1-Dichloroethane	93		90		70-130	3		20
Chloroform	98		95		70-130	3		20
2-Chloroethylvinyl ether	80		80		70-130	0		20
Carbon tetrachloride	95		92		63-132	3		20
1,2-Dichloropropane	88		86		70-130	2		20
Dibromochloromethane	97		95		63-130	2		20
1,1,2-Trichloroethane	95		94		70-130	1		20
Tetrachloroethene	100		97		70-130	3		20
Chlorobenzene	101		98		75-130	3		20
Trichlorofluoromethane	89		87		62-150	2		20
1,2-Dichloroethane	92		90		70-130	2		20
1,1,1-Trichloroethane	96		94		67-130	2		20
Bromodichloromethane	91		88		67-130	3		20
trans-1,3-Dichloropropene	97		95		70-130	2		20
cis-1,3-Dichloropropene	86		84		70-130	2		20
1,1-Dichloropropene	92		90		70-130	2		20
Bromoform	84		82		54-136	2		20
1,1,2,2-Tetrachloroethane	79		78		67-130	1		20
Benzene	92		90		70-130	2		20
Toluene	97		94		70-130	3		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: Not Specified

Project Number: SITE1_SMP_2014

Lab Number: L1428583

Report Date: 12/03/14

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01 Batch: WG744907-4 WG744907-5								
Ethylbenzene	100		97		70-130	3		20
Chloromethane	**48**	Q	**50**	Q	64-130	4		20
Bromomethane	65		68		39-139	5		20
Vinyl chloride	69		67		55-140	3		20
Chloroethane	89		90		55-138	1		20
1,1-Dichloroethene	92		91		61-145	1		20
trans-1,2-Dichloroethene	96		92		70-130	4		20
Trichloroethene	94		92		70-130	2		20
1,2-Dichlorobenzene	96		93		70-130	3		20
1,3-Dichlorobenzene	101		97		70-130	4		20
1,4-Dichlorobenzene	102		98		70-130	4		20
Methyl tert butyl ether	89		90		63-130	1		20
p/m-Xylene	112		108		70-130	4		20
o-Xylene	109		105		70-130	4		20
cis-1,2-Dichloroethene	96		94		70-130	2		20
Dibromomethane	86		86		70-130	0		20
1,2,3-Trichloropropane	91		89		64-130	2		20
Acrylonitrile	91		91		70-130	0		20
Isopropyl Ether	89		88		70-130	1		20
tert-Butyl Alcohol	96		94		70-130	2		20
Styrene	108		105		70-130	3		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: Not Specified
Project Number: SITE1_SMP_2014

Lab Number: L1428583
Report Date: 12/03/14

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01 Batch: WG744907-4 WG744907-5								
Dichlorodifluoromethane	58		55		36-147	5		20
Acetone	69		66		58-148	4		20
Carbon disulfide	72		70		51-130	3		20
2-Butanone	73		73		63-138	0		20
Vinyl acetate	83		81		70-130	2		20
4-Methyl-2-pentanone	78		78		59-130	0		20
2-Hexanone	70		71		57-130	1		20
Bromochloromethane	99		99		70-130	0		20
2,2-Dichloropropane	94		91		63-133	3		20
1,2-Dibromoethane	92		90		70-130	2		20
1,3-Dichloropropane	92		91		70-130	1		20
1,1,1,2-Tetrachloroethane	108		104		64-130	4		20
Bromobenzene	81		78		70-130	4		20
n-Butylbenzene	103		98		53-136	5		20
sec-Butylbenzene	97		92		70-130	5		20
tert-Butylbenzene	90		86		70-130	5		20
o-Chlorotoluene	92		89		70-130	3		20
p-Chlorotoluene	93		89		70-130	4		20
1,2-Dibromo-3-chloropropane	87		85		41-144	2		20
Hexachlorobutadiene	91		88		63-130	3		20
Isopropylbenzene	78		74		70-130	5		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: Not Specified
Project Number: SITE1_SMP_2014

Lab Number: L1428583
Report Date: 12/03/14

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01 Batch: WG744907-4 WG744907-5								
p-Isopropyltoluene	101		96		70-130	5		20
Naphthalene	85		85		70-130	0		20
n-Propylbenzene	85		81		69-130	5		20
1,2,3-Trichlorobenzene	94		94		70-130	0		20
1,2,4-Trichlorobenzene	98		95		70-130	3		20
1,3,5-Trimethylbenzene	102		98		64-130	4		20
1,2,4-Trimethylbenzene	99		94		70-130	5		20
Methyl Acetate	91		92		70-130	1		20
Ethyl Acetate	83		84		70-130	1		20
Cyclohexane	87		85		70-130	2		20
Ethyl-Tert-Butyl-Ether	89		89		70-130	0		20
Tertiary-Amyl Methyl Ether	85		85		66-130	0		20
1,4-Dioxane	105		98		56-162	7		20
1,1,2-Trichloro-1,2,2-Trifluoroethane	99		97		70-130	2		20
1,4-Diethylbenzene	102		97		70-130	5		20
4-Ethyltoluene	92		88		70-130	4		20
1,2,4,5-Tetramethylbenzene	93		89		70-130	4		20
Ethyl ether	93		92		59-134	1		20
trans-1,4-Dichloro-2-butene	78		77		70-130	1		20
Methyl cyclohexane	95		92		70-130	3		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: Not Specified

Project Number: SITE1_SMP_2014

Lab Number: L1428583

Report Date: 12/03/14

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01 Batch: WG744907-4 WG744907-5								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	97		98		70-130
Toluene-d8	99		99		70-130
4-Bromofluorobenzene	81		80		70-130
Dibromofluoromethane	104		104		70-130

Project Name: Not Specified
Project Number: SITE1_SMP_2014

Lab Number: L1428583
Report Date: 12/03/14

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Reagent H2O Preserved Vials Frozen on: NA

Cooler Information **Custody Seal**

Cooler	
A	Absent

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1428583-01A	Vial HCl preserved	A	N/A	2.2	Y	Absent	NYTCL-8260(14)
L1428583-01B	Vial HCl preserved	A	N/A	2.2	Y	Absent	NYTCL-8260(14)
L1428583-01C	Vial HCl preserved	A	N/A	2.2	Y	Absent	NYTCL-8260(14)
L1428583-02A	Vial HCl preserved	A	N/A	2.2	Y	Absent	NYTCL-8260(14)
L1428583-02B	Vial HCl preserved	A	N/A	2.2	Y	Absent	NYTCL-8260(14)
L1428583-02C	Vial HCl preserved	A	N/A	2.2	Y	Absent	NYTCL-8260(14)
L1428583-03A	Vial HCl preserved	A	N/A	2.2	Y	Absent	NYTCL-8260(14)
L1428583-03B	Vial HCl preserved	A	N/A	2.2	Y	Absent	NYTCL-8260(14)

*Values in parentheses indicate holding time in days

Project Name:	Not Specified	**Lab Number:**	L1428583
Project Number:	SITE1_SMP_2014	**Report Date:**	12/03/14

GLOSSARY

Acronyms

EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NI	- Not Ignitable.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.

Footnotes

1	- The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Data Qualifiers

A	- Spectra identified as "Aldol Condensation Product".
B	- The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).
C	- Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
D	- Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
E	- Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

Report Format: DU Report with 'J' Qualifiers

Project Name:	Not Specified	**Lab Number:**	L1428583
Project Number:	SITE1_SMP_2014	**Report Date:**	12/03/14

Data Qualifiers

G - The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.

H - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

I - The lower value for the two columns has been reported due to obvious interference.

M - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

NJ - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.

P - The RPD between the results for the two columns exceeds the method-specified criteria.

Q - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

J - Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

ND - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.

Report Format: DU Report with 'J' Qualifiers

REFERENCES

1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IV, 2007.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.

Certification Information

Last revised April 15, 2014

The following analytes are not included in our NELAP Scope of Accreditation:

Westborough Facility
EPA 524.2: Acetone, 2-Butanone (Methyl ethyl ketone (MEK)), Tert-butyl alcohol, 2-Hexanone, Tetrahydrofuran, 1,3,5-Trichlorobenzene, 4-Methyl-2-pentanone (MIBK), Carbon disulfide, Diethyl ether.
EPA 8260C: 1,2,4,5-Tetramethylbenzene, 4-Ethyltoluene, Iodomethane (methyl iodide), Methyl methacrylate, Azobenzene.
EPA 8330A/B: PETN, Picric Acid, Nitroglycerine, 2,6-DANT, 2,4-DANT.
EPA 8270D: 1-Methylnaphthalene, Dimethylnaphthalene,1,4-Diphenylhydrazine.
EPA 625: 4-Chloroaniline, 4-Methylphenol.
SM4500: Soil: Total Phosphorus, TKN, NO2, NO3.
EPA 9071: Total Petroleum Hydrocarbons, Oil & Grease.

Mansfield Facility
EPA 8270D: Biphenyl.
EPA 2540D: TSS
EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.

The following analytes are included in our Massachusetts DEP Scope of Accreditation, Westborough Facility:

Drinking Water
EPA 200.8: Sb,As,Ba,Be,Cd,Cr,Cu,Pb,Ni,Se,Tl; **EPA 200.7**: Ba,Be,Ca,Cd,Cr,Cu,Na; **EPA 245.1:** Mercury;
EPA 300.0: Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B**
EPA 332: Perchlorate.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT, Enterolert-QT.**

Non-Potable Water
EPA 200.8: Al,Sb,As,Be,Cd,Cr,Cu,Pb,Mn,Ni,Se,Ag,Tl,Zn;
EPA 200.7: Al,Sb,As,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Mo,Ni,K,Se,Ag,Na,Sr,Ti,Tl,V,Zn;
EPA 245.1, SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2340B, SM2320B, SM4500CL-E, SM4500F-BC, SM426C, SM4500NH3-BH, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **SM4500NO3-F, EPA 353.2**: Nitrate-N**, SM4500NH3-BC-NES, EPA 351.1, SM4500P-E, SM4500P-B, E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, SM14 510AC, EPA 420.1, SM4500-CN-CE, SM2540D.**
EPA 624: Volatile Halocarbons & Aromatics,
EPA 608: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
EPA 625: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045**: PCB-Oil.
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9222D-MF**.

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

L142 8583

THE PORT AUTHORITY OF NY & NJ

CHAIN-OF-CUSTODY / Analytical Request Document

PORT IVORY Nov 25 2014

Serial_No:12031412:41

Page: 1 of 2

Cooler # ALPHA of

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed and accurate.

Task:	SITE1_SMP_2014
Total # of Samples: 3	Event Complete?
TAT	SDG

Notes: F= Field Filtered , H= Hold

Project Information:

Facility:	
Charge code	p11955502
Task Description	Site 1 SMP samples

Contact Name	Dorian Bailey / Angelos Zafirelis
Contact Phone No.	201-216-2963 / 201-216-2960
Contact Fax No.	201-216-2158
Contact Email	DBailey@panynj.gov / AZafirel@panynj.gov
Destination Laboratory	Alpha Labs

ITEM #	Field Sample No. /Identification	MATRIX CODE	G=GRAB C=COMP	SAMPLE DATE & TIME	#OF CONTAINERS	Composite Description	Analysis / Preservative: PPVOA+15							
1	PRW-07-WG-20141125 -0931	WG	G	11/25/2014 9:31	3		X							
2	WQ-20141125 0950 -FB-1	WG	G	11/25/2014 9:50	3		X							
3	WQ-201411250000-TB-1	WG	G	11/25/2014	2		X							
4														
5														
6														
7														
8														
9														
10														
11														

Additional Comments/Special Instructions:

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
	11/25/14		AAL 11/25/14	14:40	
	11/25/14	2050		11-25-14	2050
	(11-26-14	0950	AAL	11-26-14	0050

Sample Receipt Conditions			
	Y/N	Y/N	Y/N
	Y/N	Y/N	Y/N
	Y/N	Y/N	Y/N
2.2	(Y)N	(Y)N	(Y)N
Temp in OC	Samples on Ice?	Sample Intact?	Trip Blank?

Deliverables:

NAME OF SAMPLER	Robert DeBerardinis	DATE/TIME:	11-25-14
SIGNATURE of SAMPLER:			

ANALYTICAL REPORT

Lab Number:	L1424399
Client:	Port Authority of New York/New Jersey Materials Engineering-Chemical/Env Lab 241 Erie Street-Room 210 Jersey City, NJ 07310
ATTN:	Angelos Zafirelis
Phone:	(201) 216-2960
Project Name:	SITE1_SMP_2014
Project Number:	SITE1_SMP_2014
Report Date:	10/21/14

Certifications & Approvals: MA (M-MA086), NY (11148), CT (PH-0574), NH (2003), NJ NELAP (MA935), RI (LAO00065), ME (MA00086), PA (68-03671), USDA (Permit #P-330-11-00240), NC (666), TX (T104704476), DOD (L2217), US Army Corps of Engineers.

Eight Walkup Drive, Westborough, MA 01581-1019
508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com

Project Name: SITE1_SMP_2014
Project Number: SITE1_SMP_2014

Lab Number: L1424399
Report Date: 10/21/14

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L1424399-01	PRW-04-WG-201410141021	WATER	HOWLAND HOOK MARINE/PORT IVORY	10/14/14 10:21	10/14/14
L1424399-02	WQ-201410140000-TB-1	WATER	HOWLAND HOOK MARINE/PORT IVORY	10/10/14 00:00	10/14/14
L1424399-03	WQ-201410140930-FB-1	WATER	HOWLAND HOOK MARINE/PORT IVORY	10/14/14 09:30	10/14/14

Project Name: SITE1_SMP_2014 **Lab Number:** L1424399
Project Number: SITE1_SMP_2014 **Report Date:** 10/21/14

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet all of the requirements of NELAC, for all NELAC accredited parameters. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively. When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. All specific QC information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications. Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances the specific failure is not narrated but noted in the associated QC table. The information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications.

Please see the associated ADEx data file for a comparison of laboratory reporting limits that were achieved with the regulatory Numerical Standards requested on the Chain of Custody.

HOLD POLICY
For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Client Service Representative and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Client Services at 800-624-9220 with any questions.

Project Name: SITE1_SMP_2014 **Lab Number:** L1424399
Project Number: SITE1_SMP_2014 **Report Date:** 10/21/14

Case Narrative (continued)

Report Submission

All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column.

Sample Receipt

The samples were field filtered for Dissolved Metals.

Volatile Organics

L1424399-01, -02, and -03: The pH of the samples was less than two. It should be noted that 2-Chloroethylvinyl ether breaks down under acidic conditions.

L1424399-01 has elevated detection limits due to the dilution required by the elevated concentrations of non-target compounds in the sample.

Semivolatile Organics by SIM

L1424399-01 has elevated detection limits due to the dilution required by the sample matrix.

PCBs

L1424399-01: The internal standard (IS) response for 1-bromo-2-nitrobenzene was above the acceptance criteria; however, the sample was not re-analyzed due to obvious interferences.

The surrogate recoveries for L1424399-01 are below the method acceptance criteria for 2,4,5,6-tetrachloro-m-xylene (16%) and decachlorobiphenyl (14%) due to interference with the Internal Standard.

Pesticides

L1424399-01: The internal standard (IS) response for 1-bromo-2-nitrobenzene was above the acceptance criteria due to obvious interferences. The sample was re-analyzed on dilution and both sets of results are reported.

Project Name:	SITE1_SMP_2014	**Lab Number:**	L1424399
Project Number:	SITE1_SMP_2014	**Report Date:**	10/21/14

Case Narrative (continued)

Dissolved Metals

The WG731348-4 MS recovery, performed on L1424399-01, is outside the acceptance criteria for mercury (52%). A post digestion spike was performed and yielded an unacceptable recovery of 65%. This has been attributed to sample matrix.

Total Metals

The WG731350-4 MS recovery, performed on L1424399-01, is outside the acceptance criteria for mercury (49%). A post digestion spike was performed and yielded an unacceptable recovery of 74%. This has been attributed to sample matrix.

The WG732407-4 MS recovery, performed on L1424399-01, is outside the acceptance criteria for zinc (59%). A post digestion spike was performed and yielded an unacceptable recovery of 0%. This has been attributed to sample matrix.

The WG732407-3 Laboratory Duplicate RPDs, performed on L1424399-01, are outside the acceptance criteria for copper (28%), lead (55%), and zinc (95%). The elevated RPDs have been attributed to the non-homogeneous nature of the sample utilized for the laboratory duplicate.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature:  Kelly Stenstrom

Title: Technical Director/Representative Date: 10/21/14

ORGANICS

VOLATILES

Project Name: SITE1_SMP_2014 **Lab Number:** L1424399

Project Number: SITE1_SMP_2014 **Report Date:** 10/21/14

SAMPLE RESULTS

Lab ID: L1424399-01 D
Client ID: PRW-04-WG-201410141021
Sample Location: HOWLAND HOOK MARINE/PORT IVORY
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 10/17/14 12:36
Analyst: PD

Date Collected: 10/14/14 10:21
Date Received: 10/14/14
Field Prep: See Narrative

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	25	7.0	10
1,1-Dichloroethane	ND		ug/l	25	7.0	10
Chloroform	ND		ug/l	25	7.0	10
2-Chloroethylvinyl ether	ND		ug/l	100	7.0	10
Carbon tetrachloride	ND		ug/l	5.0	1.3	10
1,2-Dichloropropane	ND		ug/l	10	1.3	10
Dibromochloromethane	ND		ug/l	5.0	1.5	10
1,1,2-Trichloroethane	ND		ug/l	15	5.0	10
Tetrachloroethene	ND		ug/l	5.0	1.8	10
Chlorobenzene	ND		ug/l	25	7.0	10
1,2-Dichloroethane	ND		ug/l	5.0	1.3	10
1,1,1-Trichloroethane	ND		ug/l	25	7.0	10
Bromodichloromethane	ND		ug/l	5.0	1.9	10
trans-1,3-Dichloropropene	ND		ug/l	5.0	1.6	10
cis-1,3-Dichloropropene	ND		ug/l	5.0	1.4	10
1,3-Dichloropropene, Total	ND		ug/l	5.0	1.4	10
Bromoform	ND		ug/l	20	6.5	10
1,1,2,2-Tetrachloroethane	ND		ug/l	5.0	1.4	10
Benzene	ND		ug/l	5.0	1.6	10
Toluene	7.6	J	ug/l	25	7.0	10
Ethylbenzene	ND		ug/l	25	7.0	10
Chloromethane	ND		ug/l	25	7.0	10
Bromomethane	ND		ug/l	25	7.0	10
Vinyl chloride	ND		ug/l	10	3.3	10
Chloroethane	ND		ug/l	25	7.0	10
1,1-Dichloroethene	ND		ug/l	5.0	1.4	10
trans-1,2-Dichloroethene	ND		ug/l	25	7.0	10
Trichloroethene	ND		ug/l	5.0	1.8	10
1,2-Dichlorobenzene	ND		ug/l	25	7.0	10
1,3-Dichlorobenzene	ND		ug/l	25	7.0	10

Project Name: SITE1_SMP_2014 **Lab Number:** L1424399

Project Number: SITE1_SMP_2014 **Report Date:** 10/21/14

SAMPLE RESULTS

Lab ID: L1424399-01 D Date Collected: 10/14/14 10:21

Client ID: PRW-04-WG-201410141021 Date Received: 10/14/14

Sample Location: HOWLAND HOOK MARINE/PORT IVORY Field Prep: See Narrative

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,4-Dichlorobenzene	ND		ug/l	25	7.0	10
Acrylonitrile	ND		ug/l	50	15.	10
Acrolein	ND		ug/l	50	6.3	10

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	110		70-130
Toluene-d8	97		70-130
4-Bromofluorobenzene	97		70-130
Dibromofluoromethane	106		70-130

Project Name: SITE1_SMP_2014 **Lab Number:** L1424399

Project Number: SITE1_SMP_2014 **Report Date:** 10/21/14

SAMPLE RESULTS

Lab ID: L1424399-02
Client ID: WQ-201410140000-TB-1
Sample Location: HOWLAND HOOK MARINE/PORT IVORY
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 10/17/14 13:10
Analyst: PD

Date Collected: 10/10/14 00:00
Date Received: 10/14/14
Field Prep: None

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	2.5	0.70	1
1,1-Dichloroethane	ND		ug/l	2.5	0.70	1
Chloroform	ND		ug/l	2.5	0.70	1
2-Chloroethylvinyl ether	ND		ug/l	10	0.70	1
Carbon tetrachloride	ND		ug/l	0.50	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.13	1
Dibromochloromethane	ND		ug/l	0.50	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50	1
Tetrachloroethene	ND		ug/l	0.50	0.18	1
Chlorobenzene	ND		ug/l	2.5	0.70	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70	1
Bromodichloromethane	ND		ug/l	0.50	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14	1
Bromoform	ND		ug/l	2.0	0.65	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.14	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	2.5	0.70	1
Ethylbenzene	ND		ug/l	2.5	0.70	1
Chloromethane	ND		ug/l	2.5	0.70	1
Bromomethane	ND		ug/l	2.5	0.70	1
Vinyl chloride	ND		ug/l	1.0	0.33	1
Chloroethane	ND		ug/l	2.5	0.70	1
1,1-Dichloroethene	ND		ug/l	0.50	0.14	1
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
Trichloroethene	ND		ug/l	0.50	0.18	1
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70	1
1,3-Dichlorobenzene	ND		ug/l	2.5	0.70	1

Project Name: SITE1_SMP_2014 **Lab Number:** L1424399

Project Number: SITE1_SMP_2014 **Report Date:** 10/21/14

SAMPLE RESULTS

Lab ID: L1424399-02 Date Collected: 10/10/14 00:00

Client ID: WQ-201410140000-TB-1 Date Received: 10/14/14

Sample Location: HOWLAND HOOK MARINE/PORT IVORY Field Prep: None

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,4-Dichlorobenzene	ND		ug/l	2.5	0.70	1
Acrylonitrile	ND		ug/l	5.0	1.5	1
Acrolein	ND		ug/l	5.0	0.63	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	108		70-130
Toluene-d8	97		70-130
4-Bromofluorobenzene	100		70-130
Dibromofluoromethane	108		70-130

Project Name: SITE1_SMP_2014 **Lab Number:** L1424399

Project Number: SITE1_SMP_2014 **Report Date:** 10/21/14

SAMPLE RESULTS

Lab ID: L1424399-03
Client ID: WQ-201410140930-FB-1
Sample Location: HOWLAND HOOK MARINE/PORT IVORY
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 10/17/14 13:45
Analyst: PD

Date Collected: 10/14/14 09:30
Date Received: 10/14/14
Field Prep: See Narrative

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	2.5	0.70	1
1,1-Dichloroethane	ND		ug/l	2.5	0.70	1
Chloroform	ND		ug/l	2.5	0.70	1
2-Chloroethylvinyl ether	ND		ug/l	10	0.70	1
Carbon tetrachloride	ND		ug/l	0.50	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.13	1
Dibromochloromethane	ND		ug/l	0.50	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50	1
Tetrachloroethene	ND		ug/l	0.50	0.18	1
Chlorobenzene	ND		ug/l	2.5	0.70	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70	1
Bromodichloromethane	ND		ug/l	0.50	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14	1
Bromoform	ND		ug/l	2.0	0.65	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.14	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	2.5	0.70	1
Ethylbenzene	ND		ug/l	2.5	0.70	1
Chloromethane	ND		ug/l	2.5	0.70	1
Bromomethane	ND		ug/l	2.5	0.70	1
Vinyl chloride	ND		ug/l	1.0	0.33	1
Chloroethane	ND		ug/l	2.5	0.70	1
1,1-Dichloroethene	ND		ug/l	0.50	0.14	1
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
Trichloroethene	ND		ug/l	0.50	0.18	1
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70	1
1,3-Dichlorobenzene	ND		ug/l	2.5	0.70	1

Project Name: SITE1_SMP_2014 **Lab Number:** L1424399

Project Number: SITE1_SMP_2014 **Report Date:** 10/21/14

SAMPLE RESULTS

Lab ID: L1424399-03 Date Collected: 10/14/14 09:30

Client ID: WQ-201410140930-FB-1 Date Received: 10/14/14

Sample Location: HOWLAND HOOK MARINE/PORT IVORY Field Prep: See Narrative

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,4-Dichlorobenzene	ND		ug/l	2.5	0.70	1
Acrylonitrile	ND		ug/l	5.0	1.5	1
Acrolein	ND		ug/l	5.0	0.63	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	111		70-130
Toluene-d8	99		70-130
4-Bromofluorobenzene	101		70-130
Dibromofluoromethane	106		70-130

Project Name: SITE1_SMP_2014 **Lab Number:** L1424399

Project Number: SITE1_SMP_2014 **Report Date:** 10/21/14

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 10/17/14 10:53
Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-03 Batch: WG732096-3					
Methylene chloride	ND		ug/l	2.5	0.70
1,1-Dichloroethane	ND		ug/l	2.5	0.70
Chloroform	ND		ug/l	2.5	0.70
2-Chloroethylvinyl ether	ND		ug/l	10	0.70
Carbon tetrachloride	ND		ug/l	0.50	0.13
1,2-Dichloropropane	ND		ug/l	1.0	0.13
Dibromochloromethane	ND		ug/l	0.50	0.15
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50
Tetrachloroethene	ND		ug/l	0.50	0.18
Chlorobenzene	ND		ug/l	2.5	0.70
1,2-Dichloroethane	ND		ug/l	0.50	0.13
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70
Bromodichloromethane	ND		ug/l	0.50	0.19
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14
Bromoform	ND		ug/l	2.0	0.65
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.14
Benzene	ND		ug/l	0.50	0.16
Toluene	ND		ug/l	2.5	0.70
Ethylbenzene	ND		ug/l	2.5	0.70
Chloromethane	ND		ug/l	2.5	0.70
Bromomethane	ND		ug/l	2.5	0.70
Vinyl chloride	ND		ug/l	1.0	0.33
Chloroethane	ND		ug/l	2.5	0.70
1,1-Dichloroethene	ND		ug/l	0.50	0.14
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70
Trichloroethene	ND		ug/l	0.50	0.18
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70

Project Name: SITE1_SMP_2014 **Lab Number:** L1424399

Project Number: SITE1_SMP_2014 **Report Date:** 10/21/14

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 10/17/14 10:53
Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-03 Batch: WG732096-3					
1,3-Dichlorobenzene	ND		ug/l	2.5	0.70
1,4-Dichlorobenzene	ND		ug/l	2.5	0.70
Acrylonitrile	ND		ug/l	5.0	1.5
Acrolein	ND		ug/l	5.0	0.63

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	110		70-130
Toluene-d8	97		70-130
4-Bromofluorobenzene	98		70-130
Dibromofluoromethane	105		70-130

Lab Control Sample Analysis
Batch Quality Control

Project Name: SITE1_SMP_2014
Project Number: SITE1_SMP_2014

Lab Number: L1424399
Report Date: 10/21/14

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-03 Batch: WG732096-1 WG732096-2								
Methylene chloride	84		81		70-130	4		20
1,1-Dichloroethane	83		84		70-130	1		20
Chloroform	91		88		70-130	3		20
2-Chloroethylvinyl ether	80		76		70-130	5		20
Carbon tetrachloride	84		80		63-132	5		20
1,2-Dichloropropane	82		80		70-130	2		20
Dibromochloromethane	88		85		63-130	3		20
1,1,2-Trichloroethane	86		82		70-130	5		20
Tetrachloroethene	86		84		70-130	2		20
Chlorobenzene	90		87		75-130	3		20
Trichlorofluoromethane	82		80		62-150	2		20
1,2-Dichloroethane	92		91		70-130	1		20
1,1,1-Trichloroethane	89		86		67-130	3		20
Bromodichloromethane	90		89		67-130	1		20
trans-1,3-Dichloropropene	85		82		70-130	4		20
cis-1,3-Dichloropropene	87		86		70-130	1		20
1,1-Dichloropropene	80		80		70-130	0		20
Bromoform	86		84		54-136	2		20
1,1,2,2-Tetrachloroethane	82		82		67-130	0		20
Benzene	84		82		70-130	2		20
Toluene	84		82		70-130	2		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: SITE1_SMP_2014
Project Number: SITE1_SMP_2014

Lab Number: L1424399
Report Date: 10/21/14

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-03 Batch: WG732096-1 WG732096-2								
Ethylbenzene	86		85		70-130	1		20
Chloromethane	70		69		64-130	1		20
Bromomethane	99		94		39-139	5		20
Vinyl chloride	74		72		55-140	3		20
Chloroethane	80		79		55-138	1		20
1,1-Dichloroethene	79		78		61-145	1		20
trans-1,2-Dichloroethene	82		82		70-130	0		20
Trichloroethene	87		86		70-130	1		20
1,2-Dichlorobenzene	90		88		70-130	2		20
1,3-Dichlorobenzene	89		88		70-130	1		20
1,4-Dichlorobenzene	89		86		70-130	3		20
Methyl tert butyl ether	85		84		63-130	1		20
p/m-Xylene	89		87		70-130	2		20
o-Xylene	91		89		70-130	2		20
cis-1,2-Dichloroethene	84		86		70-130	2		20
Dibromomethane	90		91		70-130	1		20
1,2,3-Trichloropropane	83		83		64-130	0		20
Acrylonitrile	80		81		70-130	1		20
Isopropyl Ether	81		79		70-130	3		20
tert-Butyl Alcohol	83		84		70-130	1		20
Styrene	91		90		70-130	1		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: SITE1_SMP_2014
Project Number: SITE1_SMP_2014

Lab Number: L1424399
Report Date: 10/21/14

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-03 Batch: WG732096-1 WG732096-2								
Dichlorodifluoromethane	47		46		36-147	2		20
Acetone	102		94		58-148	8		20
Carbon disulfide	73		73		51-130	0		20
2-Butanone	70		69		63-138	1		20
Vinyl acetate	80		80		70-130	0		20
4-Methyl-2-pentanone	80		80		59-130	0		20
2-Hexanone	79		75		57-130	5		20
Acrolein	82		85		40-160	4		20
Bromochloromethane	97		96		70-130	1		20
2,2-Dichloropropane	91		88		63-133	3		20
1,2-Dibromoethane	87		86		70-130	1		20
1,3-Dichloropropane	86		83		70-130	4		20
1,1,1,2-Tetrachloroethane	94		92		64-130	2		20
Bromobenzene	91		90		70-130	1		20
n-Butylbenzene	80		77		53-136	4		20
sec-Butylbenzene	83		81		70-130	2		20
tert-Butylbenzene	88		85		70-130	3		20
o-Chlorotoluene	87		84		70-130	4		20
p-Chlorotoluene	88		85		70-130	3		20
1,2-Dibromo-3-chloropropane	81		80		41-144	1		20
Hexachlorobutadiene	94		87		63-130	8		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: SITE1_SMP_2014
Project Number: SITE1_SMP_2014

Lab Number: L1424399
Report Date: 10/21/14

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-03 Batch: WG732096-1 WG732096-2								
Isopropylbenzene	90		88		70-130	2		20
p-Isopropyltoluene	84		82		70-130	2		20
Naphthalene	85		84		70-130	1		20
n-Propylbenzene	83		81		69-130	2		20
1,2,3-Trichlorobenzene	89		87		70-130	2		20
1,2,4-Trichlorobenzene	88		86		70-130	2		20
1,3,5-Trimethylbenzene	88		85		64-130	3		20
1,2,4-Trimethylbenzene	84		82		70-130	2		20
Methyl Acetate	80		80		70-130	0		20
Ethyl Acetate	80		75		70-130	6		20
Cyclohexane	70		**67**	Q	70-130	4		20
Ethyl-Tert-Butyl-Ether	83		84		70-130	1		20
Tertiary-Amyl Methyl Ether	85		84		66-130	1		20
1,4-Dioxane	87		95		56-162	9		20
1,1,2-Trichloro-1,2,2-Trifluoroethane	78		75		70-130	4		20
1,4-Diethylbenzene	91		90		70-130	1		20
4-Ethyltoluene	86		85		70-130	1		20
1,2,4,5-Tetramethylbenzene	84		80		70-130	5		20
Ethyl ether	82		82		59-134	0		20
trans-1,4-Dichloro-2-butene	74		72		70-130	3		20
Iodomethane	95		98		70-130	3		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: SITE1_SMP_2014

Project Number: SITE1_SMP_2014

Lab Number: L1424399

Report Date: 10/21/14

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-03 Batch: WG732096-1 WG732096-2								
Methyl cyclohexane	78		74		70-130	5		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	106		108		70-130
Toluene-d8	96		97		70-130
4-Bromofluorobenzene	97		96		70-130
Dibromofluoromethane	108		109		70-130

SEMIVOLATILES

Project Name: SITE1_SMP_2014 **Lab Number:** L1424399

Project Number: SITE1_SMP_2014 **Report Date:** 10/21/14

SAMPLE RESULTS

Lab ID:	L1424399-01	Date Collected:	10/14/14 10:21
Client ID:	PRW-04-WG-201410141021	Date Received:	10/14/14
Sample Location:	HOWLAND HOOK MARINE/PORT IVORY	Field Prep:	See Narrative
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8270D	Extraction Date:	10/16/14 01:02
Analytical Date:	10/20/14 11:24		
Analyst:	RC		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.21	1
Benzidine	ND		ug/l	20	5.2	1
n-Nitrosodimethylamine	ND		ug/l	2.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.41	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	0.48	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.0	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.89	1
Azobenzene	ND		ug/l	2.0	0.54	1
4-Chlorophenyl phenyl ether	ND		ug/l	2.0	0.36	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.43	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.60	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.60	1
Hexachlorocyclopentadiene	ND		ug/l	20	0.58	1
Isophorone	ND		ug/l	5.0	0.79	1
Nitrobenzene	ND		ug/l	2.0	0.40	1
NDPA/DPA	ND		ug/l	2.0	0.34	1
n-Nitrosodi-n-propylamine	ND		ug/l	5.0	0.64	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	0.93	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.1	1
Di-n-butylphthalate	ND		ug/l	5.0	0.77	1
Di-n-octylphthalate	ND		ug/l	5.0	1.2	1
Diethyl phthalate	ND		ug/l	5.0	0.39	1
Dimethyl phthalate	ND		ug/l	5.0	0.33	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.78	1
p-Chloro-m-cresol	ND		ug/l	2.0	0.54	1
2-Chlorophenol	ND		ug/l	2.0	0.58	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.56	1
2,4-Dimethylphenol	ND		ug/l	5.0	0.58	1
2-Nitrophenol	ND		ug/l	10	1.0	1
4-Nitrophenol	ND		ug/l	10	1.1	1

Project Name: SITE1_SMP_2014 **Lab Number:** L1424399

Project Number: SITE1_SMP_2014 **Report Date:** 10/21/14

SAMPLE RESULTS

Lab ID: L1424399-01 Date Collected: 10/14/14 10:21

Client ID: PRW-04-WG-201410141021 Date Received: 10/14/14

Sample Location: HOWLAND HOOK MARINE/PORT IVORY Field Prep: See Narrative

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
2,4-Dinitrophenol	ND		ug/l	20	1.4	1
4,6-Dinitro-o-cresol	ND		ug/l	10	1.4	1
Phenol	14		ug/l	5.0	0.27	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	30		21-120
Phenol-d6	22		10-120
Nitrobenzene-d5	73		23-120
2-Fluorobiphenyl	81		15-120
2,4,6-Tribromophenol	63		10-120
4-Terphenyl-d14	63		41-149

Project Name: SITE1_SMP_2014 **Lab Number:** L1424399

Project Number: SITE1_SMP_2014 **Report Date:** 10/21/14

SAMPLE RESULTS

Lab ID: L1424399-01 D
Client ID: PRW-04-WG-201410141021
Sample Location: HOWLAND HOOK MARINE/PORT IVORY
Matrix: Water
Analytical Method: 1,8270D-SIM
Analytical Date: 10/19/14 06:54
Analyst: MW

Date Collected: 10/14/14 10:21
Date Received: 10/14/14
Field Prep: See Narrative
Extraction Method: EPA 3510C
Extraction Date: 10/16/14 01:03

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS-SIM - Westborough Lab						
Acenaphthene	0.19	J	ug/l	0.40	0.13	2
2-Chloronaphthalene	ND		ug/l	0.40	0.13	2
Fluoranthene	0.16	J	ug/l	0.40	0.09	2
Hexachlorobutadiene	ND		ug/l	1.0	0.14	2
Naphthalene	9.9		ug/l	0.40	0.13	2
Benzo(a)anthracene	ND		ug/l	0.40	0.11	2
Benzo(a)pyrene	ND		ug/l	0.40	0.14	2
Benzo(b)fluoranthene	ND		ug/l	0.40	0.14	2
Benzo(k)fluoranthene	ND		ug/l	0.40	0.14	2
Chrysene	ND		ug/l	0.40	0.10	2
Acenaphthylene	ND		ug/l	0.40	0.10	2
Anthracene	0.22	J	ug/l	0.40	0.13	2
Benzo(ghi)perylene	ND		ug/l	0.40	0.14	2
Fluorene	0.19	J	ug/l	0.40	0.11	2
Phenanthrene	0.66		ug/l	0.40	0.13	2
Dibenzo(a,h)anthracene	ND		ug/l	0.40	0.15	2
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.40	0.16	2
Pyrene	ND		ug/l	0.40	0.11	2
Pentachlorophenol	ND		ug/l	1.6	0.37	2
Hexachlorobenzene	ND		ug/l	1.6	0.03	2
Hexachloroethane	ND		ug/l	1.6	0.13	2

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	29		21-120
Phenol-d6	20		10-120
Nitrobenzene-d5	70		23-120
2-Fluorobiphenyl	68		15-120
2,4,6-Tribromophenol	79		10-120
4-Terphenyl-d14	70		41-149

Project Name: SITE1_SMP_2014 **Lab Number:** L1424399

Project Number: SITE1_SMP_2014 **Report Date:** 10/21/14

SAMPLE RESULTS

Lab ID:	L1424399-03	Date Collected:	10/14/14 09:30
Client ID:	WQ-201410140930-FB-1	Date Received:	10/14/14
Sample Location:	HOWLAND HOOK MARINE/PORT IVORY	Field Prep:	See Narrative
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8270D	Extraction Date:	10/16/14 01:02
Analytical Date:	10/20/14 11:52		
Analyst:	RC		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.21	1
Benzidine	ND		ug/l	20	5.2	1
n-Nitrosodimethylamine	ND		ug/l	2.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.41	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	0.48	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.0	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.89	1
Azobenzene	ND		ug/l	2.0	0.54	1
4-Chlorophenyl phenyl ether	ND		ug/l	2.0	0.36	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.43	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.60	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.60	1
Hexachlorocyclopentadiene	ND		ug/l	20	0.58	1
Isophorone	ND		ug/l	5.0	0.79	1
Nitrobenzene	ND		ug/l	2.0	0.40	1
NDPA/DPA	ND		ug/l	2.0	0.34	1
n-Nitrosodi-n-propylamine	ND		ug/l	5.0	0.64	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	0.93	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.1	1
Di-n-butylphthalate	ND		ug/l	5.0	0.77	1
Di-n-octylphthalate	ND		ug/l	5.0	1.2	1
Diethyl phthalate	ND		ug/l	5.0	0.39	1
Dimethyl phthalate	ND		ug/l	5.0	0.33	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.78	1
p-Chloro-m-cresol	ND		ug/l	2.0	0.54	1
2-Chlorophenol	ND		ug/l	2.0	0.58	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.56	1
2,4-Dimethylphenol	ND		ug/l	5.0	0.58	1
2-Nitrophenol	ND		ug/l	10	1.0	1
4-Nitrophenol	ND		ug/l	10	1.1	1

Project Name: SITE1_SMP_2014 **Lab Number:** L1424399

Project Number: SITE1_SMP_2014 **Report Date:** 10/21/14

SAMPLE RESULTS

Lab ID: L1424399-03 Date Collected: 10/14/14 09:30

Client ID: WQ-201410140930-FB-1 Date Received: 10/14/14

Sample Location: HOWLAND HOOK MARINE/PORT IVORY Field Prep: See Narrative

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
2,4-Dinitrophenol	ND		ug/l	20	1.4	1
4,6-Dinitro-o-cresol	ND		ug/l	10	1.4	1
Phenol	ND		ug/l	5.0	0.27	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	22		21-120
Phenol-d6	16		10-120
Nitrobenzene-d5	53		23-120
2-Fluorobiphenyl	54		15-120
2,4,6-Tribromophenol	56		10-120
4-Terphenyl-d14	73		41-149

Project Name: SITE1_SMP_2014 **Lab Number:** L1424399

Project Number: SITE1_SMP_2014 **Report Date:** 10/21/14

SAMPLE RESULTS

Lab ID:	L1424399-03	Date Collected:	10/14/14 09:30
Client ID:	WQ-201410140930-FB-1	Date Received:	10/14/14
Sample Location:	HOWLAND HOOK MARINE/PORT IVORY	Field Prep:	See Narrative
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8270D-SIM	Extraction Date:	10/16/14 01:03
Analytical Date:	10/19/14 03:19		
Analyst:	MW		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS-SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.20	0.06	1
2-Chloronaphthalene	ND		ug/l	0.20	0.07	1
Fluoranthene	ND		ug/l	0.20	0.04	1
Hexachlorobutadiene	ND		ug/l	0.50	0.07	1
Naphthalene	ND		ug/l	0.20	0.06	1
Benzo(a)anthracene	ND		ug/l	0.20	0.06	1
Benzo(a)pyrene	ND		ug/l	0.20	0.07	1
Benzo(b)fluoranthene	ND		ug/l	0.20	0.07	1
Benzo(k)fluoranthene	ND		ug/l	0.20	0.07	1
Chrysene	ND		ug/l	0.20	0.05	1
Acenaphthylene	ND		ug/l	0.20	0.05	1
Anthracene	ND		ug/l	0.20	0.06	1
Benzo(ghi)perylene	ND		ug/l	0.20	0.07	1
Fluorene	ND		ug/l	0.20	0.06	1
Phenanthrene	ND		ug/l	0.20	0.06	1
Dibenzo(a,h)anthracene	ND		ug/l	0.20	0.07	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.20	0.08	1
Pyrene	ND		ug/l	0.20	0.06	1
Pentachlorophenol	ND		ug/l	0.80	0.19	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.07	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	22		21-120
Phenol-d6	15		10-120
Nitrobenzene-d5	50		23-120
2-Fluorobiphenyl	52		15-120
2,4,6-Tribromophenol	66		10-120
4-Terphenyl-d14	73		41-149

Project Name: SITE1_SMP_2014 **Lab Number:** L1424399

Project Number: SITE1_SMP_2014 **Report Date:** 10/21/14

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270D-SIM
Analytical Date: 10/16/14 10:35
Analyst: MW

Extraction Method: EPA 3510C
Extraction Date: 10/16/14 01:03

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS-SIM - Westborough Lab for sample(s): 01,03 Batch: WG731494-1					
Acenaphthene	ND		ug/l	0.20	0.06
2-Chloronaphthalene	ND		ug/l	0.20	0.07
Fluoranthene	ND		ug/l	0.20	0.04
Hexachlorobutadiene	ND		ug/l	0.50	0.07
Naphthalene	ND		ug/l	0.20	0.06
Benzo(a)anthracene	ND		ug/l	0.20	0.06
Benzo(a)pyrene	ND		ug/l	0.20	0.07
Benzo(b)fluoranthene	ND		ug/l	0.20	0.07
Benzo(k)fluoranthene	ND		ug/l	0.20	0.07
Chrysene	ND		ug/l	0.20	0.05
Acenaphthylene	ND		ug/l	0.20	0.05
Anthracene	ND		ug/l	0.20	0.06
Benzo(ghi)perylene	ND		ug/l	0.20	0.07
Fluorene	ND		ug/l	0.20	0.06
Phenanthrene	ND		ug/l	0.20	0.06
Dibenzo(a,h)anthracene	ND		ug/l	0.20	0.07
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.20	0.08
Pyrene	ND		ug/l	0.20	0.06
Pentachlorophenol	ND		ug/l	0.80	0.19
Hexachlorobenzene	ND		ug/l	0.80	0.01
Hexachloroethane	ND		ug/l	0.80	0.07

Project Name: SITE1_SMP_2014
Project Number: SITE1_SMP_2014

Lab Number: L1424399
Report Date: 10/21/14

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270D-SIM
Analytical Date: 10/16/14 10:35
Analyst: MW

Extraction Method: EPA 3510C
Extraction Date: 10/16/14 01:03

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS-SIM - Westborough Lab for sample(s): 01,03 Batch: WG731494-1					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	28		21-120
Phenol-d6	18		10-120
Nitrobenzene-d5	63		23-120
2-Fluorobiphenyl	60		15-120
2,4,6-Tribromophenol	69		10-120
4-Terphenyl-d14	62		41-149

Project Name: SITE1_SMP_2014 **Lab Number:** L1424399

Project Number: SITE1_SMP_2014 **Report Date:** 10/21/14

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270D
Analytical Date: 10/16/14 09:44
Analyst: RC

Extraction Method: EPA 3510C
Extraction Date: 10/16/14 01:02

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01,03 Batch: WG731495-1					
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.21
Benzidine	ND		ug/l	20	5.2
n-Nitrosodimethylamine	ND		ug/l	2.0	0.50
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.41
3,3'-Dichlorobenzidine	ND		ug/l	5.0	0.48
2,4-Dinitrotoluene	ND		ug/l	5.0	1.0
2,6-Dinitrotoluene	ND		ug/l	5.0	0.89
Azobenzene	ND		ug/l	2.0	0.54
4-Chlorophenyl phenyl ether	ND		ug/l	2.0	0.36
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.43
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.60
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.60
Hexachlorocyclopentadiene	ND		ug/l	20	0.58
Isophorone	ND		ug/l	5.0	0.79
Nitrobenzene	ND		ug/l	2.0	0.40
NDPA/DPA	ND		ug/l	2.0	0.34
n-Nitrosodi-n-propylamine	ND		ug/l	5.0	0.64
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	0.93
Butyl benzyl phthalate	ND		ug/l	5.0	1.1
Di-n-butylphthalate	ND		ug/l	5.0	0.77
Di-n-octylphthalate	ND		ug/l	5.0	1.2
Diethyl phthalate	ND		ug/l	5.0	0.39
Dimethyl phthalate	ND		ug/l	5.0	0.33
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.78
p-Chloro-m-cresol	ND		ug/l	2.0	0.54
2-Chlorophenol	ND		ug/l	2.0	0.58
2,4-Dichlorophenol	ND		ug/l	5.0	0.56
2,4-Dimethylphenol	ND		ug/l	5.0	0.58
2-Nitrophenol	ND		ug/l	10	1.0

Project Name: SITE1_SMP_2014
Project Number: SITE1_SMP_2014

Lab Number: L1424399
Report Date: 10/21/14

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270D
Analytical Date: 10/16/14 09:44
Analyst: RC

Extraction Method: EPA 3510C
Extraction Date: 10/16/14 01:02

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01,03 Batch: WG731495-1					
4-Nitrophenol	ND		ug/l	10	1.1
2,4-Dinitrophenol	ND		ug/l	20	1.4
4,6-Dinitro-o-cresol	ND		ug/l	10	1.4
Phenol	ND		ug/l	5.0	0.27

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	31		21-120
Phenol-d6	21		10-120
Nitrobenzene-d5	63		23-120
2-Fluorobiphenyl	61		15-120
2,4,6-Tribromophenol	73		10-120
4-Terphenyl-d14	64		41-149

Lab Control Sample Analysis

Batch Quality Control

Project Name: SITE1_SMP_2014

Project Number: SITE1_SMP_2014

Lab Number: L1424399

Report Date: 10/21/14

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS-SIM - Westborough Lab Associated sample(s): 01,03 Batch: WG731494-2 WG731494-3								
Acenaphthene	58		58		37-111	0		40
2-Chloronaphthalene	57		55		40-140	4		40
Fluoranthene	79		82		40-140	4		40
Hexachlorobutadiene	45		41		40-140	9		40
Naphthalene	54		48		40-140	12		40
Benzo(a)anthracene	80		83		40-140	4		40
Benzo(a)pyrene	78		82		40-140	5		40
Benzo(b)fluoranthene	79		84		40-140	6		40
Benzo(k)fluoranthene	77		80		40-140	4		40
Chrysene	72		76		40-140	5		40
Acenaphthylene	69		64		40-140	8		40
Anthracene	76		74		40-140	3		40
Benzo(ghi)perylene	77		80		40-140	4		40
Fluorene	70		70		40-140	0		40
Phenanthrene	69		70		40-140	1		40
Dibenzo(a,h)anthracene	83		86		40-140	4		40
Indeno(1,2,3-cd)pyrene	83		87		40-140	5		40
Pyrene	76		78		26-127	3		40
2-Methylnaphthalene	57		53		40-140	7		40
Pentachlorophenol	64		68		9-103	6		40
Hexachlorobenzene	71		72		40-140	1		40

Lab Control Sample Analysis

Batch Quality Control

Project Name: SITE1_SMP_2014
Project Number: SITE1_SMP_2014

Lab Number: L1424399
Report Date: 10/21/14

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS-SIM - Westborough Lab Associated sample(s): 01,03 Batch: WG731494-2 WG731494-3								
Hexachloroethane	47		43		40-140	9		40

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	33		32		21-120
Phenol-d6	23		22		10-120
Nitrobenzene-d5	73		71		23-120
2-Fluorobiphenyl	74		73		15-120
2,4,6-Tribromophenol	85		89		10-120
4-Terphenyl-d14	74		78		41-149

Lab Control Sample Analysis
Batch Quality Control

Project Name: SITE1_SMP_2014
Project Number: SITE1_SMP_2014

Lab Number: L1424399
Report Date: 10/21/14

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01,03 Batch: WG731495-2 WG731495-3								
Acenaphthene	74		72		37-111	3		30
1,2,4-Trichlorobenzene	53		56		39-98	6		30
Benzidine	19		42			**75**	Q	30
n-Nitrosodimethylamine	36		35			3		30
Hexachlorobenzene	84		80		40-140	5		30
Bis(2-chloroethyl)ether	71		72		40-140	1		30
2-Chloronaphthalene	70		69		40-140	1		30
1,2-Dichlorobenzene	53		55		40-140	4		30
1,3-Dichlorobenzene	50		52		40-140	4		30
1,4-Dichlorobenzene	50		51		36-97	2		30
3,3'-Dichlorobenzidine	80		80		40-140	0		30
2,4-Dinitrotoluene	90		87		24-96	3		30
2,6-Dinitrotoluene	82		80		40-140	2		30
Azobenzene	79		79		40-140	0		30
Fluoranthene	80		80		40-140	0		30
4-Chlorophenyl phenyl ether	75		74		40-140	1		30
4-Bromophenyl phenyl ether	82		82		40-140	0		30
Bis(2-chloroisopropyl)ether	71		72		40-140	1		30
Bis(2-chloroethoxy)methane	80		79		40-140	1		30
Hexachlorobutadiene	51		51		40-140	0		30
Hexachlorocyclopentadiene	46		46		40-140	0		30

Lab Control Sample Analysis
Batch Quality Control

Project Name: SITE1_SMP_2014
Project Number: SITE1_SMP_2014

Lab Number: L1424399
Report Date: 10/21/14

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01,03 Batch: WG731495-2 WG731495-3								
Hexachloroethane	48		49		40-140	2		30
Isophorone	73		73		40-140	0		30
Naphthalene	59		60		40-140	2		30
Nitrobenzene	74		74		40-140	0		30
NitrosoDiPhenylAmine(NDPA)/DPA	79		79		40-140	0		30
n-Nitrosodi-n-propylamine	77		78		29-132	1		30
Bis(2-Ethylhexyl)phthalate	83		82		40-140	1		30
Butyl benzyl phthalate	85		88		40-140	3		30
Di-n-butylphthalate	85		85		40-140	0		30
Di-n-octylphthalate	85		86		40-140	1		30
Diethyl phthalate	85		84		40-140	1		30
Dimethyl phthalate	82		80		40-140	2		30
Benzo(a)anthracene	82		81		40-140	1		30
Benzo(a)pyrene	77		75		40-140	3		30
Benzo(b)fluoranthene	81		79		40-140	3		30
Benzo(k)fluoranthene	79		82		40-140	4		30
Chrysene	80		80		40-140	0		30
Acenaphthylene	70		70		45-123	0		30
Anthracene	77		78		40-140	1		30
Benzo(ghi)perylene	85		82		40-140	4		30
Fluorene	77		76		40-140	1		30

Lab Control Sample Analysis
Batch Quality Control

Project Name: SITE1_SMP_2014
Project Number: SITE1_SMP_2014

Lab Number: L1424399
Report Date: 10/21/14

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01,03 Batch: WG731495-2 WG731495-3								
Phenanthrene	78		77		40-140	1		30
Dibenzo(a,h)anthracene	80		79		40-140	1		30
Indeno(1,2,3-cd)Pyrene	82		82		40-140	0		30
Pyrene	78		82		26-127	5		30
Biphenyl	74		74			0		30
Aniline	45		43		40-140	5		30
4-Chloroaniline	90		89		40-140	1		30
2-Nitroaniline	80		79		52-143	1		30
3-Nitroaniline	64		61		25-145	5		30
4-Nitroaniline	77		80		51-143	4		30
Dibenzofuran	75		74		40-140	1		30
2-Methylnaphthalene	66		63		40-140	5		30
1,2,4,5-Tetrachlorobenzene	67		67		2-134	0		30
Acetophenone	76		78		39-129	3		30
2,4,6-Trichlorophenol	84		84		30-130	0		30
P-Chloro-M-Cresol	77		75		23-97	3		30
2-Chlorophenol	63		66		27-123	5		30
2,4-Dichlorophenol	74		76		30-130	3		30
2,4-Dimethylphenol	75		76		30-130	1		30
2-Nitrophenol	78		74		30-130	5		30
4-Nitrophenol	41		40		10-80	2		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: SITE1_SMP_2014

Project Number: SITE1_SMP_2014

Lab Number: L1424399

Report Date: 10/21/14

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01,03 Batch: WG731495-2 WG731495-3								
2,4-Dinitrophenol	81		83		20-130	2		30
4,6-Dinitro-o-cresol	87		85		20-164	2		30
Pentachlorophenol	93		92		9-103	1		30
Phenol	24		28		12-110	15		30
2-Methylphenol	60		59		30-130	2		30
3-Methylphenol/4-Methylphenol	57		59		30-130	3		30
2,4,5-Trichlorophenol	84		82		30-130	2		30
Benzoic Acid	24		25			4		30
Benzyl Alcohol	52		55			6		30
Carbazole	81		83		55-144	2		30
Pyridine	20		20		10-66	0		30
Benzaldehyde	86		93		40-140	8		30
Caprolactam	19		17		10-130	11		30
Atrazine	85		88		40-140	3		30
2,3,4,6-Tetrachlorophenol	80		76		54-145	5		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: SITE1_SMP_2014
Project Number: SITE1_SMP_2014

Lab Number: L1424399
Report Date: 10/21/14

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01,03 Batch: WG731495-2 WG731495-3								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	43		46		21-120
Phenol-d6	33		34		10-120
Nitrobenzene-d5	88		94		23-120
2-Fluorobiphenyl	87		87		15-120
2,4,6-Tribromophenol	99		100		10-120
4-Terphenyl-d14	83		87		41-149

PCBS

Project Name: SITE1_SMP_2014 **Lab Number:** L1424399

Project Number: SITE1_SMP_2014 **Report Date:** 10/21/14

SAMPLE RESULTS

Lab ID:	L1424399-01	Date Collected:	10/14/14 10:21
Client ID:	PRW-04-WG-201410141021	Date Received:	10/14/14
Sample Location:	HOWLAND HOOK MARINE/PORT IVORY	Field Prep:	See Narrative
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8082A	Extraction Date:	10/15/14 16:55
Analytical Date:	10/16/14 18:27	Cleanup Method:	EPA 3665A
Analyst:	JT	Cleanup Date:	10/16/14
		Cleanup Method:	EPA 3660B
		Cleanup Date:	10/16/14

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/l	0.083	0.055	1	B
Aroclor 1221	ND		ug/l	0.083	0.053	1	B
Aroclor 1232	ND		ug/l	0.083	0.031	1	B
Aroclor 1242	ND		ug/l	0.083	0.060	1	B
Aroclor 1248	ND		ug/l	0.083	0.051	1	B
Aroclor 1254	ND		ug/l	0.083	0.034	1	B
Aroclor 1260	ND		ug/l	0.083	0.032	1	B
Aroclor 1262	ND		ug/l	0.083	0.029	1	B
Aroclor 1268	ND		ug/l	0.083	0.038	1	B
PCBs, Total	ND		ug/l	0.083	0.029	1	B

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	93		30-150	B
Decachlorobiphenyl	87		30-150	B
2,4,5,6-Tetrachloro-m-xylene	**16**	Q	30-150	A
Decachlorobiphenyl	**14**	Q	30-150	A

Project Name: SITE1_SMP_2014 **Lab Number:** L1424399

Project Number: SITE1_SMP_2014 **Report Date:** 10/21/14

SAMPLE RESULTS

Lab ID:	L1424399-03	Date Collected:	10/14/14 09:30
Client ID:	WQ-201410140930-FB-1	Date Received:	10/14/14
Sample Location:	HOWLAND HOOK MARINE/PORT IVORY	Field Prep:	See Narrative
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8082A	Extraction Date:	10/15/14 16:55
Analytical Date:	10/16/14 18:40	Cleanup Method:	EPA 3665A
Analyst:	JT	Cleanup Date:	10/16/14
		Cleanup Method:	EPA 3660B
		Cleanup Date:	10/16/14

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/l	0.083	0.055	1	A
Aroclor 1221	ND		ug/l	0.083	0.053	1	A
Aroclor 1232	ND		ug/l	0.083	0.031	1	A
Aroclor 1242	ND		ug/l	0.083	0.060	1	A
Aroclor 1248	ND		ug/l	0.083	0.051	1	A
Aroclor 1254	ND		ug/l	0.083	0.034	1	A
Aroclor 1260	ND		ug/l	0.083	0.032	1	A
Aroclor 1262	ND		ug/l	0.083	0.029	1	A
Aroclor 1268	ND		ug/l	0.083	0.038	1	A
PCBs, Total	ND		ug/l	0.083	0.029	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	71		30-150	B
Decachlorobiphenyl	67		30-150	B
2,4,5,6-Tetrachloro-m-xylene	63		30-150	A
Decachlorobiphenyl	63		30-150	A

Project Name: SITE1_SMP_2014 **Lab Number:** L1424399

Project Number: SITE1_SMP_2014 **Report Date:** 10/21/14

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8082A
Analytical Date: 10/16/14 18:53
Analyst: JT

Extraction Method: EPA 3510C
Extraction Date: 10/15/14 16:55
Cleanup Method: EPA 3665A
Cleanup Date: 10/16/14
Cleanup Method: EPA 3660B
Cleanup Date: 10/16/14

Parameter	Result	Qualifier	Units	RL	MDL	Column
Polychlorinated Biphenyls by GC - Westborough Lab for sample(s): 01,03 Batch: WG731398-1						
Aroclor 1016	ND		ug/l	0.083	0.055	A
Aroclor 1221	ND		ug/l	0.083	0.053	A
Aroclor 1232	ND		ug/l	0.083	0.031	A
Aroclor 1242	ND		ug/l	0.083	0.060	A
Aroclor 1248	ND		ug/l	0.083	0.051	A
Aroclor 1254	ND		ug/l	0.083	0.034	A
Aroclor 1260	ND		ug/l	0.083	0.032	A
Aroclor 1262	ND		ug/l	0.083	0.029	A
Aroclor 1268	ND		ug/l	0.083	0.038	A
PCBs, Total	ND		ug/l	0.083	0.029	A

Surrogate	%Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	56		30-150	B
Decachlorobiphenyl	72		30-150	B
2,4,5,6-Tetrachloro-m-xylene	50		30-150	A
Decachlorobiphenyl	68		30-150	A

Lab Control Sample Analysis

Batch Quality Control

Project Name: SITE1_SMP_2014

Project Number: SITE1_SMP_2014

Lab Number: L1424399

Report Date: 10/21/14

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
Polychlorinated Biphenyls by GC - Westborough Lab Associated sample(s): 01,03 Batch: WG731398-2 WG731398-3									
Aroclor 1016	57		68		40-140	18		50	A
Aroclor 1260	62		75		40-140	19		50	A

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	54		61		30-150	B
Decachlorobiphenyl	63		77		30-150	B
2,4,5,6-Tetrachloro-m-xylene	50		57		30-150	A
Decachlorobiphenyl	61		74		30-150	A

PESTICIDES

Project Name: SITE1_SMP_2014 **Lab Number:** L1424399

Project Number: SITE1_SMP_2014 **Report Date:** 10/21/14

SAMPLE RESULTS

Lab ID:	L1424399-01	Date Collected:	10/14/14 10:21
Client ID:	PRW-04-WG-201410141021	Date Received:	10/14/14
Sample Location:	HOWLAND HOOK MARINE/PORT IVORY	Field Prep:	See Narrative
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8081B	Extraction Date:	10/16/14 06:22
Analytical Date:	10/19/14 03:11	Cleanup Method:	EPA 3620B
Analyst:	JW	Cleanup Date:	10/18/14

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Organochlorine Pesticides by GC - Westborough Lab							
Delta-BHC	ND		ug/l	0.020	0.005	1	A
Lindane	ND		ug/l	0.020	0.004	1	A
Alpha-BHC	ND		ug/l	0.020	0.004	1	A
Beta-BHC	ND		ug/l	0.020	0.006	1	A
Heptachlor	ND		ug/l	0.020	0.003	1	A
Aldrin	ND		ug/l	0.020	0.002	1	A
Heptachlor epoxide	ND		ug/l	0.020	0.004	1	A
Endrin	ND		ug/l	0.040	0.004	1	A
Endrin ketone	ND		ug/l	0.040	0.005	1	A
Dieldrin	ND		ug/l	0.040	0.004	1	A
4,4'-DDE	ND		ug/l	0.040	0.004	1	A
4,4'-DDD	ND		ug/l	0.040	0.005	1	A
4,4'-DDT	ND		ug/l	0.040	0.004	1	A
Endosulfan I	ND		ug/l	0.020	0.003	1	A
Endosulfan II	ND		ug/l	0.040	0.005	1	A
Endosulfan sulfate	ND		ug/l	0.040	0.005	1	A
Methoxychlor	ND		ug/l	0.200	0.007	1	A
Toxaphene	ND		ug/l	0.200	0.063	1	A
cis-Chlordane	ND		ug/l	0.020	0.007	1	A
trans-Chlordane	ND		ug/l	0.020	0.006	1	A
Chlordane	ND		ug/l	0.200	0.046	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	62		30-150	A
Decachlorobiphenyl	**19**	Q	30-150	A
2,4,5,6-Tetrachloro-m-xylene	89		30-150	B
Decachlorobiphenyl	85		30-150	B

Project Name: SITE1_SMP_2014 **Lab Number:** L1424399

Project Number: SITE1_SMP_2014 **Report Date:** 10/21/14

SAMPLE RESULTS

Lab ID:	L1424399-01 D	Date Collected:	10/14/14 10:21
Client ID:	PRW-04-WG-201410141021	Date Received:	10/14/14
Sample Location:	HOWLAND HOOK MARINE/PORT IVORY	Field Prep:	See Narrative
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8081B	Extraction Date:	10/16/14 06:22
Analytical Date:	10/20/14 13:05	Cleanup Method:	EPA 3620B
Analyst:	JW	Cleanup Date:	10/18/14

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Organochlorine Pesticides by GC - Westborough Lab							
Delta-BHC	ND		ug/l	0.100	0.023	5	A
Lindane	ND		ug/l	0.100	0.022	5	A
Alpha-BHC	ND		ug/l	0.100	0.022	5	A
Beta-BHC	ND		ug/l	0.100	0.028	5	A
Heptachlor	ND		ug/l	0.100	0.016	5	A
Aldrin	ND		ug/l	0.100	0.011	5	A
Heptachlor epoxide	ND		ug/l	0.100	0.021	5	A
Endrin	ND		ug/l	0.200	0.021	5	A
Endrin ketone	ND		ug/l	0.200	0.024	5	A
Dieldrin	ND		ug/l	0.200	0.021	5	A
4,4'-DDE	ND		ug/l	0.200	0.019	5	A
4,4'-DDD	ND		ug/l	0.200	0.023	5	A
4,4'-DDT	ND		ug/l	0.200	0.022	5	A
Endosulfan I	ND		ug/l	0.100	0.017	5	A
Endosulfan II	ND		ug/l	0.200	0.026	5	A
Endosulfan sulfate	ND		ug/l	0.200	0.024	5	A
Methoxychlor	ND		ug/l	1.00	0.034	5	A
Toxaphene	ND		ug/l	1.00	0.314	5	A
cis-Chlordane	ND		ug/l	0.100	0.033	5	A
trans-Chlordane	ND		ug/l	0.100	0.031	5	A
Chlordane	ND		ug/l	1.00	0.232	5	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	62		30-150	A
Decachlorobiphenyl	59		30-150	A
2,4,5,6-Tetrachloro-m-xylene	127		30-150	B
Decachlorobiphenyl	140		30-150	B

Project Name: SITE1_SMP_2014 **Lab Number:** L1424399

Project Number: SITE1_SMP_2014 **Report Date:** 10/21/14

SAMPLE RESULTS

Lab ID:	L1424399-03	Date Collected:	10/14/14 09:30
Client ID:	WQ-201410140930-FB-1	Date Received:	10/14/14
Sample Location:	HOWLAND HOOK MARINE/PORT IVORY	Field Prep:	See Narrative
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8081B	Extraction Date:	10/16/14 06:22
Analytical Date:	10/19/14 03:27	Cleanup Method:	EPA 3620B
Analyst:	JW	Cleanup Date:	10/18/14

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Organochlorine Pesticides by GC - Westborough Lab							
Delta-BHC	ND		ug/l	0.020	0.005	1	A
Lindane	ND		ug/l	0.020	0.004	1	A
Alpha-BHC	ND		ug/l	0.020	0.004	1	A
Beta-BHC	ND		ug/l	0.020	0.006	1	A
Heptachlor	ND		ug/l	0.020	0.003	1	A
Aldrin	ND		ug/l	0.020	0.002	1	A
Heptachlor epoxide	ND		ug/l	0.020	0.004	1	A
Endrin	ND		ug/l	0.040	0.004	1	A
Endrin ketone	ND		ug/l	0.040	0.005	1	A
Dieldrin	ND		ug/l	0.040	0.004	1	A
4,4'-DDE	ND		ug/l	0.040	0.004	1	A
4,4'-DDD	ND		ug/l	0.040	0.005	1	A
4,4'-DDT	ND		ug/l	0.040	0.004	1	A
Endosulfan I	ND		ug/l	0.020	0.003	1	A
Endosulfan II	ND		ug/l	0.040	0.005	1	A
Endosulfan sulfate	ND		ug/l	0.040	0.005	1	A
Methoxychlor	ND		ug/l	0.200	0.007	1	A
Toxaphene	ND		ug/l	0.200	0.063	1	A
cis-Chlordane	ND		ug/l	0.020	0.007	1	A
trans-Chlordane	ND		ug/l	0.020	0.006	1	A
Chlordane	ND		ug/l	0.200	0.046	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	84		30-150	A
Decachlorobiphenyl	57		30-150	A
2,4,5,6-Tetrachloro-m-xylene	92		30-150	B
Decachlorobiphenyl	70		30-150	B

Project Name: SITE1_SMP_2014 **Lab Number:** L1424399

Project Number: SITE1_SMP_2014 **Report Date:** 10/21/14

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8081B
Analytical Date: 10/19/14 01:34
Analyst: JW

Extraction Method: EPA 3510C
Extraction Date: 10/16/14 06:22
Cleanup Method: EPA 3620B
Cleanup Date: 10/18/14

Parameter	Result	Qualifier	Units	RL	MDL	Column
Organochlorine Pesticides by GC - Westborough Lab for sample(s): 01,03 Batch: WG731537-1						
Delta-BHC	ND		ug/l	0.020	0.005	A
Lindane	ND		ug/l	0.020	0.004	A
Alpha-BHC	ND		ug/l	0.020	0.004	A
Beta-BHC	ND		ug/l	0.020	0.006	A
Heptachlor	ND		ug/l	0.020	0.003	A
Aldrin	ND		ug/l	0.020	0.002	A
Heptachlor epoxide	ND		ug/l	0.020	0.004	A
Endrin	ND		ug/l	0.040	0.004	A
Endrin ketone	ND		ug/l	0.040	0.005	A
Dieldrin	ND		ug/l	0.040	0.004	A
4,4'-DDE	ND		ug/l	0.040	0.004	A
4,4'-DDD	ND		ug/l	0.040	0.005	A
4,4'-DDT	ND		ug/l	0.040	0.004	A
Endosulfan I	ND		ug/l	0.020	0.003	A
Endosulfan II	ND		ug/l	0.040	0.005	A
Endosulfan sulfate	ND		ug/l	0.040	0.005	A
Methoxychlor	ND		ug/l	0.200	0.007	A
Toxaphene	ND		ug/l	0.200	0.063	A
cis-Chlordane	ND		ug/l	0.020	0.007	A
trans-Chlordane	ND		ug/l	0.020	0.006	A
Chlordane	ND		ug/l	0.200	0.046	A

Surrogate	%Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	89		30-150	A
Decachlorobiphenyl	82		30-150	A
2,4,5,6-Tetrachloro-m-xylene	88		30-150	B
Decachlorobiphenyl	81		30-150	B

Lab Control Sample Analysis

Batch Quality Control

Project Name: SITE1_SMP_2014

Project Number: SITE1_SMP_2014

Lab Number: L1424399

Report Date: 10/21/14

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
Organochlorine Pesticides by GC - Westborough Lab Associated sample(s): 01,03 Batch: WG731537-2 WG731537-3									
Delta-BHC	86		94		30-150	9		20	A
Lindane	92		100		30-150	8		20	A
Alpha-BHC	107		114		30-150	6		20	A
Beta-BHC	97		105		30-150	8		20	A
Heptachlor	91		98		30-150	8		20	A
Aldrin	93		100		30-150	7		20	A
Heptachlor epoxide	90		97		30-150	8		20	A
Endrin	104		116		30-150	11		20	A
Endrin ketone	87		93		30-150	6		20	A
Dieldrin	95		103		30-150	8		20	A
4,4'-DDE	91		98		30-150	8		20	A
4,4'-DDD	94		102		30-150	8		20	A
4,4'-DDT	95		105		30-150	10		20	A
Endosulfan I	90		103		30-150	13		20	A
Endosulfan II	84		91		30-150	8		20	A
Endosulfan sulfate	88		96		30-150	8		20	A
Methoxychlor	99		112		30-150	13		20	A
cis-Chlordane	88		96		30-150	9		20	A
trans-Chlordane	91		100		30-150	9		20	A

Lab Control Sample Analysis

Batch Quality Control

Project Name: SITE1_SMP_2014
Project Number: SITE1_SMP_2014

Lab Number: L1424399
Report Date: 10/21/14

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Organochlorine Pesticides by GC - Westborough Lab Associated sample(s): 01,03 Batch: WG731537-2 WG731537-3								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	87		90		30-150	A
Decachlorobiphenyl	79		84		30-150	A
2,4,5,6-Tetrachloro-m-xylene	89		100		30-150	B
Decachlorobiphenyl	82		95		30-150	B

METALS

Project Name: SITE1_SMP_2014 **Lab Number:** L1424399

Project Number: SITE1_SMP_2014 **Report Date:** 10/21/14

SAMPLE RESULTS

Lab ID: L1424399-01 Date Collected: 10/14/14 10:21

Client ID: PRW-04-WG-201410141021 Date Received: 10/14/14

Sample Location: HOWLAND HOOK MARINE/PORT IVORY Field Prep: See Narrative

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Westborough Lab											
Antimony, Total	0.0017		mg/l	0.0005	0.0001	1	10/18/14 17:37	10/21/14 13:57	EPA 3005A	1,6020A	BM
Arsenic, Total	0.0057		mg/l	0.0005	0.0001	1	10/18/14 17:37	10/21/14 13:57	EPA 3005A	1,6020A	BM
Beryllium, Total	ND		mg/l	0.0005	0.0002	1	10/18/14 17:37	10/21/14 13:57	EPA 3005A	1,6020A	BM
Cadmium, Total	ND		mg/l	0.0002	0.0001	1	10/18/14 17:37	10/21/14 13:57	EPA 3005A	1,6020A	BM
Chromium, Total	0.0021		mg/l	0.0010	0.0003	1	10/18/14 17:37	10/21/14 13:57	EPA 3005A	1,6020A	BM
Copper, Total	0.0037		mg/l	0.0010	0.0003	1	10/18/14 17:37	10/21/14 13:57	EPA 3005A	1,6020A	BM
Lead, Total	0.0026		mg/l	0.0010	0.0001	1	10/18/14 17:37	10/21/14 13:57	EPA 3005A	1,6020A	BM
Mercury, Total	0.00015	J	mg/l	0.00020	0.00006	1	10/15/14 15:17	10/15/14 20:20	EPA 7470A	1,7470A	AK
Nickel, Total	0.0390		mg/l	0.0010	0.0001	1	10/18/14 17:37	10/21/14 13:57	EPA 3005A	1,6020A	BM
Selenium, Total	0.001	J	mg/l	0.005	0.001	1	10/18/14 17:37	10/21/14 13:57	EPA 3005A	1,6020A	BM
Silver, Total	ND		mg/l	0.0003	0.0001	1	10/18/14 17:37	10/21/14 13:57	EPA 3005A	1,6020A	BM
Thallium, Total	ND		mg/l	0.0002	0.0001	1	10/18/14 17:37	10/21/14 13:57	EPA 3005A	1,6020A	BM
Zinc, Total	0.1948		mg/l	0.0100	0.0026	1	10/18/14 17:37	10/21/14 13:57	EPA 3005A	1,6020A	BM
Dissolved Metals - Westborough Lab											
Antimony, Dissolved	0.0004	J	mg/l	0.0005	0.0001	1	10/21/14 15:45	10/21/14 19:07	NA	1,6020A	BM
Arsenic, Dissolved	0.0042		mg/l	0.0005	0.0001	1	10/21/14 15:45	10/21/14 19:07	NA	1,6020A	BM
Beryllium, Dissolved	ND		mg/l	0.0005	0.0002	1	10/21/14 15:45	10/21/14 19:07	NA	1,6020A	BM
Cadmium, Dissolved	ND		mg/l	0.0002	0.0001	1	10/21/14 15:45	10/21/14 19:07	NA	1,6020A	BM
Chromium, Dissolved	0.0019	J	mg/l	0.0020	0.0003	1	10/21/14 15:45	10/21/14 19:07	NA	1,6020A	BM
Copper, Dissolved	0.0004	J	mg/l	0.0010	0.0003	1	10/21/14 15:45	10/21/14 19:07	NA	1,6020A	BM
Lead, Dissolved	0.0012		mg/l	0.0010	0.0001	1	10/21/14 15:45	10/21/14 19:07	NA	1,6020A	BM
Mercury, Dissolved	ND		mg/l	0.00020	0.00006	1	10/15/14 15:17	10/15/14 20:02	EPA 7470A	1,7470A	AK
Nickel, Dissolved	0.0352		mg/l	0.0010	0.0001	1	10/21/14 15:45	10/21/14 19:07	NA	1,6020A	BM
Selenium, Dissolved	0.010		mg/l	0.005	0.001	1	10/21/14 15:45	10/21/14 19:07	NA	1,6020A	BM
Silver, Dissolved	ND		mg/l	0.0003	0.0001	1	10/21/14 15:45	10/21/14 19:07	NA	1,6020A	BM
Thallium, Dissolved	ND		mg/l	0.0002	0.0001	1	10/21/14 15:45	10/21/14 19:07	NA	1,6020A	BM
Zinc, Dissolved	0.0151		mg/l	0.0100	0.0026	1	10/21/14 15:45	10/21/14 19:07	NA	1,6020A	BM

Project Name: SITE1_SMP_2014 **Lab Number:** L1424399

Project Number: SITE1_SMP_2014 **Report Date:** 10/21/14

SAMPLE RESULTS

Lab ID: L1424399-03 Date Collected: 10/14/14 09:30

Client ID: WQ-201410140930-FB-1 Date Received: 10/14/14

Sample Location: HOWLAND HOOK MARINE/PORT IVORY Field Prep: See Narrative

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Westborough Lab											
Antimony, Total	0.0001	J	mg/l	0.0005	0.0001	1	10/18/14 17:37	10/21/14 14:23	EPA 3005A	1,6020A	BM
Arsenic, Total	ND		mg/l	0.0005	0.0001	1	10/18/14 17:37	10/21/14 14:23	EPA 3005A	1,6020A	BM
Beryllium, Total	ND		mg/l	0.0005	0.0002	1	10/18/14 17:37	10/21/14 14:23	EPA 3005A	1,6020A	BM
Cadmium, Total	ND		mg/l	0.0002	0.0001	1	10/18/14 17:37	10/21/14 14:23	EPA 3005A	1,6020A	BM
Chromium, Total	ND		mg/l	0.0010	0.0003	1	10/18/14 17:37	10/21/14 14:23	EPA 3005A	1,6020A	BM
Copper, Total	ND		mg/l	0.0010	0.0003	1	10/18/14 17:37	10/21/14 14:23	EPA 3005A	1,6020A	BM
Lead, Total	ND		mg/l	0.0010	0.0001	1	10/18/14 17:37	10/21/14 14:23	EPA 3005A	1,6020A	BM
Mercury, Total	0.00008	J	mg/l	0.00020	0.00006	1	10/15/14 15:17	10/15/14 20:27	EPA 7470A	1,7470A	AK
Nickel, Total	0.0001	J	mg/l	0.0010	0.0001	1	10/18/14 17:37	10/21/14 14:23	EPA 3005A	1,6020A	BM
Selenium, Total	ND		mg/l	0.005	0.001	1	10/18/14 17:37	10/21/14 14:23	EPA 3005A	1,6020A	BM
Silver, Total	ND		mg/l	0.0003	0.0001	1	10/18/14 17:37	10/21/14 14:23	EPA 3005A	1,6020A	BM
Thallium, Total	ND		mg/l	0.0002	0.0001	1	10/18/14 17:37	10/21/14 14:23	EPA 3005A	1,6020A	BM
Zinc, Total	0.0149		mg/l	0.0100	0.0026	1	10/18/14 17:37	10/21/14 14:23	EPA 3005A	1,6020A	BM
Dissolved Metals - Westborough Lab											
Antimony, Dissolved	0.0004	J	mg/l	0.0005	0.0001	1	10/21/14 15:45	10/21/14 19:04	NA	1,6020A	BM
Arsenic, Dissolved	ND		mg/l	0.0005	0.0001	1	10/21/14 15:45	10/21/14 19:04	NA	1,6020A	BM
Beryllium, Dissolved	ND		mg/l	0.0005	0.0002	1	10/21/14 15:45	10/21/14 19:04	NA	1,6020A	BM
Cadmium, Dissolved	ND		mg/l	0.0002	0.0001	1	10/21/14 15:45	10/21/14 19:04	NA	1,6020A	BM
Chromium, Dissolved	0.0008	J	mg/l	0.0020	0.0003	1	10/21/14 15:45	10/21/14 19:04	NA	1,6020A	BM
Copper, Dissolved	ND		mg/l	0.0010	0.0003	1	10/21/14 15:45	10/21/14 19:04	NA	1,6020A	BM
Lead, Dissolved	ND		mg/l	0.0010	0.0001	1	10/21/14 15:45	10/21/14 19:04	NA	1,6020A	BM
Mercury, Dissolved	0.00011	J	mg/l	0.00020	0.00006	1	10/15/14 15:17	10/15/14 20:13	EPA 7470A	1,7470A	AK
Nickel, Dissolved	0.0004	J	mg/l	0.0010	0.0001	1	10/21/14 15:45	10/21/14 19:04	NA	1,6020A	BM
Selenium, Dissolved	ND		mg/l	0.005	0.001	1	10/21/14 15:45	10/21/14 19:04	NA	1,6020A	BM
Silver, Dissolved	0.0001	J	mg/l	0.0003	0.0001	1	10/21/14 15:45	10/21/14 19:04	NA	1,6020A	BM
Thallium, Dissolved	ND		mg/l	0.0002	0.0001	1	10/21/14 15:45	10/21/14 19:04	NA	1,6020A	BM
Zinc, Dissolved	0.0042	J	mg/l	0.0100	0.0026	1	10/21/14 15:45	10/21/14 19:04	NA	1,6020A	BM

Project Name: SITE1_SMP_2014 **Lab Number:** L1424399

Project Number: SITE1_SMP_2014 **Report Date:** 10/21/14

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Dissolved Metals - Westborough Lab for sample(s): 01,03 Batch: WG731348-1										
Mercury, Dissolved	ND		mg/l	0.00020	0.00006	1	10/15/14 15:17	10/15/14 19:58	1,7470A	AK

Prep Information

Digestion Method: EPA 7470A

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Westborough Lab for sample(s): 01,03 Batch: WG731350-1										
Mercury, Total	ND		mg/l	0.00020	0.00006	1	10/15/14 15:17	10/15/14 20:15	1,7470A	AK

Prep Information

Digestion Method: EPA 7470A

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Westborough Lab for sample(s): 01,03 Batch: WG732407-1										
Antimony, Total	ND		mg/l	0.0005	0.0001	1	10/18/14 17:37	10/21/14 13:51	1,6020A	BM
Arsenic, Total	ND		mg/l	0.0005	0.0001	1	10/18/14 17:37	10/21/14 13:51	1,6020A	BM
Beryllium, Total	ND		mg/l	0.0005	0.0002	1	10/18/14 17:37	10/21/14 13:51	1,6020A	BM
Cadmium, Total	ND		mg/l	0.0002	0.0001	1	10/18/14 17:37	10/21/14 13:51	1,6020A	BM
Chromium, Total	0.0004	J	mg/l	0.0010	0.0003	1	10/18/14 17:37	10/21/14 13:51	1,6020A	BM
Copper, Total	ND		mg/l	0.0010	0.0003	1	10/18/14 17:37	10/21/14 13:51	1,6020A	BM
Lead, Total	ND		mg/l	0.0005	0.0001	1	10/18/14 17:37	10/21/14 13:51	1,6020A	BM
Nickel, Total	0.0002	J	mg/l	0.0005	0.0001	1	10/18/14 17:37	10/21/14 13:51	1,6020A	BM
Selenium, Total	ND		mg/l	0.005	0.001	1	10/18/14 17:37	10/21/14 13:51	1,6020A	BM
Silver, Total	ND		mg/l	0.0003	0.0001	1	10/18/14 17:37	10/21/14 13:51	1,6020A	BM
Thallium, Total	ND		mg/l	0.0002	0.0001	1	10/18/14 17:37	10/21/14 13:51	1,6020A	BM
Zinc, Total	ND		mg/l	0.0100	0.0026	1	10/18/14 17:37	10/21/14 13:51	1,6020A	BM

Project Name: SITE1_SMP_2014 **Lab Number:** L1424399

Project Number: SITE1_SMP_2014 **Report Date:** 10/21/14

Method Blank Analysis
Batch Quality Control

Prep Information

Digestion Method: EPA 3005A

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Dissolved Metals - Westborough Lab for sample(s): 01,03 Batch: WG733078-1										
Antimony, Dissolved	0.0001	J	mg/l	0.0005	0.0001	1	10/21/14 15:45	10/21/14 18:58	1,6020A	BM
Arsenic, Dissolved	ND		mg/l	0.0005	0.0001	1	10/21/14 15:45	10/21/14 18:58	1,6020A	BM
Beryllium, Dissolved	ND		mg/l	0.0005	0.0002	1	10/21/14 15:45	10/21/14 18:58	1,6020A	BM
Cadmium, Dissolved	ND		mg/l	0.0002	0.0001	1	10/21/14 15:45	10/21/14 18:58	1,6020A	BM
Chromium, Dissolved	0.0013	J	mg/l	0.0020	0.0003	1	10/21/14 15:45	10/21/14 18:58	1,6020A	BM
Copper, Dissolved	ND		mg/l	0.0010	0.0003	1	10/21/14 15:45	10/21/14 18:58	1,6020A	BM
Lead, Dissolved	ND		mg/l	0.0010	0.0001	1	10/21/14 15:45	10/21/14 18:58	1,6020A	BM
Nickel, Dissolved	0.0004	J	mg/l	0.0010	0.0001	1	10/21/14 15:45	10/21/14 18:58	1,6020A	BM
Selenium, Dissolved	ND		mg/l	0.005	0.001	1	10/21/14 15:45	10/21/14 18:58	1,6020A	BM
Silver, Dissolved	0.0002	J	mg/l	0.0003	0.0001	1	10/21/14 15:45	10/21/14 18:58	1,6020A	BM
Thallium, Dissolved	ND		mg/l	0.0002	0.0001	1	10/21/14 15:45	10/21/14 18:58	1,6020A	BM
Zinc, Dissolved	ND		mg/l	0.0100	0.0026	1	10/21/14 15:45	10/21/14 18:58	1,6020A	BM

Prep Information

Digestion Method: NA

Lab Control Sample Analysis

Batch Quality Control

Project Name: SITE1_SMP_2014
Project Number: SITE1_SMP_2014

Lab Number: L1424399
Report Date: 10/21/14

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Dissolved Metals - Westborough Lab Associated sample(s): 01,03 Batch: WG731348-2								
Mercury, Dissolved	105		-		70-130	-		
Total Metals - Westborough Lab Associated sample(s): 01,03 Batch: WG731350-2								
Mercury, Total	106		-		80-120	-		
Total Metals - Westborough Lab Associated sample(s): 01,03 Batch: WG732407-2								
Antimony, Total	88		-		80-120	-		
Arsenic, Total	88		-		80-120	-		
Beryllium, Total	91		-		80-120	-		
Cadmium, Total	92		-		80-120	-		
Chromium, Total	91		-		80-120	-		
Copper, Total	96		-		80-120	-		
Lead, Total	89		-		80-120	-		
Nickel, Total	93		-		80-120	-		
Selenium, Total	98		-		80-120	-		
Silver, Total	92		-		80-120	-		
Thallium, Total	84		-		80-120	-		
Zinc, Total	96		-		80-120	-		

Lab Control Sample Analysis

Batch Quality Control

Project Name: SITE1_SMP_2014

Project Number: SITE1_SMP_2014

Lab Number: L1424399

Report Date: 10/21/14

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Dissolved Metals - Westborough Lab Associated sample(s): 01,03 Batch: WG733078-2					
Antimony, Dissolved	89	-	80-120	-	
Arsenic, Dissolved	96	-	80-120	-	
Beryllium, Dissolved	92	-	80-120	-	
Cadmium, Dissolved	97	-	80-120	-	
Chromium, Dissolved	92	-	80-120	-	
Copper, Dissolved	95	-	80-120	-	
Lead, Dissolved	92	-	80-120	-	
Nickel, Dissolved	95	-	80-120	-	
Selenium, Dissolved	110	-	80-120	-	
Silver, Dissolved	96	-	80-120	-	
Thallium, Dissolved	89	-	80-120	-	
Zinc, Dissolved	97	-	80-120	-	

Matrix Spike Analysis
Batch Quality Control

Project Name: SITE1_SMP_2014
Project Number: SITE1_SMP_2014

Lab Number: L1424399
Report Date: 10/21/14

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Dissolved Metals - Westborough Lab Associated sample(s): 01,03 QC Batch ID: WG731348-4 QC Sample: L1424399-01 Client ID: PRW-04-WG-201410141021												
Mercury, Dissolved	ND	0.005	0.00260	**52**	Q	-	-		75-125	-		20
Total Metals - Westborough Lab Associated sample(s): 01,03 QC Batch ID: WG731350-4 QC Sample: L1424399-01 Client ID: PRW-04-WG-201410141021												
Mercury, Total	0.00015J	0.005	0.00247	**49**	Q	-	-		75-125	-		20
Total Metals - Westborough Lab Associated sample(s): 01,03 QC Batch ID: WG732407-4 QC Sample: L1424399-01 Client ID: PRW-04-WG-201410141021												
Antimony, Total	0.0017	0.5	0.4599	92		-	-		75-125	-		20
Arsenic, Total	0.0057	0.12	0.1196	95		-	-		75-125	-		20
Beryllium, Total	ND	0.05	0.0477	95		-	-		75-125	-		20
Cadmium, Total	ND	0.051	0.0472	92		-	-		75-125	-		20
Chromium, Total	0.0021	0.2	0.1796	89		-	-		75-125	-		20
Copper, Total	0.0037	0.25	0.2291	90		-	-		75-125	-		20
Lead, Total	0.0026	0.51	0.4598	90		-	-		75-125	-		20
Nickel, Total	0.0390	0.5	0.5074	94		-	-		75-125	-		20
Selenium, Total	0.001J	0.12	0.107	89		-	-		75-125	-		20
Silver, Total	ND	0.05	0.0386	77		-	-		75-125	-		20
Thallium, Total	ND	0.12	0.1029	86		-	-		75-125	-		20
Zinc, Total	0.1948	0.5	0.4920	**59**	Q	-	-		75-125	-		20

Matrix Spike Analysis
Batch Quality Control

Project Name: SITE1_SMP_2014
Project Number: SITE1_SMP_2014

Lab Number: L1424399
Report Date: 10/21/14

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	MSD Found	MSD %Recovery	Recovery Limits	RPD	RPD Limits
Dissolved Metals - Westborough Lab Associated sample(s): 01,03 QC Batch ID: WG733078-4 QC Sample: L1424399-03 Client ID: WQ-201410140930-FB-1									
Antimony, Dissolved	0.0004J	0.5	0.4576	92	-	-	75-125	-	20
Arsenic, Dissolved	ND	0.12	0.1096	91	-	-	75-125	-	20
Beryllium, Dissolved	ND	0.05	0.0472	94	-	-	75-125	-	20
Cadmium, Dissolved	ND	0.051	0.0566	111	-	-	75-125	-	20
Chromium, Dissolved	0.0008J	0.2	0.1824	91	-	-	75-125	-	20
Copper, Dissolved	ND	0.25	0.2383	95	-	-	75-125	-	20
Lead, Dissolved	ND	0.51	0.4760	93	-	-	75-125	-	20
Nickel, Dissolved	0.0004J	0.5	0.4447	89	-	-	75-125	-	20
Selenium, Dissolved	ND	0.12	0.115	96	-	-	75-125	-	20
Silver, Dissolved	0.0001J	0.05	0.0390	78	-	-	75-125	-	20
Thallium, Dissolved	ND	0.12	0.1059	88	-	-	75-125	-	20
Zinc, Dissolved	0.0042J	0.5	0.4938	99	-	-	75-125	-	20

Lab Duplicate Analysis
Batch Quality Control

Project Name: SITE1_SMP_2014
Project Number: SITE1_SMP_2014

Lab Number: L1424399
Report Date: 10/21/14

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Dissolved Metals - Westborough Lab Associated sample(s): 01,03 QC Batch ID: WG731348-3 QC Sample: L1424399-01 Client ID: PRW-04-WG-201410141021						
Mercury, Dissolved	ND	ND	mg/l	NC		20
Total Metals - Westborough Lab Associated sample(s): 01,03 QC Batch ID: WG731350-3 QC Sample: L1424399-01 Client ID: PRW-04-WG-201410141021						
Mercury, Total	0.00015J	0.00016J	mg/l	NC		20
Total Metals - Westborough Lab Associated sample(s): 01,03 QC Batch ID: WG732407-3 QC Sample: L1424399-01 Client ID: PRW-04-WG-201410141021						
Antimony, Total	0.0017	0.0020	mg/l	15		20
Arsenic, Total	0.0057	0.0052	mg/l	8		20
Beryllium, Total	ND	ND	mg/l	NC		20
Cadmium, Total	ND	0.0001J	mg/l	NC		20
Chromium, Total	0.0021	0.0019	mg/l	11		20
Copper, Total	0.0037	0.0049	mg/l	**28**	Q	20
Lead, Total	0.0026	0.0045	mg/l	**55**	Q	20
Nickel, Total	0.0390	0.0405	mg/l	4		20
Selenium, Total	0.001J	0.001J	mg/l	NC		20
Silver, Total	ND	ND	mg/l	NC		20
Thallium, Total	ND	ND	mg/l	NC		20
Zinc, Total	0.1948	0.0694	mg/l	**95**	Q	20

Lab Duplicate Analysis
Batch Quality Control

Project Name: SITE1_SMP_2014
Project Number: SITE1_SMP_2014

Lab Number: L1424399
Report Date: 10/21/14

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
Dissolved Metals - Westborough Lab Associated sample(s): 01,03 QC Batch ID: WG733078-3 QC Sample: L1424399-03 Client ID: WQ-201410140930-FB-1					
Antimony, Dissolved	0.0004J	0.0001J	mg/l	NC	20
Arsenic, Dissolved	ND	ND	mg/l	NC	20
Beryllium, Dissolved	ND	ND	mg/l	NC	20
Cadmium, Dissolved	ND	ND	mg/l	NC	20
Chromium, Dissolved	0.0008J	0.0007J	mg/l	NC	20
Copper, Dissolved	ND	ND	mg/l	NC	20
Lead, Dissolved	ND	ND	mg/l	NC	20
Nickel, Dissolved	0.0004J	0.0002J	mg/l	NC	20
Selenium, Dissolved	ND	0.002J	mg/l	NC	20
Silver, Dissolved	0.0001J	ND	mg/l	NC	20
Thallium, Dissolved	ND	ND	mg/l	NC	20
Zinc, Dissolved	0.0042J	0.0036J	mg/l	NC	20

INORGANICS
&
MISCELLANEOUS

Project Name: SITE1_SMP_2014
Project Number: SITE1_SMP_2014

Lab Number: L1424399
Report Date: 10/21/14

SAMPLE RESULTS

Lab ID: L1424399-01
Client ID: PRW-04-WG-201410141021
Sample Location: HOWLAND HOOK MARINE/PORT IVORY
Matrix: Water

Date Collected: 10/14/14 10:21
Date Received: 10/14/14
Field Prep: See Narrative

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Cyanide, Total	0.012		mg/l	0.005	0.001	1	10/15/14 11:52	10/15/14 14:50	1,9010C/9012B	JO

Project Name: SITE1_SMP_2014
Project Number: SITE1_SMP_2014

Lab Number: L1424399
Report Date: 10/21/14

SAMPLE RESULTS

Lab ID: L1424399-03
Client ID: WQ-201410140930-FB-1
Sample Location: HOWLAND HOOK MARINE/PORT IVORY
Matrix: Water

Date Collected: 10/14/14 09:30
Date Received: 10/14/14
Field Prep: See Narrative

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Cyanide, Total	ND		mg/l	0.005	0.001	1	10/15/14 11:52	10/15/14 14:51	1,9010C/9012B	JO

Project Name: SITE1_SMP_2014 **Lab Number:** L1424399

Project Number: SITE1_SMP_2014 **Report Date:** 10/21/14

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab for sample(s): 01,03 Batch: WG731265-1										
Cyanide, Total	ND		mg/l	0.005	0.001	1	10/15/14 11:52	10/15/14 14:46	1,9010C/9012B	JO

Lab Control Sample Analysis

Batch Quality Control

Project Name: SITE1_SMP_2014

Project Number: SITE1_SMP_2014

Lab Number: L1424399

Report Date: 10/21/14

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01,03 Batch: WG731265-2 WG731265-3								
Cyanide, Total	92		96		80-120	4		20

Matrix Spike Analysis
Batch Quality Control

Project Name: SITE1_SMP_2014
Project Number: SITE1_SMP_2014

Lab Number: L1424399
Report Date: 10/21/14

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01,03 QC Batch ID: WG731265-4 WG731265-5 QC Sample: L1424399-01 Client ID: PRW-04-WG-201410141021												
Cyanide, Total	0.012	0.2	0.216	102		0.190	89		80-120	13		20

Project Name: SITE1_SMP_2014 **Lab Number:** L1424399

Project Number: SITE1_SMP_2014 **Report Date:** 10/21/14

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Reagent H2O Preserved Vials Frozen on: NA

Cooler Information Custody Seal

Cooler	
A	Absent

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1424399-01A	Vial HCl preserved	A	N/A	3.1	Y	Absent	NYTCL-8260(14)
L1424399-01B	Vial HCl preserved	A	N/A	3.1	Y	Absent	NYTCL-8260(14)
L1424399-01C	Vial HCl preserved	A	N/A	3.1	Y	Absent	NYTCL-8260(14)
L1424399-01D	Amber 1000ml unpreserved	A	7	3.1	Y	Absent	NYTCL-8270(7),NYTCL-8270-SIM(7)
L1424399-01E	Amber 1000ml unpreserved	A	7	3.1	Y	Absent	NYTCL-8270(7),NYTCL-8270-SIM(7)
L1424399-01F	Amber 1000ml unpreserved	A	7	3.1	Y	Absent	NYTCL-8082-1200ML(7)
L1424399-01G	Amber 1000ml unpreserved	A	7	3.1	Y	Absent	NYTCL-8082-1200ML(7)
L1424399-01H	Amber 500ml unpreserved	A	7	3.1	Y	Absent	NYTCL-8081(7)
L1424399-01I	Amber 500ml unpreserved	A	7	3.1	Y	Absent	NYTCL-8081(7)
L1424399-01J	Plastic 250ml HNO3 preserved	A	<2	3.1	Y	Absent	SE-6020T(180),TL-6020T(180),CR-6020T(180),NI-6020T(180),CU-6020T(180),ZN-6020T(180),PB-6020T(180),BE-6020T(180),AS-6020T(180),SB-6020T(180),AG-6020T(180),CD-6020T(180),HG-T(28)
L1424399-01K	Plastic 250ml NaOH preserved	A	>12	3.1	Y	Absent	TCN-9010(14)
L1424399-01W	Plastic 500ml HNO3 preserved	A	<2	3.1	Y	Absent	CU-6020S(180),SE-6020S(180),BE-6020S(180),ZN-6020S(180),CR-6020S(180),NI-6020S(180),PB-6020S(180),TL-6020S(180),AG-6020S(180),AS-6020S(180),SB-6020S(180),CD-6020S(180),HG-S(28)
L1424399-02A	Vial HCl preserved	A	N/A	3.1	Y	Absent	NYTCL-8260(14)
L1424399-02B	Vial HCl preserved	A	N/A	3.1	Y	Absent	NYTCL-8260(14)
L1424399-03A	Vial HCl preserved	A	N/A	3.1	Y	Absent	NYTCL-8260(14)
L1424399-03B	Vial HCl preserved	A	N/A	3.1	Y	Absent	NYTCL-8260(14)
L1424399-03C	Vial HCl preserved	A	N/A	3.1	Y	Absent	NYTCL-8260(14)
L1424399-03D	Amber 1000ml unpreserved	A	7	3.1	Y	Absent	NYTCL-8270(7),NYTCL-8270-SIM(7)

*Values in parentheses indicate holding time in days

Project Name: SITE1_SMP_2014
Project Number: SITE1_SMP_2014

Lab Number: L1424399
Report Date: 10/21/14

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1424399-03E	Amber 1000ml unpreserved	A	7	3.1	Y	Absent	NYTCL-8270(7),NYTCL-8270-SIM(7)
L1424399-03F	Amber 1000ml unpreserved	A	7	3.1	Y	Absent	NYTCL-8082-1200ML(7)
L1424399-03G	Amber 1000ml unpreserved	A	7	3.1	Y	Absent	NYTCL-8082-1200ML(7)
L1424399-03H	Amber 500ml unpreserved	A	7	3.1	Y	Absent	NYTCL-8081(7)
L1424399-03I	Amber 500ml unpreserved	A	7	3.1	Y	Absent	NYTCL-8081(7)
L1424399-03J	Plastic 250ml HNO3 preserved	A	<2	3.1	Y	Absent	SE-6020T(180),TL-6020T(180),CR-6020T(180),NI-6020T(180),CU-6020T(180),ZN-6020T(180),PB-6020T(180),BE-6020T(180),AS-6020T(180),SB-6020T(180),AG-6020T(180),CD-6020T(180),HG-T(28)
L1424399-03K	Plastic 250ml NaOH preserved	A	>12	3.1	Y	Absent	TCN-9010(14)
L1424399-03W	Plastic 500ml HNO3 preserved	A	<2	3.1	Y	Absent	CU-6020S(180),SE-6020S(180),BE-6020S(180),ZN-6020S(180),CR-6020S(180),NI-6020S(180),PB-6020S(180),TL-6020S(180),AG-6020S(180),AS-6020S(180),SB-6020S(180),CD-6020S(180),HG-S(28)

*Values in parentheses indicate holding time in days

Project Name:	SITE1_SMP_2014	**Lab Number:**	L1424399
Project Number:	SITE1_SMP_2014	**Report Date:**	10/21/14

GLOSSARY

Acronyms

EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NI	- Not Ignitable.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.

Footnotes

1	- The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Data Qualifiers

A	- Spectra identified as "Aldol Condensation Product".
B	- The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).
C	- Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
D	- Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
E	- Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

Report Format: DU Report with 'J' Qualifiers

Project Name:	SITE1_SMP_2014	**Lab Number:**	L1424399
Project Number:	SITE1_SMP_2014	**Report Date:**	10/21/14

Data Qualifiers

G - The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.

H - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

I - The lower value for the two columns has been reported due to obvious interference.

M - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

NJ - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.

P - The RPD between the results for the two columns exceeds the method-specified criteria.

Q - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

J - Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

ND - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.

Report Format: DU Report with 'J' Qualifiers

Project Name:	SITE1_SMP_2014	**Lab Number:**	L1424399
Project Number:	SITE1_SMP_2014	**Report Date:**	10/21/14

REFERENCES

1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IV, 2007.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.

Certification Information

Last revised April 15, 2014

The following analytes are not included in our NELAP Scope of Accreditation:

Westborough Facility
EPA 524.2: Acetone, 2-Butanone (Methyl ethyl ketone (MEK)), Tert-butyl alcohol, 2-Hexanone, Tetrahydrofuran, 1,3,5-Trichlorobenzene, 4-Methyl-2-pentanone (MIBK), Carbon disulfide, Diethyl ether.
EPA 8260C: 1,2,4,5-Tetramethylbenzene, 4-Ethyltoluene, Iodomethane (methyl iodide), Methyl methacrylate, Azobenzene.
EPA 8330A/B: PETN, Picric Acid, Nitroglycerine, 2,6-DANT, 2,4-DANT.
EPA 8270D: 1-Methylnaphthalene, Dimethylnaphthalene,1,4-Diphenylhydrazine.
EPA 625: 4-Chloroaniline, 4-Methylphenol.
SM4500: Soil: Total Phosphorus, TKN, NO2, NO3.
EPA 9071: Total Petroleum Hydrocarbons, Oil & Grease.

Mansfield Facility
EPA 8270D: Biphenyl.
EPA 2540D: TSS
EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.

The following analytes are included in our Massachusetts DEP Scope of Accreditation, Westborough Facility:

Drinking Water
EPA 200.8: Sb,As,Ba,Be,Cd,Cr,Cu,Pb,Ni,Se,Tl; **EPA 200.7**: Ba,Be,Ca,Cd,Cr,Cu,Na; **EPA 245.1:** Mercury;
EPA 300.0: Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B**
EPA 332: Perchlorate.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT, Enterolert-QT.**

Non-Potable Water
EPA 200.8: Al,Sb,As,Be,Cd,Cr,Cu,Pb,Mn,Ni,Se,Ag,Tl,Zn;
EPA 200.7: Al,Sb,As,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Mo,Ni,K,Se,Ag,Na,Sr,Ti,Tl,V,Zn;
EPA 245.1, SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2340B, SM2320B, SM4500CL-E, SM4500F-BC, SM426C, SM4500NH3-BH, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **SM4500NO3-F, EPA 353.2**: Nitrate-N**, SM4500NH3-BC-NES, EPA 351.1, SM4500P-E, SM4500P-B, E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, SM14 510AC, EPA 420.1, SM4500-CN-CE, SM2540D.**
EPA 624: Volatile Halocarbons & Aromatics,
EPA 608: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
EPA 625: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045**: PCB-Oil.
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9222D-MF**.

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

L1424399

THE PORT AUTHORITY OF NY & NJ

CHAIN-OF-CUSTODY / Analytical Request Document

Port Ivory - 20141014

L1424399

Serial_No:10211420:17

Page: 1 of 1

Cooler # ALPHA of

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed and accurate.

Task:	SITE1_SMP_2014	
Total # of Samples: 3		Event Complete?
TAT		SDG

Project Information:

Facility:	Port Ivory
Charge code	p11955502
Task Description	Site 1 SMP samples

Contact Name	Dorian Bailey / Angelos Zafirelis
Contact Phone No.	201-216-2963 / 201-216-2960
Contact Fax No.	201-216-2158
Contact Email	DBailey@panynj.gov / AZafirel@panynj.gov
Destination Laboratory	Alpha Labs

Notes: F= Field Filtered , H= Hold

ITEM #	Field Sample No. /Identification	MATRIX CODE	G=GRAB C=COMP	SAMPLE DATE	#OF CONTAINERS	Composite Description	Preservative / Analysis	CL_PP-METALS-13-D	PP+40	PPVOA+15					
1	PRW-04-WG-201410141021	WG	G	10/14/2014 10:21	12			X	X						
2	WQ-201410140000-TB-1	WQ	G	10/14/2014 00:00	2					X					
3	WQ-201410140930-FB-1	WQ	G	10/14/2014 09:30	12			X	X						

Additional Comments/Special Instructions:

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
	10/14/14	1445	AAL	10/14/14	1445
	10/14/14	2225		10-14-14	2225
	10-14-14	2225		10/14/14	22:25

Sample Receipt Conditions

Temp in 0C	Samples on Ice?	Sample intact?	Trip Blank?
	Y / N	Y / N	Y / N
	Y / N	Y / N	Y / N
	Y / N	Y / N	Y / N
	Y / N	Y / N	Y / N

Deliverables:

NAME OF SAMPLER	Rob DeBerardinis	DATE/TIME:	
SIGNATURE of SAMPLER:			

ANALYTICAL REPORT

Lab Number:	L1500236
Client:	Port Authority of New York/New Jersey Materials Engineering-Chemical/Env Lab 241 Erie Street-Room 210 Jersey City, NJ 07310
ATTN:	Angelos Zafirelis
Phone:	(201) 216-2960
Project Name:	SITE1_PRW7_GW_2014
Project Number:	SITE1_PRW7_GW_2014
Report Date:	01/08/15

Certifications & Approvals: MA (M-MA086), NY (11148), CT (PH-0574), NH (2003), NJ NELAP (MA935), RI (LAO00065), ME (MA00086), PA (68-03671), USDA (Permit #P-330-11-00240), NC (666), TX (T104704476), DOD (L2217), US Army Corps of Engineers.

Eight Walkup Drive, Westborough, MA 01581-1019
508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com

Project Name: SITE1_PRW7_GW_2014
Project Number: SITE1_PRW7_GW_2014

Lab Number: L1500236
Report Date: 01/08/15

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L1500236-01	WG-201501061316-FD-1	WATER	PORT IVORY	01/06/15 13:16	01/07/15
L1500236-02	WQ-20150106000-TB-1	WATER	PORT IVORY	01/05/15 00:00	01/07/15
L1500236-03	WQ-201501061220-FB-1	WATER	PORT IVORY	01/06/15 12:20	01/07/15
L1500236-04	PRW-07-WG-201501061316	WATER	PORT IVORY	01/06/15 13:16	01/07/15

Project Name: SITE1_PRW7_GW_2014 **Lab Number:** L1500236
Project Number: SITE1_PRW7_GW_2014 **Report Date:** 01/08/15

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet all of the requirements of NELAC, for all NELAC accredited parameters. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively. When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. All specific QC information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications. Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances the specific failure is not narrated but noted in the associated QC table. The information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications.

Please see the associated ADEx data file for a comparison of laboratory reporting limits that were achieved with the regulatory Numerical Standards requested on the Chain of Custody.

HOLD POLICY
For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Client Service Representative and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Client Services at 800-624-9220 with any questions.

Project Name:	SITE1_PRW7_GW_2014	**Lab Number:**	L1500236
Project Number:	SITE1_PRW7_GW_2014	**Report Date:**	01/08/15

Case Narrative (continued)

Report Submission

All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column.

Sample Receipt

L1500236-01 and -04 were received above the appropriate pH for the Metals analysis. The laboratory added additional HNO3 to a pH <2.

Volatile Organics

The WG754408-4/-5 MS/MSD recoveries, performed on L1500236-04, are below the acceptance criteria for toluene (0%/0%). The unacceptable percent recoveries are attributed to the elevated concentrations of target compounds present in the sample utilized for the MS/MSD.

Semivolatile Organics

The WG754131-4/-5 MS/MSD recoveries, performed on L1500236-04, are outside the acceptance criteria for 3,3'-dichlorobenzidine (0%/0%) and p-chloro-m-cresol (MS 98%).

The WG754131-4/-5 MS/MSD RPDs, performed on L1500236-04, are above the acceptance criteria for bis(2-chloroethyl)ether (32%), bis(2-chloroisopropyl)ether (34%), and hexachlorocyclopentadiene (31%).

Semivolatile Organics by SIM

L1500236-01 and -04 have elevated detection limits due to the dilutions required by the sample matrices.

The WG754133-4/-5 MS/MSD recoveries, performed on L1500236-04, are above the acceptance criteria for pentachlorophenol (120%/110%); however, the associated LCS/LCSD recoveries are within overall method allowances. No further action was required.

The surrogate recovery for the WG754133-4 MS, performed on L1500236-04, is above the acceptance criteria for 2,4,6-tribromophenol (138%).

Project Name:	SITE1_PRW7_GW_2014	**Lab Number:**	L1500236
Project Number:	SITE1_PRW7_GW_2014	**Report Date:**	01/08/15

Case Narrative (continued)

PCBs

L1500236-01: The surrogate recoveries are below the acceptance criteria for decachlorobiphenyl (11%/11%); however, the recoveries were confirmed by the Pesticide analysis performed on this sample; therefore, re-extraction was not required.

The surrogate recoveries for the following sample and QC are below the acceptance criteria for decachlorobiphenyl. Because the recoveries were confirmed by the QC, re-extraction was not required:

L1500236-04: 8%/6%

WG754134-4/-5 MS/MSD: 10%/10% and 8%/8%

The WG754134-4/-5 MS/MSD recoveries, performed on L1500236-04, are below the acceptance criteria for aroclor 1016 (MS 39%) and aroclor 1260 (9%/12%).

Pesticides

L1500236-01: The surrogate recoveries are below the acceptance criteria for decachlorobiphenyl (14%/16%); however, the recoveries were confirmed by the PCB analysis performed on this sample; therefore, re-extraction was not required.

The surrogate recoveries for the following sample and QC are below the acceptance criteria for decachlorobiphenyl. Because the recoveries were confirmed by the QC, re-extraction was not required:

L1500236-04: 10%/14%

WG754135-4/-5 MS/MSD: 12%/12% and 16%/13%

The WG754135-4/-5 MS/MSD recoveries, performed on L1500236-04, are below the acceptance criteria for 4,4'-dde (23%/22%) and 4,4'-ddt (23%/25%); however, the associated LCS/LCSD recoveries are within overall method allowances. No further action was required.

The WG754135-4/-5 MS/MSD RPDs, performed on L1500236-04, are above the acceptance criteria for lindane (34%) and alpha-bhc (35%).

Project Name:	SITE1_PRW7_GW_2014	**Lab Number:**	L1500236
Project Number:	SITE1_PRW7_GW_2014	**Report Date:**	01/08/15

Case Narrative (continued)

Metals

L1500236-03: The Field Blank has concentrations above the reporting limits for chromium, nickel, and zinc. The results were confirmed.

The WG754180-3/-4 MS/MSD recoveries, performed on L1500236-04, are below the acceptance criteria for selenium (14%/16%). A post digestion spike was performed and was within acceptance criteria.

The WG754219-3/-4 MS/MSD recoveries, performed on L1500236-04, are below the acceptance criteria for mercury (30%/31%). A post digestion spike was performed and was within acceptance criteria.

Cyanide, Total

The WG754138-4/-5 MS/MSD recoveries (74%/76%), performed on L1500236-04, are below the acceptance criteria; however, the associated LCS/LCSD recoveries are within criteria. No further action was taken.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature: Kelly Stenstrom

Title: Technical Director/Representative Date: 01/08/15

ORGANICS

VOLATILES

Project Name: SITE1_PRW7_GW_2014 **Lab Number:** L1500236

Project Number: SITE1_PRW7_GW_2014 **Report Date:** 01/08/15

SAMPLE RESULTS

Lab ID: L1500236-01 D2
Client ID: WG-201501061316-FD-1
Sample Location: PORT IVORY
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 01/08/15 15:32
Analyst: MS

Date Collected: 01/06/15 13:16
Date Received: 01/07/15
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Toluene	82000		ug/l	2500	700	1000

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	114		70-130
Toluene-d8	112		70-130
4-Bromofluorobenzene	105		70-130
Dibromofluoromethane	96		70-130

Project Name: SITE1_PRW7_GW_2014 **Lab Number:** L1500236

Project Number: SITE1_PRW7_GW_2014 **Report Date:** 01/08/15

SAMPLE RESULTS

Lab ID: L1500236-01 D
Client ID: WG-201501061316-FD-1
Sample Location: PORT IVORY
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 01/08/15 13:32
Analyst: MS

Date Collected: 01/06/15 13:16
Date Received: 01/07/15
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	250	70.	100
1,1-Dichloroethane	ND		ug/l	250	70.	100
Chloroform	ND		ug/l	250	70.	100
2-Chloroethylvinyl ether	ND		ug/l	1000	70.	100
Carbon tetrachloride	ND		ug/l	50	13.	100
1,2-Dichloropropane	ND		ug/l	100	13.	100
Dibromochloromethane	ND		ug/l	50	15.	100
1,1,2-Trichloroethane	ND		ug/l	150	50.	100
Tetrachloroethene	ND		ug/l	50	18.	100
Chlorobenzene	ND		ug/l	250	70.	100
1,2-Dichloroethane	ND		ug/l	50	13.	100
1,1,1-Trichloroethane	ND		ug/l	250	70.	100
Bromodichloromethane	ND		ug/l	50	19.	100
trans-1,3-Dichloropropene	ND		ug/l	50	16.	100
cis-1,3-Dichloropropene	ND		ug/l	50	14.	100
1,3-Dichloropropene, Total	ND		ug/l	50	14.	100
Bromoform	ND		ug/l	200	65.	100
1,1,2,2-Tetrachloroethane	ND		ug/l	50	14.	100
Benzene	21	J	ug/l	50	16.	100
Toluene	60000	E	ug/l	250	70.	100
Ethylbenzene	ND		ug/l	250	70.	100
Chloromethane	ND		ug/l	250	70.	100
Bromomethane	ND		ug/l	250	70.	100
Vinyl chloride	ND		ug/l	100	33.	100
Chloroethane	ND		ug/l	250	70.	100
1,1-Dichloroethene	ND		ug/l	50	14.	100
trans-1,2-Dichloroethene	ND		ug/l	250	70.	100
Trichloroethene	ND		ug/l	50	18.	100
1,2-Dichlorobenzene	ND		ug/l	250	70.	100
1,3-Dichlorobenzene	ND		ug/l	250	70.	100

Project Name: SITE1_PRW7_GW_2014 **Lab Number:** L1500236

Project Number: SITE1_PRW7_GW_2014 **Report Date:** 01/08/15

SAMPLE RESULTS

Lab ID: L1500236-01 D
Client ID: WG-201501061316-FD-1
Sample Location: PORT IVORY

Date Collected: 01/06/15 13:16
Date Received: 01/07/15
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,4-Dichlorobenzene	ND		ug/l	250	70.	100
Acrylonitrile	ND		ug/l	500	150	100
Acrolein	ND		ug/l	500	63.	100

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	113		70-130
Toluene-d8	107		70-130
4-Bromofluorobenzene	104		70-130
Dibromofluoromethane	95		70-130

Project Name: SITE1_PRW7_GW_2014 **Lab Number:** L1500236

Project Number: SITE1_PRW7_GW_2014 **Report Date:** 01/08/15

SAMPLE RESULTS

Lab ID: L1500236-02
Client ID: WQ-20150106000-TB-1
Sample Location: PORT IVORY
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 01/08/15 12:32
Analyst: MS

Date Collected: 01/05/15 00:00
Date Received: 01/07/15
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	2.5	0.70	1
1,1-Dichloroethane	ND		ug/l	2.5	0.70	1
Chloroform	ND		ug/l	2.5	0.70	1
2-Chloroethylvinyl ether	ND		ug/l	10	0.70	1
Carbon tetrachloride	ND		ug/l	0.50	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.13	1
Dibromochloromethane	ND		ug/l	0.50	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50	1
Tetrachloroethene	ND		ug/l	0.50	0.18	1
Chlorobenzene	ND		ug/l	2.5	0.70	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70	1
Bromodichloromethane	ND		ug/l	0.50	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14	1
Bromoform	ND		ug/l	2.0	0.65	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.14	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	2.5	0.70	1
Ethylbenzene	ND		ug/l	2.5	0.70	1
Chloromethane	ND		ug/l	2.5	0.70	1
Bromomethane	ND		ug/l	2.5	0.70	1
Vinyl chloride	ND		ug/l	1.0	0.33	1
Chloroethane	ND		ug/l	2.5	0.70	1
1,1-Dichloroethene	ND		ug/l	0.50	0.14	1
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
Trichloroethene	ND		ug/l	0.50	0.18	1
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70	1
1,3-Dichlorobenzene	ND		ug/l	2.5	0.70	1

Project Name: SITE1_PRW7_GW_2014 **Lab Number:** L1500236

Project Number: SITE1_PRW7_GW_2014 **Report Date:** 01/08/15

SAMPLE RESULTS

Lab ID: L1500236-02 Date Collected: 01/05/15 00:00

Client ID: WQ-20150106000-TB-1 Date Received: 01/07/15

Sample Location: PORT IVORY Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,4-Dichlorobenzene	ND		ug/l	2.5	0.70	1
Acrylonitrile	ND		ug/l	5.0	1.5	1
Acrolein	ND		ug/l	5.0	0.63	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	116		70-130
Toluene-d8	111		70-130
4-Bromofluorobenzene	102		70-130
Dibromofluoromethane	96		70-130

Project Name: SITE1_PRW7_GW_2014 **Lab Number:** L1500236

Project Number: SITE1_PRW7_GW_2014 **Report Date:** 01/08/15

SAMPLE RESULTS

Lab ID: L1500236-03
Client ID: WQ-201501061220-FB-1
Sample Location: PORT IVORY
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 01/08/15 13:02
Analyst: MS

Date Collected: 01/06/15 12:20
Date Received: 01/07/15
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	2.5	0.70	1
1,1-Dichloroethane	ND		ug/l	2.5	0.70	1
Chloroform	ND		ug/l	2.5	0.70	1
2-Chloroethylvinyl ether	ND		ug/l	10	0.70	1
Carbon tetrachloride	ND		ug/l	0.50	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.13	1
Dibromochloromethane	ND		ug/l	0.50	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50	1
Tetrachloroethene	ND		ug/l	0.50	0.18	1
Chlorobenzene	ND		ug/l	2.5	0.70	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70	1
Bromodichloromethane	ND		ug/l	0.50	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14	1
Bromoform	ND		ug/l	2.0	0.65	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.14	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	2.5	0.70	1
Ethylbenzene	ND		ug/l	2.5	0.70	1
Chloromethane	ND		ug/l	2.5	0.70	1
Bromomethane	ND		ug/l	2.5	0.70	1
Vinyl chloride	ND		ug/l	1.0	0.33	1
Chloroethane	ND		ug/l	2.5	0.70	1
1,1-Dichloroethene	ND		ug/l	0.50	0.14	1
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
Trichloroethene	ND		ug/l	0.50	0.18	1
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70	1
1,3-Dichlorobenzene	ND		ug/l	2.5	0.70	1

Project Name: SITE1_PRW7_GW_2014 **Lab Number:** L1500236

Project Number: SITE1_PRW7_GW_2014 **Report Date:** 01/08/15

SAMPLE RESULTS

Lab ID: L1500236-03 Date Collected: 01/06/15 12:20

Client ID: WQ-201501061220-FB-1 Date Received: 01/07/15

Sample Location: PORT IVORY Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,4-Dichlorobenzene	ND		ug/l	2.5	0.70	1
Acrylonitrile	ND		ug/l	5.0	1.5	1
Acrolein	ND		ug/l	5.0	0.63	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	118		70-130
Toluene-d8	111		70-130
4-Bromofluorobenzene	103		70-130
Dibromofluoromethane	96		70-130

Project Name: SITE1_PRW7_GW_2014 **Lab Number:** L1500236

Project Number: SITE1_PRW7_GW_2014 **Report Date:** 01/08/15

SAMPLE RESULTS

Lab ID: L1500236-04 D2
Client ID: PRW-07-WG-201501061316
Sample Location: PORT IVORY
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 01/08/15 16:02
Analyst: MS

Date Collected: 01/06/15 13:16
Date Received: 01/07/15
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Toluene	79000		ug/l	2500	700	1000

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	115		70-130
Toluene-d8	111		70-130
4-Bromofluorobenzene	104		70-130
Dibromofluoromethane	95		70-130

Project Name: SITE1_PRW7_GW_2014 **Lab Number:** L1500236

Project Number: SITE1_PRW7_GW_2014 **Report Date:** 01/08/15

SAMPLE RESULTS

Lab ID: L1500236-04 D
Client ID: PRW-07-WG-201501061316
Sample Location: PORT IVORY
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 01/08/15 14:02
Analyst: MS

Date Collected: 01/06/15 13:16
Date Received: 01/07/15
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	250	70.	100
1,1-Dichloroethane	ND		ug/l	250	70.	100
Chloroform	ND		ug/l	250	70.	100
2-Chloroethylvinyl ether	ND		ug/l	1000	70.	100
Carbon tetrachloride	ND		ug/l	50	13.	100
1,2-Dichloropropane	ND		ug/l	100	13.	100
Dibromochloromethane	ND		ug/l	50	15.	100
1,1,2-Trichloroethane	ND		ug/l	150	50.	100
Tetrachloroethene	ND		ug/l	50	18.	100
Chlorobenzene	ND		ug/l	250	70.	100
1,2-Dichloroethane	ND		ug/l	50	13.	100
1,1,1-Trichloroethane	ND		ug/l	250	70.	100
Bromodichloromethane	ND		ug/l	50	19.	100
trans-1,3-Dichloropropene	ND		ug/l	50	16.	100
cis-1,3-Dichloropropene	ND		ug/l	50	14.	100
1,3-Dichloropropene, Total	ND		ug/l	50	14.	100
Bromoform	ND		ug/l	200	65.	100
1,1,2,2-Tetrachloroethane	ND		ug/l	50	14.	100
Benzene	22	J	ug/l	50	16.	100
Toluene	62000	E	ug/l	250	70.	100
Ethylbenzene	ND		ug/l	250	70.	100
Chloromethane	ND		ug/l	250	70.	100
Bromomethane	ND		ug/l	250	70.	100
Vinyl chloride	ND		ug/l	100	33.	100
Chloroethane	ND		ug/l	250	70.	100
1,1-Dichloroethene	ND		ug/l	50	14.	100
trans-1,2-Dichloroethene	ND		ug/l	250	70.	100
Trichloroethene	ND		ug/l	50	18.	100
1,2-Dichlorobenzene	ND		ug/l	250	70.	100
1,3-Dichlorobenzene	ND		ug/l	250	70.	100

Project Name: SITE1_PRW7_GW_2014 **Lab Number:** L1500236

Project Number: SITE1_PRW7_GW_2014 **Report Date:** 01/08/15

SAMPLE RESULTS

Lab ID: L1500236-04 D
Client ID: PRW-07-WG-201501061316
Sample Location: PORT IVORY

Date Collected: 01/06/15 13:16
Date Received: 01/07/15
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,4-Dichlorobenzene	ND		ug/l	250	70.	100
Acrylonitrile	ND		ug/l	500	150	100
Acrolein	ND		ug/l	500	63.	100

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	111		70-130
Toluene-d8	109		70-130
4-Bromofluorobenzene	104		70-130
Dibromofluoromethane	94		70-130

Project Name: SITE1_PRW7_GW_2014 **Lab Number:** L1500236

Project Number: SITE1_PRW7_GW_201 **Report Date:** 01/08/15

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 01/08/15 12:02
Analyst: MS

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-04 Batch: WG754408-3					
Methylene chloride	ND		ug/l	2.5	0.70
1,1-Dichloroethane	ND		ug/l	2.5	0.70
Chloroform	ND		ug/l	2.5	0.70
2-Chloroethylvinyl ether	ND		ug/l	10	0.70
Carbon tetrachloride	ND		ug/l	0.50	0.13
1,2-Dichloropropane	ND		ug/l	1.0	0.13
Dibromochloromethane	ND		ug/l	0.50	0.15
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50
Tetrachloroethene	ND		ug/l	0.50	0.18
Chlorobenzene	ND		ug/l	2.5	0.70
1,2-Dichloroethane	ND		ug/l	0.50	0.13
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70
Bromodichloromethane	ND		ug/l	0.50	0.19
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14
Bromoform	ND		ug/l	2.0	0.65
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.14
Benzene	ND		ug/l	0.50	0.16
Toluene	ND		ug/l	2.5	0.70
Ethylbenzene	ND		ug/l	2.5	0.70
Chloromethane	ND		ug/l	2.5	0.70
Bromomethane	ND		ug/l	2.5	0.70
Vinyl chloride	ND		ug/l	1.0	0.33
Chloroethane	ND		ug/l	2.5	0.70
1,1-Dichloroethene	ND		ug/l	0.50	0.14
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70
Trichloroethene	ND		ug/l	0.50	0.18
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70

Project Name: SITE1_PRW7_GW_2014 **Lab Number:** L1500236

Project Number: SITE1_PRW7_GW_201 **Report Date:** 01/08/15

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 01/08/15 12:02
Analyst: MS

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-04 Batch: WG754408-3					
1,3-Dichlorobenzene	ND		ug/l	2.5	0.70
1,4-Dichlorobenzene	ND		ug/l	2.5	0.70
Acrylonitrile	ND		ug/l	5.0	1.5
Acrolein	ND		ug/l	5.0	0.63

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	115		70-130
Toluene-d8	112		70-130
4-Bromofluorobenzene	102		70-130
Dibromofluoromethane	96		70-130

Lab Control Sample Analysis
Batch Quality Control

Project Name: SITE1_PRW7_GW_2014
Project Number: SITE1_PRW7_GW_2014

Lab Number: L1500236
Report Date: 01/08/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-04 Batch: WG754408-1 WG754408-2								
Methylene chloride	86		86		70-130	0		20
1,1-Dichloroethane	92		94		70-130	2		20
Chloroform	88		91		70-130	3		20
2-Chloroethylvinyl ether	96		94		70-130	2		20
Carbon tetrachloride	83		87		63-132	5		20
1,2-Dichloropropane	92		94		70-130	2		20
Dibromochloromethane	98		99		63-130	1		20
1,1,2-Trichloroethane	107		106		70-130	1		20
Tetrachloroethene	95		98		70-130	3		20
Chlorobenzene	103		104		75-130	1		20
Trichlorofluoromethane	87		90		62-150	3		20
1,2-Dichloroethane	96		97		70-130	1		20
1,1,1-Trichloroethane	87		89		67-130	2		20
Bromodichloromethane	86		88		67-130	2		20
trans-1,3-Dichloropropene	107		107		70-130	0		20
cis-1,3-Dichloropropene	88		87		70-130	1		20
1,1-Dichloropropene	90		93		70-130	3		20
Bromoform	108		107		54-136	1		20
1,1,2,2-Tetrachloroethane	117		114		67-130	3		20
Benzene	88		90		70-130	2		20
Toluene	103		105		70-130	2		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: SITE1_PRW7_GW_2014

Project Number: SITE1_PRW7_GW_2014

Lab Number: L1500236

Report Date: 01/08/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-04 Batch: WG754408-1 WG754408-2								
Ethylbenzene	106		108		70-130	2		20
Chloromethane	98		100		64-130	2		20
Bromomethane	131		124		39-139	5		20
Vinyl chloride	99		101		55-140	2		20
Chloroethane	102		108		55-138	6		20
1,1-Dichloroethene	84		86		61-145	2		20
trans-1,2-Dichloroethene	84		88		70-130	5		20
Trichloroethene	87		90		70-130	3		20
1,2-Dichlorobenzene	110		110		70-130	0		20
1,3-Dichlorobenzene	113		113		70-130	0		20
1,4-Dichlorobenzene	114		114		70-130	0		20
Methyl tert butyl ether	88		88		63-130	0		20
p/m-Xylene	108		110		70-130	2		20
o-Xylene	106		108		70-130	2		20
cis-1,2-Dichloroethene	86		87		70-130	1		20
Dibromomethane	86		86		70-130	0		20
1,2,3-Trichloropropane	**131**	Q	129		64-130	2		20
Acrylonitrile	95		93		70-130	2		20
Isopropyl Ether	101		100		70-130	1		20
tert-Butyl Alcohol	83		79		70-130	5		20
Styrene	108		109		70-130	1		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: SITE1_PRW7_GW_2014
Project Number: SITE1_PRW7_GW_2014

Lab Number: L1500236
Report Date: 01/08/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-04 Batch: WG754408-1 WG754408-2								
Dichlorodifluoromethane	80		84		36-147	5		20
Acetone	72		66		58-148	9		20
Carbon disulfide	86		90		51-130	5		20
2-Butanone	104		96		63-138	8		20
Vinyl acetate	101		98		70-130	3		20
4-Methyl-2-pentanone	89		89		59-130	0		20
2-Hexanone	109		110		57-130	1		20
Acrolein	106		99		40-160	7		20
Bromochloromethane	91		91		70-130	0		20
2,2-Dichloropropane	88		90		63-133	2		20
1,2-Dibromoethane	100		102		70-130	2		20
1,3-Dichloropropane	108		109		70-130	1		20
1,1,1,2-Tetrachloroethane	102		104		64-130	2		20
Bromobenzene	106		107		70-130	1		20
n-Butylbenzene	123		125		53-136	2		20
sec-Butylbenzene	119		120		70-130	1		20
tert-Butylbenzene	114		117		70-130	3		20
o-Chlorotoluene	127		127		70-130	0		20
p-Chlorotoluene	122		122		70-130	0		20
1,2-Dibromo-3-chloropropane	118		96		41-144	**21**	Q	20
Hexachlorobutadiene	111		106		63-130	5		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: SITE1_PRW7_GW_2014
Project Number: SITE1_PRW7_GW_2014

Lab Number: L1500236
Report Date: 01/08/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-04 Batch: WG754408-1 WG754408-2								
Isopropylbenzene	115		117		70-130	2		20
p-Isopropyltoluene	118		118		70-130	0		20
Naphthalene	109		108		70-130	1		20
n-Propylbenzene	119		120		69-130	1		20
1,2,3-Trichlorobenzene	108		107		70-130	1		20
1,2,4-Trichlorobenzene	106		106		70-130	0		20
1,3,5-Trimethylbenzene	121		122		64-130	1		20
1,2,4-Trimethylbenzene	117		119		70-130	2		20
Methyl Acetate	96		100		70-130	4		20
Ethyl Acetate	96		97		70-130	1		20
Cyclohexane	95		99		70-130	4		20
Ethyl-Tert-Butyl-Ether	93		94		70-130	1		20
Tertiary-Amyl Methyl Ether	87		88		66-130	1		20
1,4-Dioxane	76		76		56-162	0		20
1,1,2-Trichloro-1,2,2-Trifluoroethane	86		90		70-130	5		20
1,4-Diethylbenzene	116		117		70-130	1		20
4-Ethyltoluene	118		120		70-130	2		20
1,2,4,5-Tetramethylbenzene	112		113		70-130	1		20
Ethyl ether	86		87		59-134	1		20
trans-1,4-Dichloro-2-butene	129		125		70-130	3		20
Methyl cyclohexane	88		93		70-130	6		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: SITE1_PRW7_GW_2014

Project Number: SITE1_PRW7_GW_2014

Lab Number: L1500236

Report Date: 01/08/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-04 Batch: WG754408-1 WG754408-2								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	112		113		70-130
Toluene-d8	111		112		70-130
4-Bromofluorobenzene	103		102		70-130
Dibromofluoromethane	97		98		70-130

Matrix Spike Analysis
Batch Quality Control

Project Name: SITE1_PRW7_GW_2014
Project Number: SITE1_PRW7_GW_2014

Lab Number: L1500236
Report Date: 01/08/15

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-04 QC Batch ID: WG754408-4 WG754408-5 QC Sample: L1500236-01 Client ID: WG-201501061316-FD-1												
Methylene chloride	ND	1000	910	91		960	96		70-130	5		20
1,1-Dichloroethane	ND	1000	1000	100		1000	104		70-130	0		20
Chloroform	ND	1000	940	94		1000	100		70-130	6		20
2-Chloroethylvinyl ether	ND	1000	820J	82		870J	88		70-130	6		20
Carbon tetrachloride	ND	1000	930	93		960	96		63-132	3		20
1,2-Dichloropropane	ND	1000	980	98		1000	104		70-130	2		20
Dibromochloromethane	ND	1000	990	99		1100	106		63-130	11		20
1,1,2-Trichloroethane	ND	1000	1100	109		1200	116		70-130	9		20
Tetrachloroethene	ND	1000	1000	105		1100	109		70-130	10		20
Chlorobenzene	ND	1000	1100	110		1200	116		75-130	9		20
Trichlorofluoromethane	ND	1000	1000	101		1000	103		62-150	0		20
1,2-Dichloroethane	ND	1000	1000	100		1000	106		70-130	0		20
1,1,1-Trichloroethane	ND	1000	960	96		1000	100		67-130	4		20
Bromodichloromethane	ND	1000	910	91		960	96		67-130	5		20
trans-1,3-Dichloropropene	ND	1000	1100	106		1100	113		70-130	0		20
cis-1,3-Dichloropropene	ND	1000	900	90		950	95		70-130	5		20
1,1-Dichloropropene	ND	1000	1000	101		1100	106		70-130	10		20
Bromoform	ND	1000	1000	104		1100	110		54-136	10		20
1,1,2,2-Tetrachloroethane	ND	1000	1200	116		1200	124		67-130	0		20
Benzene	21.J	1000	980	98		1000	102		70-130	2		20
Toluene	60000E	1000	59000E	**0**	Q	60000E	**0**	Q	70-130	2		20

Matrix Spike Analysis
Batch Quality Control

Project Name: SITE1_PRW7_GW_2014
Project Number: SITE1_PRW7_GW_2014

Lab Number: L1500236
Report Date: 01/08/15

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-04 QC Batch ID: WG754408-4 WG754408-5 QC Sample: L1500236-01 Client ID: WG-201501061316-FD-1												
Ethylbenzene	ND	1000	1200	116		1200	122		70-130	0		20
Chloromethane	ND	1000	960	96		980	98		64-130	2		20
Bromomethane	ND	1000	790	79		720	72		39-139	9		20
Vinyl chloride	ND	1000	1100	111		1100	115		55-140	0		20
Chloroethane	ND	1000	1200	117		1200	116		55-138	0		20
1,1-Dichloroethene	ND	1000	950	95		980	98		61-145	3		20
trans-1,2-Dichloroethene	ND	1000	920	92		970	97		70-130	5		20
Trichloroethene	ND	1000	970	97		1000	102		70-130	3		20
1,2-Dichlorobenzene	ND	1000	1200	115		1200	121		70-130	0		20
1,3-Dichlorobenzene	ND	1000	1200	118		1200	125		70-130	0		20
1,4-Dichlorobenzene	ND	1000	1200	119		1200	126		70-130	0		20
Methyl tert butyl ether	ND	1000	890	89		940	94		63-130	5		20
p/m-Xylene	ND	2000	2300	117		2400	123		70-130	4		20
o-Xylene	ND	2000	2300	114		2400	120		70-130	4		20
cis-1,2-Dichloroethene	ND	1000	910	91		960	96		70-130	5		20
Dibromomethane	ND	1000	890	89		940	94		70-130	5		20
1,2,3-Trichloropropane	ND	1000	1300	**132**	Q	1400	**139**	Q	64-130	7		20
Acrylonitrile	ND	1000	940	94		960	96		70-130	2		20
Isopropyl Ether	ND	1000	1100	107		1100	113		70-130	0		20
tert-Butyl Alcohol	ND	5000	3300	**66**	Q	3900	78		70-130	17		20
Styrene	ND	2000	2300	115		2400	121		70-130	4		20

Matrix Spike Analysis
Batch Quality Control

Project Name: SITE1_PRW7_GW_2014
Project Number: SITE1_PRW7_GW_2014

Lab Number: L1500236
Report Date: 01/08/15

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-04 QC Batch ID: WG754408-4 WG754408-5 QC Sample: L1500236-01 Client ID: WG-201501061316-FD-1												
Dichlorodifluoromethane	ND	1000	930	93		940	94		36-147	1		20
Acetone	ND	1000	740	74		790	79		58-148	7		20
Carbon disulfide	ND	1000	980	98		1000	104		51-130	2		20
2-Butanone	ND	1000	860	86		1100	109		63-138	**24**	Q	20
Vinyl acetate	ND	1000	1100	109		1200	115		70-130	9		20
4-Methyl-2-pentanone	ND	1000	890	89		960	96		59-130	8		20
2-Hexanone	ND	1000	1100	107		1200	118		57-130	9		20
Acrolein	ND	1000	1000	103		1100	113		40-160	10		20
Bromochloromethane	ND	1000	940	94		1000	100		70-130	6		20
2,2-Dichloropropane	ND	1000	940	94		980	98		63-133	4		20
1,2-Dibromoethane	ND	1000	1000	104		1100	110		70-130	10		20
1,3-Dichloropropane	ND	1000	1100	114		1200	119		70-130	9		20
1,1,1,2-Tetrachloroethane	ND	1000	1000	106		1100	112		64-130	10		20
Bromobenzene	ND	1000	1100	112		1200	117		70-130	9		20
n-Butylbenzene	ND	1000	1300	134		1400	**141**	Q	53-136	7		20
sec-Butylbenzene	ND	1000	1300	**131**	Q	1400	**137**	Q	70-130	7		20
tert-Butylbenzene	ND	1000	1200	126		1300	**132**	Q	70-130	8		20
o-Chlorotoluene	ND	1000	1300	126		1300	**133**	Q	70-130	0		20
p-Chlorotoluene	ND	1000	1300	**131**	Q	1400	**138**	Q	70-130	7		20
1,2-Dibromo-3-chloropropane	ND	1000	1200	121		1300	130		41-144	8		20
Hexachlorobutadiene	ND	1000	1000	103		1100	114		63-130	10		20

Matrix Spike Analysis
Batch Quality Control

Project Name: SITE1_PRW7_GW_2014
Project Number: SITE1_PRW7_GW_2014

Lab Number: L1500236
Report Date: 01/08/15

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-04 QC Batch ID: WG754408-4 WG754408-5 QC Sample: L1500236-01 Client ID: WG-201501061316-FD-1												
Isopropylbenzene	ND	1000	1200	126		1300	**132**	Q	70-130	8		20
p-Isopropyltoluene	ND	1000	1300	128		1300	**135**	Q	70-130	0		20
Naphthalene	ND	1000	1000	100		1100	115		70-130	10		20
n-Propylbenzene	ND	1000	1300	**131**	Q	1400	**136**	Q	69-130	7		20
1,2,3-Trichlorobenzene	ND	1000	980	98		1100	114		70-130	12		20
1,2,4-Trichlorobenzene	ND	1000	1000	105		1200	116		70-130	18		20
1,3,5-Trimethylbenzene	ND	1000	1300	**131**	Q	1400	**139**	Q	64-130	7		20
1,2,4-Trimethylbenzene	ND	1000	1300	127		1300	**133**	Q	70-130	0		20
Methyl Acetate	ND	1000	970	97		1100	107		70-130	13		20
Ethyl Acetate	ND	1000	980J	98		1000	104		70-130	2		20
Cyclohexane	ND	1000	1100	110		1100	113		70-130	0		20
Ethyl-Tert-Butyl-Ether	ND	1000	980	98		1000	103		70-130	2		20
Tertiary-Amyl Methyl Ether	ND	1000	890	89		930	93		66-130	4		20
1,4-Dioxane	ND	50000	28000	**55**	Q	42000	83		56-162	**40**	Q	20
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	1000	970	97		990	99		70-130	2		20
1,4-Diethylbenzene	ND	1000	1200	126		1300	**132**	Q	70-130	8		20
4-Ethyltoluene	ND	1000	1300	129		1400	**135**	Q	70-130	7		20
1,2,4,5-Tetramethylbenzene	ND	1000	1200	119		1300	126		70-130	8		20
Ethyl ether	ND	1000	900	90		940	94		59-134	4		20
trans-1,4-Dichloro-2-butene	ND	1000	1100	114		1200	116		70-130	9		20
Methyl cyclohexane	ND	1000	1000	100		1000	102		70-130	0		20

Matrix Spike Analysis
Batch Quality Control

Project Name: SITE1_PRW7_GW_2014
Project Number: SITE1_PRW7_GW_2014

Lab Number: L1500236
Report Date: 01/08/15

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-04 QC Batch ID: WG754408-4 WG754408-5 QC Sample: L1500236-01 Client ID: WG-201501061316-FD-1												

Surrogate	MS % Recovery	MS Qualifier	MSD % Recovery	MSD Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	113		111		70-130
4-Bromofluorobenzene	104		104		70-130
Dibromofluoromethane	97		97		70-130
Toluene-d8	110		110		70-130

SEMIVOLATILES

Project Name: SITE1_PRW7_GW_2014 **Lab Number:** L1500236

Project Number: SITE1_PRW7_GW_2014 **Report Date:** 01/08/15

SAMPLE RESULTS

Lab ID: L1500236-01
Client ID: WG-201501061316-FD-1
Sample Location: PORT IVORY
Matrix: Water
Analytical Method: 1,8270D
Analytical Date: 01/08/15 12:08
Analyst: PS

Date Collected: 01/06/15 13:16
Date Received: 01/07/15
Field Prep: Not Specified
Extraction Method: EPA 3510C
Extraction Date: 01/08/15 00:52

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.21	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.41	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	0.48	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.0	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.89	1
4-Chlorophenyl phenyl ether	ND		ug/l	2.0	0.36	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.43	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.60	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.60	1
Hexachlorocyclopentadiene	ND		ug/l	20	0.58	1
Isophorone	ND		ug/l	5.0	0.79	1
Nitrobenzene	ND		ug/l	2.0	0.40	1
NDPA/DPA	ND		ug/l	2.0	0.34	1
n-Nitrosodi-n-propylamine	ND		ug/l	5.0	0.64	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	0.93	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.1	1
Di-n-butylphthalate	ND		ug/l	5.0	0.77	1
Di-n-octylphthalate	ND		ug/l	5.0	1.2	1
Diethyl phthalate	2.2	J	ug/l	5.0	0.39	1
Dimethyl phthalate	ND		ug/l	5.0	0.33	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.78	1
p-Chloro-m-cresol	ND		ug/l	2.0	0.54	1
2-Chlorophenol	ND		ug/l	2.0	0.58	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.56	1
2,4-Dimethylphenol	0.99	J	ug/l	5.0	0.58	1
2-Nitrophenol	ND		ug/l	10	1.0	1
4-Nitrophenol	ND		ug/l	10	1.1	1
2,4-Dinitrophenol	ND		ug/l	20	1.4	1
4,6-Dinitro-o-cresol	ND		ug/l	10	1.4	1
Phenol	ND		ug/l	5.0	0.27	1

Project Name: SITE1_PRW7_GW_2014 **Lab Number:** L1500236

Project Number: SITE1_PRW7_GW_2014 **Report Date:** 01/08/15

SAMPLE RESULTS

Lab ID: L1500236-01 Date Collected: 01/06/15 13:16

Client ID: WG-201501061316-FD-1 Date Received: 01/07/15

Sample Location: PORT IVORY Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor

Semivolatile Organics by GC/MS - Westborough Lab

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	26		21-120
Phenol-d6	18		10-120
Nitrobenzene-d5	65		23-120
2-Fluorobiphenyl	70		15-120
2,4,6-Tribromophenol	76		10-120
4-Terphenyl-d14	70		41-149

Project Name: SITE1_PRW7_GW_2014 **Lab Number:** L1500236

Project Number: SITE1_PRW7_GW_2014 **Report Date:** 01/08/15

SAMPLE RESULTS

Lab ID: L1500236-01 D
Client ID: WG-201501061316-FD-1
Sample Location: PORT IVORY
Matrix: Water
Analytical Method: 1,8270D-SIM
Analytical Date: 01/08/15 13:00
Analyst: MW

Date Collected: 01/06/15 13:16
Date Received: 01/07/15
Field Prep: Not Specified
Extraction Method: EPA 3510C
Extraction Date: 01/08/15 00:51

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS-SIM - Westborough Lab						
Acenaphthene	ND		ug/l	1.0	0.32	5
2-Chloronaphthalene	ND		ug/l	1.0	0.33	5
Fluoranthene	0.23	J	ug/l	1.0	0.22	5
Hexachlorobutadiene	ND		ug/l	2.5	0.36	5
Naphthalene	0.69	J	ug/l	1.0	0.32	5
Benzo(a)anthracene	ND		ug/l	1.0	0.28	5
Benzo(a)pyrene	ND		ug/l	1.0	0.34	5
Benzo(b)fluoranthene	ND		ug/l	1.0	0.36	5
Benzo(k)fluoranthene	ND		ug/l	1.0	0.34	5
Chrysene	ND		ug/l	1.0	0.24	5
Acenaphthylene	ND		ug/l	1.0	0.25	5
Anthracene	ND		ug/l	1.0	0.32	5
Benzo(ghi)perylene	ND		ug/l	1.0	0.35	5
Fluorene	ND		ug/l	1.0	0.28	5
Phenanthrene	ND		ug/l	1.0	0.32	5
Dibenzo(a,h)anthracene	ND		ug/l	1.0	0.36	5
Indeno(1,2,3-cd)pyrene	ND		ug/l	1.0	0.40	5
Pyrene	ND		ug/l	1.0	0.28	5
Pentachlorophenol	ND		ug/l	4.0	0.94	5
Hexachlorobenzene	ND		ug/l	4.0	0.07	5
Hexachloroethane	ND		ug/l	4.0	0.32	5

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	29		21-120
Phenol-d6	21		10-120
Nitrobenzene-d5	83		23-120
2-Fluorobiphenyl	86		15-120
2,4,6-Tribromophenol	114		10-120
4-Terphenyl-d14	79		41-149

Project Name: SITE1_PRW7_GW_2014 **Lab Number:** L1500236

Project Number: SITE1_PRW7_GW_2014 **Report Date:** 01/08/15

SAMPLE RESULTS

Lab ID: L1500236-03
Client ID: WQ-201501061220-FB-1
Sample Location: PORT IVORY
Matrix: Water
Analytical Method: 1,8270D
Analytical Date: 01/08/15 12:32
Analyst: PS

Date Collected: 01/06/15 12:20
Date Received: 01/07/15
Field Prep: Not Specified
Extraction Method: EPA 3510C
Extraction Date: 01/08/15 00:52

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.21	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.41	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	0.48	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.0	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.89	1
4-Chlorophenyl phenyl ether	ND		ug/l	2.0	0.36	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.43	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.60	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.60	1
Hexachlorocyclopentadiene	ND		ug/l	20	0.58	1
Isophorone	ND		ug/l	5.0	0.79	1
Nitrobenzene	ND		ug/l	2.0	0.40	1
NDPA/DPA	ND		ug/l	2.0	0.34	1
n-Nitrosodi-n-propylamine	ND		ug/l	5.0	0.64	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	0.93	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.1	1
Di-n-butylphthalate	ND		ug/l	5.0	0.77	1
Di-n-octylphthalate	ND		ug/l	5.0	1.2	1
Diethyl phthalate	ND		ug/l	5.0	0.39	1
Dimethyl phthalate	ND		ug/l	5.0	0.33	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.78	1
p-Chloro-m-cresol	ND		ug/l	2.0	0.54	1
2-Chlorophenol	ND		ug/l	2.0	0.58	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.56	1
2,4-Dimethylphenol	ND		ug/l	5.0	0.58	1
2-Nitrophenol	ND		ug/l	10	1.0	1
4-Nitrophenol	ND		ug/l	10	1.1	1
2,4-Dinitrophenol	ND		ug/l	20	1.4	1
4,6-Dinitro-o-cresol	ND		ug/l	10	1.4	1
Phenol	ND		ug/l	5.0	0.27	1

Project Name: SITE1_PRW7_GW_2014 **Lab Number:** L1500236

Project Number: SITE1_PRW7_GW_2014 **Report Date:** 01/08/15

SAMPLE RESULTS

Lab ID: L1500236-03 Date Collected: 01/06/15 12:20

Client ID: WQ-201501061220-FB-1 Date Received: 01/07/15

Sample Location: PORT IVORY Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor

Semivolatile Organics by GC/MS - Westborough Lab

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	**18**	Q	21-120
Phenol-d6	14		10-120
Nitrobenzene-d5	44		23-120
2-Fluorobiphenyl	50		15-120
2,4,6-Tribromophenol	69		10-120
4-Terphenyl-d14	76		41-149

Project Name: SITE1_PRW7_GW_2014 **Lab Number:** L1500236

Project Number: SITE1_PRW7_GW_2014 **Report Date:** 01/08/15

SAMPLE RESULTS

Lab ID: L1500236-03
Client ID: WQ-201501061220-FB-1
Sample Location: PORT IVORY
Matrix: Water
Analytical Method: 1,8270D-SIM
Analytical Date: 01/08/15 11:21
Analyst: MW

Date Collected: 01/06/15 12:20
Date Received: 01/07/15
Field Prep: Not Specified
Extraction Method: EPA 3510C
Extraction Date: 01/08/15 00:51

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS-SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.20	0.06	1
2-Chloronaphthalene	ND		ug/l	0.20	0.07	1
Fluoranthene	ND		ug/l	0.20	0.04	1
Hexachlorobutadiene	ND		ug/l	0.50	0.07	1
Naphthalene	ND		ug/l	0.20	0.06	1
Benzo(a)anthracene	ND		ug/l	0.20	0.06	1
Benzo(a)pyrene	ND		ug/l	0.20	0.07	1
Benzo(b)fluoranthene	ND		ug/l	0.20	0.07	1
Benzo(k)fluoranthene	ND		ug/l	0.20	0.07	1
Chrysene	ND		ug/l	0.20	0.05	1
Acenaphthylene	ND		ug/l	0.20	0.05	1
Anthracene	ND		ug/l	0.20	0.06	1
Benzo(ghi)perylene	ND		ug/l	0.20	0.07	1
Fluorene	ND		ug/l	0.20	0.06	1
Phenanthrene	ND		ug/l	0.20	0.06	1
Dibenzo(a,h)anthracene	ND		ug/l	0.20	0.07	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.20	0.08	1
Pyrene	ND		ug/l	0.20	0.06	1
Pentachlorophenol	ND		ug/l	0.80	0.19	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.07	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	**17**	Q	21-120
Phenol-d6	12		10-120
Nitrobenzene-d5	45		23-120
2-Fluorobiphenyl	50		15-120
2,4,6-Tribromophenol	85		10-120
4-Terphenyl-d14	78		41-149

Project Name: SITE1_PRW7_GW_2014 **Lab Number:** L1500236

Project Number: SITE1_PRW7_GW_2014 **Report Date:** 01/08/15

SAMPLE RESULTS

Lab ID: L1500236-04
Client ID: PRW-07-WG-201501061316
Sample Location: PORT IVORY
Matrix: Water
Analytical Method: 1,8270D
Analytical Date: 01/08/15 12:58
Analyst: PS

Date Collected: 01/06/15 13:16
Date Received: 01/07/15
Field Prep: Not Specified
Extraction Method: EPA 3510C
Extraction Date: 01/08/15 00:52

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.21	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.41	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	0.48	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.0	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.89	1
4-Chlorophenyl phenyl ether	ND		ug/l	2.0	0.36	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.43	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.60	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.60	1
Hexachlorocyclopentadiene	ND		ug/l	20	0.58	1
Isophorone	ND		ug/l	5.0	0.79	1
Nitrobenzene	ND		ug/l	2.0	0.40	1
NDPA/DPA	ND		ug/l	2.0	0.34	1
n-Nitrosodi-n-propylamine	ND		ug/l	5.0	0.64	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	0.93	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.1	1
Di-n-butylphthalate	ND		ug/l	5.0	0.77	1
Di-n-octylphthalate	ND		ug/l	5.0	1.2	1
Diethyl phthalate	ND		ug/l	5.0	0.39	1
Dimethyl phthalate	ND		ug/l	5.0	0.33	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.78	1
p-Chloro-m-cresol	ND		ug/l	2.0	0.54	1
2-Chlorophenol	ND		ug/l	2.0	0.58	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.56	1
2,4-Dimethylphenol	1.3	J	ug/l	5.0	0.58	1
2-Nitrophenol	ND		ug/l	10	1.0	1
4-Nitrophenol	ND		ug/l	10	1.1	1
2,4-Dinitrophenol	ND		ug/l	20	1.4	1
4,6-Dinitro-o-cresol	ND		ug/l	10	1.4	1
Phenol	ND		ug/l	5.0	0.27	1

Project Name: SITE1_PRW7_GW_2014 **Lab Number:** L1500236

Project Number: SITE1_PRW7_GW_2014 **Report Date:** 01/08/15

SAMPLE RESULTS

Lab ID: L1500236-04 Date Collected: 01/06/15 13:16

Client ID: PRW-07-WG-201501061316 Date Received: 01/07/15

Sample Location: PORT IVORY Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor

Semivolatile Organics by GC/MS - Westborough Lab

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	31		21-120
Phenol-d6	21		10-120
Nitrobenzene-d5	68		23-120
2-Fluorobiphenyl	75		15-120
2,4,6-Tribromophenol	77		10-120
4-Terphenyl-d14	73		41-149

Project Name: SITE1_PRW7_GW_2014 **Lab Number:** L1500236

Project Number: SITE1_PRW7_GW_2014 **Report Date:** 01/08/15

SAMPLE RESULTS

Lab ID: L1500236-04 D
Client ID: PRW-07-WG-201501061316
Sample Location: PORT IVORY
Matrix: Water
Analytical Method: 1,8270D-SIM
Analytical Date: 01/08/15 12:35
Analyst: MW

Date Collected: 01/06/15 13:16
Date Received: 01/07/15
Field Prep: Not Specified
Extraction Method: EPA 3510C
Extraction Date: 01/08/15 00:51

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS-SIM - Westborough Lab						
Acenaphthene	ND		ug/l	1.0	0.32	5
2-Chloronaphthalene	ND		ug/l	1.0	0.33	5
Fluoranthene	ND		ug/l	1.0	0.22	5
Hexachlorobutadiene	ND		ug/l	2.5	0.36	5
Naphthalene	ND		ug/l	1.0	0.32	5
Benzo(a)anthracene	ND		ug/l	1.0	0.28	5
Benzo(a)pyrene	ND		ug/l	1.0	0.34	5
Benzo(b)fluoranthene	ND		ug/l	1.0	0.36	5
Benzo(k)fluoranthene	ND		ug/l	1.0	0.34	5
Chrysene	ND		ug/l	1.0	0.24	5
Acenaphthylene	ND		ug/l	1.0	0.25	5
Anthracene	ND		ug/l	1.0	0.32	5
Benzo(ghi)perylene	ND		ug/l	1.0	0.35	5
Fluorene	ND		ug/l	1.0	0.28	5
Phenanthrene	ND		ug/l	1.0	0.32	5
Dibenzo(a,h)anthracene	ND		ug/l	1.0	0.36	5
Indeno(1,2,3-cd)pyrene	ND		ug/l	1.0	0.40	5
Pyrene	ND		ug/l	1.0	0.28	5
Pentachlorophenol	ND		ug/l	4.0	0.94	5
Hexachlorobenzene	ND		ug/l	4.0	0.07	5
Hexachloroethane	ND		ug/l	4.0	0.32	5

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	30		21-120
Phenol-d6	21		10-120
Nitrobenzene-d5	82		23-120
2-Fluorobiphenyl	84		15-120
2,4,6-Tribromophenol	108		10-120
4-Terphenyl-d14	75		41-149

Project Name: SITE1_PRW7_GW_2014 **Lab Number:** L1500236

Project Number: SITE1_PRW7_GW_201 **Report Date:** 01/08/15

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270D
Analytical Date: 01/08/15 10:03
Analyst: PS

Extraction Method: EPA 3510C
Extraction Date: 01/08/15 00:52

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01,03-04 Batch: WG754131-1					
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.21
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.41
3,3'-Dichlorobenzidine	ND		ug/l	5.0	0.48
2,4-Dinitrotoluene	ND		ug/l	5.0	1.0
2,6-Dinitrotoluene	ND		ug/l	5.0	0.89
4-Chlorophenyl phenyl ether	ND		ug/l	2.0	0.36
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.43
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.60
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.60
Hexachlorocyclopentadiene	ND		ug/l	20	0.58
Isophorone	ND		ug/l	5.0	0.79
Nitrobenzene	ND		ug/l	2.0	0.40
NDPA/DPA	ND		ug/l	2.0	0.34
n-Nitrosodi-n-propylamine	ND		ug/l	5.0	0.64
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	0.93
Butyl benzyl phthalate	ND		ug/l	5.0	1.1
Di-n-butylphthalate	ND		ug/l	5.0	0.77
Di-n-octylphthalate	ND		ug/l	5.0	1.2
Diethyl phthalate	ND		ug/l	5.0	0.39
Dimethyl phthalate	ND		ug/l	5.0	0.33
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.78
p-Chloro-m-cresol	ND		ug/l	2.0	0.54
2-Chlorophenol	ND		ug/l	2.0	0.58
2,4-Dichlorophenol	ND		ug/l	5.0	0.56
2,4-Dimethylphenol	ND		ug/l	5.0	0.58
2-Nitrophenol	ND		ug/l	10	1.0
4-Nitrophenol	ND		ug/l	10	1.1
2,4-Dinitrophenol	ND		ug/l	20	1.4
4,6-Dinitro-o-cresol	ND		ug/l	10	1.4

Project Name: SITE1_PRW7_GW_2014 **Lab Number:** L1500236

Project Number: SITE1_PRW7_GW_201 **Report Date:** 01/08/15

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270D
Analytical Date: 01/08/15 10:03
Analyst: PS

Extraction Method: EPA 3510C
Extraction Date: 01/08/15 00:52

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01,03-04 Batch: WG754131-1					
Phenol	ND		ug/l	5.0	0.27

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	22		21-120
Phenol-d6	14		10-120
Nitrobenzene-d5	47		23-120
2-Fluorobiphenyl	55		15-120
2,4,6-Tribromophenol	63		10-120
4-Terphenyl-d14	78		41-149

Project Name: SITE1_PRW7_GW_2014 **Lab Number:** L1500236

Project Number: SITE1_PRW7_GW_201 **Report Date:** 01/08/15

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270D-SIM
Analytical Date: 01/08/15 10:07
Analyst: MW

Extraction Method: EPA 3510C
Extraction Date: 01/08/15 00:51

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS-SIM - Westborough Lab for sample(s): 01,03-04 Batch: WG754133-1					
Acenaphthene	ND		ug/l	0.20	0.06
2-Chloronaphthalene	ND		ug/l	0.20	0.07
Fluoranthene	ND		ug/l	0.20	0.04
Hexachlorobutadiene	ND		ug/l	0.50	0.07
Naphthalene	ND		ug/l	0.20	0.06
Benzo(a)anthracene	ND		ug/l	0.20	0.06
Benzo(a)pyrene	ND		ug/l	0.20	0.07
Benzo(b)fluoranthene	ND		ug/l	0.20	0.07
Benzo(k)fluoranthene	ND		ug/l	0.20	0.07
Chrysene	ND		ug/l	0.20	0.05
Acenaphthylene	ND		ug/l	0.20	0.05
Anthracene	ND		ug/l	0.20	0.06
Benzo(ghi)perylene	ND		ug/l	0.20	0.07
Fluorene	ND		ug/l	0.20	0.06
Phenanthrene	ND		ug/l	0.20	0.06
Dibenzo(a,h)anthracene	ND		ug/l	0.20	0.07
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.20	0.08
Pyrene	ND		ug/l	0.20	0.06
Pentachlorophenol	ND		ug/l	0.80	0.19
Hexachlorobenzene	ND		ug/l	0.80	0.01
Hexachloroethane	ND		ug/l	0.80	0.07

Project Name: SITE1_PRW7_GW_2014 **Lab Number:** L1500236

Project Number: SITE1_PRW7_GW_201 **Report Date:** 01/08/15

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270D-SIM
Analytical Date: 01/08/15 10:07
Analyst: MW

Extraction Method: EPA 3510C
Extraction Date: 01/08/15 00:51

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS-SIM - Westborough Lab for sample(s): 01,03-04 Batch: WG754133-1					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	23		21-120
Phenol-d6	16		10-120
Nitrobenzene-d5	56		23-120
2-Fluorobiphenyl	60		15-120
2,4,6-Tribromophenol	93		10-120
4-Terphenyl-d14	81		41-149

Lab Control Sample Analysis
Batch Quality Control

Project Name: SITE1_PRW7_GW_2014
Project Number: SITE1_PRW7_GW_2014

Lab Number: L1500236
Report Date: 01/08/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01,03-04 Batch: WG754131-2 WG754131-3								
1,2,4-Trichlorobenzene	56		45		39-98	22		30
Bis(2-chloroethyl)ether	71		56		40-140	24		30
1,2-Dichlorobenzene	54		42		40-140	25		30
1,3-Dichlorobenzene	50		**39**	Q	40-140	25		30
1,4-Dichlorobenzene	53		40		36-97	28		30
3,3'-Dichlorobenzidine	87		74		40-140	16		30
2,4-Dinitrotoluene	91		73		24-96	22		30
2,6-Dinitrotoluene	90		73		40-140	21		30
4-Chlorophenyl phenyl ether	82		64		40-140	25		30
4-Bromophenyl phenyl ether	86		68		40-140	23		30
Bis(2-chloroisopropyl)ether	67		53		40-140	23		30
Bis(2-chloroethoxy)methane	78		62		40-140	23		30
Hexachlorocyclopentadiene	49		40		40-140	20		30
Isophorone	78		63		40-140	21		30
Nitrobenzene	72		59		40-140	20		30
NitrosoDiPhenylAmine(NDPA)/DPA	91		74		40-140	21		30
n-Nitrosodi-n-propylamine	76		61		29-132	22		30
Bis(2-Ethylhexyl)phthalate	91		79		40-140	14		30
Butyl benzyl phthalate	90		75		40-140	18		30
Di-n-butylphthalate	95		78		40-140	20		30
Di-n-octylphthalate	94		78		40-140	19		30

Lab Control Sample Analysis
Batch Quality Control

Project Name: SITE1_PRW7_GW_2014
Project Number: SITE1_PRW7_GW_2014

Lab Number: L1500236
Report Date: 01/08/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01,03-04 Batch: WG754131-2 WG754131-3								
Diethyl phthalate	90		73		40-140	21		30
Dimethyl phthalate	89		72		40-140	21		30
Biphenyl	73		58			23		30
4-Chloroaniline	79		61		40-140	26		30
2-Nitroaniline	92		71		52-143	26		30
3-Nitroaniline	78		65		25-145	18		30
4-Nitroaniline	90		72		51-143	22		30
Dibenzofuran	82		66		40-140	22		30
1,2,4,5-Tetrachlorobenzene	62		50		2-134	21		30
Acetophenone	79		64		39-129	21		30
2,4,6-Trichlorophenol	90		70		30-130	25		30
P-Chloro-M-Cresol	85		67		23-97	24		30
2-Chlorophenol	67		54		27-123	21		30
2,4-Dichlorophenol	81		68		30-130	17		30
2,4-Dimethylphenol	81		66		30-130	20		30
2-Nitrophenol	76		62		30-130	20		30
4-Nitrophenol	40		34		10-80	16		30
2,4-Dinitrophenol	95		74		20-130	25		30
4,6-Dinitro-o-cresol	97		79		20-164	20		30
Phenol	29		24		12-110	19		30
2-Methylphenol	59		50		30-130	17		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: SITE1_PRW7_GW_2014

Project Number: SITE1_PRW7_GW_2014

Lab Number: L1500236

Report Date: 01/08/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01,03-04 Batch: WG754131-2 WG754131-3								
3-Methylphenol/4-Methylphenol	55		46		30-130	18		30
2,4,5-Trichlorophenol	93		75		30-130	21		30
Benzoic Acid	11		14			24		30
Benzyl Alcohol	58		47			21		30
Carbazole	95		80		55-144	17		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	37		31		21-120
Phenol-d6	25		21		10-120
Nitrobenzene-d5	76		63		23-120
2-Fluorobiphenyl	87		70		15-120
2,4,6-Tribromophenol	90		75		10-120
4-Terphenyl-d14	96		78		41-149

Lab Control Sample Analysis

Batch Quality Control

Project Name: SITE1_PRW7_GW_2014

Project Number: SITE1_PRW7_GW_2014

Lab Number: L1500236

Report Date: 01/08/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS-SIM - Westborough Lab Associated sample(s): 01,03-04 Batch: WG754133-2 WG754133-3								
Acenaphthene	83		87		37-111	5		40
2-Chloronaphthalene	81		86		40-140	6		40
Fluoranthene	98		98		40-140	0		40
Hexachlorobutadiene	69		76		40-140	10		40
Naphthalene	76		81		40-140	6		40
Benzo(a)anthracene	98		98		40-140	0		40
Benzo(a)pyrene	101		101		40-140	0		40
Benzo(b)fluoranthene	105		106		40-140	1		40
Benzo(k)fluoranthene	98		98		40-140	0		40
Chrysene	96		96		40-140	0		40
Acenaphthylene	87		92		40-140	6		40
Anthracene	89		90		40-140	1		40
Benzo(ghi)perylene	95		94		40-140	1		40
Fluorene	96		100		40-140	4		40
Phenanthrene	87		88		40-140	1		40
Dibenzo(a,h)anthracene	97		96		40-140	1		40
Indeno(1,2,3-cd)pyrene	96		95		40-140	1		40
Pyrene	97		97		26-127	0		40
2-Methylnaphthalene	82		88		40-140	7		40
Pentachlorophenol	92		86		9-103	7		40
Hexachlorobenzene	82		84		40-140	2		40

Lab Control Sample Analysis

Batch Quality Control

Project Name: SITE1_PRW7_GW_2014

Project Number: SITE1_PRW7_GW_2014

Lab Number: L1500236

Report Date: 01/08/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS-SIM - Westborough Lab Associated sample(s): 01,03-04 Batch: WG754133-2 WG754133-3								
Hexachloroethane	60		68		40-140	13		40

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	35		37		21-120
Phenol-d6	24		24		10-120
Nitrobenzene-d5	78		83		23-120
2-Fluorobiphenyl	83		88		15-120
2,4,6-Tribromophenol	**122**	Q	**126**	Q	10-120
4-Terphenyl-d14	90		90		41-149

Matrix Spike Analysis
Batch Quality Control

Project Name: SITE1_PRW7_GW_2014
Project Number: SITE1_PRW7_GW_2014

Lab Number: L1500236
Report Date: 01/08/15

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01,03-04 QC Batch ID: WG754131-4 WG754131-5 QC Sample: L1500236-04 Client ID: PRW-07-WG-201501061316												
1,2,4-Trichlorobenzene	ND	40	32	80		24	60		39-98	29		30
Bis(2-chloroethyl)ether	ND	40	36	90		26	65		40-140	**32**	Q	30
1,2-Dichlorobenzene	ND	40	32	80		23	58		40-140	**33**	Q	30
1,3-Dichlorobenzene	ND	40	29	73		22	55		40-140	27		30
1,4-Dichlorobenzene	ND	40	30	75		22	55		36-97	**31**	Q	30
3,3'-Dichlorobenzidine	ND	40	ND	**0**	Q	ND	**0**	Q	40-140	NC		30
2,4-Dinitrotoluene	ND	40	33	83		25	63		24-96	28		30
2,6-Dinitrotoluene	ND	40	34	85		27	68		40-140	23		30
4-Chlorophenyl phenyl ether	ND	40	34	85		26	65		40-140	27		30
4-Bromophenyl phenyl ether	ND	40	35	88		27	68		40-140	26		30
Bis(2-chloroisopropyl)ether	ND	40	31	78		22	55		40-140	**34**	Q	30
Bis(2-chloroethoxy)methane	ND	40	34	85		26	65		40-140	27		30
Hexachlorocyclopentadiene	ND	40	30	75		22	55		40-140	**31**	Q	30
Isophorone	ND	40	35	88		27	68		40-140	26		30
Nitrobenzene	ND	40	32	80		24	60		40-140	29		30
NDPA/DPA	ND	40	36	90		28	70		40-140	25		30
n-Nitrosodi-n-propylamine	ND	40	34	85		27	68		29-132	23		30
Bis(2-ethylhexyl)phthalate	ND	40	42	110		27	68		40-140	**43**	Q	30
Butyl benzyl phthalate	ND	40	35	88		26	65		40-140	30		30
Di-n-butylphthalate	ND	40	36	90		28	70		40-140	25		30
Di-n-octylphthalate	ND	40	35	88		27	68		40-140	26		30

Matrix Spike Analysis
Batch Quality Control

Project Name: SITE1_PRW7_GW_2014
Project Number: SITE1_PRW7_GW_2014

Lab Number: L1500236
Report Date: 01/08/15

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01,03-04 QC Batch ID: WG754131-4 WG754131-5 QC Sample: L1500236-04 Client ID: PRW-07-WG-201501061316												
Diethyl phthalate	ND	40	38	95		29	73		40-140	27		30
Dimethyl phthalate	ND	40	35	88		27	68		40-140	26		30
Biphenyl	ND	40	36	90		27	68			29		30
4-Chloroaniline	ND	40	32	80		14	**35**	Q	40-140	**78**	Q	30
2-Nitroaniline	ND	40	38	95		29	73		52-143	27		30
3-Nitroaniline	ND	40	6.0	**15**	Q	ND	**0**	Q	25-145	NC		30
4-Nitroaniline	ND	40	23	58		19	**48**	Q	51-143	19		30
Dibenzofuran	ND	40	36	90		28	70		40-140	25		30
1,2,4,5-Tetrachlorobenzene	ND	40	34	85		25	63		2-134	**31**	Q	30
Acetophenone	ND	40	36	90		28	70		39-129	25		30
2,4,6-Trichlorophenol	ND	40	40	100		30	75		30-130	29		30
p-Chloro-m-cresol	ND	40	39	**98**	Q	34	85		23-97	14		30
2-Chlorophenol	ND	40	31	78		23	58		27-123	30		30
2,4-Dichlorophenol	ND	40	37	93		29	73		30-130	24		30
2,4-Dimethylphenol	1.3J	40	39	98		30	75		30-130	26		30
2-Nitrophenol	ND	40	35	88		27	68		30-130	26		30
4-Nitrophenol	ND	40	23	58		18	45		10-80	24		30
2,4-Dinitrophenol	ND	40	35	88		26	65		20-130	30		30
4,6-Dinitro-o-cresol	ND	40	33	83		26	65		20-164	24		30
Phenol	ND	40	12	30		9.8	25		12-110	20		30
2-Methylphenol	34	40	56	55		56	55		30-130	0		30

Matrix Spike Analysis

Batch Quality Control

Project Name: SITE1_PRW7_GW_2014
Project Number: SITE1_PRW7_GW_2014

Lab Number: L1500236
Report Date: 01/08/15

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01,03-04 QC Batch ID: WG754131-4 WG754131-5 QC Sample: L1500236-04 Client ID: PRW-07-WG-201501061316												
3-Methylphenol/4-Methylphenol	32	40	54	55		52	50		30-130	4		30
2,4,5-Trichlorophenol	ND	40	40	100		30	75		30-130	29		30
Benzoic Acid	1.7J	40	19J	48		14.J	35			30		30
Benzyl Alcohol	3.1	40	26	57		20	42			26		30
Carbazole	ND	40	36	90		28	70		55-144	25		30

Surrogate	MS % Recovery	MS Qualifier	MSD % Recovery	MSD Qualifier	Acceptance Criteria
2,4,6-Tribromophenol	95		73		10-120
2-Fluorobiphenyl	94		71		15-120
2-Fluorophenol	42		32		21-120
4-Terphenyl-d14	91		69		41-149
Nitrobenzene-d5	85		65		23-120
Phenol-d6	29		22		10-120

Matrix Spike Analysis
Batch Quality Control

Project Name: SITE1_PRW7_GW_2014
Project Number: SITE1_PRW7_GW_2014

Lab Number: L1500236
Report Date: 01/08/15

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS-SIM - Westborough Lab Associated sample(s): 01,03-04 QC Batch ID: WG754133-4 WG754133-5 QC Sample: L1500236-04 Client ID: PRW-07-WG-201501061316												
Acenaphthene	ND	40	42	110		36	90		37-111	15		40
2-Chloronaphthalene	ND	40	42	110		37	93		40-140	13		40
Fluoranthene	ND	40	40	100		36	90		40-140	11		40
Hexachlorobutadiene	ND	40	38	95		34	85		40-140	11		40
Naphthalene	ND	40	38	95		34	85		40-140	11		40
Benzo(a)anthracene	ND	40	42	110		37	93		40-140	13		40
Benzo(a)pyrene	ND	40	45	110		38	95		40-140	17		40
Benzo(b)fluoranthene	ND	40	46	120		38	95		40-140	19		40
Benzo(k)fluoranthene	ND	40	42	110		36	90		40-140	15		40
Chrysene	ND	40	41	100		36	90		40-140	13		40
Acenaphthylene	ND	40	42	110		37	93		40-140	13		40
Anthracene	ND	40	39	98		35	88		40-140	11		40
Benzo(ghi)perylene	ND	40	39	98		34	85		40-140	14		40
Fluorene	ND	40	48	120		41	100		40-140	16		40
Phenanthrene	ND	40	40	100		36	90		40-140	11		40
Dibenzo(a,h)anthracene	ND	40	41	100		35	88		40-140	16		40
Indeno(1,2,3-cd)pyrene	ND	40	41	100		35	88		40-140	16		40
Pyrene	ND	40	40	100		36	90		26-127	11		40
2-Methylnaphthalene	ND	40	42	110		36	90		40-140	15		40
Pentachlorophenol	ND	40	49	**120**	Q	42	**110**	Q	9-103	15		40
Hexachlorobenzene	ND	40	40	100		36	90		40-140	11		40

Matrix Spike Analysis
Batch Quality Control

Project Name: SITE1_PRW7_GW_2014
Project Number: SITE1_PRW7_GW_2014

Lab Number: L1500236
Report Date: 01/08/15

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS-SIM - Westborough Lab Associated sample(s): 01,03-04 QC Batch ID: WG754133-4 WG754133-5 QC Sample: L1500236-04 Client ID: PRW-07-WG-201501061316												
Hexachloroethane	ND	40	32	80		28	70		40-140	13		40

Surrogate	MS % Recovery	MS Qualifier	MSD % Recovery	MSD Qualifier	Acceptance Criteria
2,4,6-Tribromophenol	**138**	Q	117		10-120
2-Fluorobiphenyl	103		90		15-120
2-Fluorophenol	40		35		21-120
4-Terphenyl-d14	87		80		41-149
Nitrobenzene-d5	99		89		23-120
Phenol-d6	29		26		10-120

PCBS

Project Name: SITE1_PRW7_GW_2014 **Lab Number:** L1500236

Project Number: SITE1_PRW7_GW_2014 **Report Date:** 01/08/15

SAMPLE RESULTS

Lab ID:	L1500236-01	Date Collected:	01/06/15 13:16
Client ID:	WG-201501061316-FD-1	Date Received:	01/07/15
Sample Location:	PORT IVORY	Field Prep:	Not Specified
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8082A	Extraction Date:	01/08/15 00:51
Analytical Date:	01/08/15 10:52	Cleanup Method:	EPA 3665A
Analyst:	JT	Cleanup Date:	01/08/15
		Cleanup Method:	EPA 3660B
		Cleanup Date:	01/08/15

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/l	0.083	0.055	1	A
Aroclor 1221	ND		ug/l	0.083	0.053	1	A
Aroclor 1232	ND		ug/l	0.083	0.031	1	A
Aroclor 1242	ND		ug/l	0.083	0.060	1	A
Aroclor 1248	ND		ug/l	0.083	0.051	1	A
Aroclor 1254	ND		ug/l	0.083	0.034	1	A
Aroclor 1260	ND		ug/l	0.083	0.032	1	A
Aroclor 1262	ND		ug/l	0.083	0.029	1	A
Aroclor 1268	ND		ug/l	0.083	0.038	1	A
PCBs, Total	ND		ug/l	0.083	0.029	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	41		30-150	B
Decachlorobiphenyl	**11**	Q	30-150	B
2,4,5,6-Tetrachloro-m-xylene	47		30-150	A
Decachlorobiphenyl	**11**	Q	30-150	A

Project Name: SITE1_PRW7_GW_2014 **Lab Number:** L1500236

Project Number: SITE1_PRW7_GW_2014 **Report Date:** 01/08/15

SAMPLE RESULTS

Lab ID:	L1500236-03	Date Collected:	01/06/15 12:20
Client ID:	WQ-201501061220-FB-1	Date Received:	01/07/15
Sample Location:	PORT IVORY	Field Prep:	Not Specified
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8082A	Extraction Date:	01/08/15 00:51
Analytical Date:	01/08/15 11:06	Cleanup Method:	EPA 3665A
Analyst:	JT	Cleanup Date:	01/08/15
		Cleanup Method:	EPA 3660B
		Cleanup Date:	01/08/15

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/l	0.083	0.055	1	A
Aroclor 1221	ND		ug/l	0.083	0.053	1	A
Aroclor 1232	ND		ug/l	0.083	0.031	1	A
Aroclor 1242	ND		ug/l	0.083	0.060	1	A
Aroclor 1248	ND		ug/l	0.083	0.051	1	A
Aroclor 1254	ND		ug/l	0.083	0.034	1	A
Aroclor 1260	ND		ug/l	0.083	0.032	1	A
Aroclor 1262	ND		ug/l	0.083	0.029	1	A
Aroclor 1268	ND		ug/l	0.083	0.038	1	A
PCBs, Total	ND		ug/l	0.083	0.029	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	62		30-150	B
Decachlorobiphenyl	42		30-150	B
2,4,5,6-Tetrachloro-m-xylene	60		30-150	A
Decachlorobiphenyl	36		30-150	A

Project Name: SITE1_PRW7_GW_2014 **Lab Number:** L1500236

Project Number: SITE1_PRW7_GW_2014 **Report Date:** 01/08/15

SAMPLE RESULTS

Lab ID:	L1500236-04	Date Collected:	01/06/15 13:16
Client ID:	PRW-07-WG-201501061316	Date Received:	01/07/15
Sample Location:	PORT IVORY	Field Prep:	Not Specified
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8082A	Extraction Date:	01/08/15 00:51
Analytical Date:	01/08/15 11:20	Cleanup Method:	EPA 3665A
Analyst:	JT	Cleanup Date:	01/08/15
		Cleanup Method:	EPA 3660B
		Cleanup Date:	01/08/15

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/l	0.083	0.055	1	A
Aroclor 1221	ND		ug/l	0.083	0.053	1	A
Aroclor 1232	ND		ug/l	0.083	0.031	1	A
Aroclor 1242	ND		ug/l	0.083	0.060	1	A
Aroclor 1248	ND		ug/l	0.083	0.051	1	A
Aroclor 1254	ND		ug/l	0.083	0.034	1	A
Aroclor 1260	ND		ug/l	0.083	0.032	1	A
Aroclor 1262	ND		ug/l	0.083	0.029	1	A
Aroclor 1268	ND		ug/l	0.083	0.038	1	A
PCBs, Total	ND		ug/l	0.083	0.029	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	47		30-150	B
Decachlorobiphenyl	**8**	Q	30-150	B
2,4,5,6-Tetrachloro-m-xylene	44		30-150	A
Decachlorobiphenyl	**6**	Q	30-150	A

Project Name: SITE1_PRW7_GW_2014 **Lab Number:** L1500236

Project Number: SITE1_PRW7_GW_201 **Report Date:** 01/08/15

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8082A
Analytical Date: 01/08/15 12:01
Analyst: JT

Extraction Method: EPA 3510C
Extraction Date: 01/08/15 00:51
Cleanup Method: EPA 3665A
Cleanup Date: 01/08/15
Cleanup Method: EPA 3660B
Cleanup Date: 01/08/15

Parameter	Result	Qualifier	Units	RL	MDL	Column
Polychlorinated Biphenyls by GC - Westborough Lab for sample(s): 01,03-04 Batch: WG754134-1						
Aroclor 1016	ND		ug/l	0.083	0.055	A
Aroclor 1221	ND		ug/l	0.083	0.053	A
Aroclor 1232	ND		ug/l	0.083	0.031	A
Aroclor 1242	ND		ug/l	0.083	0.060	A
Aroclor 1248	ND		ug/l	0.083	0.051	A
Aroclor 1254	ND		ug/l	0.083	0.034	A
Aroclor 1260	ND		ug/l	0.083	0.032	A
Aroclor 1262	ND		ug/l	0.083	0.029	A
Aroclor 1268	ND		ug/l	0.083	0.038	A
PCBs, Total	ND		ug/l	0.083	0.029	A

Surrogate	%Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	60		30-150	B
Decachlorobiphenyl	71		30-150	B
2,4,5,6-Tetrachloro-m-xylene	58		30-150	A
Decachlorobiphenyl	66		30-150	A

Matrix Spike Analysis
Batch Quality Control

Project Name: SITE1_PRW7_GW_2014
Project Number: SITE1_PRW7_GW_2014

Lab Number: L1500236
Report Date: 01/08/15

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits	Column
Polychlorinated Biphenyls by GC - Westborough Lab Associated sample(s): 01,03-04 QC Batch ID: WG754134-4 WG754134-5 QC Sample: L1500236-04 Client ID: PRW-07-WG-201501061316													
Aroclor 1016	ND	2.6	1.02	**39**	Q	1.09	42		40-140	7		50	A
Aroclor 1260	ND	2.6	0.242	**9**	Q	0.323	**12**	Q	40-140	29		50	A

Surrogate	MS % Recovery	MS Qualifier	MSD % Recovery	MSD Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	61		49		30-150	B
Decachlorobiphenyl	**10**	Q	**10**	Q	30-150	B
2,4,5,6-Tetrachloro-m-xylene	56		45		30-150	A
Decachlorobiphenyl	**8**	Q	**8**	Q	30-150	A

Lab Control Sample Analysis

Batch Quality Control

Project Name: SITE1_PRW7_GW_2014

Project Number: SITE1_PRW7_GW_2014

Lab Number: L1500236

Report Date: 01/08/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
Polychlorinated Biphenyls by GC - Westborough Lab Associated sample(s): 01,03-04 Batch: WG754134-2 WG754134-3									
Aroclor 1016	76		74		40-140	3		50	A
Aroclor 1260	69		71		40-140	4		50	A

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	58		56		30-150	B
Decachlorobiphenyl	64		73		30-150	B
2,4,5,6-Tetrachloro-m-xylene	56		55		30-150	A
Decachlorobiphenyl	53		57		30-150	A

PESTICIDES

Project Name: SITE1_PRW7_GW_2014 **Lab Number:** L1500236

Project Number: SITE1_PRW7_GW_2014 **Report Date:** 01/08/15

SAMPLE RESULTS

Lab ID:	L1500236-01	Date Collected:	01/06/15 13:16
Client ID:	WG-201501061316-FD-1	Date Received:	01/07/15
Sample Location:	PORT IVORY	Field Prep:	Not Specified
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8081B	Extraction Date:	01/08/15 00:50
Analytical Date:	01/08/15 13:35	Cleanup Method:	EPA 3620B
Analyst:	GP	Cleanup Date:	01/08/15

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Organochlorine Pesticides by GC - Westborough Lab							
Delta-BHC	ND		ug/l	0.020	0.005	1	A
Lindane	ND		ug/l	0.020	0.004	1	A
Alpha-BHC	ND		ug/l	0.020	0.004	1	A
Beta-BHC	ND		ug/l	0.020	0.006	1	A
Heptachlor	ND		ug/l	0.020	0.003	1	A
Aldrin	ND		ug/l	0.020	0.002	1	A
Heptachlor epoxide	ND		ug/l	0.020	0.004	1	A
Endrin	ND		ug/l	0.040	0.004	1	A
Endrin ketone	ND		ug/l	0.040	0.005	1	A
Dieldrin	ND		ug/l	0.040	0.004	1	A
4,4'-DDE	ND		ug/l	0.040	0.004	1	A
4,4'-DDD	ND		ug/l	0.040	0.005	1	A
4,4'-DDT	ND		ug/l	0.040	0.004	1	A
Endosulfan I	ND		ug/l	0.020	0.003	1	A
Endosulfan II	ND		ug/l	0.040	0.005	1	A
Endosulfan sulfate	ND		ug/l	0.040	0.005	1	A
Methoxychlor	ND		ug/l	0.200	0.007	1	A
Toxaphene	ND		ug/l	0.200	0.063	1	A
cis-Chlordane	ND		ug/l	0.020	0.007	1	A
trans-Chlordane	ND		ug/l	0.020	0.006	1	A
Chlordane	ND		ug/l	0.200	0.046	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	69		30-150	A
Decachlorobiphenyl	**14**	Q	30-150	A
2,4,5,6-Tetrachloro-m-xylene	59		30-150	B
Decachlorobiphenyl	**16**	Q	30-150	B

Project Name: SITE1_PRW7_GW_2014 **Lab Number:** L1500236

Project Number: SITE1_PRW7_GW_2014 **Report Date:** 01/08/15

SAMPLE RESULTS

Lab ID:	L1500236-03	Date Collected:	01/06/15 12:20
Client ID:	WQ-201501061220-FB-1	Date Received:	01/07/15
Sample Location:	PORT IVORY	Field Prep:	Not Specified
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8081B	Extraction Date:	01/08/15 00:50
Analytical Date:	01/08/15 13:50	Cleanup Method:	EPA 3620B
Analyst:	GP	Cleanup Date:	01/08/15

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Organochlorine Pesticides by GC - Westborough Lab							
Delta-BHC	ND		ug/l	0.020	0.005	1	A
Lindane	ND		ug/l	0.020	0.004	1	A
Alpha-BHC	ND		ug/l	0.020	0.004	1	A
Beta-BHC	ND		ug/l	0.020	0.006	1	A
Heptachlor	0.017	J	ug/l	0.020	0.003	1	A
Aldrin	ND		ug/l	0.020	0.002	1	A
Heptachlor epoxide	ND		ug/l	0.020	0.004	1	A
Endrin	ND		ug/l	0.040	0.004	1	A
Endrin ketone	ND		ug/l	0.040	0.005	1	A
Dieldrin	ND		ug/l	0.040	0.004	1	A
4,4'-DDE	ND		ug/l	0.040	0.004	1	A
4,4'-DDD	ND		ug/l	0.040	0.005	1	A
4,4'-DDT	ND		ug/l	0.040	0.004	1	A
Endosulfan I	ND		ug/l	0.020	0.003	1	A
Endosulfan II	ND		ug/l	0.040	0.005	1	A
Endosulfan sulfate	ND		ug/l	0.040	0.005	1	A
Methoxychlor	ND		ug/l	0.200	0.007	1	A
Toxaphene	ND		ug/l	0.200	0.063	1	A
cis-Chlordane	0.022	PI	ug/l	0.020	0.007	1	B
trans-Chlordane	0.034		ug/l	0.020	0.006	1	B
Chlordane	0.316		ug/l	0.200	0.046	1	B

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	92		30-150	A
Decachlorobiphenyl	58		30-150	A
2,4,5,6-Tetrachloro-m-xylene	107		30-150	B
Decachlorobiphenyl	68		30-150	B

Project Name: SITE1_PRW7_GW_2014 **Lab Number:** L1500236

Project Number: SITE1_PRW7_GW_2014 **Report Date:** 01/08/15

SAMPLE RESULTS

Lab ID:	L1500236-04	Date Collected:	01/06/15 13:16
Client ID:	PRW-07-WG-201501061316	Date Received:	01/07/15
Sample Location:	PORT IVORY	Field Prep:	Not Specified
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8081B	Extraction Date:	01/08/15 00:50
Analytical Date:	01/08/15 14:06	Cleanup Method:	EPA 3620B
Analyst:	GP	Cleanup Date:	01/08/15

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Organochlorine Pesticides by GC - Westborough Lab							
Delta-BHC	ND		ug/l	0.020	0.005	1	A
Lindane	ND		ug/l	0.020	0.004	1	A
Alpha-BHC	ND		ug/l	0.020	0.004	1	A
Beta-BHC	ND		ug/l	0.020	0.006	1	A
Heptachlor	ND		ug/l	0.020	0.003	1	A
Aldrin	ND		ug/l	0.020	0.002	1	A
Heptachlor epoxide	ND		ug/l	0.020	0.004	1	A
Endrin	ND		ug/l	0.040	0.004	1	A
Endrin ketone	ND		ug/l	0.040	0.005	1	A
Dieldrin	ND		ug/l	0.040	0.004	1	A
4,4'-DDE	ND		ug/l	0.040	0.004	1	A
4,4'-DDD	ND		ug/l	0.040	0.005	1	A
4,4'-DDT	ND		ug/l	0.040	0.004	1	A
Endosulfan I	ND		ug/l	0.020	0.003	1	A
Endosulfan II	ND		ug/l	0.040	0.005	1	A
Endosulfan sulfate	ND		ug/l	0.040	0.005	1	A
Methoxychlor	ND		ug/l	0.200	0.007	1	A
Toxaphene	ND		ug/l	0.200	0.063	1	A
cis-Chlordane	ND		ug/l	0.020	0.007	1	A
trans-Chlordane	ND		ug/l	0.020	0.006	1	A
Chlordane	ND		ug/l	0.200	0.046	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	62		30-150	A
Decachlorobiphenyl	**10**	Q	30-150	A
2,4,5,6-Tetrachloro-m-xylene	55		30-150	B
Decachlorobiphenyl	**14**	Q	30-150	B

Project Name: SITE1_PRW7_GW_2014 **Lab Number:** L1500236

Project Number: SITE1_PRW7_GW_201 **Report Date:** 01/08/15

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8081B
Analytical Date: 01/08/15 12:17
Analyst: GP

Extraction Method: EPA 3510C
Extraction Date: 01/08/15 00:50
Cleanup Method: EPA 3620B
Cleanup Date: 01/08/15

Parameter	Result	Qualifier	Units	RL	MDL	Column
Organochlorine Pesticides by GC - Westborough Lab for sample(s): 01,03-04 Batch: WG754135-1						
Delta-BHC	ND		ug/l	0.020	0.005	A
Lindane	ND		ug/l	0.020	0.004	A
Alpha-BHC	ND		ug/l	0.020	0.004	A
Beta-BHC	ND		ug/l	0.020	0.006	A
Heptachlor	ND		ug/l	0.020	0.003	A
Aldrin	ND		ug/l	0.020	0.002	A
Heptachlor epoxide	ND		ug/l	0.020	0.004	A
Endrin	ND		ug/l	0.040	0.004	A
Endrin ketone	ND		ug/l	0.040	0.005	A
Dieldrin	ND		ug/l	0.040	0.004	A
4,4'-DDE	ND		ug/l	0.040	0.004	A
4,4'-DDD	ND		ug/l	0.040	0.005	A
4,4'-DDT	ND		ug/l	0.040	0.004	A
Endosulfan I	ND		ug/l	0.020	0.003	A
Endosulfan II	ND		ug/l	0.040	0.005	A
Endosulfan sulfate	ND		ug/l	0.040	0.005	A
Methoxychlor	ND		ug/l	0.200	0.007	A
Toxaphene	ND		ug/l	0.200	0.063	A
cis-Chlordane	ND		ug/l	0.020	0.007	A
trans-Chlordane	ND		ug/l	0.020	0.006	A
Chlordane	ND		ug/l	0.200	0.046	A

Surrogate	%Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	59		30-150	A
Decachlorobiphenyl	55		30-150	A
2,4,5,6-Tetrachloro-m-xylene	63		30-150	B
Decachlorobiphenyl	67		30-150	B

Lab Control Sample Analysis
Batch Quality Control

Project Name: SITE1_PRW7_GW_2014
Project Number: SITE1_PRW7_GW_2014

Lab Number: L1500236
Report Date: 01/08/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
Organochlorine Pesticides by GC - Westborough Lab Associated sample(s): 01,03-04 Batch: WG754135-2 WG754135-3									
Delta-BHC	88		80		30-150	10		20	A
Lindane	112		100		30-150	11		20	A
Alpha-BHC	124		110		30-150	12		20	A
Beta-BHC	113		102		30-150	10		20	A
Heptachlor	97		91		30-150	6		20	A
Aldrin	101		97		30-150	4		20	A
Heptachlor epoxide	107		96		30-150	11		20	A
Endrin	118		106		30-150	11		20	A
Endrin ketone	94		88		30-150	7		20	A
Dieldrin	114		104		30-150	9		20	A
4,4'-DDE	112		101		30-150	10		20	A
4,4'-DDD	105		94		30-150	11		20	A
4,4'-DDT	105		95		30-150	10		20	A
Endosulfan I	105		95		30-150	10		20	A
Endosulfan II	95		89		30-150	7		20	A
Endosulfan sulfate	94		89		30-150	6		20	A
Methoxychlor	116		106		30-150	9		20	A
cis-Chlordane	107		97		30-150	10		20	A
trans-Chlordane	122		112		30-150	9		20	A

Lab Control Sample Analysis

Batch Quality Control

Project Name: SITE1_PRW7_GW_2014

Project Number: SITE1_PRW7_GW_2014

Lab Number: L1500236

Report Date: 01/08/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Organochlorine Pesticides by GC - Westborough Lab Associated sample(s): 01,03-04 Batch: WG754135-2 WG754135-3								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	78		75		30-150	A
Decachlorobiphenyl	94		79		30-150	A
2,4,5,6-Tetrachloro-m-xylene	82		89		30-150	B
Decachlorobiphenyl	100		99		30-150	B

Matrix Spike Analysis
Batch Quality Control

Project Name: SITE1_PRW7_GW_2014
Project Number: SITE1_PRW7_GW_2014

Lab Number: L1500236
Report Date: 01/08/15

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits	Column
Organochlorine Pesticides by GC - Westborough Lab Associated sample(s): 01,03-04 QC Batch ID: WG754135-4 WG754135-5 QC Sample: L1500236-04 Client ID: PRW-07-WG-201501061316													
Delta-BHC	ND	0.5	0.384	77		0.375	75		30-150	2		30	A
Lindane	ND	0.5	0.427	85		0.605	121		30-150	**34**	Q	30	A
Alpha-BHC	ND	0.5	0.487	97		0.695	139		30-150	**35**	Q	30	A
Beta-BHC	ND	0.5	0.400	80		0.439	88		30-150	9		30	A
Heptachlor	ND	0.5	0.336	67		0.301	60		30-150	11		30	A
Aldrin	ND	0.5	0.278	56		0.333	67		30-150	18		30	A
Heptachlor epoxide	ND	0.5	0.352	70		0.407	81		30-150	14		30	A
Endrin	ND	0.5	0.364	73		0.438	88		30-150	18		30	A
Endrin ketone	ND	0.5	0.357	71		0.398	80		30-150	11		30	A
Dieldrin	ND	0.5	0.357	71		0.408	82		30-150	13		30	A
4,4'-DDE	ND	0.5	0.114	**23**	Q	0.111	**22**	Q	30-150	3		30	A
4,4'-DDD	ND	0.5	0.226	45		0.260	52		30-150	14		30	A
4,4'-DDT	ND	0.5	0.116	**23**	Q	0.124	**25**	Q	30-150	7		30	A
Endosulfan I	ND	0.5	0.352	70		0.393	79		30-150	11		30	A
Endosulfan II	ND	0.5	0.338	68		0.401	80		30-150	17		30	A
Endosulfan sulfate	ND	0.5	0.370	74		0.391	78		30-150	6		30	A
Methoxychlor	ND	0.5	0.297	59		0.330	66		30-150	11		30	A
cis-Chlordane	ND	0.5	0.239	48		0.258	52		30-150	8		30	A
trans-Chlordane	ND	0.5	0.331	66		0.350	70		30-150	6		30	A

Matrix Spike Analysis

Batch Quality Control

Project Name: SITE1_PRW7_GW_2014
Project Number: SITE1_PRW7_GW_2014

Lab Number: L1500236
Report Date: 01/08/15

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits

Organochlorine Pesticides by GC - Westborough Lab Associated sample(s): 01,03-04 QC Batch ID: WG754135-4 WG754135-5 QC Sample: L1500236-04 Client ID: PRW-07-WG-201501061316

Surrogate	MS % Recovery	MS Qualifier	MSD % Recovery	MSD Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	59		78		30-150	A
Decachlorobiphenyl	**12**	Q	**12**	Q	30-150	A
2,4,5,6-Tetrachloro-m-xylene	60		79		30-150	B
Decachlorobiphenyl	**16**	Q	**13**	Q	30-150	B

METALS

Project Name: SITE1_PRW7_GW_2014 **Lab Number:** L1500236

Project Number: SITE1_PRW7_GW_2014 **Report Date:** 01/08/15

SAMPLE RESULTS

Lab ID: L1500236-01 Date Collected: 01/06/15 13:16

Client ID: WG-201501061316-FD-1 Date Received: 01/07/15

Sample Location: PORT IVORY Field Prep: Not Specified

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Westborough Lab											
Antimony, Total	0.00089	J	mg/l	0.00200	0.00006	1	01/08/15 04:42	01/08/15 12:11	EPA 3005A	1,6020A	KL
Arsenic, Total	0.00254		mg/l	0.00050	0.00012	1	01/08/15 04:42	01/08/15 12:11	EPA 3005A	1,6020A	KL
Barium, Total	0.02894		mg/l	0.00050	0.00006	1	01/08/15 04:42	01/08/15 12:11	EPA 3005A	1,6020A	KL
Beryllium, Total	ND		mg/l	0.00050	0.00015	1	01/08/15 04:42	01/08/15 12:11	EPA 3005A	1,6020A	KL
Cadmium, Total	0.00012	J	mg/l	0.00020	0.00005	1	01/08/15 04:42	01/08/15 12:11	EPA 3005A	1,6020A	KL
Chromium, Total	0.00308		mg/l	0.00200	0.00025	1	01/08/15 04:42	01/08/15 12:11	EPA 3005A	1,6020A	KL
Copper, Total	0.00110		mg/l	0.00100	0.00026	1	01/08/15 04:42	01/08/15 12:11	EPA 3005A	1,6020A	KL
Lead, Total	0.00097	J	mg/l	0.00100	0.00012	1	01/08/15 04:42	01/08/15 12:11	EPA 3005A	1,6020A	KL
Mercury, Total	ND		mg/l	0.00020	0.00006	1	01/08/15 09:37	01/08/15 13:39	EPA 7470A	1,7470A	MC
Nickel, Total	0.01194		mg/l	0.00100	0.00008	1	01/08/15 04:42	01/08/15 12:11	EPA 3005A	1,6020A	KL
Selenium, Total	ND		mg/l	0.00500	0.00100	1	01/08/15 04:42	01/08/15 12:11	EPA 3005A	1,6020A	KL
Silver, Total	ND		mg/l	0.00040	0.00007	1	01/08/15 04:42	01/08/15 12:11	EPA 3005A	1,6020A	KL
Thallium, Total	ND		mg/l	0.00050	0.00005	1	01/08/15 04:42	01/08/15 12:11	EPA 3005A	1,6020A	KL
Zinc, Total	0.01574		mg/l	0.01000	0.00256	1	01/08/15 04:42	01/08/15 12:11	EPA 3005A	1,6020A	KL

Project Name: SITE1_PRW7_GW_2014 **Lab Number:** L1500236

Project Number: SITE1_PRW7_GW_2014 **Report Date:** 01/08/15

SAMPLE RESULTS

Lab ID: L1500236-03 Date Collected: 01/06/15 12:20

Client ID: WQ-201501061220-FB-1 Date Received: 01/07/15

Sample Location: PORT IVORY Field Prep: Not Specified

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Westborough Lab											
Antimony, Total	0.00058	J	mg/l	0.00200	0.00006	1	01/08/15 04:42	01/08/15 11:45	EPA 3005A	1,6020A	KL
Arsenic, Total	ND		mg/l	0.00050	0.00012	1	01/08/15 04:42	01/08/15 11:45	EPA 3005A	1,6020A	KL
Barium, Total	0.00028	J	mg/l	0.00050	0.00006	1	01/08/15 04:42	01/08/15 11:45	EPA 3005A	1,6020A	KL
Beryllium, Total	ND		mg/l	0.00050	0.00015	1	01/08/15 04:42	01/08/15 11:45	EPA 3005A	1,6020A	KL
Cadmium, Total	ND		mg/l	0.00020	0.00005	1	01/08/15 04:42	01/08/15 11:45	EPA 3005A	1,6020A	KL
Chromium, Total	0.00762		mg/l	0.00200	0.00025	1	01/08/15 04:42	01/08/15 11:45	EPA 3005A	1,6020A	KL
Copper, Total	0.00028	J	mg/l	0.00100	0.00026	1	01/08/15 04:42	01/08/15 11:45	EPA 3005A	1,6020A	KL
Lead, Total	ND		mg/l	0.00100	0.00012	1	01/08/15 04:42	01/08/15 11:45	EPA 3005A	1,6020A	KL
Mercury, Total	ND		mg/l	0.00020	0.00006	1	01/08/15 09:37	01/08/15 13:41	EPA 7470A	1,7470A	MC
Nickel, Total	0.00311		mg/l	0.00100	0.00008	1	01/08/15 04:42	01/08/15 11:45	EPA 3005A	1,6020A	KL
Selenium, Total	ND		mg/l	0.00500	0.00100	1	01/08/15 04:42	01/08/15 11:45	EPA 3005A	1,6020A	KL
Silver, Total	ND		mg/l	0.00040	0.00007	1	01/08/15 04:42	01/08/15 11:45	EPA 3005A	1,6020A	KL
Thallium, Total	ND		mg/l	0.00050	0.00005	1	01/08/15 04:42	01/08/15 11:45	EPA 3005A	1,6020A	KL
Zinc, Total	0.01517		mg/l	0.01000	0.00256	1	01/08/15 04:42	01/08/15 11:45	EPA 3005A	1,6020A	KL

Project Name: SITE1_PRW7_GW_2014 **Lab Number:** L1500236

Project Number: SITE1_PRW7_GW_2014 **Report Date:** 01/08/15

SAMPLE RESULTS

Lab ID: L1500236-04 Date Collected: 01/06/15 13:16

Client ID: PRW-07-WG-201501061316 Date Received: 01/07/15

Sample Location: PORT IVORY Field Prep: Not Specified

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Westborough Lab											
Antimony, Total	0.00080	J	mg/l	0.00200	0.00006	1	01/08/15 04:42	01/08/15 11:56	EPA 3005A	1,6020A	KL
Arsenic, Total	0.00282		mg/l	0.00050	0.00012	1	01/08/15 04:42	01/08/15 11:56	EPA 3005A	1,6020A	KL
Barium, Total	0.02973		mg/l	0.00050	0.00006	1	01/08/15 04:42	01/08/15 11:56	EPA 3005A	1,6020A	KL
Beryllium, Total	ND		mg/l	0.00050	0.00015	1	01/08/15 04:42	01/08/15 11:56	EPA 3005A	1,6020A	KL
Cadmium, Total	ND		mg/l	0.00020	0.00005	1	01/08/15 04:42	01/08/15 11:56	EPA 3005A	1,6020A	KL
Chromium, Total	0.01482		mg/l	0.00200	0.00025	1	01/08/15 04:42	01/08/15 11:56	EPA 3005A	1,6020A	KL
Copper, Total	0.00184		mg/l	0.00100	0.00026	1	01/08/15 04:42	01/08/15 11:56	EPA 3005A	1,6020A	KL
Lead, Total	0.00140		mg/l	0.00100	0.00012	1	01/08/15 04:42	01/08/15 11:56	EPA 3005A	1,6020A	KL
Mercury, Total	0.00274		mg/l	0.00020	0.00006	1	01/08/15 09:37	01/08/15 13:32	EPA 7470A	1,7470A	MC
Nickel, Total	0.01718		mg/l	0.00100	0.00008	1	01/08/15 04:42	01/08/15 11:56	EPA 3005A	1,6020A	KL
Selenium, Total	ND		mg/l	0.00500	0.00100	1	01/08/15 04:42	01/08/15 11:56	EPA 3005A	1,6020A	KL
Silver, Total	ND		mg/l	0.00040	0.00007	1	01/08/15 04:42	01/08/15 11:56	EPA 3005A	1,6020A	KL
Thallium, Total	ND		mg/l	0.00050	0.00005	1	01/08/15 04:42	01/08/15 11:56	EPA 3005A	1,6020A	KL
Zinc, Total	0.02227		mg/l	0.01000	0.00256	1	01/08/15 04:42	01/08/15 11:56	EPA 3005A	1,6020A	KL

Project Name: SITE1_PRW7_GW_2014 **Lab Number:** L1500236

Project Number: SITE1_PRW7_GW_2014 **Report Date:** 01/08/15

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Westborough Lab for sample(s): 01,03-04 Batch: WG754180-1										
Antimony, Total	0.00042	J	mg/l	0.00200	0.00006	1	01/08/15 04:42	01/08/15 10:56	1,6020A	KL
Arsenic, Total	ND		mg/l	0.00050	0.00012	1	01/08/15 04:42	01/08/15 10:56	1,6020A	KL
Barium, Total	ND		mg/l	0.00050	0.00006	1	01/08/15 04:42	01/08/15 10:56	1,6020A	KL
Beryllium, Total	ND		mg/l	0.00050	0.00015	1	01/08/15 04:42	01/08/15 10:56	1,6020A	KL
Cadmium, Total	ND		mg/l	0.00020	0.00005	1	01/08/15 04:42	01/08/15 10:56	1,6020A	KL
Chromium, Total	0.00196	J	mg/l	0.00200	0.00025	1	01/08/15 04:42	01/08/15 10:56	1,6020A	KL
Copper, Total	ND		mg/l	0.00100	0.00026	1	01/08/15 04:42	01/08/15 10:56	1,6020A	KL
Lead, Total	ND		mg/l	0.00100	0.00012	1	01/08/15 04:42	01/08/15 10:56	1,6020A	KL
Nickel, Total	0.00077	J	mg/l	0.00100	0.00008	1	01/08/15 04:42	01/08/15 10:56	1,6020A	KL
Selenium, Total	ND		mg/l	0.00500	0.00100	1	01/08/15 04:42	01/08/15 10:56	1,6020A	KL
Silver, Total	ND		mg/l	0.00040	0.00007	1	01/08/15 04:42	01/08/15 10:56	1,6020A	KL
Thallium, Total	ND		mg/l	0.00050	0.00005	1	01/08/15 04:42	01/08/15 10:56	1,6020A	KL
Zinc, Total	ND		mg/l	0.01000	0.00256	1	01/08/15 04:42	01/08/15 10:56	1,6020A	KL

Prep Information

Digestion Method: EPA 3005A

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Westborough Lab for sample(s): 01,03-04 Batch: WG754219-1										
Mercury, Total	ND		mg/l	0.00020	0.00006	1	01/08/15 09:37	01/08/15 13:28	1,7470A	MC

Prep Information

Digestion Method: EPA 7470A

Lab Control Sample Analysis

Batch Quality Control

Project Name: SITE1_PRW7_GW_2014

Project Number: SITE1_PRW7_GW_2014

Lab Number: L1500236

Report Date: 01/08/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Westborough Lab Associated sample(s): 01,03-04 Batch: WG754180-2								
Antimony, Total	106		-		80-120	-		
Arsenic, Total	99		-		80-120	-		
Barium, Total	102		-		80-120	-		
Beryllium, Total	103		-		80-120	-		
Cadmium, Total	115		-		80-120	-		
Chromium, Total	100		-		80-120	-		
Copper, Total	101		-		80-120	-		
Lead, Total	106		-		80-120	-		
Nickel, Total	99		-		80-120	-		
Selenium, Total	117		-		80-120	-		
Silver, Total	102		-		80-120	-		
Thallium, Total	102		-		80-120	-		
Zinc, Total	110		-		80-120	-		
Total Metals - Westborough Lab Associated sample(s): 01,03-04 Batch: WG754219-2								
Mercury, Total	100		-		80-120	-		

Matrix Spike Analysis
Batch Quality Control

Project Name: SITE1_PRW7_GW_2014
Project Number: SITE1_PRW7_GW_2014

Lab Number: L1500236
Report Date: 01/08/15

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Westborough Lab Associated sample(s): 01,03-04 QC Batch ID: WG754180-3 WG754180-4 QC Sample: L1500236-04 Client ID: PRW-07-WG-201501061316												
Antimony, Total	0.00080J	0.5	0.5139	103		0.5241	105		75-125	2		20
Arsenic, Total	0.00282	0.12	0.1238	101		0.1210	98		75-125	2		20
Barium, Total	0.02973	2	2.091	103		2.103	104		75-125	1		20
Beryllium, Total	ND	0.05	0.04825	96		0.04962	99		75-125	3		20
Cadmium, Total	ND	0.051	0.05201	102		0.05914	116		75-125	13		20
Chromium, Total	0.01482	0.2	0.2009	93		0.2189	102		75-125	9		20
Copper, Total	0.00184	0.25	0.2384	95		0.2553	101		75-125	7		20
Lead, Total	0.00140	0.51	0.5440	106		0.5508	108		75-125	1		20
Nickel, Total	0.01718	0.5	0.4798	92		0.5291	102		75-125	10		20
Selenium, Total	ND	0.12	0.0164	**14**	Q	0.0188	**16**	Q	75-125	14		20
Silver, Total	ND	0.05	0.04956	99		0.05181	104		75-125	4		20
Thallium, Total	ND	0.12	0.1207	100		0.1234	103		75-125	2		20
Zinc, Total	0.02227	0.5	0.5266	101		0.5786	111		75-125	9		20
Total Metals - Westborough Lab Associated sample(s): 01,03-04 QC Batch ID: WG754219-3 WG754219-4 QC Sample: L1500236-04 Client ID: PRW-07-WG-201501061316												
Mercury, Total	0.00274	0.005	0.00423	**30**	Q	0.00430	**31**	Q	75-125	2		20

INORGANICS
&
MISCELLANEOUS

Project Name: SITE1_PRW7_GW_2014
Project Number: SITE1_PRW7_GW_2014
Lab Number: L1500236
Report Date: 01/08/15

SAMPLE RESULTS

Lab ID: L1500236-01
Client ID: WG-201501061316-FD-1
Sample Location: PORT IVORY
Matrix: Water
Date Collected: 01/06/15 13:16
Date Received: 01/07/15
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Cyanide, Total	0.002	J	mg/l	0.005	0.001	1	01/08/15 00:15	01/08/15 11:33	1,9010C/9012B	JO

Project Name: SITE1_PRW7_GW_2014
Project Number: SITE1_PRW7_GW_2014
Lab Number: L1500236
Report Date: 01/08/15

SAMPLE RESULTS

Lab ID: L1500236-03
Client ID: WQ-201501061220-FB-1
Sample Location: PORT IVORY
Matrix: Water
Date Collected: 01/06/15 12:20
Date Received: 01/07/15
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Cyanide, Total	ND		mg/l	0.005	0.001	1	01/08/15 00:15	01/08/15 11:34	1,9010C/9012B	JO

Project Name: SITE1_PRW7_GW_2014
Project Number: SITE1_PRW7_GW_2014

Lab Number: L1500236
Report Date: 01/08/15

SAMPLE RESULTS

Lab ID: L1500236-04
Client ID: PRW-07-WG-201501061316
Sample Location: PORT IVORY
Matrix: Water

Date Collected: 01/06/15 13:16
Date Received: 01/07/15
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Cyanide, Total	0.002	J	mg/l	0.005	0.001	1	01/08/15 00:15	01/08/15 11:35	1,9010C/9012B	JO

Project Name: SITE1_PRW7_GW_2014 **Lab Number:** L1500236

Project Number: SITE1_PRW7_GW_2014 **Report Date:** 01/08/15

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab for sample(s): 01,03-04 Batch: WG754138-1										
Cyanide, Total	ND		mg/l	0.005	0.001	1	01/08/15 00:15	01/08/15 11:30	1,9010C/9012B	JO

Lab Control Sample Analysis

Batch Quality Control

Project Name: SITE1_PRW7_GW_2014

Project Number: SITE1_PRW7_GW_2014

Lab Number: L1500236

Report Date: 01/08/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab	Associated sample(s): 01,03-04		Batch: WG754138-2		WG754138-3			
Cyanide, Total	94		95		80-120	1		20

Matrix Spike Analysis
Batch Quality Control

Project Name: SITE1_PRW7_GW_2014
Project Number: SITE1_PRW7_GW_2014

Lab Number: L1500236
Report Date: 01/08/15

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01,03-04 QC Batch ID: WG754138-4 WG754138-5 QC Sample: L1500236-04 Client ID: PRW-07-WG-201501061316												
Cyanide, Total	0.002J	0.2	0.149	**74**	Q	0.151	**76**	Q	80-120	1		20

Project Name: SITE1_PRW7_GW_2014
Project Number: SITE1_PRW7_GW_2014

Lab Number: L1500236
Report Date: 01/08/15

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Reagent H2O Preserved Vials Frozen on: NA

Cooler Information Custody Seal

Cooler	
A	Absent
B	Absent
C	Absent

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1500236-01A	Vial HCl preserved	A	N/A	2.1	Y	Absent	NYTCL-8260(14)
L1500236-01B	Vial HCl preserved	A	N/A	2.1	Y	Absent	NYTCL-8260(14)
L1500236-01C	Vial HCl preserved	A	N/A	2.1	Y	Absent	NYTCL-8260(14)
L1500236-01D	Plastic 500ml HNO3 preserved	A	<2	2.1	Y	Absent	BA-6020T(180),SE-6020T(180),TL-6020T(180),CR-6020T(180),NI-6020T(180),CU-6020T(180),ZN-6020T(180),PB-6020T(180),BE-6020T(180),AS-6020T(180),SB-6020T(180),AG-6020T(180),CD-6020T(180),HG-T(28)
L1500236-01E	Plastic 250ml NaOH preserved	A	>12	2.1	Y	Absent	TCN-9010(14)
L1500236-01F	Amber 1000ml unpreserved	A	8	2.1	Y	Absent	NYTCL-8270(7),NYTCL-8270-SIM(7)
L1500236-01G	Amber 1000ml unpreserved	A	8	2.1	Y	Absent	NYTCL-8270(7),NYTCL-8270-SIM(7)
L1500236-01H	Amber 500ml unpreserved	A	8	2.1	Y	Absent	NYTCL-8081(7)
L1500236-01I	Amber 500ml unpreserved	A	8	2.1	Y	Absent	NYTCL-8081(7)
L1500236-01J	Amber 1000ml unpreserved	A	8	2.1	Y	Absent	NYTCL-8082-1200ML(7)
L1500236-01K	Amber 1000ml unpreserved	A	8	2.1	Y	Absent	NYTCL-8082-1200ML(7)
L1500236-02A	Vial HCl preserved	B	N/A	3.4	Y	Absent	NYTCL-8260(14)
L1500236-02B	Vial HCl preserved	B	N/A	3.4	Y	Absent	NYTCL-8260(14)
L1500236-03A	Vial HCl preserved	B	N/A	3.4	Y	Absent	NYTCL-8260(14)
L1500236-03B	Vial HCl preserved	B	N/A	3.4	Y	Absent	NYTCL-8260(14)
L1500236-03C	Vial HCl preserved	B	N/A	3.4	Y	Absent	NYTCL-8260(14)

*Values in parentheses indicate holding time in days

Project Name: SITE1_PRW7_GW_2014
Project Number: SITE1_PRW7_GW_2014

Lab Number: L1500236
Report Date: 01/08/15

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1500236-03D	Plastic 500ml HNO3 preserved	B	<2	3.4	Y	Absent	BA-6020T(180),SE-6020T(180),TL-6020T(180),CR-6020T(180),NI-6020T(180),CU-6020T(180),ZN-6020T(180),PB-6020T(180),BE-6020T(180),AS-6020T(180),SB-6020T(180),AG-6020T(180),CD-6020T(180),HG-T(28)
L1500236-03E	Plastic 250ml NaOH preserved	B	>12	3.4	Y	Absent	TCN-9010(14)
L1500236-03F	Amber 1000ml unpreserved	B	8	3.4	Y	Absent	NYTCL-8270(7),NYTCL-8270-SIM(7)
L1500236-03G	Amber 1000ml unpreserved	B	8	3.4	Y	Absent	NYTCL-8270(7),NYTCL-8270-SIM(7)
L1500236-03H	Amber 500ml unpreserved	B	8	3.4	Y	Absent	NYTCL-8081(7)
L1500236-03I	Amber 500ml unpreserved	B	8	3.4	Y	Absent	NYTCL-8081(7)
L1500236-03J	Amber 1000ml unpreserved	B	8	3.4	Y	Absent	NYTCL-8082-1200ML(7)
L1500236-03K	Amber 1000ml unpreserved	B	8	3.4	Y	Absent	NYTCL-8082-1200ML(7)
L1500236-04A	Vial HCl preserved	C	N/A	4.5	Y	Absent	NYTCL-8260(14)
L1500236-04A1	Vial HCl preserved	B	N/A	3.4	Y	Absent	NYTCL-8260(14)
L1500236-04A2	Vial HCl preserved	C	N/A	4.5	Y	Absent	NYTCL-8260(14)
L1500236-04B	Vial HCl preserved	C	N/A	4.5	Y	Absent	NYTCL-8260(14)
L1500236-04B1	Vial HCl preserved	B	N/A	3.4	Y	Absent	NYTCL-8260(14)
L1500236-04B2	Vial HCl preserved	C	N/A	4.5	Y	Absent	NYTCL-8260(14)
L1500236-04C	Vial HCl preserved	C	N/A	4.5	Y	Absent	NYTCL-8260(14)
L1500236-04C1	Vial HCl preserved	B	N/A	3.4	Y	Absent	NYTCL-8260(14)
L1500236-04C2	Vial HCl preserved	C	N/A	4.5	Y	Absent	NYTCL-8260(14)
L1500236-04D	Plastic 500ml HNO3 preserved	C	<2	4.5	Y	Absent	BA-6020T(180),SE-6020T(180),TL-6020T(180),CR-6020T(180),NI-6020T(180),CU-6020T(180),ZN-6020T(180),PB-6020T(180),BE-6020T(180),AS-6020T(180),SB-6020T(180),AG-6020T(180),CD-6020T(180),HG-T(28)
L1500236-04D1	Plastic 500ml HNO3 preserved	B	<2	3.4	Y	Absent	BA-6020T(180),SE-6020T(180),TL-6020T(180),CR-6020T(180),NI-6020T(180),CU-6020T(180),ZN-6020T(180),PB-6020T(180),BE-6020T(180),AS-6020T(180),SB-6020T(180),AG-6020T(180),CD-6020T(180),HG-T(28)
L1500236-04D2	Plastic 500ml HNO3 preserved	C	<2	4.5	Y	Absent	BA-6020T(180),SE-6020T(180),TL-6020T(180),CR-6020T(180),NI-6020T(180),CU-6020T(180),ZN-6020T(180),PB-6020T(180),BE-6020T(180),AS-6020T(180),SB-6020T(180),AG-6020T(180),CD-6020T(180),HG-T(28)

*Values in parentheses indicate holding time in days

Project Name: SITE1_PRW7_GW_2014
Project Number: SITE1_PRW7_GW_2014

Lab Number: L1500236
Report Date: 01/08/15

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1500236-04E	Plastic 250ml NaOH preserved	C	>12	4.5	Y	Absent	TCN-9010(14)
L1500236-04E1	Plastic 250ml NaOH preserved	B	>12	3.4	Y	Absent	TCN-9010(14)
L1500236-04E2	Plastic 250ml NaOH preserved	C	>12	4.5	Y	Absent	TCN-9010(14)
L1500236-04F	Amber 1000ml unpreserved	C	8	4.5	Y	Absent	NYTCL-8270(7),NYTCL-8270-SIM(7)
L1500236-04F1	Amber 1000ml unpreserved	B	8	3.4	Y	Absent	NYTCL-8270(7),NYTCL-8270-SIM(7)
L1500236-04F2	Amber 1000ml unpreserved	C	8	4.5	Y	Absent	NYTCL-8270(7),NYTCL-8270-SIM(7)
L1500236-04G	Amber 1000ml unpreserved	C	8	4.5	Y	Absent	NYTCL-8270(7),NYTCL-8270-SIM(7)
L1500236-04G1	Amber 1000ml unpreserved	B	8	3.4	Y	Absent	NYTCL-8270(7),NYTCL-8270-SIM(7)
L1500236-04G2	Amber 1000ml unpreserved	C	8	4.5	Y	Absent	NYTCL-8270(7),NYTCL-8270-SIM(7)
L1500236-04H	Amber 500ml unpreserved	C	8	4.5	Y	Absent	NYTCL-8081(7)
L1500236-04H1	Amber 500ml unpreserved	B	8	3.4	Y	Absent	NYTCL-8081(7)
L1500236-04H2	Amber 500ml unpreserved	C	8	4.5	Y	Absent	NYTCL-8081(7)
L1500236-04I	Amber 500ml unpreserved	C	8	4.5	Y	Absent	NYTCL-8081(7)
L1500236-04I1	Amber 500ml unpreserved	B	8	3.4	Y	Absent	NYTCL-8081(7)
L1500236-04I2	Amber 500ml unpreserved	C	8	4.5	Y	Absent	NYTCL-8081(7)
L1500236-04J	Amber 1000ml unpreserved	C	8	4.5	Y	Absent	NYTCL-8082-1200ML(7)
L1500236-04J1	Amber 1000ml unpreserved	B	8	3.4	Y	Absent	NYTCL-8082-1200ML(7)
L1500236-04J2	Amber 1000ml unpreserved	C	8	4.5	Y	Absent	NYTCL-8082-1200ML(7)
L1500236-04K	Amber 1000ml unpreserved	C	8	4.5	Y	Absent	NYTCL-8082-1200ML(7)
L1500236-04K1	Amber 1000ml unpreserved	B	8	3.4	Y	Absent	NYTCL-8082-1200ML(7)
L1500236-04K2	Amber 1000ml unpreserved	C	8	4.5	Y	Absent	NYTCL-8082-1200ML(7)

Container Comments

L1500236-01D

L1500236-01K

L1500236-03D

L1500236-03K

L1500236-04D

L1500236-04H1

*Values in parentheses indicate holding time in days

Project Name:	SITE1_PRW7_GW_2014	**Lab Number:**	L1500236
Project Number:	SITE1_PRW7_GW_2014	**Report Date:**	01/08/15

GLOSSARY

Acronyms

EDL - Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).

EPA - Environmental Protection Agency.

LCS - Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LCSD - Laboratory Control Sample Duplicate: Refer to LCS.

LFB - Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

MDL - Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

MS - Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available.

MSD - Matrix Spike Sample Duplicate: Refer to MS.

NA - Not Applicable.

NC - Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.

NI - Not Ignitable.

RL - Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

RPD - Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.

SRM - Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.

Footnotes

1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Data Qualifiers

A - Spectra identified as "Aldol Condensation Product".

B - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).

C - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.

D - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.

E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

Report Format: DU Report with 'J' Qualifiers

Project Name:	SITE1_PRW7_GW_2014	**Lab Number:**	L1500236
Project Number:	SITE1_PRW7_GW_2014	**Report Date:**	01/08/15

Data Qualifiers

G - The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.

H - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

I - The lower value for the two columns has been reported due to obvious interference.

M - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

NJ - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.

P - The RPD between the results for the two columns exceeds the method-specified criteria.

Q - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

J - Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

ND - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.

Report Format: DU Report with 'J' Qualifiers

Project Name:	SITE1_PRW7_GW_2014	**Lab Number:**	L1500236
Project Number:	SITE1_PRW7_GW_2014	**Report Date:**	01/08/15

REFERENCES

1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IV, 2007.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.

Certification Information

Last revised December 16, 2014

The following analytes are not included in our NELAP Scope of Accreditation:

Westborough Facility
EPA 524.2: Acetone, 2-Butanone (Methyl ethyl ketone (MEK)), Tert-butyl alcohol, 2-Hexanone, Tetrahydrofuran, 1,3,5-Trichlorobenzene, 4-Methyl-2-pentanone (MIBK), Carbon disulfide, Diethyl ether.
EPA 8260C: 1,2,4,5-Tetramethylbenzene, 4-Ethyltoluene, Iodomethane (methyl iodide), Methyl methacrylate, Azobenzene.
EPA 8270D: 1-Methylnaphthalene, Dimethylnaphthalene,1,4-Diphenylhydrazine.
EPA 625: 4-Chloroaniline, 4-Methylphenol.
SM4500: Soil: Total Phosphorus, TKN, NO2, NO3.
EPA 9071: Total Petroleum Hydrocarbons, Oil & Grease.

Mansfield Facility
EPA 8270D: Biphenyl.
EPA 2540D: TSS
EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.

The following analytes are included in our Massachusetts DEP Scope of Accreditation, Westborough Facility:

Drinking Water
EPA 200.8: Sb,As,Ba,Be,Cd,Cr,Cu,Pb,Ni,Se,Tl; **EPA 200.7**: Ba,Be,Ca,Cd,Cr,Cu,Na; **EPA 245.1:** Mercury;
EPA 300.0: Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B**
EPA 332: Perchlorate.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT, Enterolert-QT.**

Non-Potable Water
EPA 200.8: Al,Sb,As,Be,Cd,Cr,Cu,Pb,Mn,Ni,Se,Ag,Tl,Zn;
EPA 200.7: Al,Sb,As,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Mo,Ni,K,Se,Ag,Na,Sr,Ti,Tl,V,Zn;
EPA 245.1, SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2340B, SM2320B, SM4500CL-E, SM4500F-BC, SM426C, SM4500NH3-BH, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **SM4500NO3-F, EPA 353.2**: Nitrate-N**, SM4500NH3-BC-NES, EPA 351.1, SM4500P-E, SM4500P-B, E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, SM14 510AC, EPA 420.1, SM4500-CN-CE, SM2540D.**
EPA 624: Volatile Halocarbons & Aromatics,
EPA 608: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
EPA 625: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045**: PCB-Oil.
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9222D-MF**.

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

THE PORT AUTHORITY OF NY & NJ

CHAIN-OF-CUSTODY / Analytical Request Document

PORT IVORY JAN 06 2015

L1500236 Serial No:01081517:42

Page: 1 of 1

Cooler # ALPHA of

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed and accurate.

Task:	SITE1_PRW7_GW_2014	
Total # of Samples: 4	Event Complete?	
TAT		SDG

Notes: F= Field Filtered , H= Hold

Project Information:

Facility:	
Charge code	p11955502
Task Description	Site 1 SMP samples

Contact Name	Victoria Carley/ Angelos Zafirelis
Contact Phone No.	201-984-9800 / 201-216-2960
Contact Fax No.	201-216-2158
Contact Email	VCarley@panynj.gov / AZafirel@panynj.gov
Destination Laboratory	Alpha Labs

ITEM #	Field Sample No. /Identification	MATRIX CODE	G=GRAB C=COMP	SAMPLE DATE & TIME	#OF CONTAINERS	Composite Description	Preservative	Analysis: PP VOC	PP SVOC	PP Metals	Pesticides	PCB's	Total Cyanide		
12	WG-20150106/316 -FD-1	WG	G	1/6/2015 1316	11			X	X	X	X	X	X		
	WQ-20150106000-TB-1	WQ	G	1/5/2015	2			X							
	WQ-20150106/220 -FB-1	WQ	G	1/6/2015 1220	11			X	X	X	X	X	X		
	PRW-07-WG-20150106 1316	WG	G	1/6/2015 1316	33			X	X	X	X	X	X		
5															
6															
7															
8															
9															
10															
11															

Additional Comments/Special Instructions:

MS/MSD sample collect at PRW-7

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
	1/7/15	10:30	AAC	1-7-15	10:30
	1-7-15	1841		1-7-15	1840
	1-7-15	2210	Stephen Phillips	01/07/15	2210

Sample Receipt Conditions

	Y/N	Y/N	Y/N
	Y/N	Y/N	Y/N
	Y/N	Y/N	Y/N
	Y/N	Y/N	Y/N
	Temp in OC	Samples on Ice?	Sample Intact?	Trip Blank?

Deliverables:

EZEDD, XL Summary Table, NYSDEC Equis, NY- Full Deliverables

NAME OF SAMPLER		DATE/TIME:	
SIGNATURE of SAMPLER:			

FORMS

Enclosure 2

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

Site Details **Box 1**

Site No. V00615

Site Name Port Ivory Site (Former P & G) Site 1

Site Address: 40 Western Avenue Zip Code: 10303
City/Town: Staten Island
County: Richmond
Site Acreage: ~~13.0~~ 14.95

Reporting Period: May 20, 2014 to January 22, 2015

	YES	NO
1. Is the information above correct?	☐	☒
If NO, include handwritten above or on a separate sheet.		
2. Has some or all of the site property been sold, subdivided, merged, or undergone a tax map amendment during this Reporting Period?	☐	☒
3. Has there been any change of use at the site during this Reporting Period (see 6NYCRR 375-1.11(d))?	☐	☒
4. Have any federal, state, and/or local permits (e.g., building, discharge) been issued for or at the property during this Reporting Period?	☐	☒
If you answered YES to questions 2 thru 4, include documentation or evidence that documentation has been previously submitted with this certification form.		
5. Is the site currently undergoing development?	☐	☒

Box 2

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

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

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

Signature of Owner, Remedial Party or Designated Representative

Date

SITE NO. V00615

Box 3

Description of Institutional Controls

Parcel	Owner	Institutional Control
1400-1 (a portion of)	Port Authority of New York and New Jersey	Ground Water Use Restriction

The IC restricts disturbance of the cover and limits the use of groundwater at the site in perpetuity. To ensure that the EC and IC remain protective of human health and the environment, periodic groundwater and surface water monitoring and periodic inspections of the EC will be conducted. The periodic monitoring and inspections will continue until the NYSDEC notifies the Port Authority in writing that periodic monitoring is no longer required. Additionally, the SMP requires that the Port Authority take certain actions if the EC is disturbed during site improvement activities.

Box 4

Description of Engineering Controls

Parcel	Engineering Control
1400-1 (a portion of)	Cover System

The EC consists of at least one foot of crushed stone, concrete, or asphalt and covers the entire site.

Box 5

Periodic Review Report (PRR) Certification Statements

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

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

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

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. V00615

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 Robert P. Pruno at 4 World Trade Center, 150 Greenwich ST NY, NY 10006
print name print business address

am certifying as Owner 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

3/2/2015
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 David S. Glass at 1430 Broadway, 10th Fl, New York, NY
print name print business address

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

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

Stamp (Required for PE)

Date 3/6/2015