THE PORT AUTHORITY OF NY & NJ

Engineering Department

February 11, 2010

Thomas Gibbons, Project Manager
NY State Dept. of Environmental Conservation
Division of Environmental Remediation
625 Broadway
Albany, NY 12233

RE: Site 2 Focused Supplemental Remedial Investigation Report
Howland Hook Marine Terminal –
Port Ivory Facility (40 Western Avenue)
Staten Island, New York 10303

Dear Mr. Gibbons:

Please find enclosed two copies of the final Focused Supplemental Remedial Investigation Report (FSRIR) for Site 2 (VCP ID# V00674-2) at the above referenced facility. The FSRIR is submitted pursuant to the Voluntary Cleanup Program (VCP) Agreement between the NYSDEC and The Port Authority of New York and New Jersey.

If you have any questions or comments, please feel free to contact Ed Aldrich at 973-565-7553.

Very truly yours,

The Port Authority of New York and New Jersey

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cc: B. Callaghan (NYSDOH)
E. Aldrich (PANYNJ)
G. Clark (HMM)

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The Port Authority of New York and New Jersey

Focused Supplemental Remedial Investigation Report

Site 2 (VCP Site 00674-2)

HHMT - Port Ivory Facility

January 2010

40 Western Avenue, Staten Island, New York

HMM 232952

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1.0 Executive Summary

This report summarizes the results of the Focused Supplemental Remedial Investigation (FSRI) conducted at Site 2 in 2007. The FSRI was necessary to investigate three open Areas of Concern (AOCs) known as AOC-Western Area, AOC-Area 2A Southeast, and AOC-TE Pipeline. The overall goal of the FSRI was to determine whether additional investigation or remediation was warranted at these open AOCs. This report supplements the information documented in the *Comprehensive Remedial Investigation Report* (CRIR) dated April 2008, which has been submitted to the New York State Department of Environmental Conservation (NYSDEC).

Soil sampling was necessary at AOC-Western Area to document the effectiveness of soil removal activities completed by The Port Authority of New York and New Jersey (The Port Authority). At AOC-Area 2A Southeast, light non-aqueous phase liquid (LNAPL)-impacted soil had not been completely delineated. In AOC-TE Pipeline, the environmental quality of soil and groundwater had not been evaluated along the International Mantex Tank Terminals (IMTT) and Texas Eastern pipelines.

During the FSRI, LNAPL-impacted soil was encountered at only AOC-Area 2A Southeast. The LNAPL was delineated to a minimum area of approximately 4,000 square feet. Delineation of LNAPL-impacted soil to the east of AOC-Area 2A Southeast was completed at AOC-Western Area. To the west, sediment sampling in Bridge Creek and field observations of soil quality along the bank of Bridge Creek, demonstrate delineation of LNAPL impacts. The north and south limits of LNAPL-soil were defined at soil borings. LNAPL was not encountered in any FSRI monitoring well installed at Site 2. Therefore, mobile LNAPL is not anticipated to be present at AOC-Area 2A Southeast.

Soil impacts at AOC-Western Area and AOC-TE Pipeline consist primarily of polycyclic aromatic hydrocarbon (PAH) compounds believed to be attributable to fill materials used to raise the site grade by Proctor and Gamble (P&G). These soil impacts are similar to concentrations detected at other portions of the HHMT-Port Ivory Facility. Groundwater is impacted with PAH compounds, which has not impacted surface water in Bridge Creek.

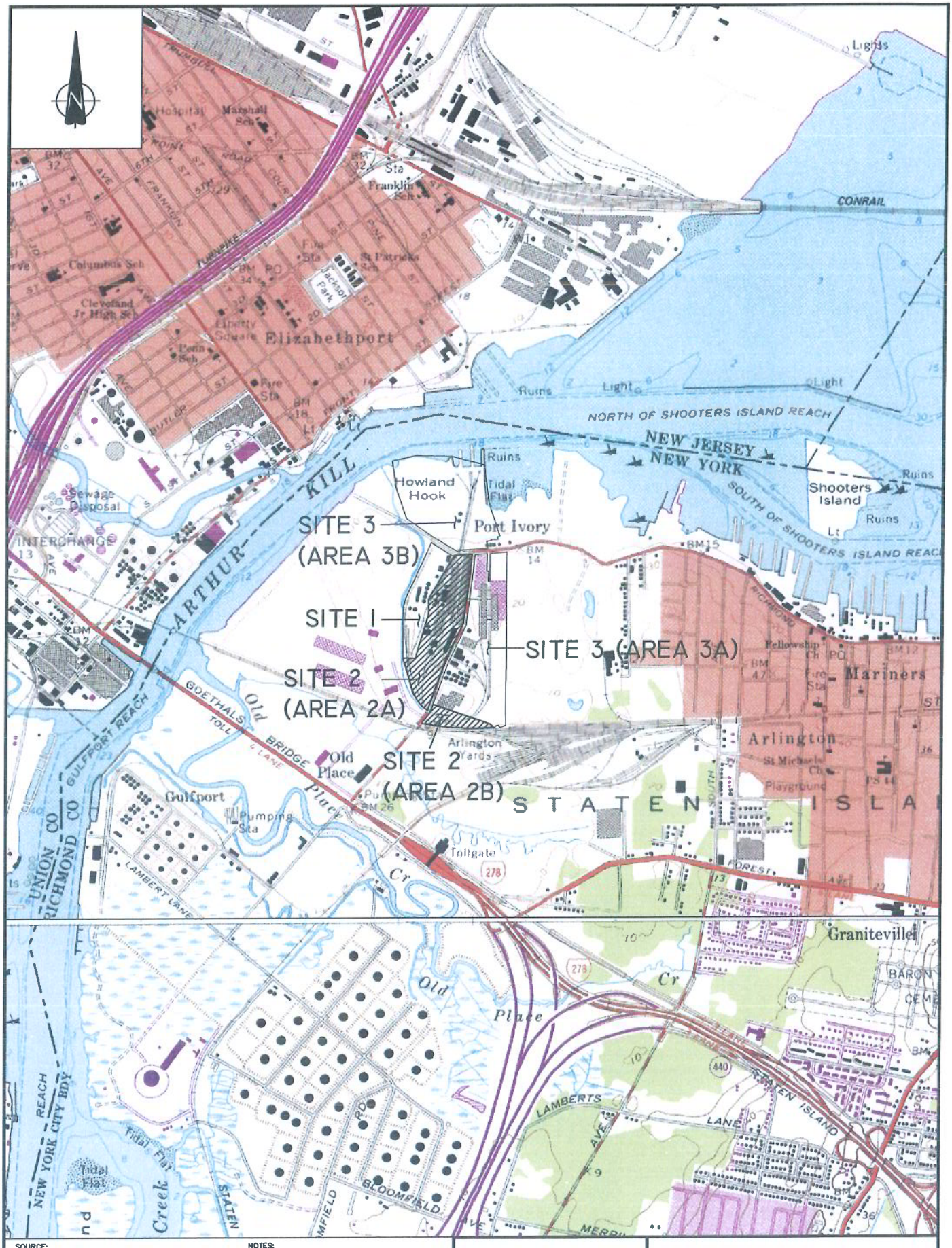
The FSRI has concluded that no additional evaluation or remediation is warranted beyond the establishment of institutional/engineering controls and a Deed Restriction as specified in the Site 2 Remedial Action Work Plan (RAWP). The environmental quality of groundwater, surface water, and potentially sediment as well as inspection of the impervious cover will be monitored after redevelopment.

2.0 Introduction

The Port Authority is currently redeveloping the former P&G Port Ivory Facility, now known as the Howland Hook Marine Terminal (HHMT)-Port Ivory Facility. The property is located at 40 Western Avenue in Staten Island, Richmond County, New York, as presented on Figure 1. The HHMT-Port Ivory Facility consists of three parcels: Block 1309, Lot 10; Block 1338, Lot 1; and, Block 1400, Lot 1. The Port Authority purchased these three parcels from P&G in 2000. The HHMT-Port Ivory Facility is bordered by Bridge Creek to the west, the Arthur Kill to the north, wetlands and vacant land to the east, and a railroad to the south. 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.

The Port Authority is in the process of redeveloping the HHMT-Port Ivory Facility for a commercial end use; specifically, The Port Authority intends to utilize the property as an intermodal facility. For the purpose of this report, an intermodal facility is defined as a facility where cargo transported by ship is transferred to intermediate and final destinations via train or truck. Following redevelopment, an environmental cap will be constructed throughout the majority of the HHMT-Port Ivory Facility, including Site 2.

As part of the facility redevelopment, The Port Authority entered into the NYSDEC Voluntary Cleanup Program (VCP) in August 2002. The Port Authority's objective for entering into the VCP program with the NYSDEC was to address the presence of contamination due to prior operations at the facility that were unrelated to The Port Authority. The Port Authority has established different redevelopment schedules for different portions of the facility. To accommodate The Port Authority's redevelopment schedule, the NYSDEC agreed to expedite the review of information pertaining to certain portions of the facility. Thus, The Port Authority and the NYSDEC agreed to address the HHMT-Port Ivory Facility as three VCP Sites and submit assessment, investigation, and remedial action information/documentation for each individual Site. The Sites (See Figure 1) have been defined as follows: Site 1 consists of the northwestern portion of Block 1400, Lot 1; Site 2, which is further subdivided into Areas 2A and 2B, consists of the eastern and southern portions of Block 1400, Lot 1 (Area 2A) and the southern portion of Block 1338, Lot 1 (Area 2B); and, Site 3, which is further subdivided into Areas 3A and 3B, consists of the remaining portion of Block 1338, Lot 1 (Area 3A) and Block 1309, Lot 10 (Area 3B). The VCP agreement for Site 3 (Area 3A) formerly known as Site 3 (VCP agreement for Site V-00675-2, VCP Index Number W2-0987-02-04) was revised to incorporate Site 3 (Area 3B), formerly known as "Future



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

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HHMT - PORT IVORY FACILITY
FIGURE 1
SITE LOCATION MAP
003

Designed	Drawn	Checked	Date
RGM	RGM	GCK	1/12/10

Site 4," on January 4, 2007. This FSRI includes information associated only with Site 2 (VCP Agreement V-00674-2), which encompasses 28.6 acres of the 123.75-acre HHMT-Port Ivory Facility. Area 2A has an area of 23.94 acres and Area 2B has an area of 4.66 acres.

Area 2A is bordered by Site 1 to the west, Richmond Terrace to the north, Western Avenue to the east, and a railroad to the south. Vehicular access to the northern portion of Area 2A is provided from the west by a paved access road from Site 1. Vehicular access to the central and southern portions of Area 2A is provided by two paved access roads, one located between Building Nos. 41 and 45 and the second located at the extreme southern portion of Area 2A. At the time of the Phase I ESA and SI, Area 2A was improved by numerous buildings and paved roadways and parking lots. The majority of these improvements have been razed in preparation for site redevelopment. Area 2A is currently improved by three buildings: a structure in the footprint of former Building No. 40, which has been razed; Building No. 41: and, Building No. 45. Please note, the structure in the footprint of former Building No. 40 consists of two temporary modular offices. A chain-link fence borders Area 2A to the north, east, and south. As part of site redevelopment, recently constructed railroad tracks and paved areas are located to the west of the existing buildings at Area 2A. The railroad tracks extend off the southern portion of Area 2A, cross over Western Avenue, and extend across Area 2B. Area 2A exhibits little relief and is devoid of vegetation. A soil pile is currently located along the western boundary of Area 2A; this soil pile was used for surcharging purposes and will be regraded or transported off site.

Area 2B is bordered by Western Avenue to the west, Site 3 to the north, marshland to the east, and a railroad and stream to the south. Area 2B exhibits a slight upward grade to the east. The northern boundary of Area 2B extends along the southern building wall of Building Nos. 74/75 such that Area 2B does not include the interior of Building Nos. 74/75 but includes exterior areas to the south of the buildings. Vehicular access to Area 2B is provided from Western Avenue and from Site 3. At the time of the Phase I ESA and SI, Area 2B was improved by (the southern portions of) Building Nos. 70, 70A, 70B, 70C, 70F, 70G, and 72. These buildings have been razed, and Area 2B is currently improved only by recently constructed railroad tracks trending in an east to west direction, paved roadways, and an out-of-service truck scale located within one of the roadways. Vegetation is present at most portions of Area 2B that are not paved; the densest vegetation occurs along a small stream located along the southern boundary of Area 2B.

Four utility easements traverse Area 2B; two of the easements, granted to Colonial Pipeline Company (Colonial) and IMTT, formerly owned by Texas Eastern, are believed to contain active pipelines. Reportedly, the IMTT easement contains a 12-inch liquid petroleum pipeline. The Colonial easement contains two liquid petroleum pipelines. The remaining easements contain inactive pipelines. One such easement granted to Texas Eastern, contains an inactive pipeline. The final easement, reported to have been owned at one time by the Tidewater Pipe Co., Ltd. (Tidewater), contains seven abandoned underground pipelines (Tidewater pipelines) that were formerly utilized to transmit petroleum products. All four easements are between 8 and 15 feet wide. Three of the easements, including the easement to IMTT that contains an active pipeline, trend approximately parallel to Western Avenue in the western portion of Area 2B before turning approximately 90 degrees to the east and trending from west-northwest to east-southeast across Area 2B before turning east-northeast and exiting the facility. The easement owned and maintained by Colonial, trends approximately north-south through the western portion of Area 2B before turning approximately 45 degrees and passing under Western Avenue into Area 2A.

Two utility easements, both associated with underground petroleum pipelines, are located at Area 2A. As noted above, one easement, maintained by Colonial, is present beneath both Areas 2A and 2B. This easement, associated with one active pipeline, runs along the western side of Area 2A and crosses the Area 2A-Site 1 boundary. The second easement, to Exxon-Mobil, is associated with two inactive pipelines that cross Bridge Creek in the southern portion of Area 2A and turn north, ultimately crossing the Area 2A-Site 1 boundary. The location of the IMTT, Texas Eastern, and Tidewater pipelines are presented on Figure 4.

2.1 Environmental Investigations at Site 2

Prior to conducting the FSRI, Hatch Mott MacDonald (HMM) conducted various phases of environmental investigation at Site 2 between calendar years 2000 and 2007 on behalf of The Port Authority. The overall goal of these investigations was to determine the appropriate remedial actions, if any, for soil and/or groundwater at Site 2 given the proposed site redevelopment for commercial (intermodal facility) purposes. Prior to the FSRI, HMM's environmental investigation efforts have included the performance of a Phase I Environmental Site Assessment with an additional file review (Phase I ESA), Site Investigation (SI), Remedial Investigation (RI), and a Supplemental Remedial Investigation (SRI). Limited soil excavation as part of an Interim Remedial Measure (IRM) was completed at Area 2B in 2006. The results of these activities are summarized in the CRIR dated April 2008, which has been submitted to the NYSDEC.

The Phase I ESA and SI were conducted to identify and characterize AOCs at the facility in 2000, prior to The Port Authority's purchase of the property. The RI and SRI were conducted following the transfer of the property from P&G to The Port Authority. The RI and SRI were conducted to further investigate selected AOCs that, based upon the results of the SI, were deemed to warrant additional investigation. Some of the AOCs targeted for investigation during the RI were inaccessible due to their proximity to buildings and other structures; subsequent to the RI, these buildings were demolished and these AOCs were investigated during the SRI.

The Port Authority conducted an IRM at Area 2B to remove LNAPL-impacted soil in one AOC (AOC-Southern Area. Based on the success of the IRM, no further evaluation was recommended for AOC-Southern Area.

Additional (FSRI) sampling/investigation was necessary in three open AOCs: AOC-Western Area, AOC-Area 2A Southeast, and AOC-TE Pipeline, which was identified subsequent to the SRI. AOC-Western Area is discussed in Section 2.1.1 and AOC-Area 2A Southeast is discussed in Section 2.1.2. Since no investigation was completed at AOC-TE Pipeline prior to the FSRI, AOC-TE Pipeline is not discussed in Section 2.1.

2.1.1 AOC-Western Area

The Port Authority encountered soil impacted by LNAPL during modification to the storm water system in the western portion of Area 2B. The area of LNAPL-impacted soil was identified as AOC-Western Area. A set of five pipelines, believed to be five of the seven Tidewater pipelines, and a single, inactive 12-inch-diameter pipeline, believed to be the Texas Eastern pipeline, were observed within the excavation. Impacted soil was excavated, transported to, and disposed of at the Edgeboro Landfill, an NJDEP-permitted disposal facility that is owned by the Middlesex County Utilities Authority.

The investigation of AOC-Western Area involved the collection of five soil samples and one groundwater sample from the excavation. The soil samples were analyzed for volatile organic compounds (VOCs), semivolatile organic compounds (SVOCs), and total petroleum hydrocarbons (TPHC). TPHC results ranged from 1,800 to 6,300 milligrams per kilogram (mg/kg). Other soil impacts, primarily PAH compounds, were detected at concentrations similar to those detected at other portions of the HHMT-Port Ivory Facility. Please note, samples were not collected from soil at the bottom of the excavation because the excavation was extended through fill material and into an underlying meadowmat unit. Since the

meadowmat is dominated by clay, silt, and organic matter, it is both a barrier to vertical groundwater migration and a sink for organic compounds. Therefore, this unit is considered to represent the vertical limit for soil and groundwater impacts.

A sample of groundwater that had seeped into the excavation was collected as soon as possible following the observation of LNAPL-impacted soil. Analytical data indicate that groundwater has not been adversely impacted with regulated organic compounds. Since The Port Authority did not collect a sufficient number of post-excavation soil samples, additional post-excavation soil sampling was necessary during the FSRI to document the effectiveness of the soil removal efforts.

2.1.2 AOC-Area 2A Southeast

The Port Authority upgraded its storm water infrastructure near the southern Site 2 boundary between August and September 2006. The work to the east side of Western Avenue was conducted to install a culvert between two (approximately) east-west trending ditches. The southern ditch was to be drained by a pipe that extends west beneath Western Avenue onto Area 2A and discharges at Bridge Creek. The portion of the pipe located on the west side of Western Avenue is shown on Figure 3.

Soil impacted by the presence of LNAPL was encountered to the east of Western Avenue in AOC-Western Area. LNAPL-impacted soil was not encountered in the trench dug in Western Avenue, but was encountered immediately to the south of three Tidewater pipes on the west side of Western Avenue. As the LNAPL-impacted soil on the west side of Western Avenue appeared to be the result of a separate discharge from AOC-Western Area, it was identified as a separate Area of Concern termed AOC-Area 2A Southeast.

The LNAPL-impacted soil encountered at AOC-Area 2A Southeast was excavated and stockpiled onsite pending offsite disposal. To characterize the soil remaining along the excavation perimeter, The Port Authority collected three post-excavation soil samples in September 2006. The samples were collected in accordance with the NYSDEC *Draft DER-10 Technical Guidance for Site Investigation and Remediation*, dated December 2002. Soil samples, designated as WAW-1N and WAW-2S, respectively, were collected from a depth of 3 to 3.5 feet below the ground surface (bgs) from the north and south sidewalls of the excavation. The depth interval sampled corresponds to the most impacted interval as determined based on field observations. Sample WAW-1B was collected at a depth of 5 to 5.5 feet bgs from the bottom of the

excavation. Consistent with previous NYSDEC-approved work plans where LNAPL-impacted soil was being investigated and/or delineated, the samples were analyzed for VOCs, SVOCs, and TPHC.

Except for acetone in sample WAW-1N, no VOCs were detected at concentrations above their respective NYSDEC Recommended Soil Cleanup Objective (RSCO). Acetone was detected at a concentration of 0.25 mg/kg, which slightly exceeds its NYSDEC RSCO of 0.2 mg/kg. This minor exceedance of a single VOC in one soil sample does not warrant additional investigation or remediation. The concentrations of individual PAH compounds in the samples collected at WAW-1N, WAW-1B and WAW-2S exceeded their respective RSCOs and are attributable to historic fill materials placed at the site by P&G. However, the total concentration of PAH compounds in sample WAW-2S (705.5 mg/kg) exceeds the RSCO for total SVOCs (500 mg/kg) and the total concentration of PAH compounds detected in historic fill materials throughout the HHMT-Port Ivory Facility. Please note, cinders were encountered at location WAW-2S, and the elevated concentration of PAH compounds and total SVOCs may be attributable to cinders inadvertently being included in the soil sample. TPHC concentrations ranged from 1,200 mg/kg (in sample WAW-2S) to 14,000 mg/kg (in sample WAW-1N). The concentration of TPHC in the samples collected at WAW-1N and WAW-1B exceeded 5,000 mg/kg, the site-specific threshold that triggers an investigation for mobile (i.e., free) LNAPL.

All three soil samples identified above were collected while the excavation at Area 2A was open. Subsequently, The Port Authority installed a three-foot diameter storm water drainage pipe and backfilled the excavation to grade with soil from the surrounding area. Riprap was placed along the bank of Bridge Creek to stabilize the excavation backfill.

In addition to the analytical results, field observations and screening confirmed the presence of LNAPL-impacted soil at AOC-Area 2A Southeast. Soil along the north sidewall of the excavation appeared to be impacted by LNAPL from a depth of approximately 3 to 4 feet bgs. Based on field observations, soil impacts were most pronounced along the Tidewater pipelines. Mobile LNAPL was not observed in the excavation.

Additional investigation (i.e., the FSRI) was warranted at AOC-Area 2A Southeast due to both field observations and soil sampling analytical results. Horizontal delineation of LNAPL-impacted soil was incomplete. Confirmation that the soil, as opposed to cinders, at WAW-2S contained elevated concentrations of total PAH compounds was required. In the event the soil contained elevated

concentrations of total PAH compounds, horizontal delineation was required to the east, south, and west of location WAW-2S. Please note, vertical delineation was achieved at a depth of five feet bgs at WAW-2S.

Delineation of the TPHC in soil was not necessary because an RSCO has not been established for TPHC. However, TPHC concentrations at this site have been used as an indicator for LNAPL saturation in soil; the greater the concentration of TPHC, the greater the presumed LNAPL saturation. In addition, a TPHC concentration of over 5,000 mg/kg is a trigger for investigating the presence or absence of mobile LNAPL. Therefore, The Port Authority proposed to complete the delineation of the LNAPL-impacted soil based on filed screening and TPHC analytical results to determine where soil is most likely to contain mobile LNAPL. The presence or absence of free LNAPL would then be determined.

3.0 FSRI Goal and Scope of Work

The overall goal of the FSRI was to determine whether additional investigative and/or remedial efforts were required at the three open Site 2 AOCs (AOC-Area 2A Southeast at Area 2A and AOC-Western Area and AOC-TE Pipeline at Area 2B). The proposed scope of work for AOC-Area 2A Southeast was summarized in the NYSDEC-approved document entitled *FSRI Work Plan AOC-Area 2A Southeast* (Work Plan 1) at Area 2A dated August 24, 2007. The proposed scope of work for AOC-Western Area and AOC-TE Pipeline was summarized in the NYSDEC-approved document entitled *Revised FSRI-Area 2B* (Work Plan 2) dated December 12, 2006. Please note, sampling surface water of the unnamed tributary to Bridge Creek was included in Work Plan 2. However, this activity was completed separately and was summarized in the NYSDEC-approved CRIR dated April 2008.

The FSRI objectives were slightly different at each AOC. The FSRI objective at AOC-Western Area was to document the effectiveness of the soil removal efforts through the collection of post-excavation soil samples (Objective 1). Soil removal efforts were completed in 2005, and ten post-excavation samples were collected in 2006. However, the excavation was partially backfilled and post-excavation soil sampling frequency required by DER-10 (i.e., one per 30 linear feet) could not be achieved. The remaining post-excavation soil samples were collected in 2007 at soil boring locations.

The objectives of the FSRI at AOC-Area 2A Southeast were to confirm the presence or absence of elevated (i.e., above site-wide background) concentrations of PAH compounds at location WAW-2S (Objective 2); delineate LNAPL-impacted soil to the north of WAW-1N (Objective 3); investigate for the

presence of mobile LNAPL (Objective 4); and evaluate whether the presence of LNAPL has impacted groundwater or surface water (Objective 5).

The objectives of the FSRI at AOC-Area TE Pipeline were as follows: to determine the locations of underground pipelines located in easements to Texas Eastern and IMTT (Objective 6) and to confirm the presence or absence of LNAPL-impacted soil along these pipelines (Objective 7).

The FSRI scope of work for AOC-Western Area, AOC-Area 2A Southeast, and AOC-TE Pipeline is summarized below. Methods used during the FSRI field activities are described in Section 5.

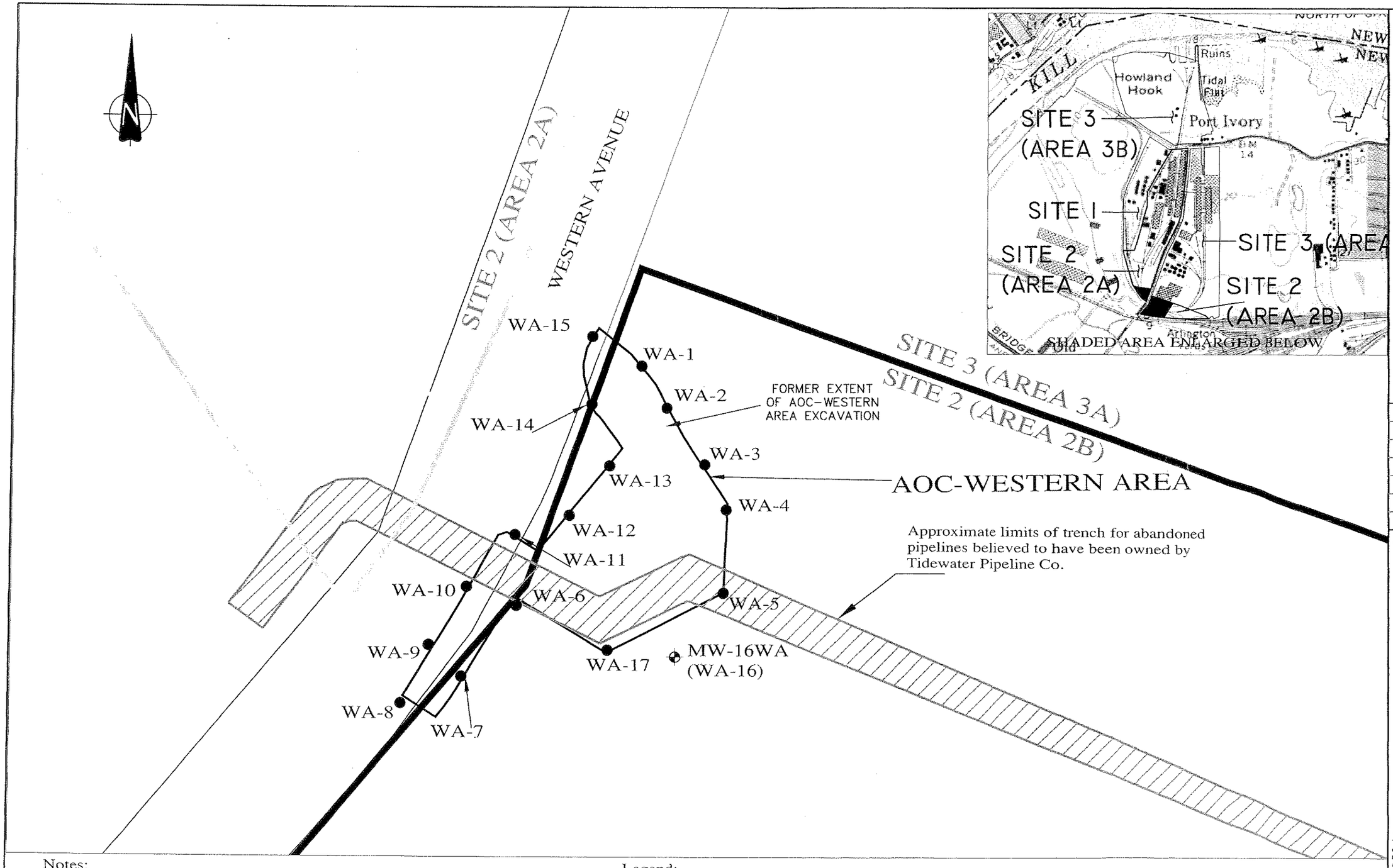
3.1 Scope of Work AOC-Western Area

The general scope of work for AOC-Western Area consisted of the investigation of soil quality at the AOC-Western Area excavation. Soil samples WA-1 through WA-17 (see Figure 2 for soil sampling locations) were collected along the perimeter of the excavation. Soil samples were collected directly from the excavation sidewalls at a rate of one soil sample per 30 linear feet of excavation sidewall. Since a portion of the western area excavation was backfilled at the time of sample collection, some post-excavation sidewall samples were collected by drilling soil borings. Soil borings were drilled at locations WA-1, WA-5, WA-12, WA-13, WA-14, WA-15, WA-16, and WA-17. No soil samples were collected from the meadowmat unit at the bottom of the excavation, which is believed to limit the vertical migration of impacts.

Although LNAPL was not encountered in AOC-Western Area, TPHC was detected at a concentration above 5,000 mg/kg at one location (WA-16). The Port Authority and the NYSDEC have established a TPHC concentration of 5,000 mg/kg as the threshold above which mobile LNAPL should be investigated. Consistent with other areas of the HHMT-Port Ivory Facility, the presence of mobile LNAPL was investigated during the FSRI by installing a monitoring well (MW-16WA) at WA-16. If LNAPL was measured in the well, then the presence of mobile LNAPL would be confirmed. If LNAPL did not flow into the well, the LNAPL would be considered to be present in residual saturation (i.e., immobile) because it did not flow into the well.

3.2 Scope of Work AOC-Area 2A Southeast

The scope of work for AOC-Area 2A Southeast included the confirmation of elevated concentrations of total PAH compounds at WAW-2S, the delineation of LNAPL-impacted soil, the confirmation of the



Notes:

(1) All soil boring and monitoring well locations were surveyed by The Port Authority Survey Group.

(2) Soil boring WA-16 was converted to a monitoring well (MW-16WA) as shown on map.

(3) VCP = Voluntary Cleanup Program

Legend:

VCP Site Boundary

WA-9 Soil Boring Location

MW-16WA Monitoring Well Location

40 0 40 80
SCALE IN FEET

Sheet of

THE PORT AUTHORITY OF NY & NJ

ENGINEERING PROGRAM MANAGER

No.	Date	Revision	Approved

ENGINEERING DEPARTMENT

HOWLAND HOOK MARINE TERMINAL
PORT IVORY FACILITY
SITE 2
(AREAS 2A AND 2B)

ENVIRONMENTAL

Title

SAMPLING LOCATION MAP
AOC - WESTERN AREA

Designed by	Drawn by	Checked by
	RMT	GKC

Date 7/7/2009

Contract Number 011

Drawing Number FIGURE 2

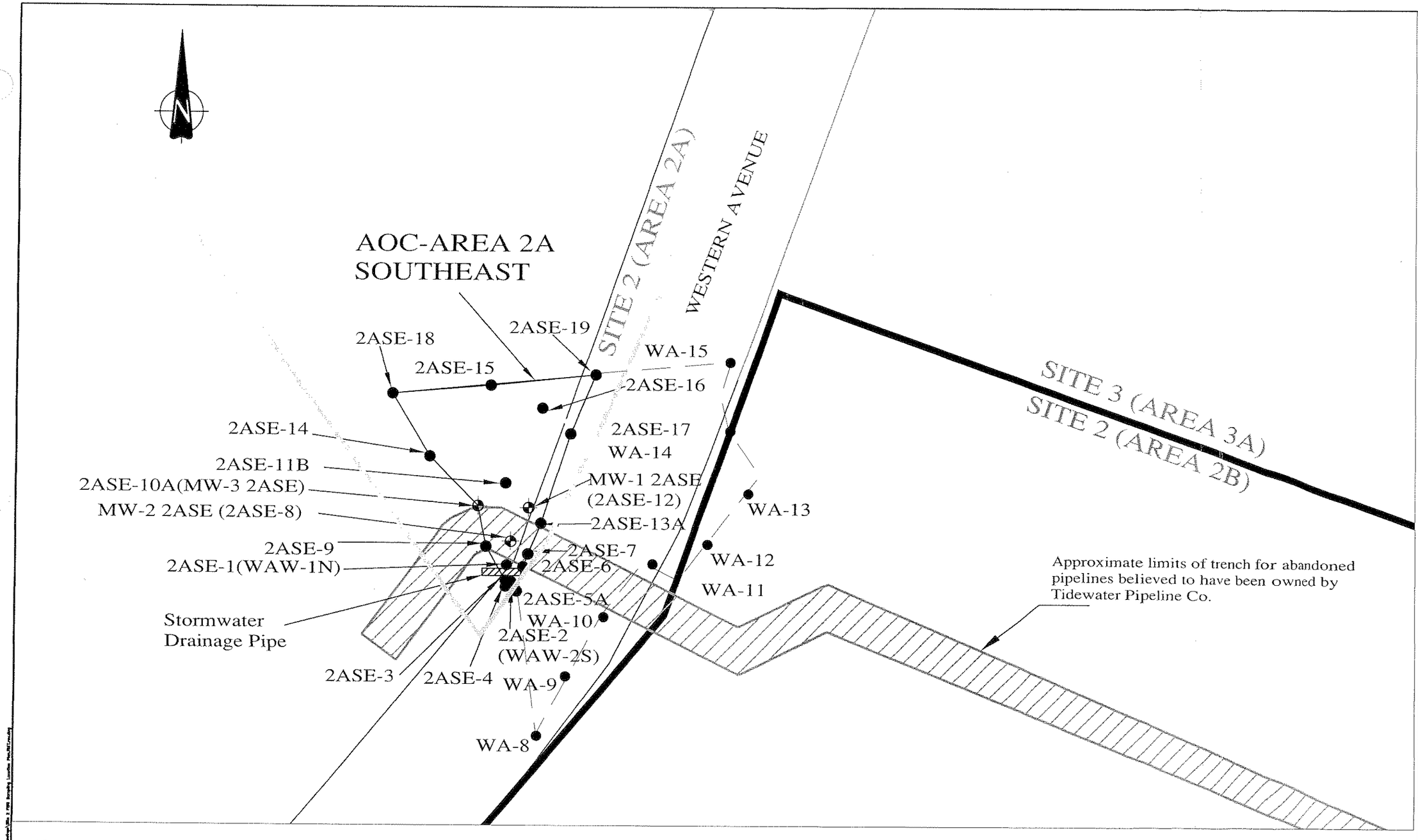
P:\232952\232952wmd\Operable Unit Reports\Operable Unit 2\Site 2 FSRI 2007\drawings\Site 2 FSRI Sampling Locat...tion.RMT.rev.dwg

presence or absence of mobile LNAPL, and a groundwater investigation. Twenty-five soil samples were collected from 16 soil borings and groundwater samples were collected from three groundwater monitoring wells.

Elevated concentrations of PAH compounds and total SVOCs were previously detected in soil at WAW-2S in the 3-3.5 foot bgs depth interval. These impacts, which were delineated vertically at five feet bgs, may be attributable to the presence of cinders at this location. To confirm whether or not elevated concentrations of organic compounds are present in soil at WAW-2S (Objective 2), a confirmatory soil sample was collected from as close as possible to the original sample location and depth (3-3.5 foot bgs). The new location was identified as 2ASE-2. Care was taken to ensure that the soil sample did not contain cinders. The soil sample was analyzed for SVOC+20, which includes PAH compounds.

In the event that the soil sample at 2ASE-2 contained elevated concentrations of total PAH compounds, soil borings were drilled in the vicinity of WAW-2S (Objective 2). A step-out soil boring (AOC-Area 2ASE5) was drilled to the east, one soil boring (AOC-Area 2ASE4) was drilled to the south, and one soil boring (AOC-Area 2ASE3) was drilled to the west of WAW-2S. No soil samples were collected from a soil boring drilled to the north because delineation to the north was previously completed. A soil sample was collected from the 3 to 3.5 foot bgs depth interval at each step-out boring. The samples were placed on hold at the analytical laboratory, to be analyzed for SVOCs+20. If the confirmatory sample collected at WAW-2S contained concentrations of total PAH compounds above site-wide levels, the step-out samples would be analyzed. However, since elevated concentrations of PAH compounds and total SVOCs were not detected at WAW-2S, soil samples from the step-out borings were not analyzed by the analytical laboratory. See Figure 3 for sampling locations.

Concentrations of TPHC above 5,000 mg/kg, a site-specific criterion that triggers an investigation for mobile LNAPL, were previously detected in the 5-5.5 foot bgs depth interval at locations WAW-1B (at a concentration of 6,200 mg/kg) and WAW-1N (at a concentration of 14,000 mg/kg). Horizontal delineation is complete at location WAW-2S (i.e., to the south of locations WAW-1B and WAW-1N). Since the concentration of TPHC in soil was more than two times higher at location WAW-1N than at WAW-1B and since The Port Authority installed a storm water drainage pipe where sample WAW-1B was collected, a deeper soil sample below 5.5 feet bgs was collected at location WAW-1N (2ASE) for vertical delineation purposes.



Notes:
(1) All soil boring and monitoring well locations were surveyed by The Port Authority Survey Group.
(2) Soil borings 2ASE-8, 2ASE-10A, and 2ASE-12 were converted to monitoring wells MW-1 2ASE through MW-3 2ASE as shown on map.
(3) The extent of LNAPL-impacted soil in AOC-Area 2A Southeast was delineated to the west along the bank of Bridge Creek and to the east at the western edge of AOC-Western Area as defined by soil borings WA-8 to WA-15.
(4) The stormwater drainage pipe indicated on the map extends beneath Western Avenue from Area 2B onto Area 2A and discharges into Bridge Creek. The portion of the pipe located beneath Western Avenue is not shown on map.
(5) VCP = Voluntary Cleanup Program
(6) LNAPL = light, non-aqueous phase liquid

Legend:

- VCP Site Boundary
- Limits of LNAPL-impacted soil
- Maximum Limits of LNAPL-impacted (Note 7)
- 2ASE-15 Soil Boring Location
- MW-1-2ASE Monitoring Well Location

40 0 40 80
SCALE IN FEET

Sheet of

THE PORT AUTHORITY OF NY & NJ

ENGINEERING PROGRAM MANAGER

No.	Date	Revision	Approved

ENGINEERING DEPARTMENT

HOWLAND HOOK MARINE TERMINAL
PORT IVORY FACILITY
SITE 2
(AREAS 2A AND 2B)

ENVIRONMENTAL

Title

SAMPLING LOCATION MAP
AOC-AREA 2A
SOUTHEAST

Designed by	Drawn by	Checked by
	RMT	GKC

Date 7/7/2009

Contract Number 013

Drawing Number FIGURE 3

To complete horizontal delineation of LNAPL-impacted soil in AOC-Area 2A Southeast (Objective 3), The Port Authority initially proposed to drill eight step-out borings to the north, east, and west of WAW-1N. Locations 2ASE6 through 2ASE9 were the "first" step-out soil borings, while locations 2ASE10A through 2ASE13A were the "second" step-out soil borings. However field observations indicated the presence of LNAPL-impacted soil to the north of WAW-1N was greater than expected and an additional 6 step-out soil borings (2ASE-14 through 2ASE-19) were drilled to complete the horizontal delineation. The soil samples were analyzed for TPHC. See Figure 3 for sampling locations.

Twenty-four soil samples were collected from 14 soil borings drill to delineate LNAPL-impacted soil in AOC-Area 2A Southeast (Objective 3). At locations where LNAPL-impacted soil was not encountered, a soil sample was collected from the six-inch depth interval immediately above groundwater. At locations where LNAPL-impacted soil was encountered, one sample was collected from the most impacted depth interval based on field observations and a second sample was collected from immediately below the impacted depth interval.

Since LNAPL-impacted soil was encountered in the vicinity of AOC-Area 2A Southeast and the concentration of TPHC exceeded 5,000 mg/kg, the site-specific threshold that triggers an investigation for mobile LNAPL, three groundwater monitoring wells were installed to confirm the presence or absence of mobile LNAPL. The locations were where the most pronounced soil impacts were detected based on field observations and TPHC results. Specifically, wells were installed at 2ASE-8 (MW-2-2ASE), 2ASE-10A (MW-3-2ASE), and 2ASE-12 (MW-1-2ASE). The presence or absence of LNAPL was confirmed in these wells using an oil-water indicator.

To evaluate whether the presence of LNAPL-impacted soil had impacted groundwater quality in AOC-Area 2A Southeast (Objective 5), a groundwater sample was collected from MW-1-2ASE, MW-2-2ASE, and MW-3-2ASE. The groundwater samples were analyzed for analyzed for VOC+10 and SVOC+20. See Figure 5 for groundwater sampling locations.

Groundwater was impacted with PAH compounds in AOC-Area 2A Southeast, surface water sampling was completed at three locations: one sample was collected approximately 50 feet upstream of where the groundwater impacts were detected in AOC-Area 2A Southeast, one sample was collected adjacent to the groundwater impacts, and one sample was collected approximately 50 feet downstream from where the

groundwater impacts were detected. The surface water samples were analyzed for the contaminant of concern, PAH compounds. See Figure 5 for surface water sampling locations.

3.3 Scope of Work AOC –TE Pipeline

The general objectives for the FSRI at AOC-TE Pipeline were to locate underground pipelines in the Texas Eastern and IMTT easements at Area 2B and to characterize soil along the pipelines. Following the completion of the geophysical survey, soil borings were drilled along the Texas Eastern and IMTT pipelines and soil samples were collected and submitted to an analytical laboratory for analysis of VO+10 and SVOC+20.

The geophysical surveys utilized in locating the pipelines included the use of both line tracing and electromagnetic methods. The Texas Eastern pipeline was exposed at its intersection with the AOC-Western Area excavation. The IMTT pipeline was accessed by access ports at the pipeline run. Since both pipelines could be accessed, line tracing methods were initially used followed by electromagnetic methods to confirm the findings. A current was induced in the pipelines, where each was exposed. The pipelines were marked in the field with marking tape and pin flags, which were surveyed using a hand-held global positioning system (GPS) device with sub-meter accuracy. Pipeline locations are shown on Figure 4.

As per the NYSDEC approved sampling rate along pipelines at other portions of the HHMT-Port Ivory Facility, one soil boring was drilled for each 50 feet of pipeline. Therefore, 10 soil borings were drilled along the Texas Eastern pipeline and 12 soil borings were drilled along the IMTT pipeline. A total of 22 soil samples were collected for analysis. Consistent with other areas of the HHMT-Port Ivory Facility, the soil samples were analyzed for VO+10, SVOC+20, and TPHC. See Figure 4 for sampling locations.

4.0 FSRI – METHODS

This section describes the methodology utilized during all field activities conducted during the FSRI. Descriptions of the methods used to complete the FSRI activities, including the performance of a geophysical survey, the drilling of soil borings, the collection of soil samples, the installation of groundwater monitoring wells, the collection of groundwater samples, and the collection of surface water samples are provided below in sections 4.1 through 4.6, respectively.

SITE 2 (AREA 2A)

WESTERN AVENUE

SITE 3 (AREA 3A)
SITE 2 (AREA 2B)

Approximate limits of trench for abandoned pipelines believed to have been owned by Tidewater Pipeline Co.

EASEMENT FOR TEXAS EASTERN PIPELINE

TE-1

WA-7

TE-2

TE-3

Inactive Texas Eastern Pipeline

TE-4

TE-5

Active (IMTT) Pipeline

SH-3

SH-4

SH-5

SH-2

SH-1

TE-6

SH-6

SH-7

TE-7

SH-8

SH-11

SH-9

TE-8

TE-9

SH-12

SH-10

TE-10

Easement for IMTT Pipeline

AOC-TE PIPELINE

THE INTERNATIONAL MANTEX TANK TERMINALS (IMTT) AND TEXAS EASTERN PIPELINES CONSTITUTE AOC–TE PIPELINE.

Notes:
(1) All soil boring and monitoring well locations were surveyed by The Port Authority Survey Group.
(2) The Texas Eastern and IMTT pipelines were field located using geophysical methods and mapped using coordinates from a hand held GPS unit with sub-meter accuracy. These pipelines do not appear to be located in the identified easements.
(3) VCP = Voluntary Cleanup Program
(4) The TE soil borings were drilled along the inactive Texas Eastern Pipeline.
(5) The SH soil borings were drilled along the active IMTT pipeline.

Legend:

VCP Site Boundary

SH-1 Soil Boring Location

30 0 30 60
SCALE IN FEET

Sheet of

THE PORT AUTHORITY OF NY & NJ

ENGINEERING PROGRAM MANAGER

No.	Date	Revision	Approved

ENGINEERING DEPARTMENT

ENVIRONMENTAL

Title

HOWLAND HOOK MARINE TERMINAL
PORT IVORY FACILITY
SITE 2
(AREAS 2A AND 2B)

SAMPLING LOCATION MAP
AOC-TE PIPELINE

Designed by	Drawn by	Checked by
	RMT	GKC

Date 7/7/2009

Contract Number 016

Drawing Number FIGURE 4

4.1 Geophysical Survey Methods

The geophysical survey was performed at Area 2B on March 5, 2007. The purpose of the geophysical survey was to locate single pipelines believed to be present in the Texas Eastern and IMTT easements. The geophysical survey included electromagnetic methods and line tracing methods.

Line tracing efforts consisted of inducing a current along the pipeline and tracing the current along the pipeline. The current was induced from a radio-frequency transmitter that was placed at grade or an electric current applied to the pipeline directly. All line tracing work involved placing the transmitter at grade above the pipeline and oriented in approximately the same direction as the pipeline. In no case was the receiver, the instrument used to detect the current, placed within 50 feet of the transmitter.

The wheel-mounted EM-61 transmitter and receiver were pulled along the study area at a uniform rate, and the electric field strength was measured every eight inches along transect lines. The transect lines were oriented perpendicular to the pipelines and established so that the pipelines ran through the center of the grid. The field strength data were contoured using the computer application Surfer. Anomalies were identified based on the contour map. The locations of the pipelines were mapped using a hand held GPS unit. Pipeline locations are included on Figure 4.

At the completion of the line tracing effort, markings were painted on the macadam/grass to indicate the results. The results were compared to the EM-61 survey results to confirm that the pipelines detected in the line tracing survey produced anomalies in the EM-61 survey. Pipeline locations are shown on Figure 4.

4.2 Drilling Methods – Soil Borings

All soil borings were drilled in accordance with NYSDEC regulations and guidance documents. Soil borings were drilled using manual and/or hollow stem auger drilling methods. As per Port Authority protocols for the protection of existing utilities, soil borings were drilled to a depth of six feet bgs using manual methods except for locations where macadam was present at ground surface. At locations where macadam was present at land surface, augers were used to drill through the macadam and the borehole was advanced below the macadam to a depth of six feet using manual methods. Manual methods included use of post-hole diggers and/or soil augers advanced by hand. These tools were used to advance the borehole and to collect six-inch-long soil cores for inspection.

At depths below six feet below grade, the soil boring was either extended to its completion depth using manual methods or was drilled using hollow stem auger drilling methods. Hollow stem auger drilling included the use of 4 ¼-inch augers, a center rod with a floating plug, and a 3-inch inner diameter split spoon sampler. The floating plug was inserted into the bottom auger, and the augers were advanced to approximately six feet bgs (i.e., to the bottom of the borehole advanced manually). The floating plug was removed, and the split spoon was driven two feet below the bottom of the auger using a 140-pound hammer that was repeatedly dropped approximately 30 inches onto rods connected to the split spoon. The split spoon was retrieved and the soil column was logged. The floating plug was inserted back into the augers, and the augers were advanced an additional two feet. The floating plug was removed, the split spoon was inserted into the augers, and an additional two feet of the soil column were recovered and inspected. This process continued until the soil boring was completed. Completion depths varied, but the soil borings were advanced to the bottom of the impacted soil (for soil borings where LNAPL-impacted soil were encountered) or to at least two feet below the water table (for soil borings where LNAPL-impacted soil was not observed) unless auger refusal was encountered. If auger refusal was encountered, the borehole was abandoned and a new soil boring was drilled adjacent to the abandoned boring location.

The soil column was logged continuously at all soil boring locations for (at a minimum) the following conditions: color; texture; moisture content; and, indications of LNAPL-impacted soil, including elevated concentrations of volatile organic vapors (as measured using a PID), discolored soil, sheen, LNAPL, and odor. Boring logs are included in Appendix A. Soil boring locations are shown on Figures 2, 3, and 4.

4.3 Soil Sampling Methods

Except for the soil sample collected at 2ASE-2 (WAW-2S) in AOC-Area 2A Southeast, soil samples were collected from the most impacted depth interval, as determined based on field screening results (primarily) or on field observations (secondarily) and a second soil sample was collected from a deeper depth interval, either where the soil appeared clean (i.e., did not exhibit indications of LNAPL impacts) or in the six-inch depth interval immediately above the meadowmat unit, which ever was shallower. Field screening consisted of measuring the concentration of volatile organic vapors present in the soil using a PID. Field observations included but were not limited to the presence of sheen, discolored soil, odor, and/or LNAPL. At locations where LNAPL-impacted soil was not encountered, the soil sample was collected from the depth interval immediately above groundwater. The soil sample collected at 2ASE-2 (WAW-2S) was collected at a predetermined depth interval based on previous analytical results.

Soil was transferred from the sampling device (i.e, the split spoon, hand auger, or post-hole digger) directly into sampling jars. All soil samples were submitted to Veritech, a New York-certified analytical laboratory for analysis.

4.4 Installation of Groundwater Monitoring Wells

During the FSRI, four soil borings (2ASE-8, 2ASE-10A, 2ASE-12, and WA-16) were converted to groundwater monitoring wells. Three of the monitoring wells were located in AOC-Area 2A Southeast and the remaining well was located in AOC-Western Area.

The monitoring wells were constructed of 2-inch diameter PVC screen and riser. The PVC screen and riser were inserted through the augers. All wells were constructed using 0.010-inch slot size screen that extended from approximately two feet above groundwater to the bottom of the borehole. The sand pack and seal were installed as the augers were removed from the ground. The sand pack consisted of number 2 size sand, and was installed to a depth of approximately one to two feet above the top of the screen. Bentonite pellets and Portland cement were installed above the sand pack in the wells to preclude storm water or perched water from entering the sand pack. The wells were completed with locking caps and flush-mount covers.

After installation, the wells were developed using the pump and surge method. Specifically, water was evacuated from each well using a submersible pump and dedicated tubing. The development continued until the discharge water appeared clear. Development water was monitored for clarity, color, pH, temperature, conductivity, turbidity, dissolved oxygen, and ORP/Eh. The measurements were recorded in the field book.

4.5 Collection of Groundwater Samples

A groundwater sample was collected from each of the four wells (MW-1 2ASE, MW-2 2ASE, MW-3 2ASE, and MW-16WA) installed at Site 2. Groundwater sampling was performed in accordance with NYSDEC requirements and guidance documents. Standard (3 to 5 volume purge) purging and sampling methods were used.

Prior to groundwater sampling, the presence or absence of LNAPL in the temporary well was confirmed and the depth to water in the well was measured relative to a surveyed reference point using an electronic oil-water interface meter. The volume of water within the well was calculated. The well was purged of

three to five times the calculated volume of water using a submersible pump. After the water level recovered, a dedicated Teflon bailer was lowered into the well, allowed to fill with water, and was removed from the well. The groundwater sample was transferred from the bailer into laboratory-prepared sampling jars. The samples were labeled and placed on ice in a cooler. All soil samples were transported to the analytical laboratory under chain-of-custody documentation. The groundwater samples were analyzed for VOC+10 and SVOC+20.

4.6 Collection of Surface Water Samples

Since the groundwater investigation at Area 2A Southeast indicated that groundwater at well location MW-2-2ASE is impacted with PAH compounds at concentrations above their respective AWQSGV, a surface water investigation was initiated. Three surface water samples were collected from Bridge Creek during low tide: one from a location approximately 50 feet upstream of well MW-2-2ASE, one from a location adjacent to well MW-2 2ASE, and one from a location approximately 50 feet downstream of well MW-2ASE. The surface water samples were collected from downstream to upstream to avoid disturbance of the samples. All three surface water samples were submitted to Veritech, a New York-certified analytical laboratory under full Chain-of-Custody documentation. The surface water samples were analyzed for PAH compounds since PAH compounds were the only contaminants detected in groundwater.

5.0 FSRI RESULTS

The FSRI conducted at Site 2 included the following components: completion of the geophysical survey, drilling of soil borings, the installation of monitoring wells, and the collection of soil, groundwater and surface water samples for analysis. During implementation of each component, field observations and measurements were recorded. The results of the FSRI efforts are presented below. Sections 5.1, 5.2, and 5.3 summarize the results of the geophysical survey, field observations, and analytical results, respectively.

5.1 Geophysical Survey

Using line tracing methods, the inactive Texas Eastern pipeline was traced from where the pipeline is exposed at AOC-Western Area, to approximately 400 feet to the southeast where the pipeline then turns approximately 45 degrees to the northeast, and to a point beneath recently constructed railroad tracks. The portion of the inactive Texas Eastern pipeline located during the geophysical survey is shown on Figure 4.

The active IMTT pipeline was located from where it enters the southern border of Area 2B near the unnamed tributary of Bridge Creek approximately 50 feet north where the pipeline turns 90 degrees to the east and travels approximately 300 feet east paralleling the unnamed tributary to Bridge Creek. The pipeline then turns 45 degrees northeast and travels under recently constructed railroad tracks. The portion of the active IMTT pipeline located during the geophysical survey is shown on Figure 4.

Please note, the inactive Texas Eastern and active IMTT pipelines extending to the northeast beyond the recently constructed railroad tracks were not located using geophysical methods because these portions of the pipelines were previously investigated along with the Tidewater pipelines as part of the SRI completed in 2006.

5.2 Field Observations

The following section provides a summary of field observations encountered during the FSRI. Field observations included the extent of potential soil impacts, as identified visually (i.e., the presence of LNAPL, discolored soil, sheen, etc.) and through field screening methods (i.e., the use of a PID to measure the concentration of volatile organic vapors in the soil column) as well as the soil color and depth to groundwater, if encountered. Field observations were recorded and samples were collected by The Port Authority Materials Group. A summary of the field observations at each location is indicated on Table 1. Field observations encountered at AOC-Area 2A Southeast, AOC-Western Area, and AOC-TE Pipeline are summarized in Sections 5.2.1, 5.2.2, and 5.2.3, respectively.

In general, soil encountered during the FSRI included urban fill material overlying a meadowmat substratum. Urban fill materials encountered generally consisted of variable amounts of sand, silts, and clay with cinders and slag. The meadowmat substratum consisted of clay and dark gray organic matter. The meadowmat (i.e., peat) layer is believed to act as a barrier to vertical migration of contaminants. The overburden materials encountered were consistent to those previously encountered at Site 2. Filter material (i.e., lime sludge) was encountered at soil boring TE-4 in AOC-TE Pipeline. For specific soil conditions at a soil boring/well location, please refer to the boring logs in Appendix A.

5.2.1 Field Observations AOC-Western Area

Soil samples were collected from the perimeter of the AOC-Western Area excavation. At areas where the excavation remained opened, the soils samples were collected directly from the sidewall. Where the excavation had been backfilled the soil samples were collected by advancing a soil boring below grade.

Table 1
Summary of Field Observations
Focused Supplemental Remedial Investigation (2007)
HHMT - Port Ivory Facility
Site 2

Date Collected	Location	Indications of Petroleum-Impacted Soil?	Impacted Interval (ft bgs)	Sample Depth (ft bgs)	Medium	Analyses	Depth to Water (ft bgs)	Maximum Concentration of Volatile Organic Vapors (ppm)
9/13/2007	2ASE1	Yes	3.5-6	6.0-6.5	Soil	TPHC	5.0	13.0
9/12/2007	2ASE2	No	NE	3-3.5	Soil	PAH Compounds	4.0	ND
11/20/2007	2ASE3	No	NE	3-3.5	Soil	See Note 1	4.0	ND
9/13/2007	2ASE4	No	NE	3-3.5	Soil	See Note 1	NE	ND
9/12/2007	2ASE5A	Yes	4.0-5.5	3-3.5	Soil	See Note 1	NE	102.0
9/13/2007	2ASE6	No	NE	4.5-5.0	Soil	TPHC	5.0	ND
9/13/2007	2ASE7	Yes	2.0-6.0	4.0-4.5	Soil	TPHC	5.0	79.0
9/13/2007	2ASE7	No	2.0-6.0	6.0-6.5	Soil	TPHC	5.0	4.5
9/13/2007	2ASE8	Yes	2.0-6.0	4.0-4.5	Soil	TPHC	5.0	145.0
9/13/2007	2ASE8	No	2.0-6.0	6.0-6.5	Soil	TPHC	5.0	4.5
9/13/2007	2ASE9	Yes	2.8-6.0	4.0-4.5	Soil	TPHC	5.0	88.7
9/13/2007	2ASE9	No	2.8-6.0	6.0-6.5	Soil	TPHC	5.0	11.2
9/17/2007	2ASE10A	Yes	3.0-4.0	3.5-4.0	Soil	TPHC	4.0	133.8
9/17/2007	2ASE10A	No	3.0-4.0	5.5-6.0	Soil	TPHC	4.0	ND
9/18/2007	2ASE11B	Yes	3.0-4.5	3.5-4.0	Soil	TPHC	4.2	15.6
9/18/2007	2ASE11B	No	3.0-4.5	5.5-6.0	Soil	TPHC	4.2	ND
9/18/2007	2ASE12	Yes	3.3-4.3	3.0-3.8	Soil	TPHC	3.8	23.7
9/18/2007	2ASE12	No	3.3-4.3	4.3-4.8	Soil	TPHC	3.8	ND
9/14/2007	2ASE13A	Yes	NE	3.5-4.0	Soil	TPHC	5.0	66.3
9/14/2007	2ASE13A	No	NE	5.5-6.0	Soil	TPHC	5.0	17.0
11/5/2007	2ASE14	Yes	4-6	4.0-4.5	Soil	TPHC	4.0	15.0
11/5/2007	2ASE14	No	4-6	7.5-8.0	Soil	TPHC	4.0	ND
11/5/2007	2ASE15	No	NE	3.5-4.0	Soil	TPHC	4.0	ND
11/5/2007	2ASE16	No	NE	4.0-4.5	Soil	TPHC	4.5	ND
11/7/2007	2ASE17	Yes	4.5-5.5	4.5-5.0	Soil	TPHC	4.9	31.0
11/7/2007	2ASE17	No	4.5-5.5	6.5-7.0	Soil	TPHC	4.9	ND
11/7/2007	2ASE18	No	NE	3.0-3.5	Soil	TPHC	3.8	ND
11/9/2005	2ASE19	No	NE	4.0-4.5	Soil	TPHC	4.5	ND
11/5/2007	WA-1	No	NE	4.0-4.5	Soil	TCL VOC+10, TCL SVOC+20, TPHC	5.0	ND
9/11/2006	WA-2	No	NE	3.5-4	Soil	TCL VOC+10, TCL SVOC+20, TPHC	4.0	ND
9/11/2006	WA-3	No	NE	3-3.5	Soil	TCL VOC+10, TCL SVOC+20, TPHC	3.5	ND
9/11/2006	WA-4	No	NE	3-3.5	Soil	TCL VOC+10, TCL SVOC+20, TPHC	3.5	ND
9/11/2006	WA-4	No	NE	3-3.5	Soil	TCL VOC+10, TCL SVOC+20, TPHC	3.5	ND
11/8/2007	WA-5	No	NE	4.0-4.5	Soil	TCL VOC+10, TCL SVOC+20, TPHC	5.0	ND
11/8/2007	WA-5	No	NE	6.5-7.0	Soil	TCL VOC+10, TCL SVOC+20, TPHC	5.0	ND
9/11/2006	WA-6	No	NE	3.5-4	Soil	TCL VOC+10, TCL SVOC+20, TPHC	4.0	ND
9/11/2006	WA-7	No	NE	4-4.5	Soil	TCL VOC+10, TCL SVOC+20, TPHC	4.5	ND
9/11/2006	WA-8	No	NE	3-3.5	Soil	TCL VOC+10, TCL SVOC+20, TPHC	3.5	ND
9/11/2006	WA-9	No	NE	3-3.5	Soil	TCL VOC+10, TCL SVOC+20, TPHC	3.5	ND
9/11/2006	WA-10	No	NE	3-3.5	Soil	TCL VOC+10, TCL SVOC+20, TPHC	3.5	ND
9/11/2006	WA-11	No	NE	3-3.5	Soil	TCL VOC+10, TCL SVOC+20, TPHC	3.5	ND
11/9/2007	WA-12	No	NE	4.5-5.0	Soil	TCL VOC+10, TCL SVOC+20, TPHC	5.0	ND
11/8/2007	WA-13	No	NE	3.0-3.5	Soil	TCL VOC+10, TCL SVOC+20, TPHC	3.5	ND
11/8/2007	WA-14	No	NE	3.0-3.6	Soil	TCL VOC+10, TCL SVOC+20, TPHC	3.7	ND
11/7/2007	WA-15	No	NE	6-6.5	Soil	TCL VOC+10, TCL SVOC+20, TPHC	6.5	ND
11/8/2007	WA-16	No	NE	4.5-5	Soil	TCL VOC+10, TCL SVOC+20, TPHC	5.0	ND
11/9/2007	WA-17	No	NE	5.5-6	Soil	TCL VOC+10, TCL SVOC+20, TPHC	6.0	ND
11/9/2007	TE-1	No	NE	NA	Soil	See Note 1	4.0	ND
11/9/2007	TE-2	No	NE	4.5-5.0	Soil	TCL VOC+10, TCL SVOC+20, TPHC	5.0	ND
11/9/2007	TE-3	No	NE	4.5-5.0	Soil	TCL VOC+10, TCL SVOC+20, TPHC	5.0	ND
11/16/2007	TE-4	No	NE	6.0-6.5	Soil	TCL VOC+10, TCL SVOC+20, TPHC	6.5	ND
11/16/2007	TE-5	No	NE	6.5-7	Soil	TCL VOC+10, TCL SVOC+20, TPHC	7.0	ND
11/16/2007	TE-6	No	NE	4.5-5.0	Soil	TCL VOC+10, TCL SVOC+20, TPHC	5.0	ND
11/16/2007	TE-7	No	NE	5.5-6.0	Soil	TCL VOC+10, TCL SVOC+20, TPHC	6.0	ND
11/12/2007	TE-8	No	NE	5.5-6.0	Soil	TCL VOC+10, TCL SVOC+20, TPHC	6.0	ND
11/12/2007	TE-9	No	NE	5.5-6.0	Soil	TCL VOC+10, TCL SVOC+20, TPHC	6.0	ND
11/21/2007	TE-10	No	NE	6.5-7.0	Soil	TCL VOC+10, TCL SVOC+20, TPHC	7.0	ND
11/8/2007	SH-1	No	NE	4.0-4.5	Soil	TCL VOC+10, TCL SVOC+20, TPHC	4.5	ND
11/20/2007	SH-2	No	NE	3.5-4.0	Soil	TCL VOC+10, TCL SVOC+20, TPHC	4.0	ND
11/20/2007	SH-3	No	NE	5.5-6.0	Soil	TCL VOC+10, TCL SVOC+20, TPHC	6.0	ND
11/8/2007	SH-4	No	NE	4.5-5.0	Soil	TCL VOC+10, TCL SVOC+20, TPHC	4.9	ND
11/21/2007	SH-5	No	NE	3.5-4.0	Soil	TCL VOC+10, TCL SVOC+20, TPHC	4.0	ND
11/8/2007	SH-6	No	NE	5.0-5.5	Soil	TCL VOC+10, TCL SVOC+20, TPHC	5.5	ND
11/14/2007	SH-7	No	NE	3.5-4	Soil	TCL VOC+10, TCL SVOC+20, TPHC	4.0	ND
11/20/2007	SH-8	No	NE	4.5-5.0	Soil	TCL VOC+10, TCL SVOC+20, TPHC	5.0	ND
11/12/2007	SH-9	No	NE	5.5-5.5	Soil	TCL VOC+10, TCL SVOC+20, TPHC	5.5	ND
11/14/2007	SH-10	No	NE	6.0-6.5	Soil	TCL VOC+10, TCL SVOC+20, TPHC	6.5	ND
11/13/2007	SH-11	No	NE	4.0-4.5	Soil	TCL VOC+10, TCL SVOC+20, TPHC	4.5	ND
11/12/2007	SH-12	No	NE	4.0-4.5	Soil	TCL VOC+10, TCL SVOC+20, TPHC	5.0	ND
12/5/2007	MW-1-2ASE (2ASE-12)	Yes	3.3-4.3	NA	Groundwater	TCL VOC+10, TCL SVOC+20	2.31	NA
12/10/2007	MW-2-2ASE (2ASE-8)	Yes	2.0-6.0	NA	Groundwater	TCL VOC+10, TCL SVOC+20	2.61	NA
12/10/2007	MW-3-2ASE (2ASE-10A)	Yes	3.0-4.0	NA	Groundwater	TCL VOC+10, TCL SVOC+20	1.00	NA
12/7/2007	MW-16WA (WA-16)	NA	NE	NA	Groundwater	TCL VOC+10, TCL SVOC+20	1.81	NA
9/23/2008	SW-1	NA	NA	NA	Surface Water	PAH Compunds	NA	NA
9/23/2008	SW-2	NA	NA	NA	Surface Water	PAH Compunds	NA	NA
9/23/2008	SW-3	NA	NA	NA	Surface Water	PAH Compunds	NA	NA

Notes and Abbreviations

1. No soil samples were submitted for laboratory analysis.
3. The reported depths to groundwater at soil borings are based on field observations during drilling.
4. The depth to water readings measured at monitoring wells were reported from top of casing and were reported to the nearest 0.01 feet.

NE= Not encountered
ppm= parts per million above site background
ND=Not detected above site background concentrations
Ft bgs = Feet below ground surface
mg/Kg = Milligrams per kilogram
LNAPL = Light non-aqueous phase liquid
NA= Not Applicable
PAH= polycyclic aromatic hydrocarbons
TCL = Target Compound List
VOC+10 = Volatile Organic Compounds with a 10-compounds library search
SVOC+20 = Semi Volatile Organic Compounds with a 20-compounds library search
TPHC = Total Petroleum Hydrocarbons

Soil samples were collected from 17 locations (WA-1 through WA-17). With the exception of soil boring WA-5, one soil sample was collected at each soil boring location. Two samples were collected and analyzed from WA-5: one was collected to characterize dark colored soil present in the 4 to 4.5-foot depth interval and the second for post-excavation purposes. Field screening with a PID measured volatile organic vapors at a concentration of 32.5 mg/kg in the dark-colored soil at WA-5. A deeper sample was collected at the apparent "clean" zone at a depth of 6 to 6.5 feet where dark colored soil was not apparent and volatile organic vapors were not measured above site background using a PID. This depth interval corresponded to the groundwater interface. Based on field observations and analytical results, the black coloration appeared to be attributable to the material used for fill rather than to LNAPL impacts.

Fill materials encountered were consistent with those described above. The meadowmat unit was encountered below the fill material. The fill-meadowmat contact varied in depth from 5 to 7.5 feet bgs.

With the exception of WA-5, no concentrations of volatile organic vapors above site background were measured using a PID. Neither LNAPL, nor LNAPL impacts were encountered at any of the soil boring locations. Groundwater was encountered at depths between 2 and 6.5 feet bgs during drilling.

Although no LNAPL was encountered in AOC-Western Area, TPHC was detected at a concentration above 5,000 mg/kg at one location (WA-16). To confirm that mobile LNAPL was not present at WA-16, The Port Authority installed and sampled a monitoring well at this location. LNAPL was not encountered in the well during gauging on December 17, 2007.

Groundwater was encountered in shallow well MW-16WA at an elevation of approximately 3.7 feet above mean sea level (AMSL). The groundwater flow direction is generally anticipated to be to the south towards the unnamed tributary of Bridge Creek.

5.2.2 Field Observations AOC-Area 2A Southeast

Indications of LNAPL impacts, including sheen on soil and groundwater, petroleum odors, and/or stained soil, were encountered at soil boring locations 2ASE-1, 2ASE-5, 2ASE-7 through 2ASE-14, and 2ASE-17. Concentrations of volatile organic vapors measured using a PID exceeded 100 mg/kg at 2ASE-5, (102 mg/kg), 2ASE-8 (145 mg/kg), and 2ASE-10A (133.8 mg/kg). Where encountered, LNAPL-impacted soil was present between approximately two and six feet bgs. The thickness of petroleum

impacts ranged from one to four feet, with an average thickness of two feet. In general, petroleum impacts were encountered approximately one foot above and one foot below the water table.
Fill materials encountered were consistent with those described above. The meadowmat unit was encountered below the fill material. The fill-meadowmat contact varied in depth from 5.5 to 6 feet bgs. Groundwater was encountered at depths between approximately 4 and 5 feet bgs during drilling.

Groundwater monitoring wells were installed at 2ASE-8 (MW-1-2ASE), 2ASE-10A (MW-2-2ASE), and 2ASE-12 (MW-3-2ASE) to investigate for mobile LNAPL and to evaluate potential impacts to groundwater from the presence of LNAPL. These three locations were selected because they exhibited the most pronounced impacts based on field observations and the greatest concentration of TPHC in soil. LNAPL was not encountered in any well during gauging on December 17, 2007. Therefore, mobile LNAPL is not anticipated in AOC-Area 2A Southeast.

Groundwater was encountered in the shallow wells at elevations ranging from approximately 3.84 at well MW-2 2ASE to 4.91 feet above mean sea level (AMSL) at well MW-3 2ASE. The groundwater flow direction is generally anticipated to be towards Bridge Creek. The variability in the static water level, if any, is due to the tidal fluctuation of the adjacent Bridge Creek.

5.2.3 Field Observations AOC-TE Pipeline

Ten soil borings (TE-1 through TE-10) were drilled along the inactive Texas Eastern pipeline and 12 soil borings (SH-1 through SH-12) were drilled along the active IMTT pipeline. Fill materials encountered were consistent with those described above. The meadowmat unit was encountered below the fill material and varied in depth from six to nine feet bgs. No elevated concentrations of volatile organic vapors were measured using a PID. LNAPL-impacted soil was not encountered at any of the soil boring locations. Groundwater was encountered at a depth of four to seven feet bgs during drilling. Since LNAPL-impacted soil was not encountered and concentrations of organic compounds are similar to site-wide background concentrations, no monitoring wells were installed in this AOC to investigate the environmental quality of groundwater or the presence or absence of mobile LNAPL.

5.3 Analytical Results

In order to meet the objectives, the FSRI included the collection of soil, groundwater and surface water samples for analysis. Sections 5.3.1 through 5.3.3 summarize the analytical results for soil, and surface water samples, respectively.

5.3.1 Soil Sampling Analytical Results

The soil sampling component of the FSRI at AOC-Area 2A Southeast was conducted to confirm the presence of elevated concentrations of PAH compounds at one location (WAW-2S, as per Objective 2) and, if present, to delineate LNAPL-impacted soils at this AOC. Soil sampling was completed at AOC-Western Area and AOC-TE Pipeline to confirm the presence or absence of LNAPL-impacted soil at these AOCs. The soil sampling summary is indicated on Table 1. Analytical results are summarized in Tables 2A through 2C.

For the purposes of this summary, the soil sampling analytical results have been compared to the RSCOs set forth in the January 1994 NYSDEC Division of Technical and Administrative Guidance Memorandum (TAGM) 4046. Please note, the reference to these cleanup objectives in this report does not represent any agreement or concurrence that the same are appropriate for usage at this site.

AOC-Western Area Soil Sampling Results

The sampling program for AOC-Western Area included the collection of 18 soil samples from 17 locations. The samples were analyzed for VO+10, SVOC+20, and TPHC.

With the exception of the methylene chloride detected in the soil sample collected at WA-16, no VOCs were detected at concentrations greater than their respective RSCOs in any of the soil samples collected from AOC-Western Area. Methylene chloride was detected at a concentration of 0.2 mg/kg, above its RSCO of 0.1 mg/kg. Methylene chloride, a common laboratory solvent, was also detected in the method blank prepared and analyzed by the laboratory. The concentration of methylene chloride in the soil sample is therefore attributable to laboratory contamination. Total concentrations of VOC tentatively identified compounds (TICs) were below 9 mg/kg in all samples.

The following SVOCs were detected at concentrations that exceeded their respective RSCOs in at least one of the soil samples collected in AOC-Western Area: benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, chrysene, and dibenzo(a,h)anthracene. All these compounds are PAH compounds, a subset of SVOCs that have been detected in historic fill throughout the HHMT-Port Ivory Facility. The concentrations of these PAH compounds detected in AOC-Western Area soil samples are similar to those detected in the historic fill. The concentrations of SVOC TICs were below 250 mg/kg.

TABLE 2A
SUMMARY OF SOIL ANALYTICAL RESULTS-VOCS
HHMT--PORT IVORY FACILITY
SITE 2

Location		WA-1			WA-2			WA-3			WA-4			WA-5			WA-5		
Sample ID	New York	PI-2B-WA1-110507SO03			AOCWA-2 (3.5-4)			AOCWA-3 (3-3.5)			AOCWA-4 (3-3.5)			PI-2BWA05-110807SO03			PI-2BWA05-110807SO04		
Lab Sample No.	RSCOs	AC34093-005			AC25567-001			AC25567-002			AC25567-003			AC34275-001			AC34275-002		
Sampling Date		11/5/2007			9/11/2006			9/11/2006			9/11/2006			11/8/2007			11/8/2007		
Matrix		SOLID			SOLID			SOLID			SOLID			SOLID			SOLID		
Sample Depth (feet bgs)		4-4.5			3.5-4			3-3.5			3-3.5			4-4.5			6.5-7		
Volatile Organic Compounds (VOCs)		Conc	MDL	Qual	Conc	MDL	Qual	Conc	MDL	Qual	Conc	MDL	Qual	Conc	MDL	Qual	Conc	MDL	Qual
1,1,1-Trichloroethane	0.8	ND	0.006		ND	0.0062		ND	0.0061		ND	0.0063		ND	0.0063		ND	0.006	
1,1,1,2-Tetrachloroethane	NS	NA			ND	0.0062		ND	0.0061		ND	0.0063		NA			NA		
1,1,2,2-Tetrachloroethane	0.6	ND	0.006		ND	0.0062		ND	0.0061		ND	0.0063		ND	0.0063		ND	0.006	
1,1,2-trichloro-1,2,2-trifluoroethane	6	ND	0.006		NA			NA			NA			ND	0.0063		ND	0.006	
1,1,2-Trichloroethane	NS	ND	0.006		ND	0.0062		ND	0.0061		ND	0.0063		ND	0.0063		ND	0.006	
1,1-Dichloroethane	0.2	ND	0.006		ND	0.0062		ND	0.0061		ND	0.0063		ND	0.0063		ND	0.006	
1,1-Dichloroethene	0.4	ND	0.006		ND	0.0062		ND	0.0061		ND	0.0063		ND	0.0063		ND	0.006	
1,2,3-Trichloropropane	NS	ND	0.006		NA			NA			NA			ND	0.0063		ND	0.006	
1,2,4-Trimethylbenzene	NS	ND	0.0012		NA			NA			NA			0.0013	0.0013		ND	0.0012	
1,2-Dichlorobenzene	7.9	ND	0.006		NA			NA			NA			ND	0.0063		ND	0.006	
1,2-Dichloroethane	0.1	ND	0.006		ND	0.0062		ND	0.0061		ND	0.0063		ND	0.0063		ND	0.006	
1,2-Dichloropropane	NS	ND	0.006		ND	0.0062		ND	0.0061		ND	0.0063		ND	0.0063		ND	0.006	
1,3,5-Trimethylbenzene	NS	ND	0.0012		NA			NA			NA			ND	0.0013		ND	0.0012	
1,3-Dichlorobenzene	1.6	ND	0.006		NA			NA			NA			ND	0.0063		ND	0.006	
1,3-Dichloropropane	NS	ND	0.006		NA			NA			NA			ND	0.0063		ND	0.006	
1,4-Dichlorobenzene	8.5	ND	0.006		NA			NA			NA			ND	0.0063		ND	0.006	
1,4-Dioxane	NS	ND	0.3		NA			NA			NA			ND	0.32		ND	0.3	
2-Butanone	0.3	ND	0.006		ND	0.0062		ND	0.0061		ND	0.0063		ND	0.0063		ND	0.006	
2-Chloroethylvinylether	NS	ND	0.006		ND	0.0062		ND	0.0061		ND	0.0063		ND	0.0063		ND	0.006	
2-Hexanone	NS	ND	0.006		ND	0.0062		ND	0.0061		ND	0.0063		ND	0.0063		ND	0.006	
4-Isopropyltoluene	NS	ND	0.0012		NA			NA			NA			ND	0.0013		ND	0.0012	
4-Methyl-2-Pentanone	1	ND	0.006		ND	0.0062		ND	0.0061		ND	0.0063		ND	0.0063		ND	0.006	
Acetone	0.2	0.031	0.03		ND	0.031		ND	0.03		ND	0.032		0.035	0.032		0.043	0.03	
Acrolein	NS	ND	0.03		ND	0.031		ND	0.03		ND	0.032		ND	0.032		ND	0.03	
Acrylonitrile	NS	ND	0.006		ND	0.0062		ND	0.0061		ND	0.0063		ND	0.0063		ND	0.006	
Benzene	0.06	ND	0.0012		ND	0.0012		ND	0.0012		ND	0.0013		ND	0.0013		ND	0.0012	
Bromodichloromethane	NS	ND	0.006		ND	0.0062		ND	0.0061		ND	0.0063		ND	0.0063		ND	0.006	
Bromoform	NS	ND	0.006		ND	0.0062		ND	0.0061		ND	0.0063		ND	0.0063		ND	0.006	
Bromomethane	NS	ND	0.006		ND	0.0062		ND	0.0061		ND	0.0063		ND	0.0063		ND	0.006	
Carbon disulfide	2.7	ND	0.006		ND	0.0062		ND	0.0061		ND	0.0063		ND	0.0063		ND	0.006	
Carbon tetrachloride	0.6	ND	0.006		ND	0.0062		ND	0.0061		ND	0.0063		ND	0.0063		ND	0.006	
Chlorobenzene	1.7	ND	0.006		ND	0.0062		ND	0.0061		ND	0.0063		ND	0.0063		ND	0.006	
Chloroethane	1.9	ND	0.006		ND	0.0062		ND	0.0061		ND	0.0063		ND	0.0063		ND	0.006	
Chloroform	0.3	ND	0.006		ND	0.0062		ND	0.0061		ND	0.0063		ND	0.0063		ND	0.006	
Chloromethane	NS	ND	0.006		ND	0.0062		ND	0.0061		ND	0.0063		ND	0.0063		ND	0.006	
cis-1,2-Dichloroethene	NS	ND	0.006		ND	0.0062		ND	0.0061		ND	0.0063		ND	0.0063		ND	0.006	
cis-1,3-Dichloropropene	NS	ND	0.006		ND	0.0062		ND	0.0061		ND	0.0063		ND	0.0063		ND	0.006	
Dibromochloromethane	NS	ND	0.006		ND	0.0062		ND	0.0061		ND	0.0063		ND	0.0063		ND	0.006	
Dichlorodifluoromethane	NS	ND	0.006		NA			NA			NA			ND	0.0063		ND	0.006	
Ethylbenzene	5.5	ND	0.0012		ND	0.0012		ND	0.0012		ND	0.0013		ND	0.0013		ND	0.0012	
Isopropylbenzene	NS	ND	0.0012		NA			NA			NA			ND	0.0013		ND	0.0012	
m&p-Xylenes	1.2	ND	0.0024		ND	0.0025		ND	0.0024		ND	0.0025		ND	0.0025		ND	0.0024	
Methylene chloride	0.1	0.023	0.006	B	0.047	0.0062	B	0.033	0.0061	B	0.029	0.0063	B	0.014	0.0063	B	0.017	0.006	B
Methyl-t-butyl ether	NS	ND	0.0012		NA			NA			NA			ND	0.0013		ND	0.0012	
n-Butylbenzene	NS	ND	0.0012		NA			NA			NA			ND	0.0013		ND	0.0012	
n-Propylbenzene	NS	ND	0.0012		NA			NA			NA			ND	0.0013		ND	0.0012	
o-Xylene	1.2	ND	0.0012		ND	0.0012		ND	0.0012		ND	0.0013		ND	0.0013		ND	0.0012	
sec-Butylbenzene	NS	ND	0.0012		NA			NA			NA			ND	0.0013		ND	0.0012	
Styrene	NS	ND	0.006		ND	0.0062		ND	0.0061		ND	0.0063		ND	0.0063		ND	0.006	
t-Butyl Alcohol	NS	ND	0.03		NA			NA			NA			ND	0.032		ND	0.03	
t-Butylbenzene	NS	ND	0.0012		NA			NA			NA			ND	0.0013		ND	0.0012	
Tetrachloroethene	1.4	ND	0.006		ND	0.0062		ND	0.0061		ND	0.0063		ND	0.0063		ND	0.006	
Toluene	1.5	ND	0.0012		ND	0.0012		ND	0.0012		ND	0.0013		ND	0.0013		ND	0.0012	
trans-1,2-Dichloroethene	0.3	ND	0.006		ND	0.0062		ND	0.0061		ND	0.0063		ND	0.0063		ND	0.006	
trans-1,3-dichloropropene	NS	ND	0.006		ND	0.0062		ND	0.0061		ND	0.0063		ND	0.0063		ND	0.006	
Trichloroethene	0.7	ND	0.006		ND	0.0062		ND	0.0061		ND	0.0063		ND	0.0063		ND	0.006	
Trichlorofluoromethane	NS	ND	0.006		NA			NA			NA			ND	0.0063		ND	0.006	
Vinyl chloride	0.2	ND	0.006		ND	0.0062		ND	0.0061		ND	0.0063		ND	0.0063		ND	0.006	
Total VOC TICs	NS	0.0054		J	0.0129		J	0.0111		J	0.0295		J	0.237		J	0.0057		J

Notes and Abbreviations

1) Bold concentrations in shaded cells exceed the RSCOs
2) Duplicate samples collected from SH-5D and TE-4D
mg/Kg = milligrams per kilogram (all units reported in mg/Kg).
RSCOs = Recommended Soil Cleanup Objectives from the Technical and Administrative Guidance Memorandum # 4046, dated January 24, 1994.
NA = Not analyzed
NS = No Standard
Conc = Concentration
MDL = Quantitation Limit
Qual = Laboratory Data Qualifier
ND = The compound was not detected
B = The analyte was found in the laboratory blank and the sample. This indicates possible laboratory contamination of the sample.
J = The compound was detected at a concentration below the calibration range. The concentration is estimated.
Feet bgs = Feet below ground surface
TICs = Tentatively identified compounds

TABLE 2A
SUMMARY OF SOIL ANALYTICAL RESULTS-VOCS
HHMT--PORT IVORY FACILITY
SITE 2

Location		WA-6			WA-7			WA-8			WA-9			WA-10			WA-11		
Sample ID		AOCWA-6 (3.5-4)			AOCWA-7 (4-4.5)			AOCWA-8 (3-3.5)			AOCWA-9 (3-3.5)			AOCWA-10 (3-3.5)			AOCWA-11 (3-3.5)		
Lab Sample No.		AC25567-004			AC25567-005			AC25567-006			AC25567-007			AC25567-008			AC25567-009		
Sampling Date	New York	9/11/2006			9/11/2006			9/11/2006			9/11/2006			9/11/2006			9/11/2006		
Matrix	RSCOs	SOLID			SOLID			SOLID			SOILD			SOILD			SOLIDS		
Sample Depth (feet bgs)		3.5-4			4-4.5			3-3.5			3-3.5			3-3.5			3-3.5		
Volatile Organic Compounds (VOCs)		Conc	MDL	Qual	Conc	MDL	Qual	Conc	MDL	Qual	Conc	MDL	Qual	Conc	MDL	Qual	Conc	MDL	Qual
1,1,1-Trichloroethane	0.8	ND	0.0063		ND	0.006		ND	0.0063		ND	0.006		ND	0.0063		ND	0.0063	
1,1,1,2-Tetrachloroethane	NS	ND	0.0063		ND	0.006		ND	0.0063		ND	0.006		ND	0.0063		ND	0.0063	
1,1,2,2-Tetrachloroethane	0.6	ND	0.0063		ND	0.006		ND	0.0063		ND	0.006		ND	0.0063		ND	0.0063	
1,1,2-trichloro-1,2,2-trifluoroethane	6	NA			NA			NA			NA			NA			NA		
1,1,2-Trichloroethane	NS	ND	0.0063		ND	0.006		ND	0.0063		ND	0.006		ND	0.0063		ND	0.0063	
1,1-Dichloroethane	0.2	ND	0.0063		ND	0.006		ND	0.0063		ND	0.006		ND	0.0063		ND	0.0063	
1,1-Dichloroethene	0.4	ND	0.0063		ND	0.006		ND	0.0063		ND	0.006		ND	0.0063		ND	0.0063	
1,2,3-Trichloropropane	NS	NA			NA			NA			NA			NA			NA		
1,2,4-Trimethylbenzene	NS	NA			NA			NA			NA			NA			NA		
1,2-Dichlorobenzene	7.9	NA			NA			NA			NA			NA			NA		
1,2-Dichloroethane	0.1	ND	0.0063		ND	0.006		ND	0.0063		ND	0.006		ND	0.0063		ND	0.0063	
1,2-Dichloropropane	NS	ND	0.0063		ND	0.006		ND	0.0063		ND	0.006		ND	0.0063		ND	0.0063	
1,3,5-Trimethylbenzene	NS	NA			NA			NA			NA			NA			NA		
1,3-Dichlorobenzene	1.6	NA			NA			NA			NA			NA			NA		
1,3-Dichloropropane	NS	NA			NA			NA			NA			NA			NA		
1,4-Dichlorobenzene	8.5	NA			NA			NA			NA			NA			NA		
1,4-Dioxane	NS	NA			NA			NA			NA			NA			NA		
2-Butanone	0.3	ND	0.0063		ND	0.006		ND	0.0063		ND	0.006		ND	0.0063		ND	0.0063	
2-Chloroethylvinylether	NS	ND	0.0063		ND	0.006		ND	0.0063		ND	0.006		ND	0.0063		ND	0.0063	
2-Hexanone	NS	ND	0.0063		ND	0.006		ND	0.0063		ND	0.006		ND	0.0063		ND	0.0063	
4-Isopropyltoluene	NS	NA			NA			NA			NA			NA			NA		
4-Methyl-2-Pentanone	1	ND	0.0063		ND	0.006		ND	0.0063		ND	0.006		ND	0.0063		ND	0.0063	
Acetone	0.2	ND	0.031		ND	0.03		ND	0.032		ND	0.03		ND	0.032		ND	0.032	
Acrolein	NS	ND	0.031		ND	0.03		ND	0.032		ND	0.03		ND	0.032		ND	0.032	
Acrylonitrile	NS	ND	0.0063		ND	0.006		ND	0.0063		ND	0.006		ND	0.0063		ND	0.0063	
Benzene	0.06	ND	0.0013		ND	0.0012		ND	0.0013		ND	0.0012		ND	0.0013		ND	0.0013	
Bromodichloromethane	NS	ND	0.0063		ND	0.006		ND	0.0063		ND	0.006		ND	0.0063		ND	0.0063	
Bromoform	NS	ND	0.0063		ND	0.006		ND	0.0063		ND	0.006		ND	0.0063		ND	0.0063	
Bromomethane	NS	ND	0.0063		ND	0.006		ND	0.0063		ND	0.006		ND	0.0063		ND	0.0063	
Carbon disulfide	2.7	ND	0.0063		ND	0.006		ND	0.0063		ND	0.006		ND	0.0063		ND	0.0063	
Carbon tetrachloride	0.6	ND	0.0063		ND	0.006		ND	0.0063		ND	0.006		ND	0.0063		ND	0.0063	
Chlorobenzene	1.7	ND	0.0063		ND	0.006		ND	0.0063		ND	0.006		ND	0.0063		ND	0.0063	
Chloroethane	1.9	ND	0.0063		ND	0.006		ND	0.0063		ND	0.006		ND	0.0063		ND	0.0063	
Chloroform	0.3	ND	0.0063		ND	0.006		ND	0.0063		ND	0.006		ND	0.0063		ND	0.0063	
Chloromethane	NS	ND	0.0063		ND	0.006		ND	0.0063		ND	0.006		ND	0.0063		ND	0.0063	
cis-1,2-Dichloroethene	NS	ND	0.0063		ND	0.006		ND	0.0063		ND	0.006		ND	0.0063		ND	0.0063	
cis-1,3-Dichloropropene	NS	ND	0.0063		ND	0.006		ND	0.0063		ND	0.006		ND	0.0063		ND	0.0063	
Dibromochloromethane	NS	ND	0.0063		ND	0.006		ND	0.0063		ND	0.006		ND	0.0063		ND	0.0063	
Dichlorodifluoromethane	NS	NA			NA			NA			NA			NA			NA		
Ethylbenzene	5.5	ND	0.0013		ND	0.0012		ND	0.0013		ND	0.0012		ND	0.0013		ND	0.0013	
Isopropylbenzene	NS	NA			NA			NA			NA			NA			NA		
m&p-Xylenes	1.2	ND	0.0025		ND	0.0024		ND	0.0025		ND	0.0024		ND	0.0025		ND	0.0025	
Methylene chloride	0.1	0.036	0.0063	B	0.03	0.006	B	0.044	0.0063	B	0.05	0.006	B	0.048	0.0063	B	0.078	0.0063	B
Methyl-t-butyl ether	NS	NA			NA			NA			NA			NA			NA		
n-Butylbenzene	NS	NA			NA			NA			NA			NA			NA		
n-Propylbenzene	NS	NA			NA			NA			NA			NA			NA		
o-Xylene	1.2	ND	0.0013		ND	0.0012		ND	0.0013		ND	0.0012		ND	0.0013		ND	0.0013	
sec-Butylbenzene	NS	NA			NA			NA			NA			NA			NA		
Styrene	NS	ND	0.0063		ND	0.006		ND	0.0063		ND	0.006		ND	0.0063		ND	0.0063	
t-Butyl Alcohol	NS	NA			NA			NA			NA			NA			NA		
t-Butylbenzene	NS	NA			NA			NA			NA			NA			NA		
Tetrachloroethene	1.4	ND	0.0063		ND	0.006		ND	0.0063		ND	0.006		ND	0.0063		ND	0.0063	
Toluene	1.5	ND	0.0013		ND	0.0012		ND	0.0013		ND	0.0012		ND	0.0013		ND	0.0013	
trans-1,2-Dichloroethene	0.3	ND	0.0063		ND	0.006		ND	0.0063		ND	0.006		ND	0.0063		ND	0.0063	
trans-1,3-dichloropropene	NS	ND	0.0063		ND	0.006		ND	0.0063		ND	0.006		ND	0.0063		ND	0.0063	
Trichloroethene	0.7	ND	0.0063		ND	0.006		ND	0.0063		ND	0.006		ND	0.0063		ND	0.0063	
Trichlorofluoromethane	NS	NA			NA			NA			NA			NA			NA		
Vinyl chloride	0.2	ND	0.0063		ND	0.006		ND	0.0063		ND	0.006		ND	0.0063		ND	0.0063	
Total VOC TICs	NS	0.0113		J	0.012		J	0.0628		J	0.0116		J	0.0127		J	0.0046		J

Notes and Abbreviations

1) Bold concentrations in shaded cells exceed the RSCOs

2) Duplicate samples collected from SH-5D and TE-4D

mg/Kg = milligrams per kilogram (all units reported in mg/Kg).

RSCOs = Recommended Soil Cleanup Objectives from the Technical and Administrative Guidance Memorandum # 4046, dated January 24, 1994.

NA = Not analyzed

NS = No Standard

Conc = Concentration

MDL = Quantitation Limit

Qual = Laboratory Data Qualifier

ND = The compound was not detected

B = The analyte was found in the laboratory blank and the sample. This indicates possible laboratory contamination of the sample.

J = The compound was detected at a concentration below the calibration range. The concentration is estimated.

Feet bgs = Feet below ground surface

TICs = Tentatively identified compounds

TABLE 2A
SUMMARY OF SOIL ANALYTICAL RESULTS-VOCS
HHMT--PORT IVORY FACILITY
SITE 2

Location		WA-12			WA-13			WA-14			WA-15			WA-16			WA-17		
Sample ID		PI-2BWA12-110907SO04			PI-2BWA13-110807SO02			PI-2BWA14-110807SO02			PI-2BWA15-110707SO04			PI-2BWA16-110807SO03			PI-2BWA17-110907SO01		
Lab Sample No.		AC34274-006			AC34275-003			AC34275-004			AC34160-004			AC34275-005			AC34274-007		
Sampling Date		11/9/2007			11/8/2007			11/8/2007			11/7/2007			11/8/2007			11/9/2007		
Matrix		SOLID			SOLID			SOLID			SOLID			SOLID			SOLID		
Sample Depth (feet bgs)	New York RSCOs	4.5-5			3-3.5			3-3.5			6-6.5			4.5-5			1.5-2		
Volatile Organic Compounds (VOCs)		Conc	MDL	Qual	Conc	MDL	Qual	Conc	MDL	Qual	Conc	MDL	Qual	Conc	MDL	Qual	Conc	MDL	Qual
1,1,1-Trichloroethane	0.8	ND	0.0061		ND	0.0061		ND	0.0057		ND	0.0063		ND	0.044		ND	0.0062	
1,1,1,2-Tetrachloroethane	NS	NA			NA			NA			NA			NA			NA		
1,1,2,2-Tetrachloroethane	0.6	ND	0.0061		ND	0.0061		ND	0.0057		ND	0.0063		ND	0.044		ND	0.0062	
1,1,2-trichloro-1,2,2-trifluoroethane	6	ND	0.0061		ND	0.0061		ND	0.0057		ND	0.0063		ND	0.044		ND	0.0062	
1,1,2-Trichloroethane	NS	ND	0.0061		ND	0.0061		ND	0.0057		ND	0.0063		ND	0.044		ND	0.0062	
1,1-Dichloroethane	0.2	ND	0.0061		ND	0.0061		ND	0.0057		ND	0.0063		ND	0.044		ND	0.0062	
1,1-Dichloroethene	0.4	ND	0.0061		ND	0.0061		ND	0.0057		ND	0.0063		ND	0.044		ND	0.0062	
1,2,3-Trichloropropane	NS	ND	0.0061		ND	0.0061		ND	0.0057		ND	0.0063		ND	0.044		ND	0.0062	
1,2,4-Trimethylbenzene	NS	0.0013	0.0012		ND	0.0012		ND	0.0011		0.0018	0.0013		ND	0.0088		0.0018	0.0012	
1,2-Dichlorobenzene	7.9	ND	0.0061		ND	0.0061		ND	0.0057		ND	0.0063		ND	0.044		ND	0.0062	
1,2-Dichloroethane	0.1	ND	0.0061		ND	0.0061		ND	0.0057		ND	0.0063		ND	0.044		ND	0.0062	
1,2-Dichloropropane	NS	ND	0.0061		ND	0.0061		ND	0.0057		ND	0.0063		ND	0.044		ND	0.0062	
1,3,5-Trimethylbenzene	NS	ND	0.0012		ND	0.0012		ND	0.0011		0.0017	0.0013		0.011	0.0088		ND	0.0012	
1,3-Dichlorobenzene	1.6	ND	0.0061		ND	0.0061		ND	0.0057		ND	0.0063		ND	0.044		ND	0.0062	
1,3-Dichloropropane	NS	ND	0.0061		ND	0.0061		ND	0.0057		ND	0.0063		ND	0.044		ND	0.0062	
1,4-Dichlorobenzene	8.5	ND	0.0061		ND	0.0061		ND	0.0057		ND	0.0063		ND	0.044		ND	0.0062	
1,4-Dioxane	NS	ND	0.3		ND	0.3		ND	0.29		ND	0.31		ND	2.2		ND	0.31	
2-Butanone	0.3	ND	0.0061		ND	0.0061		ND	0.0057		ND	0.0063		ND	0.044		ND	0.0062	
2-Chloroethylvinylether	NS	ND	0.0061		ND	0.0061		ND	0.0057		ND	0.0063		ND	0.044		ND	0.0062	
2-Hexanone	NS	ND	0.0061		ND	0.0061		ND	0.0057		ND	0.0063		ND	0.044		ND	0.0062	
4-Isopropyltoluene	NS	ND	0.0012		ND	0.0012		ND	0.0011		ND	0.0013		ND	0.0088		ND	0.0012	
4-Methyl-2-Pentanone	1	ND	0.0061		ND	0.0061		ND	0.0057		ND	0.0063		ND	0.044		ND	0.0062	
Acetone	0.2	0.019	0.03	J	ND	0.03		ND	0.029		0.048	0.031		0.18	0.22	J	ND	0.031	
Acrolein	NS	ND	0.03		ND	0.03		ND	0.029		ND	0.031		ND	0.22		ND	0.031	
Acrylonitrile	NS	ND	0.0061		ND	0.0061		ND	0.0057		ND	0.0063		ND	0.044		ND	0.0062	
Benzene	0.06	ND	0.0012		ND	0.0012		ND	0.0011		ND	0.0013		ND	0.0088		ND	0.0012	
Bromodichloromethane	NS	ND	0.0061		ND	0.0061		ND	0.0057		ND	0.0063		ND	0.044		ND	0.0062	
Bromoform	NS	ND	0.0061		ND	0.0061		ND	0.0057		ND	0.0063		ND	0.044		ND	0.0062	
Bromomethane	NS	ND	0.0061		ND	0.0061		ND	0.0057		ND	0.0063		ND	0.044		ND	0.0062	
Carbon disulfide	2.7	ND	0.0061		ND	0.0061		ND	0.0057		ND	0.0063		ND	0.044		ND	0.0062	
Carbon tetrachloride	0.6	ND	0.0061		ND	0.0061		ND	0.0057		ND	0.0063		ND	0.044		ND	0.0062	
Chlorobenzene	1.7	ND	0.0061		ND	0.0061		ND	0.0057		ND	0.0063		ND	0.044		ND	0.0062	
Chloroethane	1.9	ND	0.0061		ND	0.0061		ND	0.0057		ND	0.0063		ND	0.044		ND	0.0062	
Chloroform	0.3	ND	0.0061		ND	0.0061		ND	0.0057		ND	0.0063		ND	0.044		ND	0.0062	
Chloromethane	NS	ND	0.0061		ND	0.0061		ND	0.0057		ND	0.0063		ND	0.044		ND	0.0062	
cis-1,2-Dichloroethene	NS	ND	0.0061		ND	0.0061		ND	0.0057		ND	0.0063		ND	0.044		ND	0.0062	
cis-1,3-Dichloropropene	NS	ND	0.0061		ND	0.0061		ND	0.0057		ND	0.0063		ND	0.044		ND	0.0062	
Dibromochloromethane	NS	ND	0.0061		ND	0.0061		ND	0.0057		ND	0.0063		ND	0.044		ND	0.0062	
Dichlorodifluoromethane	NS	ND	0.0061		ND	0.0061		ND	0.0057		ND	0.0063		ND	0.044		ND	0.0062	
Ethylbenzene	5.5	ND	0.0012		ND	0.0012		ND	0.0011		ND	0.0013		ND	0.0088		ND	0.0012	
Isopropylbenzene	NS	ND	0.0012		ND	0.0012		ND	0.0011		ND	0.0013		ND	0.0088		ND	0.0012	
m&p-Xylenes	1.2	ND	0.0024		ND	0.0024		ND	0.0023		ND	0.0025		ND	0.018		ND	0.0025	
Methylene chloride	0.1	0.018	0.0061	B	0.02	0.0061	B	0.031	0.0057	B	0.083	0.0063	B	0.2	0.044	B	0.028	0.0062	B
Methyl-t-butyl ether	NS	ND	0.0012		ND	0.0012		ND	0.0011		ND	0.0013		ND	0.0088		ND	0.0012	
n-Butylbenzene	NS	ND	0.0012		ND	0.0012		ND	0.0011		ND	0.0013		ND	0.0088		ND	0.0012	
n-Propylbenzene	NS	ND	0.0012		ND	0.0012		ND	0.0011		ND	0.0013		ND	0.0088		ND	0.0012	
o-Xylene	1.2	ND	0.0012		ND	0.0012		ND	0.0011		ND	0.0013		ND	0.0088		ND	0.0012	
sec-Butylbenzene	NS	ND	0.0012		ND	0.0012		ND	0.0011		ND	0.0013		ND	0.0088		ND	0.0012	
Styrene	NS	ND	0.0061		ND	0.0061		ND	0.0057		ND	0.0063		ND	0.044		ND	0.0062	
t-Butyl Alcohol	NS	ND	0.03		ND	0.03		ND	0.029		ND	0.031		ND	0.22		ND	0.031	
t-Butylbenzene	NS	ND	0.0012		ND	0.0012		ND	0.0011		ND	0.0013		ND	0.0088		ND	0.0012	
Tetrachloroethene	1.4	ND	0.0061		ND	0.0061		ND	0.0057		ND	0.0063		ND	0.044		ND	0.0062	
Toluene	1.5	ND	0.0012		ND	0.0012		ND	0.0011		ND	0.0013		ND	0.0088		ND	0.0012	
trans-1,2-Dichloroethene	0.3	ND	0.0061		ND	0.0061		ND	0.0057		ND	0.0063		ND	0.044		ND	0.0062	
trans-1,3-dichloropropene	NS	ND	0.0061		ND	0.0061		ND	0.0057		ND	0.0063		ND	0.044		ND	0.0062	
Trichloroethene	0.7	ND	0.0061		ND	0.0061		ND	0.0057		ND	0.0063		ND	0.044		ND	0.0062	
Trichlorofluoromethane	NS	ND	0.0061		ND	0.0061		ND	0.0057		ND	0.0063		ND	0.044		ND	0.0062	
Vinyl chloride	0.2	ND	0.0061		ND	0.0061		ND	0.0057		ND	0.0063		ND	0.044		ND	0.0062	
Total VOC TICs	NS	0.011		J	ND			ND			0.0303		J	8.84		J	0.0621		J

Notes and Abbreviations

1) Bold concentrations in shaded cells exceed the RSCOs

2) Duplicate samples collected from SH-5D and TE-4D

mg/Kg = milligrams per kilogram (all units reported in mg/Kg).

RSCOs = Recommended Soil Cleanup Objectives from the Technical and Administrative Guidance Memorandum # 4046, dated January 24, 1994.

NA = Not analyzed

NS = No Standard

Conc = Concentration

MDL = Quantitation Limit

Qual = Laboratory Data Qualifier

ND = The compound was not detected

B = The analyte was found in the laboratory blank and the sample. This indicates possible laboratory contamination of the sample.

J = The compound was detected at a concentration below the calibration range. The concentration is estimated.

Feet bgs = Feet below ground surface

TICs = Tentatively identified compounds

TABLE 2A
SUMMARY OF SOIL ANALYTICAL RESULTS-VOCS
HHMT--PORT IVORY FACILITY
SITE 2

Location		SH-1			SH-2			SH-3			SH-4			SH-5			SH-5D		
Sample ID	New York	PI-2BSH01-110907SO03			PI-2BSH-2-112007SO02			PI-2BSH-3-112007SO04			PI-2BSH04-110907SO03			PI-2BSH05-110907SO03			PI-2BSH5D-112107SO02		
Lab Sample No.	RSCOs	AC34274-001			AC34438-002			AC34438-003			AC34274-002			AC34274-003			AC34483-002		
Sampling Date		11/9/2007			11/20/2007			11/20/2007			11/9/2007			11/9/2007			11/21/2007		
Matrix		SOLID			SOLID			SOLID			SOLID			SOLID			SOLID		
Sample Depth (feet bgs)		4.5-5			3.5-4			5.5-6			4.5-5			3.5-4			3.5-4		
Volatile Organic Compounds (VOCs)		Conc	MDL	Qual	Conc	MDL	Qual	Conc	MDL	Qual	Conc	MDL	Qual	Conc	MDL	Qual	Conc	MDL	Qual
1,1,1-Trichloroethane	0.8	ND	0.0061		ND	0.0064		ND	0.0058		ND	0.006		ND	0.0057		ND	0.006	
1,1,1,2-Tetrachloroethane	NS	NA			NA			NA			NA			NA			NA		
1,1,2,2-Tetrachloroethane	0.6	ND	0.0061		ND	0.0064		ND	0.0058		ND	0.006		ND	0.0057		ND	0.006	
1,1,2-trichloro-1,2,2-trifluoroethane	6	ND	0.0061		ND	0.0064		ND	0.0058		ND	0.006		ND	0.0057		ND	0.006	
1,1,2-Trichloroethane	NS	ND	0.0061		ND	0.0064		ND	0.0058		ND	0.006		ND	0.0057		ND	0.006	
1,1-Dichloroethane	0.2	ND	0.0061		ND	0.0064		ND	0.0058		ND	0.006		ND	0.0057		ND	0.006	
1,1-Dichloroethene	0.4	ND	0.0061		ND	0.0064		ND	0.0058		ND	0.006		ND	0.0057		ND	0.006	
1,2,3-Trichloropropane	NS	ND	0.0061		ND	0.0064		ND	0.0058		ND	0.006		ND	0.0057		ND	0.006	
1,2,4-Trimethylbenzene	NS	0.0023	0.0061	J	ND	0.0013		ND	0.0012		0.0015	0.006	J	ND	0.0011		ND	0.0012	
1,2-Dichlorobenzene	7.9	ND	0.0061		ND	0.0064		ND	0.0058		ND	0.006		ND	0.0057		ND	0.006	
1,2-Dichloroethane	0.1	ND	0.0061		ND	0.0064		ND	0.0058		ND	0.006		ND	0.0057		ND	0.006	
1,2-Dichloropropane	NS	ND	0.0061		ND	0.0064		ND	0.0058		ND	0.006		ND	0.0057		ND	0.006	
1,3,5-Trimethylbenzene	NS	ND	0.0061		ND	0.0013		ND	0.0012		ND	0.006		ND	0.0011		ND	0.0012	
1,3-Dichlorobenzene	1.6	ND	0.0061		ND	0.0064		ND	0.0058		ND	0.006		ND	0.0057		ND	0.006	
1,3-Dichloropropane	NS	ND	0.0061		ND	0.0064		ND	0.0058		ND	0.006		ND	0.0057		ND	0.006	
1,4-Dichlorobenzene	8.5	ND	0.0061		ND	0.0064		ND	0.0058		ND	0.006		ND	0.0057		ND	0.006	
1,4-Dioxane	NS	ND	0.3		ND	0.32		ND	0.29		ND	0.3		ND	0.28		ND	0.3	
2-Butanone	0.3	ND	0.0061		ND	0.0064		ND	0.0058		ND	0.006		ND	0.0057		ND	0.006	
2-Chloroethylvinylether	NS	ND	0.0061		ND	0.0064		ND	0.0058		ND	0.006		ND	0.0057		ND	0.006	
2-Hexanone	NS	ND	0.0061		ND	0.0064		ND	0.0058		ND	0.006		ND	0.0057		ND	0.006	
4-Isopropyltoluene	NS	ND	0.0061		ND	0.0013		ND	0.0012		ND	0.006		ND	0.0011		ND	0.0012	
4-Methyl-2-Pentanone	1	ND	0.0061		ND	0.0064		ND	0.0058		ND	0.006		ND	0.0057		ND	0.006	
Acetone	0.2	0.17	0.03		0.028	0.032	J	0.027	0.029	J	0.14	0.03		ND	0.028		ND	0.03	
Acrolein	NS	ND	0.03		ND	0.032		ND	0.029		ND	0.03		ND	0.028		ND	0.03	
Acrylonitrile	NS	ND	0.0061		ND	0.0064		ND	0.0058		ND	0.006		ND	0.0057		ND	0.006	
Benzene	0.06	ND	0.0061		ND	0.0013		ND	0.0012		ND	0.006		ND	0.0011		ND	0.0012	
Bromodichloromethane	NS	ND	0.0061		ND	0.0064		ND	0.0058		ND	0.006		ND	0.0057		ND	0.006	
Bromoform	NS	ND	0.0061		ND	0.0064		ND	0.0058		ND	0.006		ND	0.0057		ND	0.006	
Bromomethane	NS	ND	0.0061		ND	0.0064		ND	0.0058		ND	0.006		ND	0.0057		ND	0.006	
Carbon disulfide	2.7	0.005	0.0061	J	ND	0.0064		ND	0.0058		0.0047	0.006	J	ND	0.0057		ND	0.006	
Carbon tetrachloride	0.6	ND	0.0061		ND	0.0064		ND	0.0058		ND	0.006		ND	0.0057		ND	0.006	
Chlorobenzene	1.7	ND	0.0061		ND	0.0064		ND	0.0058		ND	0.006		ND	0.0057		ND	0.006	
Chloroethane	1.9	ND	0.0061		ND	0.0064		ND	0.0058		ND	0.006		ND	0.0057		ND	0.006	
Chloroform	0.3	ND	0.0061		ND	0.0064		ND	0.0058		ND	0.006		ND	0.0057		ND	0.006	
Chloromethane	NS	ND	0.0061		ND	0.0064		ND	0.0058		ND	0.006		ND	0.0057		ND	0.006	
cis-1,2-Dichloroethene	NS	ND	0.0061		ND	0.0064		ND	0.0058		ND	0.006		ND	0.0057		ND	0.006	
cis-1,3-Dichloropropene	NS	ND	0.0061		ND	0.0064		ND	0.0058		ND	0.006		ND	0.0057		ND	0.006	
Dibromochloromethane	NS	ND	0.0061		ND	0.0064		ND	0.0058		ND	0.006		ND	0.0057		ND	0.006	
Dichlorodifluoromethane	NS	ND	0.0061		ND	0.0064		ND	0.0058		ND	0.006		ND	0.0057		ND	0.006	
Ethylbenzene	5.5	ND	0.0061		ND	0.0013		ND	0.0012		ND	0.006		ND	0.0011		ND	0.0012	
Isopropylbenzene	NS	ND	0.0061		ND	0.0013		ND	0.0012		ND	0.006		ND	0.0011		ND	0.0012	
m&p-Xylenes	1.2	ND	0.012		ND	0.0026		ND	0.0023		ND	0.012		ND	0.0023		ND	0.0024	
Methylene chloride	0.1	0.072	0.0061	B	0.031	0.0064	B	0.016	0.0058	B	0.14	0.006	B	0.0068	0.0057	B	0.012	0.006	B
Methyl-t-butyl ether	NS	ND	0.0061		ND	0.0013		ND	0.0012		ND	0.006		ND	0.0011		ND	0.0012	
n-Butylbenzene	NS	ND	0.0061		ND	0.0013		ND	0.0012		ND	0.006		ND	0.0011		ND	0.0012	
n-Propylbenzene	NS	ND	0.0061		ND	0.0013		ND	0.0012		ND	0.006		ND	0.0011		ND	0.0012	
o-Xylene	1.2	ND	0.0061		ND	0.0013		ND	0.0012		ND	0.006		ND	0.0011		ND	0.0012	
sec-Butylbenzene	NS	ND	0.0061		ND	0.0013		ND	0.0012		ND	0.006		ND	0.0011		ND	0.0012	
Styrene	NS	ND	0.0061		ND	0.0064		ND	0.0058		ND	0.006		ND	0.0057		ND	0.006	
t-Butyl Alcohol	NS	ND	0.03		ND	0.032		ND	0.029		0.011	0.03	J	ND	0.028		ND	0.03	
t-Butylbenzene	NS	ND	0.0061		ND	0.0013		ND	0.0012		ND	0.006		ND	0.0011		ND	0.0012	
Tetrachloroethene	1.4	ND	0.0061		ND	0.0064		ND	0.0058		ND	0.006		ND	0.0057		ND	0.006	
Toluene	1.5	ND	0.0061		ND	0.0013		ND	0.0012		ND	0.006		ND	0.0011		ND	0.0012	
trans-1,2-Dichloroethene	0.3	ND	0.0061		ND	0.0064		ND	0.0058		ND	0.006		ND	0.0057		ND	0.006	
trans-1,3-dichloropropene	NS	ND	0.0061		ND	0.0064		ND	0.0058		ND	0.006		ND	0.0057		ND	0.006	
Trichloroethene	0.7	ND	0.0061		ND	0.0064		ND	0.0058		ND	0.006		ND	0.0057		ND	0.006	
Trichlorofluoromethane	NS	ND	0.0061		ND	0.0064		ND	0.0058		ND	0.006		ND	0.0057		ND	0.006	
Vinyl chloride	0.2	ND	0.0061		ND	0.0064		ND	0.0058		ND	0.006		ND	0.0057		ND	0.006	
Total VOC TICs	NS	0.3229		J	0.012		J	0.0288		J	0.2407		J	ND		J	0.0041		J

Notes and Abbreviations

1) Bold concentrations in shaded cells exceed the RSCOs

2) Duplicate samples collected from SH-5D and TE-4D

mg/Kg = milligrams per kilogram (all units reported in mg/Kg).

RSCOs = Recommended Soil Cleanup Objectives from the Technical and Administrative Guidance Memorandum # 4046, dated January 24, 1994.

NA = Not analyzed

NS = No Standard

Conc = Concentration

MDL = Quantitation Limit

Qual = Laboratory Data Qualifier

ND = The compound was not detected

\ = The analyte was found in the laboratory blank and the sample. This indicates possible laboratory contamination of the sample.

J = The compound was detected at a concentration below the calibration range. The concentration is estimated.

Feet bgs = Feet below ground surface

TICs = Tentatively identified compounds

TABLE 2A
SUMMARY OF SOIL ANALYTICAL RESULTS-VOCS
HHMT--PORT IVORY FACILITY
SITE 2

Location		SH-6			SH-7			SH-8			SH-9			SH-10			SH-11		
Sample ID	New York	PI-2BSH06-110907SO04			PI-2BSH07-110907SO02			PI-2BSH-8-111507SO03			PI-2BSH09-111207SO03			PI-2BSH10-111407SO04			PI-2BSH11-111307SO03		
Lab Sample No.	RSCOs	AC34274-004			AC34274-005			AC34394-007			AC34274-009			AC34355-002			AC34289-001		
Sampling Date		11/9/2007			11/9/2007			11/15/2007			11/12/2007			11/14/2007			11/13/2007		
Matrix		SOLID			SOLID			SOLID			SOLID			SOLID			SOLID		
Sample Depth (feet bgs)		5-5.5			3.5-4			4.5-5			5-5.5			6-6.5			4-4.5		
Volatile Organic Compounds (VOCs)		Conc	MDL	Qual	Conc	MDL	Qual	Conc	MDL	Qual	Conc	MDL	Qual	Conc	MDL	Qual	Conc	MDL	Qual
1,1,1-Trichloroethane	0.8	ND	0.0058		ND	0.006		ND	0.0059		ND	0.0061		ND	0.006		ND	0.006	
1,1,1,2-Tetrachloroethane	NS	NA			NA			NA			NA			NA			NA		
1,1,2,2-Tetrachloroethane	0.6	ND	0.0058		ND	0.006		ND	0.0059		ND	0.0061		ND	0.006		ND	0.006	
1,1,2-trichloro-1,2,2-trifluoroethane	6	ND	0.0058		ND	0.006		ND	0.0059		ND	0.0061		ND	0.006		ND	0.006	
1,1,2-Trichloroethane	NS	ND	0.0058		ND	0.006		ND	0.0059		ND	0.0061		ND	0.006		ND	0.006	
1,1-Dichloroethane	0.2	ND	0.0058		ND	0.006		ND	0.0059		ND	0.0061		ND	0.006		ND	0.006	
1,1-Dichloroethene	0.4	ND	0.0058		ND	0.006		ND	0.0059		ND	0.0061		ND	0.006		ND	0.006	
1,2,3-Trichloropropane	NS	ND	0.0058		ND	0.006		ND	0.0059		ND	0.0061		ND	0.006		ND	0.006	
1,2,4-Trimethylbenzene	NS	0.0021	0.0012		0.0019	0.006	J	ND	0.0012		ND	0.0012		ND	0.0012		0.0018	0.0012	
1,2-Dichlorobenzene	7.9	ND	0.0058		ND	0.006		ND	0.0059		ND	0.0061		ND	0.006		ND	0.006	
1,2-Dichloroethane	0.1	ND	0.0058		ND	0.006		ND	0.0059		ND	0.0061		ND	0.006		ND	0.006	
1,2-Dichloropropane	NS	ND	0.0058		ND	0.006		ND	0.0059		ND	0.0061		ND	0.006		ND	0.006	
1,3,5-Trimethylbenzene	NS	ND	0.0012		ND	0.006		ND	0.0012		ND	0.0012		ND	0.0012		ND	0.0012	
1,3-Dichlorobenzene	1.6	ND	0.0058		ND	0.006		ND	0.0059		ND	0.0061		ND	0.006		ND	0.006	
1,3-Dichloropropane	NS	ND	0.0058		ND	0.006		ND	0.0059		ND	0.0061		ND	0.006		ND	0.006	
1,4-Dichlorobenzene	8.5	ND	0.0058		ND	0.006		ND	0.0059		ND	0.0061		ND	0.006		ND	0.006	
1,4-Dioxane	NS	ND	0.29		ND	0.3		ND	0.29		ND	0.3		ND	0.3		ND	0.3	
2-Butanone	0.3	ND	0.0058		0.026	0.006		ND	0.0059		ND	0.0061		ND	0.006		0.018	0.006	
2-Chloroethylvinylether	NS	ND	0.0058		ND	0.006		ND	0.0059		ND	0.0061		ND	0.006		ND	0.006	
2-Hexanone	NS	ND	0.0058		ND	0.006		ND	0.0059		ND	0.0061		ND	0.006		ND	0.006	
4-Isopropyltoluene	NS	ND	0.0012		ND	0.006		ND	0.0012		ND	0.0012		ND	0.0012		ND	0.0012	
4-Methyl-2-Pentanone	1	ND	0.0058		ND	0.006		ND	0.0059		ND	0.0061		ND	0.006		ND	0.006	
Acetone	0.2	ND	0.029		0.31	0.03		ND	0.029		0.032	0.03		0.055	0.03		0.12	0.03	
Acrolein	NS	ND	0.029		ND	0.03		ND	0.029		ND	0.03		ND	0.03		ND	0.03	
Acrylonitrile	NS	ND	0.0058		ND	0.006		ND	0.0059		ND	0.0061		ND	0.006		ND	0.006	
Benzene	0.06	ND	0.0012		ND	0.006		ND	0.0012		ND	0.0012		ND	0.0012		ND	0.0012	
Bromodichloromethane	NS	ND	0.0058		ND	0.006		ND	0.0059		ND	0.0061		ND	0.006		ND	0.006	
Bromoform	NS	ND	0.0058		ND	0.006		ND	0.0059		ND	0.0061		ND	0.006		ND	0.006	
Bromomethane	NS	ND	0.0058		ND	0.006		ND	0.0059		ND	0.0061		ND	0.006		ND	0.006	
Carbon disulfide	2.7	0.0014	0.0058	J	0.012	0.006		ND	0.0059		ND	0.0061		ND	0.006		0.0012	0.006	J
Carbon tetrachloride	0.6	ND	0.0058		ND	0.006		ND	0.0059		ND	0.0061		ND	0.006		ND	0.006	
Chlorobenzene	1.7	ND	0.0058		ND	0.006		ND	0.0059		ND	0.0061		ND	0.006		ND	0.006	
Chloroethane	1.9	ND	0.0058		ND	0.006		ND	0.0059		ND	0.0061		ND	0.006		ND	0.006	
Chloroform	0.3	ND	0.0058		ND	0.006		ND	0.0059		ND	0.0061		ND	0.006		ND	0.006	
Chloromethane	NS	ND	0.0058		ND	0.006		ND	0.0059		ND	0.0061		ND	0.006		ND	0.006	
cis-1,2-Dichloroethene	NS	ND	0.0058		ND	0.006		ND	0.0059		ND	0.0061		ND	0.006		ND	0.006	
cis-1,3-Dichloropropene	NS	ND	0.0058		ND	0.006		ND	0.0059		ND	0.0061		ND	0.006		ND	0.006	
Dibromochloromethane	NS	ND	0.0058		ND	0.006		ND	0.0059		ND	0.0061		ND	0.006		ND	0.006	
Dichlorodifluoromethane	NS	ND	0.0058		ND	0.006		ND	0.0059		ND	0.0061		ND	0.006		ND	0.006	
Ethylbenzene	5.5	ND	0.0012		ND	0.006		ND	0.0012		ND	0.0012		ND	0.0012		ND	0.0012	
Isopropylbenzene	NS	ND	0.0012		ND	0.006		ND	0.0012		ND	0.0012		ND	0.0012		ND	0.0012	
m&p-Xylenes	1.2	ND	0.0023		ND	0.012		ND	0.0024		ND	0.0024		ND	0.0024		ND	0.0024	
Methylene chloride	0.1	0.035	0.0058	B	0.12	0.006	B	0.062	0.0059	B	0.015	0.0061	B	0.017	0.006	B	0.039	0.006	B
Methyl-t-butyl ether	NS	ND	0.0012		ND	0.006		ND	0.0012		ND	0.0012		ND	0.0012		ND	0.0012	
n-Butylbenzene	NS	ND	0.0012		ND	0.006		ND	0.0012		ND	0.0012		ND	0.0012		ND	0.0012	
n-Propylbenzene	NS	ND	0.0012		ND	0.006		ND	0.0012		ND	0.0012		ND	0.0012		ND	0.0012	
o-Xylene	1.2	ND	0.0012		ND	0.006		ND	0.0012		ND	0.0012		ND	0.0012		ND	0.0012	
sec-Butylbenzene	NS	ND	0.0012		ND	0.006		ND	0.0012		ND	0.0012		ND	0.0012		ND	0.0012	
Styrene	NS	ND	0.0058		ND	0.006		ND	0.0059		ND	0.0061		ND	0.006		ND	0.006	
t-Butyl Alcohol	NS	ND	0.029		ND	0.03		ND	0.029		ND	0.03		ND	0.03		ND	0.03	
t-Butylbenzene	NS	ND	0.0012		ND	0.006		ND	0.0012		ND	0.0012		ND	0.0012		ND	0.0012	
Tetrachloroethene	1.4	ND	0.0058		ND	0.006		ND	0.0059		ND	0.0061		ND	0.006		ND	0.006	
Toluene	1.5	ND	0.0012		ND	0.006		ND	0.0012		ND	0.0012		ND	0.0012		ND	0.0012	
trans-1,2-Dichloroethene	0.3	ND	0.0058		ND	0.006		ND	0.0059		ND	0.0061		ND	0.006		ND	0.006	
trans-1,3-dichloropropene	NS	ND	0.0058		ND	0.006		ND	0.0059		ND	0.0061		ND	0.006		ND	0.006	
Trichloroethene	0.7	ND	0.0058		ND	0.006		ND	0.0059		ND	0.0061		ND	0.006		ND	0.006	
Trichlorofluoromethane	NS	ND	0.0058		ND	0.006		ND	0.0059		ND	0.0061		ND	0.006		ND	0.006	
Vinyl chloride	0.2	ND	0.0058		ND	0.006		ND	0.0059		ND	0.0061		ND	0.006		ND	0.006	
Total VOC TICs	NS	0.0092		J	0.2754		J	0.0059		J	0.0238		J	0.011		J	0.0052		J

Notes and Abbreviations

1) Bold concentrations in shaded cells exceed the RSCOs

2) Duplicate samples collected from SH-5D and TE-4D

mg/Kg = milligrams per kilogram (all units reported in mg/Kg).

RSCOs = Recommended Soil Cleanup Objectives from the Technical and Administrative Guidance Memorandum # 4046, dated January 24, 1994.

NA = Not analyzed

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Conc = Concentration

MDL = Quantitation Limit

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B = The analyte was found in the laboratory blank and the sample. This indicates possible laboratory contamination of the sample.

J = The compound was detected at a concentration below the calibration range. The concentration is estimated.

Feet bgs = Feet below ground surface

TICs = Tentatively identified compounds

TABLE 2A
SUMMARY OF SOIL ANALYTICAL RESULTS-VOCS
HHMT--PORT IVORY FACILITY
SITE 2

Location		SH-12			TE-2			TE-3			TE-4			TE-4D			TE-5		
Sample ID	New York	PI-2BSH12-111207SO03			PI-2BTE-2-110907O03			PI-2BTE-3-111407SO03			PI-2BTE-4-111207SO05			PI-2BTE-4D-111407SO05			PI-2BTE-5-111507SO05		
Lab Sample No.	RSCOs	AC34394-004			AC34394-002			AC34394-005			AC34394-008			AC34394-009			AC34394-010		
Sampling Date		11/12/2007			11/9/2007			11/14/2007			11/16/2007			11/16/2007			11/16/2007		
Matrix		SOLID			SOLID			SOLID			SOLID			SOLID			SOLID		
Sample Depth (feet bgs)		4.5-5			4.5-5			4.5-5			6-6.5			6-6.5			6.5-7		
Volatile Organic Compounds (VOCs)		Conc	MDL	Qual	Conc	MDL	Qual	Conc	MDL	Qual	Conc	MDL	Qual	Conc	MDL	Qual	Conc	MDL	Qual
1,1,1-Trichloroethane	0.8	ND	0.0059		ND	0.0058		ND	0.0058		ND	0.0058		ND	0.0058		ND	0.0057	
1,1,1,2-Tetrachloroethane	NS	NA			NA			NA			NA			NA			NA		
1,1,2,2-Tetrachloroethane	0.6	ND	0.0059		ND	0.0058		ND	0.0058		ND	0.0058		ND	0.0058		ND	0.0057	
1,1,2-trichloro-1,2,2-trifluoroethane	6	ND	0.0059		ND	0.0058		ND	0.0058		ND	0.0058		ND	0.0058		ND	0.0057	
1,1,2-Trichloroethane	NS	ND	0.0059		ND	0.0058		ND	0.0058		ND	0.0058		ND	0.0058		ND	0.0057	
1,1-Dichloroethane	0.2	ND	0.0059		ND	0.0058		ND	0.0058		ND	0.0058		ND	0.0058		ND	0.0057	
1,1-Dichloroethene	0.4	ND	0.0059		ND	0.0058		ND	0.0058		ND	0.0058		ND	0.0058		ND	0.0057	
1,2,3-Trichloropropane	NS	ND	0.0059		ND	0.0058		ND	0.0058		ND	0.0058		ND	0.0058		ND	0.0057	
1,2,4-Trimethylbenzene	NS	ND	0.0012		ND	0.0012		ND	0.0012		ND	0.0012		0.0013	0.0012		ND	0.0011	
1,2-Dichlorobenzene	7.9	ND	0.0059		ND	0.0058		ND	0.0058		ND	0.0058		ND	0.0058		ND	0.0057	
1,2-Dichloroethane	0.1	ND	0.0059		ND	0.0058		ND	0.0058		ND	0.0058		ND	0.0058		ND	0.0057	
1,2-Dichloropropane	NS	ND	0.0059		ND	0.0058		ND	0.0058		ND	0.0058		ND	0.0058		ND	0.0057	
1,3,5-Trimethylbenzene	NS	ND	0.0012		ND	0.0012		ND	0.0012		ND	0.0012		ND	0.0012		ND	0.0011	
1,3-Dichlorobenzene	1.6	ND	0.0059		ND	0.0058		ND	0.0058		ND	0.0058		ND	0.0058		ND	0.0057	
1,3-Dichloropropane	NS	ND	0.0059		ND	0.0058		ND	0.0058		ND	0.0058		ND	0.0058		ND	0.0057	
1,4-Dichlorobenzene	8.5	ND	0.0059		ND	0.0058		ND	0.0058		ND	0.0058		ND	0.0058		ND	0.0057	
1,4-Dioxane	NS	ND	0.29		ND	0.29		ND	0.29		ND	0.29		ND	0.29		ND	0.29	
2-Butanone	0.3	ND	0.0059		ND	0.0058		ND	0.0058		ND	0.0058		ND	0.0058		ND	0.0057	
2-Chloroethylvinylether	NS	ND	0.0059		ND	0.0058		ND	0.0058		ND	0.0058		ND	0.0058		ND	0.0057	
2-Hexanone	NS	ND	0.0059		ND	0.0058		ND	0.0058		ND	0.0058		ND	0.0058		ND	0.0057	
4-Isopropyltoluene	NS	ND	0.0012		ND	0.0012		ND	0.0012		ND	0.0012		ND	0.0012		ND	0.0011	
4-Methyl-2-Pentanone	1	ND	0.0059		ND	0.0058		ND	0.0058		ND	0.0058		ND	0.0058		ND	0.0057	
Acetone	0.2	ND	0.029		0.045	0.029		ND	0.029		0.029	0.029		0.08	0.029		0.071	0.029	
Acrolein	NS	ND	0.029		ND	0.029		ND	0.029		ND	0.029		ND	0.029		ND	0.029	
Acrylonitrile	NS	ND	0.0059		ND	0.0058		ND	0.0058		ND	0.0058		ND	0.0058		ND	0.0057	
Benzene	0.06	ND	0.0012		ND	0.0012		ND	0.0012		ND	0.0012		ND	0.0012		ND	0.0011	
Bromodichloromethane	NS	ND	0.0059		ND	0.0058		ND	0.0058		ND	0.0058		ND	0.0058		ND	0.0057	
Bromoform	NS	ND	0.0059		ND	0.0058		ND	0.0058		ND	0.0058		ND	0.0058		ND	0.0057	
Bromomethane	NS	ND	0.0059		ND	0.0058		ND	0.0058		ND	0.0058		ND	0.0058		ND	0.0057	
Carbon disulfide	2.7	ND	0.0059		ND	0.0058		ND	0.0058		0.0069	0.0058		0.007	0.0058		ND	0.0057	
Carbon tetrachloride	0.6	ND	0.0059		ND	0.0058		ND	0.0058		ND	0.0058		ND	0.0058		ND	0.0057	
Chlorobenzene	1.7	ND	0.0059		ND	0.0058		ND	0.0058		ND	0.0058		ND	0.0058		ND	0.0057	
Chloroethane	1.9	ND	0.0059		ND	0.0058		ND	0.0058		ND	0.0058		ND	0.0058		ND	0.0057	
Chloroform	0.3	ND	0.0059		ND	0.0058		ND	0.0058		ND	0.0058		ND	0.0058		ND	0.0057	
Chloromethane	NS	ND	0.0059		ND	0.0058		ND	0.0058		ND	0.0058		ND	0.0058		ND	0.0057	
cis-1,2-Dichloroethene	NS	ND	0.0059		ND	0.0058		ND	0.0058		ND	0.0058		ND	0.0058		ND	0.0057	
cis-1,3-Dichloropropene	NS	ND	0.0059		ND	0.0058		ND	0.0058		ND	0.0058		ND	0.0058		ND	0.0057	
Dibromochloromethane	NS	ND	0.0059		ND	0.0058		ND	0.0058		ND	0.0058		ND	0.0058		ND	0.0057	
Dichlorodifluoromethane	NS	ND	0.0059		ND	0.0058		ND	0.0058		ND	0.0058		ND	0.0058		ND	0.0057	
Ethylbenzene	5.5	ND	0.0012		ND	0.0012		ND	0.0012		ND	0.0012		ND	0.0012		ND	0.0011	
Isopropylbenzene	NS	ND	0.0012		ND	0.0012		ND	0.0012		ND	0.0012		ND	0.0012		ND	0.0011	
m&p-Xylenes	1.2	ND	0.0024		ND	0.0023		ND	0.0023		ND	0.0023		ND	0.0023		ND	0.0023	
Methylene chloride	0.1	0.0048	0.0059	JB	0.016	0.0058	B	0.051	0.0058	B	0.0083	0.0058	B	0.029	0.0058	B	0.029	0.0057	B
Methyl-t-butyl ether	NS	ND	0.0012		ND	0.0012		ND	0.0012		ND	0.0012		ND	0.0012		ND	0.0011	
n-Butylbenzene	NS	ND	0.0012		ND	0.0012		ND	0.0012		ND	0.0012		ND	0.0012		ND	0.0011	
n-Propylbenzene	NS	ND	0.0012		ND	0.0012		ND	0.0012		ND	0.0012		ND	0.0012		ND	0.0011	
o-Xylene	1.2	ND	0.0012		ND	0.0012		ND	0.0012		ND	0.0012		ND	0.0012		ND	0.0011	
sec-Butylbenzene	NS	ND	0.0012		ND	0.0012		ND	0.0012		ND	0.0012		ND	0.0012		ND	0.0011	
Styrene	NS	ND	0.0059		ND	0.0058		ND	0.0058		ND	0.0058		ND	0.0058		ND	0.0057	
t-Butyl Alcohol	NS	ND	0.029		ND	0.029		ND	0.029		ND	0.029		ND	0.029		ND	0.029	
t-Butylbenzene	NS	ND	0.0012		ND	0.0012		ND	0.0012		ND	0.0012		ND	0.0012		ND	0.0011	
Tetrachloroethene	1.4	ND	0.0059		ND	0.0058		ND	0.0058		ND	0.0058		ND	0.0058		ND	0.0057	
Toluene	1.5	ND	0.0012		ND	0.0012		ND	0.0012		ND	0.0012		ND	0.0012		ND	0.0011	
trans-1,2-Dichloroethene	0.3	ND	0.0059		ND	0.0058		ND	0.0058		ND	0.0058		ND	0.0058		ND	0.0057	
trans-1,3-dichloropropene	NS	ND	0.0059		ND	0.0058		ND	0.0058		ND	0.0058		ND	0.0058		ND	0.0057	
Trichloroethene	0.7	ND	0.0059		ND	0.0058		ND	0.0058		ND	0.0058		ND	0.0058		ND	0.0057	
Trichlorofluoromethane	NS	ND	0.0059		ND	0.0058		ND	0.0058		ND	0.0058		ND	0.0058		ND	0.0057	
Vinyl chloride	0.2	ND	0.0059		ND	0.0058		ND	0.0058		ND	0.0058		ND	0.0058		ND	0.0057	
Total VOC TICs	NS	0.009		J	ND		J	0.0092		J	0.012		J	0.0094		J	0.012		J

Notes and Abbreviations

1) Bold concentrations in shaded cells exceed the RSCOs

2) Duplicate samples collected from SH-5D and TE-4D

mg/Kg = milligrams per kilogram (all units reported in mg/Kg).

RSCOs = Recommended Soil Cleanup Objectives from the Technical and Administrative Guidance Memorandum # 4046, dated January 24, 1994.

NA = Not analyzed

NS = No Standard

Conc = Concentration

MDL = Quantitation Limit

Qual = Laboratory Data Qualifier

ND = The compound was not detected

J = The analyte was found in the laboratory blank and the sample. This indicates possible laboratory contamination of the sample.

J = The compound was detected at a concentration below the calibration range. The concentration is estimated.

Feet bgs = Feet below ground surface

TICs = Tentatively identified compounds

TABLE 2A
SUMMARY OF SOIL ANALYTICAL RESULTS-VOCS
HHMT--PORT IVORY FACILITY
SITE 2

Location		TE-6			TE-7			TE-8			TE-9			TE-10		
Sample ID	New York	PI-2BTE-6-111507SO03			PI-2BTE07-110907SO03			PI-2BTE-8-112007SO03			PI-2BTE09-111207SO03			PI-2BTE10-112107SO04		
Lab Sample No.	RSCOs	AC34394-006			AC34355-001			AC34438-001			AC34274-010			AC34483-001		
Sampling Date		11/15/2007			11/9/2007			11/20/2007			11/12/2007			11/21/2007		
Matrix		SOLID			SOLID			SOLID			SOLID			SOLID		
Sample Depth (feet bgs)		4.5-5			5.5-6			5.5-6			5.5-6			6.5-7		
Volatile Organic Compounds (VOCs)		Conc	MDL	Qual	Conc	MDL	Qual	Conc	MDL	Qual	Conc	MDL	Qual	Conc	MDL	Qual
1,1,1-Trichloroethane	0.8	ND	0.0059		ND	0.0056		ND	0.006		ND	0.006		ND	0.0057	
1,1,1,2-Tetrachloroethane	NS	NA			NA			NA			NA			NA		
1,1,2,2-Tetrachloroethane	0.6	ND	0.0059		ND	0.0056		ND	0.006		ND	0.006		ND	0.0057	
1,1,2-trichloro-1,2,2-trifluoroethane	6	ND	0.0059		ND	0.0056		ND	0.006		ND	0.006		ND	0.0057	
1,1,2-Trichloroethane	NS	ND	0.0059		ND	0.0056		ND	0.006		ND	0.006		ND	0.0057	
1,1-Dichloroethane	0.2	ND	0.0059		ND	0.0056		ND	0.006		ND	0.006		ND	0.0057	
1,1-Dichloroethene	0.4	ND	0.0059		ND	0.0056		ND	0.006		ND	0.006		ND	0.0057	
1,2,3-Trichloropropane	NS	ND	0.0059		ND	0.0056		ND	0.006		ND	0.006		ND	0.0057	
1,2,4-Trimethylbenzene	NS	0.0018	0.0012		ND	0.0011		ND	0.0012		ND	0.0012		ND	0.0011	
1,2-Dichlorobenzene	7.9	ND	0.0059		ND	0.0056		ND	0.006		ND	0.006		ND	0.0057	
1,2-Dichloroethane	0.1	ND	0.0059		ND	0.0056		ND	0.006		ND	0.006		ND	0.0057	
1,2-Dichloropropane	NS	ND	0.0059		ND	0.0056		ND	0.006		ND	0.006		ND	0.0057	
1,3,5-Trimethylbenzene	NS	ND	0.0012		ND	0.0011		ND	0.0012		ND	0.0012		ND	0.0011	
1,3-Dichlorobenzene	1.6	ND	0.0059		ND	0.0056		ND	0.006		ND	0.006		ND	0.0057	
1,3-Dichloropropane	NS	ND	0.0059		ND	0.0056		ND	0.006		ND	0.006		ND	0.0057	
1,4-Dichlorobenzene	8.5	ND	0.0059		ND	0.0056		ND	0.006		ND	0.006		ND	0.0057	
1,4-Dioxane	NS	ND	0.29		ND	0.28		ND	0.3		ND	0.3		ND	0.29	
2-Butanone	0.3	ND	0.0059		ND	0.0056		ND	0.006		ND	0.006		ND	0.0057	
2-Chloroethylvinylether	NS	ND	0.0059		ND	0.0056		ND	0.006		ND	0.006		ND	0.0057	
2-Hexanone	NS	ND	0.0059		ND	0.0056		ND	0.006		ND	0.006		ND	0.0057	
4-Isopropyltoluene	NS	ND	0.0012		ND	0.0011		ND	0.0012		ND	0.0012		ND	0.0011	
4-Methyl-2-Pentanone	1	ND	0.0059		ND	0.0056		ND	0.006		ND	0.006		ND	0.0057	
Acetone	0.2	0.027	0.029	J	ND	0.028		ND	0.03		0.024	0.03	J	ND	0.029	
Acrolein	NS	ND	0.029		ND	0.028		ND	0.03		ND	0.03		ND	0.029	
Acrylonitrile	NS	ND	0.0059		ND	0.0056		ND	0.006		ND	0.006		ND	0.0057	
Benzene	0.06	ND	0.0012		ND	0.0011		ND	0.0012		ND	0.0012		ND	0.0011	
Bromodichloromethane	NS	ND	0.0059		ND	0.0056		ND	0.006		ND	0.006		ND	0.0057	
Bromoform	NS	ND	0.0059		ND	0.0056		ND	0.006		ND	0.006		ND	0.0057	
Bromomethane	NS	ND	0.0059		ND	0.0056		ND	0.006		ND	0.006		ND	0.0057	
Carbon disulfide	2.7	ND	0.0059		ND	0.0056		ND	0.006		ND	0.006		ND	0.0057	
Carbon tetrachloride	0.6	ND	0.0059		ND	0.0056		ND	0.006		ND	0.006		ND	0.0057	
Chlorobenzene	1.7	ND	0.0059		ND	0.0056		ND	0.006		ND	0.006		ND	0.0057	
Chloroethane	1.9	ND	0.0059		ND	0.0056		ND	0.006		ND	0.006		ND	0.0057	
Chloroform	0.3	ND	0.0059		ND	0.0056		ND	0.006		ND	0.006		ND	0.0057	
Chloromethane	NS	ND	0.0059		ND	0.0056		ND	0.006		ND	0.006		ND	0.0057	
cis-1,2-Dichloroethene	NS	ND	0.0059		ND	0.0056		ND	0.006		ND	0.006		ND	0.0057	
cis-1,3-Dichloropropene	NS	ND	0.0059		ND	0.0056		ND	0.006		ND	0.006		ND	0.0057	
Dibromochloromethane	NS	ND	0.0059		ND	0.0056		ND	0.006		ND	0.006		ND	0.0057	
Dichlorodifluoromethane	NS	ND	0.0059		ND	0.0056		ND	0.006		ND	0.006		ND	0.0057	
Ethylbenzene	5.5	ND	0.0012		ND	0.0011		ND	0.0012		ND	0.0012		ND	0.0011	
Isopropylbenzene	NS	ND	0.0012		ND	0.0011		ND	0.0012		ND	0.0012		ND	0.0011	
m&p-Xylenes	1.2	ND	0.0024		ND	0.0022		ND	0.0024		ND	0.0024		ND	0.0023	
Methylene chloride	0.1	0.041	0.0059	B	0.02	0.0056	B	0.014	0.006	B	0.015	0.006	B	0.018	0.0057	B
Methyl-t-butyl ether	NS	ND	0.0012		ND	0.0011		ND	0.0012		ND	0.0012		ND	0.0011	
n-Butylbenzene	NS	ND	0.0012		ND	0.0011		ND	0.0012		ND	0.0012		ND	0.0011	
n-Propylbenzene	NS	ND	0.0012		ND	0.0011		ND	0.0012		ND	0.0012		ND	0.0011	
o-Xylene	1.2	ND	0.0012		ND	0.0011		ND	0.0012		ND	0.0012		ND	0.0011	
sec-Butylbenzene	NS	ND	0.0012		ND	0.0011		ND	0.0012		ND	0.0012		ND	0.0011	
Styrene	NS	ND	0.0059		ND	0.0056		ND	0.006		ND	0.006		ND	0.0057	
t-Butyl Alcohol	NS	ND	0.029		ND	0.028		ND	0.03		ND	0.03		ND	0.029	
t-Butylbenzene	NS	ND	0.0012		ND	0.0011		ND	0.0012		ND	0.0012		ND	0.0011	
Tetrachloroethene	1.4	ND	0.0059		ND	0.0056		ND	0.006		ND	0.006		ND	0.0057	
Toluene	1.5	ND	0.0012		ND	0.0011		ND	0.0012		ND	0.0012		ND	0.0011	
trans-1,2-Dichloroethene	0.3	ND	0.0059		ND	0.0056		ND	0.006		ND	0.006		ND	0.0057	
trans-1,3-dichloropropene	NS	ND	0.0059		ND	0.0056		ND	0.006		ND	0.006		ND	0.0057	
Trichloroethene	0.7	ND	0.0059		ND	0.0056		ND	0.006		ND	0.006		ND	0.0057	
Trichlorofluoromethane	NS	ND	0.0059		ND	0.0056		ND	0.006		ND	0.006		ND	0.0057	
Vinyl chloride	0.2	ND	0.0059		ND	0.0056		ND	0.006		ND	0.006		ND	0.0057	
Total VOC TICs	NS	0.0067		J	ND		J	0.008		J	0.0247		J	ND		

Notes and Abbreviations

1) Bold concentrations in shaded cells exceed the RSCOs

2) Duplicate samples collected from SH-5D and TE-4D

mg/Kg = milligrams per kilogram (all units reported in mg/Kg).

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Feet bgs = Feet below ground surface

TICs = Tentatively identified compounds

TABLE 2B
SUMMARY OF SOIL ANALYTICAL RESULTS-SVOCS
HHMT-PORT IVORY FACILITY
SITE 2

Location		2ASE-2			WA-1			WA-2			WA-3			WA-4		
Sample ID	New York RSCOs	PI-A2-SE2-091307SO04			PI-2B-WA1-110507SO03			AOCWA-2 (3.5-4)			AOCWA-3 (3-3.5)			AOCWA-4 (3-3.5)		
Lab Sample No.		AC32972-001			AC34093-005			AC25567-001			AC25567-002			AC25567-003		
Sampling Date		9/13/2007			11/5/2007			38971.00			38971.00			38971.00		
Matrix		SOLID			SOLID			SOLID			SOLID			SOLID		
Sample Depth (feet bgs)		3-3.5			4-4.5			3.5-4			3-3.5			3-3.5		
Semivolatile Organic Compounds (SVOCs)		Conc	MDL	Qual	Conc	MDL	Qual	Conc	MDL	Qual	Conc	MDL	Qual	Conc	MDL	Qual
1,2,4-Trichlorobenzene	3.4	ND	0.38		ND	0.40		ND	0.41		ND	0.41		ND	0.42	
1,2-Diphenylhydrazine	NS	ND	0.38		ND	0.40		ND	0.41		ND	0.41		ND	0.42	
2,4,5-Trichlorophenol	0.1	ND	0.38		ND	0.40		ND	0.41		ND	0.41		ND	0.42	
2,4,6-Trichlorophenol	NS	ND	0.38		ND	0.40		ND	0.41		ND	0.41		ND	0.42	
2,4-Dichlorophenol	0.4	ND	0.38		ND	0.40		ND	0.41		ND	0.41		ND	0.42	
2,4-Dimethylphenol	NS	ND	0.38		ND	0.40		ND	0.41		ND	0.41		ND	0.42	
2,4-Dinitrophenol	0.2	ND	0.95		ND	1.00		ND	2.10		ND	2.00		ND	2.10	
2,4-Dinitrotoluene	NS	ND	0.38		ND	0.40		ND	0.41		ND	0.41		ND	0.42	
2,6-Dinitrotoluene	1	ND	0.38		ND	0.40		ND	0.41		ND	0.41		ND	0.42	
2-Chloronaphthalene	NS	ND	0.38		ND	0.40		ND	0.41		ND	0.41		ND	0.42	
2-Chlorophenol	0.8	ND	0.38		ND	0.40		ND	0.41		ND	0.41		ND	0.42	
2-Methylnaphthalene	36.4	ND	0.38		ND	0.40		ND	0.41		ND	0.41		0.38	0.42	J
2-Methylphenol	0.1	ND	0.38		ND	0.40		ND	0.41		ND	0.41		ND	0.42	
2-Nitroaniline	0.43	ND	0.38		ND	0.40		ND	0.41		ND	0.41		ND	0.42	
2-Nitrophenol	0.33	ND	0.38		ND	0.40		ND	0.41		ND	0.41		ND	0.42	
3&4-Methylphenol	0.9	ND	0.38		ND	0.40		ND	0.41		ND	0.41		ND	0.42	
3,3'-Dichlorobenzidine	NS	ND	0.38		ND	0.40		ND	1.00		ND	1.00		ND	1.10	
3-Nitroaniline	0.5	ND	0.38		ND	0.40		ND	0.41		ND	0.41		ND	0.42	
4,6-Dinitro-2-methylphenol	NS	ND	0.95		ND	1.00		ND	1.00		ND	1.00		ND	1.10	
4-Bromophenyl-phenylether	NS	ND	0.38		ND	0.40		ND	0.41		ND	0.41		ND	0.42	
4-Chloro-3-methylphenol	0.24	ND	0.38		ND	0.40		ND	0.41		ND	0.41		ND	0.42	
4-Chloroaniline	0.22	ND	0.38		ND	0.40		ND	0.41		ND	0.41		ND	0.42	
4-Chlorophenyl-phenylether	NS	ND	0.38		ND	0.40		ND	0.41		ND	0.41		ND	0.42	
4-Nitroaniline	NS	ND	0.38		ND	0.40		ND	0.41		ND	0.41		ND	0.42	
4-Nitrophenol	0.1	ND	0.38		ND	0.40		ND	0.41		ND	0.41		ND	0.42	
Acenaphthene	50	ND	0.38		ND	0.40		0.07	0.41	J	ND	0.41		0.09	0.42	J
Acenaphthylene	41	ND	0.38		0.10	0.40	J	0.07	0.41	J	ND	0.41		0.04	0.42	J
Aniline	0.1	NA	NA		ND	0.40		NA			NA			NA		
Anthracene	50	0.05	0.38	J	0.05	0.40	J	0.13	0.41	J	ND	0.41		0.06	0.42	J
Benzidine	NS	ND	0.38		ND	0.40		ND	1.00		ND	1.00		ND	1.10	
Benzo[a]anthracene	0.224	0.18	0.38	J	0.30	0.40	J	0.35	0.41	J	0.05	0.41	J	0.17	0.42	J
Benzo[a]pyrene	0.061	0.15	0.38	J	0.31	0.40	J	0.29	0.41	J	0.05	0.41	J	0.22	0.42	J
Benzo[b]fluoranthene	1.1	0.18	0.38	J	0.47	0.40		0.47	0.41		0.09	0.41	J	0.26	0.42	J
Benzo[g,h,i]perylene	50	0.13	0.38	J	0.23	0.40	J	0.20	0.41	J	ND	0.41	J	0.32	0.42	J
Benzo[k]fluoranthene	1.1	0.08	0.38	J	0.14	0.40	J	0.17	0.41	J	ND	0.41		0.09	0.42	J
Benzyl alcohol	NS	ND	0.38		ND	0.40		ND	0.41		ND	0.41		ND	0.42	
Bis(2-Chloroethoxy)methane	NS	ND	0.38		ND	0.40		ND	0.41		ND	0.41		ND	0.42	
Bis(2-Chloroethyl)ether	NS	ND	0.38		ND	0.40		ND	0.41		ND	0.41		ND	0.42	
Bis(2-Chloroisopropyl)ether	NS	ND	0.38		ND	0.40		ND	0.41		ND	0.41		ND	0.42	
Bis(2-Ethylhexyl)phthalate	50	0.25	0.38	J	ND	0.40		0.07	0.41	J	0.10	0.41	J	0.10	0.42	J
Butylbenzylphthalate	50	ND	0.38		ND	0.40		ND	0.41		ND	0.41		ND	0.42	
Carbazole	NS	ND	0.38		ND	0.40		ND	0.41		ND	0.41		ND	0.42	
Chrysene	0.4	0.16	0.38	J	0.33	0.40	J	0.42	0.41		0.07	0.41	J	0.21	0.42	J
Dibenzo[a,h]anthracene	0.014	0.04	0.38	J	0.07	0.40	J	0.07	0.41	J	ND	0.41		0.06	0.42	J
Dibenzofuran	6.2	ND	0.38		ND	0.40		ND	0.41		ND	0.41		0.12	0.42	J
Diethylphthalate	7.1	ND	0.38		ND	0.40		ND	0.41		ND	0.41		ND	0.42	
Dimethylphthalate	2	ND	0.38		ND	0.40		ND	0.41		ND	0.41		ND	0.42	
Di-n-butylphthalate	8.1	ND	0.38		ND	0.40		0.09	0.41	JB	0.17	0.41	JB	0.08	0.42	JB
Di-n-octylphthalate	50	ND	0.38		ND	0.40		ND	0.41		ND	0.41		ND	0.42	
Fluoranthene	50	0.30	0.38	J	0.39	0.40	J	0.74	0.41		0.10	0.41	J	0.32	0.42	J
Fluorene	50	ND	0.38		ND	0.40		0.10	0.41	J	ND	0.41		0.08	0.42	J
Hexachlorobenzene	0.41	ND	0.38		ND	0.40		ND	0.41		ND	0.41		ND	0.42	
Hexachlorobutadiene	NS	ND	0.38		ND	0.40		ND	0.41		ND	0.41		ND	0.42	
Hexachlorocyclopentadiene	NS	ND	0.95		ND	0.40		ND	0.41		ND	0.41		ND	0.42	
Hexachloroethane	NS	ND	0.38		ND	0.40		ND	0.41		ND	0.41		ND	0.42	
Indeno[1,2,3-cd]pyrene	3.2	0.12	0.38	J	0.20	0.40	J	0.18	0.41	J	ND	0.41		0.14	0.42	J
Isophorone	4.4	ND	0.38		ND	0.40		ND	0.41		ND	0.41		ND	0.42	
Naphthalene	13	ND	0.38		ND	0.40		0.10	0.41	J	ND	0.41		0.22	0.42	J
Nitrobenzene	0.2	ND	0.38		ND	0.40		ND	0.41		ND	0.41		ND	0.42	
N-Nitrosodimethylamine	NS	ND	0.38		ND	0.40		ND	1.00		ND	1.00		ND	1.10	
N-Nitroso-di-n-propylamine	NS	ND	0.38		ND	0.40		ND	0.41		ND	0.41		ND	0.42	
N-Nitrosodiphenylamine	NS	ND	0.38		ND	0.40		ND	0.41		ND	0.41		ND	0.42	
Pentachlorophenol	1	ND	0.95		ND	2.00		ND	1.00		ND	1.00		ND	1.10	
Phenanthrene	50	0.18	0.38	J	0.15	0.40	J	0.39	0.41	J	0.05	0.41	J	0.32	0.42	J
Phenol	0.03	ND	0.38		ND	0.40		ND	0.41		ND	0.41		ND	0.42	
Pyrene	50	0.35	0.38	J	0.57	0.40		0.73	0.41		0.10	0.41	J	0.32	0.42	J
Total SVOC TICs	NS	80.66		J	79.11		J	217.65		J	138.71		J	220.47		J

Notes and Abbreviations

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TICs = Tentatively identified compounds

TABLE 2B
SUMMARY OF SOIL ANALYTICAL RESULTS-SVOCS
HHMT-PORT IVORY FACILITY
SITE 2

Location		WA-5			WA-5			WA-6			WA-7			WA-8		
Sample ID	New York RSCOs	PI-2BWA05-110807SO03			PI-2BWA05-110807SO04			AOCWA-6 (3.5-4)			AOCWA-7 (4-4.5)			AOCWA-8 (3-3.5)		
Lab Sample No.		AC34275-001			AC34275-002			AC25567-004			AC25567-005			AC25567-006		
Sampling Date		11/8/2007			11/8/2007			38971.00			38971.00			38971.00		
Matrix		SOLID			SOLID			SOLID			SOLID			SOLID		
Sample Depth (feet bgs)		4-4.5			6.5-7			3.5-4			4-4.5			3-3.5		
Semivolatile Organic Compounds (SVOCs)		Conc	MDL	Qual	Conc	MDL	Qual	Conc	MDL	Qual	Conc	MDL	Qual	Conc	MDL	Qual
1,2,4-Trichlorobenzene	3.4	ND	0.42		ND	0.40		ND	0.42		ND	0.40		ND	0.42	
1,2-Diphenylhydrazine	NS	ND	0.42		ND	0.40		ND	0.42		ND	0.40		ND	0.42	
2,4,5-Trichlorophenol	0.1	ND	0.42		ND	0.40		ND	0.42		ND	0.40		ND	0.42	
2,4,6-Trichlorophenol	NS	ND	0.42		ND	0.40		ND	0.42		ND	0.40		ND	0.42	
2,4-Dichlorophenol	0.4	ND	0.42		ND	0.40		ND	0.42		ND	0.40		ND	0.42	
2,4-Dimethylphenol	NS	ND	0.42		ND	0.40		ND	0.42		ND	0.40		ND	0.42	
2,4-Dinitrophenol	0.2	ND	1.10		ND	0.99		ND	2.10		ND	2.00		ND	2.10	
2,4-Dinitrotoluene	NS	ND	0.42		ND	0.40		ND	0.42		ND	0.40		ND	0.42	
2,6-Dinitrotoluene	1	ND	0.42		ND	0.40		ND	0.42		ND	0.40		ND	0.42	
2-Chloronaphthalene	NS	ND	0.42		ND	0.40		ND	0.42		ND	0.40		ND	0.42	
2-Chlorophenol	0.8	ND	0.42		ND	0.40		ND	0.42		ND	0.40		ND	0.42	
2-Methylnaphthalene	36.4	ND	0.42		ND	0.40		ND	0.42		ND	0.40		0.06	0.42	J
2-Methylphenol	0.1	ND	0.42		ND	0.40		ND	0.42		ND	0.40		ND	0.42	
2-Nitroaniline	0.43	ND	0.42		ND	0.40		ND	0.42		ND	0.40		ND	0.42	
2-Nitrophenol	0.33	ND	0.42		ND	0.40		ND	0.42		ND	0.40		ND	0.42	
3&4-Methylphenol	0.9	ND	0.42		ND	0.40		ND	0.42		ND	0.40		ND	0.42	
3,3'-Dichlorobenzidine	NS	ND	0.42		ND	0.40		ND	1.00		ND	1.00		ND	1.10	
3-Nitroaniline	0.5	ND	0.42		ND	0.40		ND	0.42		ND	0.40		ND	0.42	
4,6-Dinitro-2-methylphenol	NS	ND	1.10		ND	0.99		ND	1.00		ND	1.00		ND	1.10	
4-Bromophenyl-phenylether	NS	ND	0.42		ND	0.40		ND	0.42		ND	0.40		ND	0.42	
4-Chloro-3-methylphenol	0.24	ND	0.42		ND	0.40		ND	0.42		ND	0.40		ND	0.42	
4-Chloroaniline	0.22	ND	0.42		ND	0.40		ND	0.42		ND	0.40		ND	0.42	
4-Chlorophenyl-phenylether	NS	ND	0.42		ND	0.40		ND	0.42		ND	0.40		ND	0.42	
4-Nitroaniline	NS	ND	0.42		ND	0.40		ND	0.42		ND	0.40		ND	0.42	
4-Nitrophenol	0.1	ND	0.42		ND	0.40		ND	0.42		ND	0.40		ND	0.42	
Acenaphthene	50	0.07	0.42	J	ND	0.40		ND	0.42		ND	0.40		0.07	0.42	J
Acenaphthylene	41	0.07	0.42	J	ND	0.40		0.05	0.42	J	0.07	0.40	J	0.08	0.42	J
Aniline	0.1	ND	0.42		ND	0.40		NA			NA			NA		
Anthracene	50	0.12	0.42	J	ND	0.40		0.10	0.42	J	0.11	0.40	J	0.07	0.42	J
Benzidine	NS	ND	0.42		ND	0.40		ND	1.00		ND	1.00		ND	1.10	
Benzo[a]anthracene	0.224	0.25	0.42	J	0.05	0.40	J	0.51	0.42		0.29	0.40	J	0.34	0.42	J
Benzo[a]pyrene	0.061	0.22	0.42	J	ND	0.40		0.46	0.42		0.32	0.40	J	0.28	0.42	J
Benzo[b]fluoranthene	1.1	0.40	0.42	J	0.07	0.40	J	0.71	0.42		0.44	0.40		0.36	0.42	J
Benzo[g,h,i]perylene	50	0.24	0.42	J	0.04	0.40	J	0.36	0.42	J	0.25	0.40	J	0.19	0.42	J
Benzo[k]fluoranthene	1.1	0.14	0.42	J	ND	0.40		0.20	0.42	J	0.13	0.40	J	0.11	0.42	J
Benzyl alcohol	NS	ND	0.42		ND	0.40		ND	0.42		ND	0.40		ND	0.42	
Bis(2-Chloroethoxy)methane	NS	ND	0.42		ND	0.40		ND	0.42		ND	0.40		ND	0.42	
Bis(2-Chloroethyl)ether	NS	ND	0.42		ND	0.40		ND	0.42		ND	0.40		ND	0.42	
Bis(2-Chloroisopropyl)ether	NS	ND	0.42		ND	0.40		ND	0.42		ND	0.40		ND	0.42	
Bis(2-Ethylhexyl)phthalate	50	0.10	0.42	J	ND	0.40		0.11	0.42	J	0.22	0.40	J	0.18	0.42	J
Butylbenzylphthalate	50	ND	0.42		ND	0.40		ND	0.42		ND	0.40		0.10	0.42	J
Carbazole	NS	ND	0.42		ND	0.40		ND	0.42		ND	0.40		ND	0.42	
Chrysene	0.4	0.34	0.42	J	0.05	0.40	J	0.51	0.42		0.32	0.40	J	0.39	0.42	J
Dibenzo[a,h]anthracene	0.014	0.08	0.42	J	ND	0.40		0.08	0.42	J	0.07	0.40	J	0.05	0.42	J
Dibenzofuran	6.2	ND	0.42		ND	0.40		ND	0.42		ND	0.40		ND	0.42	
Diethylphthalate	7.1	ND	0.42		ND	0.40		ND	0.42		ND	0.40		ND	0.42	
Dimethylphthalate	2	ND	0.42		ND	0.40		ND	0.42		ND	0.40		0.14	0.42	J
Di-n-butylphthalate	8.1	0.12	0.42	J	0.04	0.40	J	0.10	0.42	JB	0.13	0.40	JB	0.06	0.42	J
Di-n-octylphthalate	50	ND	0.42		ND	0.40		ND	0.42		ND	0.40		ND	0.42	
Fluoranthene	50	0.52	0.42		0.07	0.40	J	0.77	0.42		0.51	0.40		0.70	0.42	
Fluorene	50	0.11	0.42	J	ND	0.40		0.05	0.42	J	0.05	0.40	J	0.09	0.42	J
Hexachlorobenzene	0.41	ND	0.42		ND	0.40		ND	0.42		ND	0.40		ND	0.42	
Hexachlorobutadiene	NS	ND	0.42		ND	0.40		ND	0.42		ND	0.40		ND	0.42	
Hexachlorocyclopentadiene	NS	ND	0.42		ND	0.40		ND	0.42		ND	0.40		ND	0.42	
Hexachloroethane	NS	ND	0.42		ND	0.40		ND	0.42		ND	0.40		ND	0.42	
Indeno[1,2,3-cd]pyrene	3.2	0.18	0.42	J	ND	0.40		0.31	0.42	J	0.20	0.40	J	0.15	0.42	J
Isophorone	4.4	ND	0.42		ND	0.40		ND	0.42		ND	0.40		ND	0.42	
Naphthalene	13	0.19	0.42	J	ND	0.40		0.11	0.42	J	0.06	0.40	J	0.05	0.42	J
Nitrobenzene	0.2	ND	0.42		ND	0.40		ND	0.42		ND	0.40		ND	0.42	
N-Nitrosodimethylamine	NS	ND	0.42		ND	0.40		ND	1.00		ND	1.00		ND	1.10	
N-Nitroso-di-n-propylamine	NS	ND	0.42		ND	0.40		ND	0.42		ND	0.40		ND	0.42	
N-Nitrosodiphenylamine	NS	ND	0.42		ND	0.40		ND	0.42		ND	0.40		ND	0.42	
Pentachlorophenol	1	ND	2.10		ND	2.00		ND	1.00		ND	1.00		ND	1.10	
Phenanthrene	50	0.45	0.42		0.07	0.40	J	0.37	0.42	J	0.44	0.40		0.59	0.42	
Phenol	0.03	ND	0.42		ND	0.40		ND	0.42		ND	0.40		ND	0.42	
Pyrene	50	0.52	0.42		0.07	0.40	J	0.83	0.42		0.67	0.40		1.20	0.42	
Total SVOC TICs	NS	75.29		J	75.61		J	190.55		J	178.08		J	191.22		J

Notes and Abbreviations

1) Bold concentrations in shaded cells exceed the RSCOs

2) Duplicate samples collected from SH-5D and TE-4D.

mg/Kg = milligrams per kilogram (all units reported in mg/kg).

RSCOs = Recommended Soil Cleanup Objectives from the Technical and Administrative Guidance Memorandum # 4046, dated January 24, 1994.

NA = Not analyzed

NS = No Standard

Conc = Concentration

MDL = Quantitation Limit

Qual = Laboratory Data Qualifier

ND = The compound was not detected

B = The analyte was found in the laboratory blank and the sample. This indicates possible laboratory contamination of the sample.

J = The compound was detected at a concentration below the calibration range. The concentration is estimated.

Feet bgs = Feet below ground surface

TICs = Tentatively identified compounds

TABLE 2B
SUMMARY OF SOIL ANALYTICAL RESULTS-SVOCS
HHMT-PORT IVORY FACILITY
SITE 2

Location		WA-9			WA-10			WA-11			WA-12			WA-13		
Sample ID	New York RSCOs	AOCWA-9 (3-3.5)			AOCWA-10 (3-3.5)			AOCWA-11 (3-3.5)			PI-2BWA12-110907SO04			PI-2BWA13-110807SO02		
Lab Sample No.		AC25567-007			AC25567-008			AC25567-009			AC34274-006			AC34275-003		
Sampling Date		38971.00			38971.00			38971.00			11/9/2007			11/8/2007		
Matrix		SOILD			SOILD			SOLIDS			SOLID			SOLID		
Sample Depth (feet bgs)		3-3.5			3-3.5			3-3.5			4.5-5			3-3.5		
Semivolatile Organic Compounds (SVOCs)		Conc	MDL	Qual	Conc	MDL	Qual	Conc	MDL	Qual	Conc	MDL	Qual	Conc	MDL	Qual
1,2,4-Trichlorobenzene	3.4	ND	0.40		ND	0.42		ND	0.42		ND	0.41		ND	0.41	
1,2-Diphenylhydrazine	NS	ND	0.40		ND	0.42		ND	0.42		ND	0.41		ND	0.41	
2,4,5-Trichlorophenol	0.1	ND	0.40		ND	0.42		ND	0.42		ND	0.41		ND	0.41	
2,4,6-Trichlorophenol	NS	ND	0.40		ND	0.42		ND	0.42		ND	0.41		ND	0.41	
2,4-Dichlorophenol	0.4	ND	0.40		ND	0.42		ND	0.42		ND	0.41		ND	0.41	
2,4-Dimethylphenol	NS	ND	0.40		ND	0.42		ND	0.42		ND	0.41		ND	0.41	
2,4-Dinitrophenol	0.2	ND	2.00		ND	2.10		ND	2.10		ND	1.00		ND	1.00	
2,4-Dinitrotoluene	NS	ND	0.40		ND	0.42		ND	0.42		ND	0.41		ND	0.41	
2,6-Dinitrotoluene	1	ND	0.40		ND	0.42		ND	0.42		ND	0.41		ND	0.41	
2-Chloronaphthalene	NS	ND	0.40		ND	0.42		ND	0.42		ND	0.41		ND	0.41	
2-Chlorophenol	0.8	ND	0.40		ND	0.42		ND	0.42		ND	0.41		ND	0.41	
2-Methylnaphthalene	36.4	0.18	0.40	J	0.07	0.42	J	ND	0.42		ND	0.41		0.40	0.41	J
2-Methylphenol	0.1	ND	0.40		ND	0.42		ND	0.42		ND	0.41		ND	0.41	
2-Nitroaniline	0.43	ND	0.40		ND	0.42		ND	0.42		ND	0.41		ND	0.41	
2-Nitrophenol	0.33	ND	0.40		ND	0.42		ND	0.42		ND	0.41		ND	0.41	
3&4-Methylphenol	0.9	ND	0.40		ND	0.42		ND	0.42		ND	0.41		ND	0.41	
3,3'-Dichlorobenzidine	NS	ND	0.99		ND	1.10		ND	1.10		ND	0.41		ND	0.41	
3-Nitroaniline	0.5	ND	0.40		ND	0.42		ND	0.42		ND	0.41		ND	0.41	
4,6-Dinitro-2-methylphenol	NS	ND	0.99		ND	1.10		ND	1.10		ND	1.00		ND	1.00	
4-Bromophenyl-phenylether	NS	ND	0.40		ND	0.42		ND	0.42		ND	0.41		ND	0.41	
4-Chloro-3-methylphenol	0.24	ND	0.40		ND	0.42		ND	0.42		ND	0.41		ND	0.41	
4-Chloroaniline	0.22	ND	0.40		ND	0.42		ND	0.42		ND	0.41		ND	0.41	
4-Chlorophenyl-phenylether	NS	ND	0.40		ND	0.42		ND	0.42		ND	0.41		ND	0.41	
4-Nitroaniline	NS	ND	0.40		ND	0.42		ND	0.42		ND	0.41		ND	0.41	
4-Nitrophenol	0.1	ND	0.40		ND	0.42		ND	0.42		ND	0.41		ND	0.41	
Acenaphthene	50	0.18	0.40	J	ND	0.42		0.07	0.42	J	ND	0.41		0.07	0.41	J
Acenaphthylene	41	0.20	0.40	J	ND	0.42		ND	0.42		ND	0.41		0.49	0.41	
Aniline	0.1	NA			NA			NA			ND	0.41		ND	0.41	
Anthracene	50	0.62	0.40		ND	0.42		0.11	0.42	J	ND	0.41		0.24	0.41	J
Benzidine	NS	ND	0.99		ND	1.10		ND	1.10		ND	0.41		ND	0.41	
Benzo[a]anthracene	0.224	1.70	0.40		0.11	0.42	J	0.39	0.42	J	0.13	0.41	J	1.20	0.41	
Benzo[a]pyrene	0.061	1.50	0.40		0.12	0.42	J	0.33	0.42	J	0.13	0.41	J	1.30	0.41	
Benzo[b]fluoranthene	1.1	2.00	0.40		0.17	0.42	J	0.47	0.42		0.20	0.41	J	1.90	0.41	
Benzo[g,h,i]perylene	50	0.95	0.40		0.10	0.42	J	0.23	0.42	J	0.11	0.41	J	1.00	0.41	
Benzo[k]fluoranthene	1.1	0.65	0.40		0.08	0.42	J	0.16	0.42	J	0.07	0.41	J	0.54	0.41	
Benzyl alcohol	NS	ND	0.40		ND	0.42		ND	0.42		ND	0.41		ND	0.41	
Bis(2-Chloroethoxy)methane	NS	ND	0.40		ND	0.42		ND	0.42		ND	0.41		ND	0.41	
Bis(2-Chloroethyl)ether	NS	ND	0.40		ND	0.42		ND	0.42		ND	0.41		ND	0.41	
Bis(2-Chloroisopropyl)ether	NS	ND	0.40		ND	0.42		ND	0.42		ND	0.41		ND	0.41	
Bis(2-Ethylhexyl)phthalate	50	0.12	0.40	J	0.06	0.42	J	0.14	0.42	J	ND	0.41		0.05	0.41	J
Butylbenzylphthalate	50	ND	0.40		ND	0.42		ND	0.42		ND	0.41		ND	0.41	
Carbazole	NS	0.26	0.40	J	ND	0.42		0.05	0.42	J	ND	0.41		0.09	0.41	J
Chrysene	0.4	1.70	0.40		0.14	0.42	J	0.39	0.42	J	0.14	0.41	J	1.50	0.41	
Dibenzo[a,h]anthracene	0.014	0.26	0.40	J	ND	0.42		0.06	0.42	J	ND	0.41		0.32	0.41	J
Dibenzofuran	6.2	0.12	0.40	J	ND	0.42		ND	0.42		ND	0.41		0.18	0.41	J
Diethylphthalate	7.1	ND	0.40		ND	0.42		ND	0.42		ND	0.41		ND	0.41	
Dimethylphthalate	2	ND	0.40		ND	0.42		ND	0.42		ND	0.41		ND	0.41	
Di-n-butylphthalate	8.1	0.07	0.40	J	ND	0.42		0.05	0.42	J	ND	0.41		ND	0.41	
Di-n-octylphthalate	50	ND	0.40		ND	0.42		ND	0.42		ND	0.41		ND	0.41	
Fluoranthene	50	3.20	0.40		0.20	0.42	J	0.83	0.42		0.22	0.41	J	2.20	0.41	
Fluorene	50	0.31	0.40	J	0.09	0.42	J	0.06	0.42	J	ND	0.41		0.12	0.41	J
Hexachlorobenzene	0.41	ND	0.40		ND	0.42		ND	0.42		ND	0.41		ND	0.41	
Hexachlorobutadiene	NS	ND	0.40		ND	0.42		ND	0.42		ND	0.41		ND	0.41	
Hexachlorocyclopentadiene	NS	ND	0.40		ND	0.42		ND	0.42		ND	0.41		ND	0.41	
Hexachloroethane	NS	ND	0.40		ND	0.42		ND	0.42		ND	0.41		ND	0.41	
Indeno[1,2,3-cd]pyrene	3.2	0.85	0.40		0.08	0.42	J	0.22	0.42	J	0.09	0.41	J	0.87	0.41	
Isophorone	4.4	ND	0.40		ND	0.42		ND	0.42		ND	0.41		ND	0.41	
Naphthalene	13	0.30	0.40	J	ND	0.42		ND	0.42		ND	0.41		0.28	0.41	J
Nitrobenzene	0.2	ND	0.40		ND	0.42		ND	0.42		ND	0.41		ND	0.41	
N-Nitrosodimethylamine	NS	ND	0.99		ND	1.10		ND	1.10		ND	0.41		ND	0.41	
N-Nitroso-di-n-propylamine	NS	ND	0.40		ND	0.42		ND	0.42		ND	0.41		ND	0.41	
N-Nitrosodiphenylamine	NS	ND	0.40		ND	0.42		ND	0.42		ND	0.41		ND	0.41	
Pentachlorophenol	1	ND	0.99		ND	1.10		ND	1.10		ND	2.00		ND	2.00	
Phenanthrene	50	2.80	0.40		0.13	0.42	J	0.56	0.42		0.12	0.41	J	1.00	0.41	
Phenol	0.03	ND	0.40		ND	0.42		ND	0.42		ND	0.41		ND	0.41	
Pyrene	50	3.50	0.40		0.20	0.42	J	0.81	0.42		0.26	0.41	J	2.50	0.41	
Total SVOC TICs	NS	186.75		J	194.07		J	194.48		J	82.53		J	77.46		J

Notes and Abbreviations

1) Bold concentrations in shaded cells exceed the RSCOs

2) Duplicate samples collected from SH-5D and TE-4D.

mg/Kg = milligrams per kilogram (all units reported in mg/kg).

RSCOs = Recommended Soil Cleanup Objectives from the Technical and Administrative Guidance Memorandum # 4046, dated January 24, 1994.

NA = Not analyzed

NS = No Standard

Conc = Concentration

MDL = Quantitation Limit

Qual = Laboratory Data Qualifier

ND = The compound was not detected

B = The analyte was found in the laboratory blank and the sample. This indicates possible laboratory contamination of the sample.

J = The compound was detected at a concentration below the calibration range. The concentration is estimated.

Feet bgs = Feet below ground surface

TICs = Tentatively identified compounds

TABLE 2B
SUMMARY OF SOIL ANALYTICAL RESULTS-SVOCS
HHMT-PORT IVORY FACILITY
SITE 2

Location		WA-14			WA-15			WA-16			WA-17			SH-1		
Sample ID	New York RSCOs	PI-2BWA14-110807SO02			PI-2BWA15-110707SO04			PI-2BWA16-110807SO03			PI-2BWA17-110907SO01			PI-2BSH01-110907SO03		
Lab Sample No.		AC34275-004			AC34160-004			AC34275-005			AC34274-007			AC34274-001		
Sampling Date		11/8/2007			11/7/2007			11/8/2007			11/9/2007			11/9/2007		
Matrix		SOLID			SOLID			SOLID			SOLID			SOLID		
Sample Depth (feet bgs)		3-3.5			6-6.5			4.5-5			1.5-2			4.5-5		
Semivolatile Organic Compounds (SVOCs)		Conc	MDL	Qual	Conc	MDL	Qual	Conc	MDL	Qual	Conc	MDL	Qual	Conc	MDL	Qual
1,2,4-Trichlorobenzene	3.4	ND	0.38		ND	0.42		ND	2.90		ND	0.41		ND	0.41	
1,2-Diphenylhydrazine	NS	ND	0.38		ND	0.42		ND	2.90		ND	0.41		ND	0.41	
2,4,5-Trichlorophenol	0.1	ND	0.38		ND	0.42		ND	2.90		ND	0.41		ND	0.41	
2,4,6-Trichlorophenol	NS	ND	0.38		ND	0.42		ND	2.90		ND	0.41		ND	0.41	
2,4-Dichlorophenol	0.4	ND	0.38		ND	0.42		ND	2.90		ND	0.41		ND	0.41	
2,4-Dimethylphenol	NS	ND	0.38		ND	0.42		ND	2.90		ND	0.41		ND	0.41	
2,4-Dinitrophenol	0.2	ND	0.96		ND	1.00		ND	7.30		ND	1.00		ND	1.00	
2,4-Dinitrotoluene	NS	ND	0.38		ND	0.42		ND	2.90		ND	0.41		ND	0.41	
2,6-Dinitrotoluene	1	ND	0.38		ND	0.42		ND	2.90		ND	0.41		ND	0.41	
2-Chloronaphthalene	NS	ND	0.38		ND	0.42		ND	2.90		ND	0.41		ND	0.41	
2-Chlorophenol	0.8	ND	0.38		ND	0.42		ND	2.90		ND	0.41		ND	0.41	
2-Methylnaphthalene	36.4	0.37	0.38	J	ND	0.42		ND	2.90		ND	0.41		0.36	0.41	J
2-Methylphenol	0.1	ND	0.38		ND	0.42		ND	2.90		ND	0.41		ND	0.41	
2-Nitroaniline	0.43	ND	0.38		ND	0.42		ND	2.90		ND	0.41		ND	0.41	
2-Nitrophenol	0.33	ND	0.38		ND	0.42		ND	2.90		ND	0.41		ND	0.41	
3&4-Methylphenol	0.9	ND	0.38		ND	0.42		ND	2.90		ND	0.41		ND	0.41	
3,3'-Dichlorobenzidine	NS	ND	0.38		ND	0.42		ND	2.90		ND	0.41		ND	0.41	
3-Nitroaniline	0.5	ND	0.38		ND	0.42		ND	2.90		ND	0.41		ND	0.41	
4,6-Dinitro-2-methylphenol	NS	ND	0.96		ND	1.00		ND	7.30		ND	1.00		ND	1.00	
4-Bromophenyl-phenylether	NS	ND	0.38		ND	0.42		ND	2.90		ND	0.41		ND	0.41	
4-Chloro-3-methylphenol	0.24	ND	0.38		ND	0.42		ND	2.90		ND	0.41		ND	0.41	
4-Chloroaniline	0.22	ND	0.38		ND	0.42		ND	2.90		ND	0.41		ND	0.41	
4-Chlorophenyl-phenylether	NS	ND	0.38		ND	0.42		ND	2.90		ND	0.41		ND	0.41	
4-Nitroaniline	NS	ND	0.38		ND	0.42		ND	2.90		ND	0.41		ND	0.41	
4-Nitrophenol	0.1	ND	0.38		ND	0.42		ND	2.90		ND	0.41		ND	0.41	
Acenaphthene	50	0.35	0.38	J	ND	0.42		0.78	2.90	J	0.30	0.41	J	0.14	0.41	J
Acenaphthylene	41	0.60	0.38		ND	0.42		ND	2.90		0.19	0.41	J	0.15	0.41	J
Aniline	0.1	ND	0.38		ND	0.42		ND	2.90		ND	0.41		ND	0.41	
Anthracene	50	0.38	0.38	J	ND	0.42		0.53	2.90	J	0.31	0.41	J	0.29	0.41	J
Benzidine	NS	ND	0.38		ND	0.42		ND	2.90		ND	0.41		ND	0.41	
Benzo[a]anthracene	0.224	1.70	0.38		ND	0.42		0.69	2.90	J	0.59	0.41		1.10	0.41	
Benzo[a]pyrene	0.061	1.90	0.38		ND	0.42		0.56	2.90	J	0.54	0.41		1.10	0.41	
Benzo[b]fluoranthene	1.1	2.90	0.38		ND	0.42		1.30	2.90	J	0.93	0.41		1.50	0.41	
Benzo[g,h,i]perylene	50	1.70	0.38		ND	0.42		0.67	2.90	J	0.49	0.41		0.79	0.41	
Benzo[k]fluoranthene	1.1	0.98	0.38		ND	0.42		0.33	2.90	J	0.28	0.41	J	0.48	0.41	
Benzyl alcohol	NS	ND	0.38		ND	0.42		ND	7.30		ND	0.41		ND	0.41	
Bis(2-Chloroethoxy)methane	NS	ND	0.38		ND	0.42		ND	2.90		ND	0.41		ND	0.41	
Bis(2-Chloroethyl)ether	NS	ND	0.38		ND	0.42		ND	2.90		ND	0.41		ND	0.41	
Bis(2-Chloroisopropyl)ether	NS	ND	0.38		ND	0.42		ND	2.90		ND	0.41		ND	0.41	
Bis(2-Ethylhexyl)phthalate	50	0.09	0.38	J	ND	0.42		ND	2.90		ND	0.41		0.05	0.41	J
Butylbenzylphthalate	50	ND	0.38		ND	0.42		ND	2.90		ND	0.41		ND	0.41	
Carbazole	NS	0.10	0.38	J	ND	0.42		ND	2.90		ND	0.41		ND	0.41	
Chrysene	0.4	2.10	0.38		ND	0.42		1.50	2.90	J	0.67	0.41		1.20	0.41	
Dibenzo[a,h]anthracene	0.014	0.48	0.38		ND	0.42		ND	2.90		0.16	0.41	J	0.23	0.41	J
Dibenzofuran	6.2	0.21	0.38	J	ND	0.42		ND	2.90		0.24	0.41	J	ND	0.41	
Diethylphthalate	7.1	ND	0.38		ND	0.42		ND	2.90		ND	0.41		ND	0.41	
Dimethylphthalate	2	ND	0.38		ND	0.42		ND	2.90		ND	0.41		ND	0.41	
Di-n-butylphthalate	8.1	ND	0.38		ND	0.42		ND	2.90		ND	0.41		ND	0.41	
Di-n-octylphthalate	50	ND	0.38		ND	0.42		ND	2.90		ND	0.41		ND	0.41	
Fluoranthene	50	3.60	0.38		ND	0.42		2.00	2.90	J	1.30	0.41		1.80	0.41	
Fluorene	50	0.17	0.38	J	ND	0.42		0.41	2.90	J	0.25	0.41	J	0.24	0.41	J
Hexachlorobenzene	0.41	ND	0.38		ND	0.42		ND	2.90		ND	0.41		ND	0.41	
Hexachlorobutadiene	NS	ND	0.38		ND	0.42		ND	2.90		ND	0.41		ND	0.41	
Hexachlorocyclopentadiene	NS	ND	0.38		ND	0.42		ND	2.90		ND	0.41		ND	0.41	
Hexachloroethane	NS	ND	0.38		ND	0.42		ND	2.90		ND	0.41		ND	0.41	
Indeno[1,2,3-cd]pyrene	3.2	1.60	0.38		ND	0.42		0.50	2.90	J	0.41	0.41	J	0.64	0.41	
Isophorone	4.4	ND	0.38		ND	0.42		ND	2.90		ND	0.41		ND	0.41	
Naphthalene	13	0.23	0.38	J	ND	0.42		0.32	2.90	J	0.21	0.41	J	0.34	0.41	J
Nitrobenzene	0.2	ND	0.38		ND	0.42		ND	2.90		ND	0.41		ND	0.41	
N-Nitrosodimethylamine	NS	ND	0.38		ND	0.42		ND	2.90		ND	0.41		ND	0.41	
N-Nitroso-di-n-propylamine	NS	ND	0.38		ND	0.42		ND	2.90		ND	0.41		ND	0.41	
N-Nitrosodiphenylamine	NS	ND	0.38		ND	0.42		ND	2.90		ND	0.41		ND	0.41	
Pentachlorophenol	1	ND	1.90		ND	2.10		ND	7.30		ND	2.10		ND	2.00	
Phenanthrene	50	0.88	0.38		ND	0.42		1.10	2.90	J	0.61	0.41		1.30	0.41	
Phenol	0.03	ND	0.38		ND	0.42		ND	2.90		ND	0.41		ND	0.41	
Pyrene	50	3.80	0.38		ND	0.42		1.90	2.90	J	1.40	0.41		2.30	0.41	
Total SVOC TICs	NS	71.86		J	52.23		J	248.00		J	50.02		J	82.25		J

Notes and Abbreviations

1) Bold concentrations in shaded cells exceed the RSCOs

2) Duplicate samples collected from SH-5D and TE-4D.

mg/Kg = milligrams per kilogram (all units reported in mg/kg).

RSCOs = Recommended Soil Cleanup Objectives from the Technical and Administrative Guidance Memorandum # 4046, dated January 24, 1994.

NA = Not analyzed

NS = No Standard

Conc = Concentration

MDL = Quantitation Limit

Qual = Laboratory Data Qualifier

ND = The compound was not detected

B = The analyte was found in the laboratory blank and the sample. This indicates possible laboratory contamination of the sample.

J = The compound was detected at a concentration below the calibration range. The concentration is estimated.

Feet bgs = Feet below ground surface

TICs = Tentatively identified compounds

TABLE 2B
SUMMARY OF SOIL ANALYTICAL RESULTS-SVOCS
HHMT-PORT IVORY FACILITY
SITE 2

Location		SH-2			SH-3			SH-4			SH-5			SH-5D		
Sample ID	New York RSCOs	PI-2BSH-2-112007SO02			PI-2BSH-3-112007SO04			PI-2BSH04-110907SO03			PI-2BSH05-110907SO03			PI-2BSH5D-112107SO02		
Lab Sample No.		AC34438-002			AC34438-003			AC34274-002			AC34274-003			AC34483-002		
Sampling Date		11/20/2007			11/20/2007			11/9/2007			11/9/2007			11/21/2007		
Matrix		SOLID			SOLID			SOLID			SOLID			SOLID		
Sample Depth (feet bgs)		3.5-4			5.5-6			4.5-5			3.5-4			3.5-4		
Semivolatile Organic Compounds (SVOCs)		Conc	MDL	Qual	Conc	MDL	Qual	Conc	MDL	Qual	Conc	MDL	Qual	Conc	MDL	Qual
1,2,4-Trichlorobenzene	3.4	ND	0.43		ND	0.39		ND	0.40		ND	19.00		ND	0.40	
1,2-Diphenylhydrazine	NS	ND	0.43		ND	0.39		ND	0.40		ND	19.00		ND	0.40	
2,4,5-Trichlorophenol	0.1	ND	0.43		ND	0.39		ND	0.40		ND	19.00		ND	0.40	
2,4,6-Trichlorophenol	NS	ND	0.43		ND	0.39		ND	0.40		ND	19.00		ND	0.40	
2,4-Dichlorophenol	0.4	ND	0.43		ND	0.39		ND	0.40		ND	19.00		ND	0.40	
2,4-Dimethylphenol	NS	ND	0.43		ND	0.39		ND	0.40		ND	19.00		ND	0.40	
2,4-Dinitrophenol	0.2	ND	1.10		ND	0.97		ND	0.99		ND	47.00		ND	0.99	
2,4-Dinitrotoluene	NS	ND	0.43		ND	0.39		ND	0.40		ND	19.00		ND	0.40	
2,6-Dinitrotoluene	1	ND	0.43		ND	0.39		ND	0.40		ND	19.00		ND	0.40	
2-Chloronaphthalene	NS	ND	0.43		ND	0.39		ND	0.40		ND	19.00		ND	0.40	
2-Chlorophenol	0.8	ND	0.43		ND	0.39		ND	0.40		ND	19.00		ND	0.40	
2-Methylnaphthalene	36.4	ND	0.43		ND	0.39		ND	0.40		ND	19.00		ND	0.40	
2-Methylphenol	0.1	ND	0.43		ND	0.39		ND	0.40		ND	19.00		ND	0.40	
2-Nitroaniline	0.43	ND	0.43		ND	0.39		ND	0.40		ND	19.00		ND	0.40	
2-Nitrophenol	0.33	ND	0.43		ND	0.39		ND	0.40		ND	19.00		ND	0.40	
3&4-Methylphenol	0.9	ND	0.43		ND	0.39		ND	0.40		ND	19.00		ND	0.40	
3,3'-Dichlorobenzidine	NS	ND	0.43		ND	0.39		ND	0.40		ND	19.00		ND	0.40	
3-Nitroaniline	0.5	ND	0.43		ND	0.39		ND	0.40		ND	19.00		ND	0.40	
4,6-Dinitro-2-methylphenol	NS	ND	1.10		ND	0.97		ND	0.99		ND	47.00		ND	0.99	
4-Bromophenyl-phenylether	NS	ND	0.43		ND	0.39		ND	0.40		ND	19.00		ND	0.40	
4-Chloro-3-methylphenol	0.24	ND	0.43		ND	0.39		ND	0.40		ND	19.00		ND	0.40	
4-Chloroaniline	0.22	ND	0.43		ND	0.39		ND	0.40		ND	19.00		ND	0.40	
4-Chlorophenyl-phenylether	NS	ND	0.43		ND	0.39		ND	0.40		ND	19.00		ND	0.40	
4-Nitroaniline	NS	ND	0.43		ND	0.39		ND	0.40		ND	19.00		ND	0.40	
4-Nitrophenol	0.1	ND	0.43		ND	0.39		ND	0.40		ND	19.00		ND	0.40	
Acenaphthene	50	ND	0.43		ND	0.39		0.17	0.40	J	ND	19.00		ND	0.40	
Acenaphthylene	41	ND	0.43		ND	0.39		0.12	0.40	J	ND	19.00		0.08	0.40	J
Aniline	0.1	ND	0.43		ND	0.39		ND	0.40		ND	19.00		ND	0.40	
Anthracene	50	0.10	0.43	J	ND	0.39		0.72	0.40		ND	19.00		0.10	0.40	J
Benzidine	NS	ND	0.43		ND	0.39		ND	0.40		ND	19.00		ND	0.40	
Benzo[a]anthracene	0.224	0.59	0.43		0.04	0.39	J	2.70	0.40		ND	19.00		0.27	0.40	J
Benzo[a]pyrene	0.061	0.48	0.43		ND	0.39		2.00	0.40		ND	19.00		0.28	0.40	J
Benzo[b]fluoranthene	1.1	0.63	0.43		0.06	0.39	J	3.30	0.40		2.70	19.00	J	0.48	0.40	
Benzo[g,h,i]perylene	50	0.35	0.43	J	ND	0.39		1.00	0.40		ND	19.00		0.29	0.40	J
Benzo[k]fluoranthene	1.1	0.24	0.43	J	ND	0.39		1.20	0.40		ND	19.00		0.15	0.40	J
Benzyl alcohol	NS	ND	0.43		ND	0.97		ND	0.40		ND	19.00		ND	0.40	
Bis(2-Chloroethoxy)methane	NS	ND	0.43		ND	0.39		ND	0.40		ND	19.00		ND	0.40	
Bis(2-Chloroethyl)ether	NS	ND	0.43		ND	0.39		ND	0.40		ND	19.00		ND	0.40	
Bis(2-Chloroisopropyl)ether	NS	ND	0.43		ND	0.39		ND	0.40		ND	19.00		ND	0.40	
Bis(2-Ethylhexyl)phthalate	50	0.09	0.43	J	ND	0.39		0.09	0.40	J	170.00	19.00		0.22	0.40	J
Butylbenzylphthalate	50	ND	0.43		ND	0.39		ND	0.40		33.00	19.00		ND	0.40	
Carbazole	NS	ND	0.43		ND	0.39		ND	0.40		ND	19.00		ND	0.40	
Chrysene	0.4	0.54	0.43		0.04	0.39	J	3.20	0.40		ND	19.00		0.29	0.40	J
Dibenzo[a,h]anthracene	0.014	0.11	0.43	J	ND	0.39		0.37	0.40	J	ND	19.00		0.10	0.40	J
Dibenzofuran	6.2	ND	0.43		ND	0.39		ND	0.40		ND	19.00		ND	0.40	
Diethylphthalate	7.1	ND	0.43		ND	0.39		ND	0.40		ND	19.00		ND	0.40	
Dimethylphthalate	2	ND	0.43		ND	0.39		ND	0.40		ND	19.00		ND	0.40	
Di-n-butylphthalate	8.1	ND	0.43		ND	0.39		ND	0.40		ND	19.00		0.09	0.40	J
Di-n-octylphthalate	50	ND	0.43		ND	0.39		ND	0.40		ND	19.00		ND	0.40	
Fluoranthene	50	1.00	0.43		0.07	0.39	J	4.40	0.40		ND	19.00		0.38	0.40	J
Fluorene	50	ND	0.43		ND	0.39		0.20	0.40	J	ND	19.00		0.04	0.40	J
Hexachlorobenzene	0.41	ND	0.43		ND	0.39		ND	0.40		ND	19.00		ND	0.40	
Hexachlorobutadiene	NS	ND	0.43		ND	0.39		ND	0.40		ND	19.00		ND	0.40	
Hexachlorocyclopentadiene	NS	ND	0.43		ND	0.39		ND	0.40		ND	19.00		ND	0.40	
Hexachloroethane	NS	ND	0.43		ND	0.39		ND	0.40		ND	19.00		ND	0.40	
Indeno[1,2,3-cd]pyrene	3.2	0.33	0.43	J	ND	0.39		0.95	0.40		ND	19.00		0.23	0.40	J
Isophorone	4.4	ND	0.43		ND	0.39		ND	0.40		ND	19.00		ND	0.40	
Naphthalene	13	0.06	0.43	J	ND	0.39		0.15	0.40	J	ND	19.00		0.14	0.40	J
Nitrobenzene	0.2	ND	0.43		ND	0.39		ND	0.40		ND	19.00		ND	0.40	
N-Nitrosodimethylamine	NS	ND	0.43		ND	0.39		ND	0.40		ND	19.00		ND	0.40	
N-Nitroso-di-n-propylamine	NS	ND	0.43		ND	0.39		ND	0.40		ND	19.00		ND	0.40	
N-Nitrosodiphenylamine	NS	ND	0.43		ND	0.39		ND	0.40		ND	19.00		ND	0.40	
Pentachlorophenol	1	ND	2.10		ND	0.97		ND	2.00		ND	95.00		ND	2.00	
Phenanthrene	50	0.48	0.43		ND	0.39		1.60	0.40		ND	19.00		0.22	0.40	J
Phenol	0.03	ND	0.43		ND	0.39		ND	0.40		ND	19.00		ND	0.40	
Pyrene	50	0.96	0.43		0.08	0.39	J	5.80	0.40		1.90	19.00	J	0.45	0.40	
Total SVOC TICs	NS	93.65		J	51.70		J	279.40		J	43.00		J	157.80		J

Notes and Abbreviations

1) Bold concentrations in shaded cells exceed the RSCOs

2) Duplicate samples collected from SH-5D and TE-4D.

mg/Kg = milligrams per kilogram (all units reported in mg/kg).

RSCOs = Recommended Soil Cleanup Objectives from the Technical and Administrative Guidance Memorandum # 4046, dated January 24, 1994.

NA = Not analyzed

NS = No Standard

Conc = Concentration

MDL = Quantitation Limit

Qual = Laboratory Data Qualifier

ND = The compound was not detected

B = The analyte was found in the laboratory blank and the sample. This indicates possible laboratory contamination of the sample.

J = The compound was detected at a concentration below the calibration range. The concentration is estimated.

Feet bgs = Feet below ground surface

TICs = Tentatively identified compounds

TABLE 2B
SUMMARY OF SOIL ANALYTICAL RESULTS-SVOCS
HHMT-PORT IVORY FACILITY
SITE 2

Location		SH-6			SH-7			SH-8			SH-9			SH-10		
Sample ID	New York RSCOs	PI-2BSH06-110907SO04			PI-2BSH07-110907SO02			PI-2BSH-8-111507SO03			PI-2BSH09-111207SO03			PI-2BSH10-111407SO04		
Lab Sample No.		AC34274-004			AC34274-005			AC34394-007			AC34274-009			AC34355-002		
Sampling Date		11/9/2007			11/9/2007			11/15/2007			11/12/2007			11/14/2007		
Matrix		SOLID			SOLID			SOLID			SOLID			SOLID		
Sample Depth (feet bgs)		5-5.5			3.5-4			4.5-5			5-5.5			6-6.5		
Semivolatile Organic Compounds (SVOCs)		Conc	MDL	Qual	Conc	MDL	Qual	Conc	MDL	Qual	Conc	MDL	Qual	Conc	MDL	Qual
1,2,4-Trichlorobenzene	3.4	ND	0.39		ND	0.40		ND	0.39		ND	0.41		ND	0.40	
1,2-Diphenylhydrazine	NS	ND	0.39		ND	0.40		ND	0.39		ND	0.41		ND	0.40	
2,4,5-Trichlorophenol	0.1	ND	0.39		ND	0.40		ND	0.39		ND	0.41		ND	0.40	
2,4,6-Trichlorophenol	NS	ND	0.39		ND	0.40		ND	0.39		ND	0.41		ND	0.40	
2,4-Dichlorophenol	0.4	ND	0.39		ND	0.40		ND	0.39		ND	0.41		ND	0.40	
2,4-Dimethylphenol	NS	ND	0.39		ND	0.40		ND	0.39		ND	0.41		ND	0.40	
2,4-Dinitrophenol	0.2	ND	0.97		ND	0.99		ND	0.98		ND	1.00		ND	0.99	
2,4-Dinitrotoluene	NS	ND	0.39		ND	0.40		ND	0.39		ND	0.41		ND	0.40	
2,6-Dinitrotoluene	1	ND	0.39		ND	0.40		ND	0.39		ND	0.41		ND	0.40	
2-Chloronaphthalene	NS	ND	0.39		ND	0.40		ND	0.39		ND	0.41		ND	0.40	
2-Chlorophenol	0.8	ND	0.39		ND	0.40		ND	0.39		ND	0.41		ND	0.40	
2-Methylnaphthalene	36.4	0.32	0.39	J	0.35	0.40	J	ND	0.39		ND	0.41		ND	0.40	
2-Methylphenol	0.1	ND	0.39		ND	0.40		ND	0.39		ND	0.41		ND	0.40	
2-Nitroaniline	0.43	ND	0.39		ND	0.40		ND	0.39		ND	0.41		ND	0.40	
2-Nitrophenol	0.33	ND	0.39		ND	0.40		ND	0.39		ND	0.41		ND	0.40	
3&4-Methylphenol	0.9	ND	0.39		ND	0.40		ND	0.39		ND	0.41		ND	0.40	
3,3'-Dichlorobenzidine	NS	ND	0.39		ND	0.40		ND	0.39		ND	0.41		ND	0.40	
3-Nitroaniline	0.5	ND	0.39		ND	0.40		ND	0.39		ND	0.41		ND	0.40	
4,6-Dinitro-2-methylphenol	NS	ND	0.97		ND	0.99		ND	0.98		ND	1.00		ND	0.99	
4-Bromophenyl-phenylether	NS	ND	0.39		ND	0.40		ND	0.39		ND	0.41		ND	0.40	
4-Chloro-3-methylphenol	0.24	ND	0.39		ND	0.40		ND	0.39		ND	0.41		ND	0.40	
4-Chloroaniline	0.22	ND	0.39		ND	0.40		ND	0.39		ND	0.41		ND	0.40	
4-Chlorophenyl-phenylether	NS	ND	0.39		ND	0.40		ND	0.39		ND	0.41		ND	0.40	
4-Nitroaniline	NS	ND	0.39		ND	0.40		ND	0.39		ND	0.41		ND	0.40	
4-Nitrophenol	0.1	ND	0.39		ND	0.40		ND	0.39		ND	0.41		ND	0.40	
Acenaphthene	50	0.86	0.39		1.40	0.40		ND	0.39		ND	0.41		ND	0.40	
Acenaphthylene	41	0.16	0.39	J	0.25	0.40	J	0.11	0.39	J	ND	0.41		ND	0.40	
Aniline	0.1	ND	0.39		ND	0.40		ND	0.39		ND	0.41		ND	0.40	
Anthracene	50	0.48	0.39		0.75	0.40		0.13	0.39	J	ND	0.41		ND	0.40	
Benzidine	NS	ND	0.39		ND	0.40		ND	0.39		ND	0.41		ND	0.40	
Benzo[a]anthracene	0.224	0.94	0.39		1.50	0.40		0.68	0.39		ND	0.41		ND	0.40	
Benzo[a]pyrene	0.061	0.81	0.39		1.40	0.40		0.73	0.39		ND	0.41		ND	0.40	
Benzo[b]fluoranthene	1.1	1.20	0.39		2.00	0.40		0.93	0.39		ND	0.41		0.04	0.40	J
Benzo[g,h,i]perylene	50	0.63	0.39		1.00	0.40		0.61	0.39		ND	0.41		ND	0.40	
Benzo[k]fluoranthene	1.1	0.39	0.39		0.58	0.40		0.32	0.39	J	ND	0.41		ND	0.40	
Benzyl alcohol	NS	ND	0.39		ND	0.40		ND	0.39		ND	0.41		ND	0.99	
Bis(2-Chloroethoxy)methane	NS	ND	0.39		ND	0.40		ND	0.39		ND	0.41		ND	0.40	
Bis(2-Chloroethyl)ether	NS	ND	0.39		ND	0.40		ND	0.39		ND	0.41		ND	0.40	
Bis(2-Chloroisopropyl)ether	NS	ND	0.39		ND	0.40		ND	0.39		ND	0.41		ND	0.40	
Bis(2-Ethylhexyl)phthalate	50	0.05	0.39	J	ND	0.40		ND	0.39		ND	0.41		ND	0.40	
Butylbenzylphthalate	50	ND	0.39		ND	0.40		ND	0.39		ND	0.41		ND	0.40	
Carbazole	NS	ND	0.39		ND	0.40		ND	0.39		ND	0.41		ND	0.40	
Chrysene	0.4	1.00	0.39		1.50	0.40		0.77	0.39		ND	0.41		ND	0.40	
Dibenzo[a,h]anthracene	0.014	0.20	0.39	J	0.33	0.40	J	0.19	0.39	J	ND	0.41		ND	0.40	
Dibenzofuran	6.2	0.51	0.39		0.33	0.40	J	ND	0.39		ND	0.41		ND	0.40	
Diethylphthalate	7.1	ND	0.39		ND	0.40		ND	0.39		ND	0.41		ND	0.40	
Dimethylphthalate	2	ND	0.39		ND	0.40		ND	0.39		ND	0.41		ND	0.40	
Di-n-butylphthalate	8.1	ND	0.39		ND	0.40		ND	0.39		ND	0.41		ND	0.40	
Di-n-octylphthalate	50	ND	0.39		ND	0.40		ND	0.39		ND	0.41		ND	0.40	
Fluoranthene	50	2.00	0.39		2.90	0.40		0.80	0.39		0.06	0.41	J	0.05	0.40	J
Fluorene	50	0.64	0.39		0.56	0.40		0.05	0.39	J	ND	0.41		ND	0.40	
Hexachlorobenzene	0.41	ND	0.39		ND	0.40		ND	0.39		ND	0.41		ND	0.40	
Hexachlorobutadiene	NS	ND	0.39		ND	0.40		ND	0.39		ND	0.41		ND	0.40	
Hexachlorocyclopentadiene	NS	ND	0.39		ND	0.40		ND	0.39		ND	0.41		ND	0.40	
Hexachloroethane	NS	ND	0.39		ND	0.40		ND	0.39		ND	0.41		ND	0.40	
Indeno[1,2,3-cd]pyrene	3.2	0.51	0.39		0.90	0.40		0.47	0.39		ND	0.41		ND	0.40	
Isophorone	4.4	ND	0.39		ND	0.40		ND	0.39		ND	0.41		ND	0.40	
Naphthalene	13	0.40	0.39		0.27	0.40	J	0.19	0.39	J	ND	0.41		ND	0.40	
Nitrobenzene	0.2	ND	0.39		ND	0.40		ND	0.39		ND	0.41		ND	0.40	
N-Nitrosodimethylamine	NS	ND	0.39		ND	0.40		ND	0.39		ND	0.41		ND	0.40	
N-Nitroso-di-n-propylamine	NS	ND	0.39		ND	0.40		ND	0.39		ND	0.41		ND	0.40	
N-Nitrosodiphenylamine	NS	ND	0.39		ND	0.40		ND	0.39		ND	0.41		ND	0.40	
Pentachlorophenol	1	ND	1.90		ND	2.00		ND	2.00		ND	2.00		ND	0.99	
Phenanthrene	50	2.80	0.39		2.00	0.40		0.49	0.39		0.07	0.41	J	ND	0.40	
Phenol	0.03	ND	0.39		ND	0.40		ND	0.39		ND	0.41		ND	0.40	
Pyrene	50	2.40	0.39		3.50	0.40		1.20	0.39		0.07	0.41	J	0.05	0.40	J
Total SVOC TICs	NS	65.19		J	69.18		J	82.56		J	62.51		J	40.47		J

Notes and Abbreviations

1) Bold concentrations in shaded cells exceed the RSCOs
2) Duplicate samples collected from SH-5D and TE-4D.

mg/Kg = milligrams per kilogram (all units reported in mg/kg).
RSCOs = Recommended Soil Cleanup Objectives from the Technical and Administrative Guidance Memorandum # 4046, dated January 24, 1994.
NA = Not analyzed
NS = No Standard
Conc = Concentration
MDL = Quantitation Limit
Qual = Laboratory Data Qualifier
ND = The compound was not detected
B = The analyte was found in the laboratory blank and the sample. This indicates possible laboratory contamination of the sample.
J = The compound was detected at a concentration below the calibration range. The concentration is estimated.
Feet bgs = Feet below ground surface
TICs = Tentatively identified compounds

TABLE 2B
SUMMARY OF SOIL ANALYTICAL RESULTS-SVOCS
HHMT-PORT IVORY FACILITY
SITE 2

Location		SH-11			SH-12			TE-2			TE-3			TE-4		
Sample ID	New York RSCOs	PI-2BSH11-111307SO03			PI-2BSH12-111207SO03			PI-2BTE-2-110907O03			PI-2BTE-3-111407SO03			PI-2BTE-4-111207SO05		
Lab Sample No.		AC34289-001			AC34394-004			AC34394-002			AC34394-005			AC34394-008		
Sampling Date		11/13/2007			11/12/2007			11/9/2007			11/14/2007			11/16/2007		
Matrix		SOLID			SOLID			SOLID			SOLID			SOLID		
Sample Depth (feet bgs)		4-4.5			4.5-5			4.5-5			4.5-5			6-6.5		
Semivolatile Organic Compounds (SVOCs)		Conc	MDL	Qual	Conc	MDL	Qual	Conc	MDL	Qual	Conc	MDL	Qual	Conc	MDL	Qual
1,2,4-Trichlorobenzene	3.4	ND	0.40		ND	0.39		ND	0.39		ND	0.39		ND	0.39	
1,2-Diphenylhydrazine	NS	ND	0.40		ND	0.39		ND	0.39		ND	0.39		ND	0.39	
2,4,5-Trichlorophenol	0.1	ND	0.40		ND	0.39		ND	0.39		ND	0.39		ND	0.39	
2,4,6-Trichlorophenol	NS	ND	0.40		ND	0.39		ND	0.39		ND	0.39		ND	0.39	
2,4-Dichlorophenol	0.4	ND	0.40		ND	0.39		ND	0.39		ND	0.39		ND	0.39	
2,4-Dimethylphenol	NS	ND	0.40		ND	0.39		ND	0.39		ND	0.39		ND	0.39	
2,4-Dinitrophenol	0.2	ND	1.00		ND	0.98		ND	0.97		ND	0.97		ND	0.97	
2,4-Dinitrotoluene	NS	ND	0.40		ND	0.39		ND	0.39		ND	0.39		ND	0.39	
2,6-Dinitrotoluene	1	ND	0.40		ND	0.39		ND	0.39		ND	0.39		ND	0.39	
2-Chloronaphthalene	NS	ND	0.40		ND	0.39		ND	0.39		ND	0.39		ND	0.39	
2-Chlorophenol	0.8	ND	0.40		ND	0.39		ND	0.39		ND	0.39		ND	0.39	
2-Methylnaphthalene	36.4	ND	0.40		ND	0.39		ND	0.39		ND	0.39		ND	0.39	
2-Methylphenol	0.1	ND	0.40		ND	0.39		ND	0.39		ND	0.39		ND	0.39	
2-Nitroaniline	0.43	ND	0.40		ND	0.39		ND	0.39		ND	0.39		ND	0.39	
2-Nitrophenol	0.33	ND	0.40		ND	0.39		ND	0.39		ND	0.39		ND	0.39	
3&4-Methylphenol	0.9	ND	0.40		ND	0.39		ND	0.39		ND	0.39		ND	0.39	
3,3'-Dichlorobenzidine	NS	ND	0.40		ND	0.39		ND	0.39		ND	0.39		ND	0.39	
3-Nitroaniline	0.5	ND	0.40		ND	0.39		ND	0.39		ND	0.39		ND	0.39	
4,6-Dinitro-2-methylphenol	NS	ND	1.00		ND	0.98		ND	0.97		ND	0.97		ND	0.97	
4-Bromophenyl-phenylether	NS	ND	0.40		ND	0.39		ND	0.39		ND	0.39		ND	0.39	
4-Chloro-3-methylphenol	0.24	ND	0.40		ND	0.39		ND	0.39		ND	0.39		ND	0.39	
4-Chloroaniline	0.22	ND	0.40		ND	0.39		ND	0.39		ND	0.39		ND	0.39	
4-Chlorophenyl-phenylether	NS	ND	0.40		ND	0.39		ND	0.39		ND	0.39		ND	0.39	
4-Nitroaniline	NS	ND	0.40		ND	0.39		ND	0.39		ND	0.39		ND	0.39	
4-Nitrophenol	0.1	ND	0.40		ND	0.39		ND	0.39		ND	0.39		ND	0.39	
Acenaphthene	50	ND	0.40		ND	0.39		ND	0.39		ND	0.39		ND	0.39	
Acenaphthylene	41	ND	0.40		ND	0.39		ND	0.39		ND	0.39		ND	0.39	
Aniline	0.1	ND	0.40		ND	0.39		ND	0.39		ND	0.39		ND	0.39	
Anthracene	50	ND	0.40		ND	0.39		0.10	0.39	J	ND	0.39		ND	0.39	
Benzidine	NS	ND	0.40		ND	0.39		ND	0.39		ND	0.39		ND	0.39	
Benzo[a]anthracene	0.224	ND	0.40		ND	0.39		0.16	0.39	J	0.10	0.39	J	ND	0.39	
Benzo[a]pyrene	0.061	0.12	0.40	J	ND	0.39		0.13	0.39	J	0.09	0.39	J	ND	0.39	
Benzo[b]fluoranthene	1.1	ND	0.40		ND	0.39		0.22	0.39	J	0.12	0.39	J	0.04	0.39	J
Benzo[g,h,i]perylene	50	ND	0.40		ND	0.39		0.10	0.39	J	0.09	0.39	J	ND	0.39	
Benzo[k]fluoranthene	1.1	ND	0.40		ND	0.39		0.08	0.39	J	0.05	0.39	J	ND	0.39	
Benzyl alcohol	NS	ND	1.00		ND	0.98		ND	0.97		ND	0.39		ND	0.97	
Bis(2-Chloroethoxy)methane	NS	ND	0.40		ND	0.39		ND	0.39		ND	0.39		ND	0.39	
Bis(2-Chloroethyl)ether	NS	ND	0.40		ND	0.39		ND	0.39		ND	0.39		ND	0.39	
Bis(2-Chloroisopropyl)ether	NS	ND	0.40		ND	0.39		ND	0.39		ND	0.39		ND	0.39	
Bis(2-Ethylhexyl)phthalate	50	ND	0.40		ND	0.39		0.06	0.39	J	ND	0.39		ND	0.39	
Butylbenzylphthalate	50	ND	0.40		ND	0.39		ND	0.39		ND	0.39		ND	0.39	
Carbazole	NS	ND	0.40		ND	0.39		ND	0.39		ND	0.39		ND	0.39	
Chrysene	0.4	ND	0.40		ND	0.39		0.20	0.39	J	0.10	0.39	J	ND	0.39	
Dibenzo[a,h]anthracene	0.014	ND	0.40		ND	0.39		ND	0.39		ND	0.39		ND	0.39	
Dibenzofuran	6.2	ND	0.40		ND	0.39		ND	0.39		ND	0.39		ND	0.39	
Diethylphthalate	7.1	ND	0.40		ND	0.39		ND	0.39		ND	0.39		ND	0.39	
Dimethylphthalate	2	ND	0.40		ND	0.39		ND	0.39		ND	0.39		ND	0.39	
Di-n-butylphthalate	8.1	ND	0.40		ND	0.39		ND	0.39		ND	0.39		ND	0.39	
Di-n-octylphthalate	50	ND	0.40		ND	0.39		ND	0.39		ND	0.39		ND	0.39	
Fluoranthene	50	ND	0.40		0.04	0.39	J	0.54	0.39		0.16	0.39	J	0.06	0.39	J
Fluorene	50	ND	0.40		ND	0.39		ND	0.39		ND	0.39		ND	0.39	
Hexachlorobenzene	0.41	ND	0.40		ND	0.39		ND	0.39		ND	0.39		ND	0.39	
Hexachlorobutadiene	NS	ND	0.40		ND	0.39		ND	0.39		ND	0.39		ND	0.39	
Hexachlorocyclopentadiene	NS	ND	0.40		ND	0.39		ND	0.39		ND	0.39		ND	0.39	
Hexachloroethane	NS	ND	0.40		ND	0.39		ND	0.39		ND	0.39		ND	0.39	
Indeno[1,2,3-od]pyrene	3.2	ND	0.40		ND	0.39		0.07	0.39	J	0.07	0.39	J	ND	0.39	
Isophorone	4.4	ND	0.40		ND	0.39		ND	0.39		ND	0.39		ND	0.39	
Naphthalene	13	ND	0.40		ND	0.39		ND	0.39		ND	0.39		ND	0.39	
Nitrobenzene	0.2	ND	0.40		ND	0.39		ND	0.39		ND	0.39		ND	0.39	
N-Nitrosodimethylamine	NS	ND	0.40		ND	0.39		ND	0.39		ND	0.39		ND	0.39	
N-Nitroso-di-n-propylamine	NS	ND	0.40		ND	0.39		ND	0.39		ND	0.39		ND	0.39	
N-Nitrosodiphenylamine	NS	ND	0.40		ND	0.39		ND	0.39		ND	0.39		ND	0.39	
Pentachlorophenol	1	ND	1.00		ND	0.98		ND	0.97		ND	1.90		ND	0.97	
Phenanthrene	50	ND	0.40		ND	0.39		0.10	0.39	J	0.07	0.39	J	ND	0.39	
Phenol	0.03	ND	0.40		ND	0.39		ND	0.39		ND	0.39		ND	0.39	
Pyrene	50	ND	0.40		ND	0.39		0.43	0.39		0.17	0.39	J	0.06	0.39	J
Total SVOC TICs	NS	57.74		J	48.00		J	75.71		J	88.59		J	45.86		J

Notes and Abbreviations

1) Bold concentrations in shaded cells exceed the RSCOs

2) Duplicate samples collected from SH-5D and TE-4D.

mg/Kg = milligrams per kilogram (all units reported in mg/kg).

RSCOs = Recommended Soil Cleanup Objectives from the Technical and Administrative Guidance Memorandum # 4046, dated January 24, 1994.

NA = Not analyzed

NS = No Standard

Conc = Concentration

MDL = Quantitation Limit

Qual = Laboratory Data Qualifier

ND = The compound was not detected

B = The analyte was found in the laboratory blank and the sample. This indicates possible laboratory contamination of the sample.

J = The compound was detected at a concentration below the calibration range. The concentration is estimated.

Feet bgs = Feet below ground surface

TICs = Tentatively identified compounds

TABLE 2B
SUMMARY OF SOIL ANALYTICAL RESULTS-SVOCS
HHMT-PORT IVORY FACILITY
SITE 2

Location		TE-4D			TE-5			TE-6			TE-7			TE-8		
Sample ID	New York RSCOs	PI-2BTE-4D-111407SO05			PI-2BTE-5-111507SO05			PI-2BTE-6-111507SO03			PI-2BTE07-110907SO03			PI-2BTE-8-112007SO03		
Lab Sample No.		AC34394-009			AC34394-010			AC34394-006			AC34355-001			AC34438-001		
Sampling Date		11/16/2007			11/16/2007			11/15/2007			11/9/2007			11/20/2007		
Matrix		SOLID			SOLID			SOLID			SOLID			SOLID		
Sample Depth (feet bgs)		6-6.5			6.5-7			4.5-5			5.5-6			5.5-6		
Semivolatile Organic Compounds (SVOCs)		Conc	MDL	Qual	Conc	MDL	Qual	Conc	MDL	Qual	Conc	MDL	Qual	Conc	MDL	Qual
1,2,4-Trichlorobenzene	3.4	ND	0.39		ND	0.38		ND	0.39		ND	0.37		ND	0.40	
1,2-Diphenylhydrazine	NS	ND	0.39		ND	0.38		ND	0.39		ND	0.37		ND	0.40	
2,4,5-Trichlorophenol	0.1	ND	0.39		ND	0.38		ND	0.39		ND	0.37		ND	0.40	
2,4,6-Trichlorophenol	NS	ND	0.39		ND	0.38		ND	0.39		ND	0.37		ND	0.40	
2,4-Dichlorophenol	0.4	ND	0.39		ND	0.38		ND	0.39		ND	0.37		ND	0.40	
2,4-Dimethylphenol	NS	ND	0.39		ND	0.38		ND	0.39		ND	0.37		ND	0.40	
2,4-Dinitrophenol	0.2	ND	0.97		ND	0.96		ND	0.98		ND	0.94		ND	1.00	
2,4-Dinitrotoluene	NS	ND	0.39		ND	0.38		ND	0.39		ND	0.37		ND	0.40	
2,6-Dinitrotoluene	1	ND	0.39		ND	0.38		ND	0.39		ND	0.37		ND	0.40	
2-Chloronaphthalene	NS	ND	0.39		ND	0.38		ND	0.39		ND	0.37		ND	0.40	
2-Chlorophenol	0.8	ND	0.39		ND	0.38		ND	0.39		ND	0.37		ND	0.40	
2-Methylnaphthalene	36.4	ND	0.39		ND	0.38		ND	0.39		ND	0.37		ND	0.40	
2-Methylphenol	0.1	ND	0.39		ND	0.38		ND	0.39		ND	0.37		ND	0.40	
2-Nitroaniline	0.43	ND	0.39		ND	0.38		ND	0.39		ND	0.37		ND	0.40	
2-Nitrophenol	0.33	ND	0.39		ND	0.38		ND	0.39		ND	0.37		ND	0.40	
3&4-Methylphenol	0.9	ND	0.39		ND	0.38		ND	0.39		ND	0.37		ND	0.40	
3,3'-Dichlorobenzidine	NS	ND	0.39		ND	0.38		ND	0.39		ND	0.37		ND	0.40	
3-Nitroaniline	0.5	ND	0.39		ND	0.38		ND	0.39		ND	0.37		ND	0.40	
4,6-Dinitro-2-methylphenol	NS	ND	0.97		ND	0.96		ND	0.98		ND	0.94		ND	1.00	
4-Bromophenyl-phenylether	NS	ND	0.39		ND	0.38		ND	0.39		ND	0.37		ND	0.40	
4-Chloro-3-methylphenol	0.24	ND	0.39		ND	0.38		ND	0.39		ND	0.37		ND	0.40	
4-Chloroaniline	0.22	ND	0.39		ND	0.38		ND	0.39		ND	0.37		ND	0.40	
4-Chlorophenyl-phenylether	NS	ND	0.39		ND	0.38		ND	0.39		ND	0.37		ND	0.40	
4-Nitroaniline	NS	ND	0.39		ND	0.38		ND	0.39		ND	0.37		ND	0.40	
4-Nitrophenol	0.1	ND	0.39		ND	0.38		ND	0.39		ND	0.37		ND	0.40	
Acenaphthene	50	ND	0.39		ND	0.38		ND	0.39		ND	0.37		0.70	0.40	
Acenaphthylene	41	ND	0.39		ND	0.38		ND	0.39		ND	0.37		0.07	0.40	J
Aniline	0.1	ND	0.39		ND	0.38		ND	0.39		ND	0.37		ND	0.40	
Anthracene	50	ND	0.39		ND	0.38		ND	0.39		ND	0.37		1.60	0.40	
Benzidine	NS	ND	0.39		ND	0.38		ND	0.39		ND	0.37		ND	0.40	
Benzo[a]anthracene	0.224	ND	0.39		0.06	0.38	J	0.07	0.39	J	0.04	0.37	J	4.50	0.40	
Benzo[a]pyrene	0.061	ND	0.39		0.05	0.38	J	0.07	0.39	J	0.05	0.37	J	4.40	0.40	
Benzo[b]fluoranthene	1.1	0.04	0.39	J	0.06	0.38	J	0.10	0.39	J	0.06	0.37	J	5.60	0.40	
Benzo[g,h,i]perylene	50	ND	0.39		ND	0.38		0.06	0.39	J	ND	0.37		2.50	0.40	
Benzo[k]fluoranthene	1.1	ND	0.39		ND	0.38		ND	0.39		ND	0.37		1.80	0.40	
Benzyl alcohol	NS	ND	0.97		ND	0.96		ND	0.39		ND	0.94		ND	0.40	
Bis(2-Chloroethoxy)methane	NS	ND	0.39		ND	0.38		ND	0.39		ND	0.37		ND	0.40	
Bis(2-Chloroethyl)ether	NS	ND	0.39		ND	0.38		ND	0.39		ND	0.37		ND	0.40	
Bis(2-Chloroisopropyl)ether	NS	ND	0.39		ND	0.38		ND	0.39		ND	0.37		ND	0.40	
Bis(2-Ethylhexyl)phthalate	50	ND	0.39		ND	0.38		ND	0.39		ND	0.37		ND	0.40	
Butylbenzylphthalate	50	ND	0.39		ND	0.38		ND	0.39		ND	0.37		ND	0.40	
Carbazole	NS	ND	0.39		ND	0.38		ND	0.39		ND	0.37		0.90	0.40	
Chrysene	0.4	ND	0.39		0.07	0.38	J	0.08	0.39	J	0.04	0.37	J	5.90	0.40	
Dibenzo[a,h]anthracene	0.014	ND	0.39		ND	0.38		ND	0.39		ND	0.37		0.83	0.40	
Dibenzofuran	6.2	ND	0.39		ND	0.38		ND	0.39		ND	0.37		0.35	0.40	J
Diethylphthalate	7.1	ND	0.39		ND	0.38		ND	0.39		ND	0.37		ND	0.40	
Dimethylphthalate	2	ND	0.39		ND	0.38		ND	0.39		ND	0.37		ND	0.40	
Di-n-butylphthalate	8.1	ND	0.39		ND	0.38		ND	0.39		ND	0.37		ND	0.40	
Di-n-octylphthalate	50	ND	0.39		ND	0.38		ND	0.39		ND	0.37		ND	0.40	
Fluoranthene	50	0.06	0.39	J	0.16	0.38	J	0.10	0.39	J	0.07	0.37	J	7.00	0.40	
Fluorene	50	ND	0.39		ND	0.38		ND	0.39		ND	0.37		0.60	0.40	
Hexachlorobenzene	0.41	ND	0.39		ND	0.38		ND	0.39		ND	0.37		ND	0.40	
Hexachlorobutadiene	NS	ND	0.39		ND	0.38		ND	0.39		ND	0.37		ND	0.40	
Hexachlorocyclopentadiene	NS	ND	0.39		ND	0.38		ND	0.39		ND	0.37		ND	0.40	
Hexachloroethane	NS	ND	0.39		ND	0.38		ND	0.39		ND	0.37		ND	0.40	
Indeno[1,2,3-cd]pyrene	3.2	ND	0.39		ND	0.38		0.06	0.39	J	ND	0.37		2.40	0.40	
Isophorone	4.4	ND	0.39		ND	0.38		ND	0.39		ND	0.37		ND	0.40	
Naphthalene	13	ND	0.39		ND	0.38		ND	0.39		ND	0.37		0.67	0.40	
Nitrobenzene	0.2	ND	0.39		ND	0.38		ND	0.39		ND	0.37		ND	0.40	
N-Nitrosodimethylamine	NS	ND	0.39		ND	0.38		ND	0.39		ND	0.37		ND	0.40	
N-Nitroso-di-n-propylamine	NS	ND	0.39		ND	0.38		ND	0.39		ND	0.37		ND	0.40	
N-Nitrosodiphenylamine	NS	ND	0.39		ND	0.38		ND	0.39		ND	0.37		ND	0.40	
Pentachlorophenol	1	ND	0.97		ND	0.96		ND	2.00		ND	0.94		ND	2.00	
Phenanthrene	50	ND	0.39		0.17	0.38	J	0.06	0.39	J	0.04	0.37	J	5.90	0.40	
Phenol	0.03	ND	0.39		ND	0.38		ND	0.39		ND	0.37		ND	0.40	
Pyrene	50	0.06	0.39	J	0.14	0.38	J	0.11	0.39	J	0.07	0.37	J	7.20	0.40	
Total SVOC TICs	NS	46.50		J	42.18		J	84.85		J	36.02		J	74.30		J

Notes and Abbreviations

1) Bold concentrations in shaded cells exceed the RSCOs

2) Duplicate samples collected from SH-5D and TE-4D.

mg/Kg = milligrams per kilogram (all units reported in mg/kg).
RSCOs = Recommended Soil Cleanup Objectives from the Technical and Administrative Guidance Memorandum # 4046, dated January 24, 1994.
NA = Not analyzed
NS = No Standard
Conc = Concentration
MDL = Quantitation Limit
Qual = Laboratory Data Qualifier
ND = The compound was not detected
B = The analyte was found in the laboratory blank and the sample. This indicates possible laboratory contamination of the sample.
J = The compound was detected at a concentration below the calibration range. The concentration is estimated.
Feet bgs = Feet below ground surface
TICs = Tentatively identified compounds

TABLE 2B
SUMMARY OF SOIL ANALYTICAL RESULTS-SVOCS
HHMT-PORT IVORY FACILITY
SITE 2

Location		TE-9			TE-10		
Sample ID	New York RSCOs	PI-2BTE09-111207SO03			PI-2BTE10-112107SO04		
Lab Sample No.		AC34274-010			AC34483-001		
Sampling Date		11/12/2007			11/21/2007		
Matrix		SOLID			SOLID		
Sample Depth (feet bgs)		5.5-6			6.5-7		
Semivolatile Organic Compounds (SVOCs)		Conc	MDL	Qual	Conc	MDL	Qual
1,2,4-Trichlorobenzene	3.4	ND	0.40		ND	0.38	
1,2-Diphenylhydrazine	NS	ND	0.40		ND	0.38	
2,4,5-Trichlorophenol	0.1	ND	0.40		ND	0.38	
2,4,6-Trichlorophenol	NS	ND	0.40		ND	0.38	
2,4-Dichlorophenol	0.4	ND	0.40		ND	0.38	
2,4-Dimethylphenol	NS	ND	0.40		ND	0.38	
2,4-Dinitrophenol	0.2	ND	1.00		ND	0.96	
2,4-Dinitrotoluene	NS	ND	0.40		ND	0.38	
2,6-Dinitrotoluene	1	ND	0.40		ND	0.38	
2-Chloronaphthalene	NS	ND	0.40		ND	0.38	
2-Chlorophenol	0.8	ND	0.40		ND	0.38	
2-Methylnaphthalene	36.4	ND	0.40		ND	0.38	
2-Methylphenol	0.1	ND	0.40		ND	0.38	
2-Nitroaniline	0.43	ND	0.40		ND	0.38	
2-Nitrophenol	0.33	ND	0.40		ND	0.38	
3&4-Methylphenol	0.9	ND	0.40		ND	0.38	
3,3'-Dichlorobenzidine	NS	ND	0.40		ND	0.38	
3-Nitroaniline	0.5	ND	0.40		ND	0.38	
4,6-Dinitro-2-methylphenol	NS	ND	1.00		ND	0.96	
4-Bromophenyl-phenylether	NS	ND	0.40		ND	0.38	
4-Chloro-3-methylphenol	0.24	ND	0.40		ND	0.38	
4-Chloroaniline	0.22	ND	0.40		ND	0.38	
4-Chlorophenyl-phenylether	NS	ND	0.40		ND	0.38	
4-Nitroaniline	NS	ND	0.40		ND	0.38	
4-Nitrophenol	0.1	ND	0.40		ND	0.38	
Acenaphthene	50	ND	0.40		ND	0.38	
Acenaphthylene	41	ND	0.40		ND	0.38	
Aniline	0.1	ND	0.40		ND	0.38	
Anthracene	50	ND	0.40		0.04	0.38	J
Benzidine	NS	ND	0.40		ND	0.38	
Benzo[a]anthracene	0.224	ND	0.40		0.25	0.38	J
Benzo[a]pyrene	0.061	ND	0.40		0.23	0.38	J
Benzo[b]fluoranthene	1.1	ND	0.40		0.35	0.38	J
Benzo[g,h,i]perylene	50	ND	0.40		0.19	0.38	J
Benzo[k]fluoranthene	1.1	ND	0.40		0.10	0.38	J
Benzyl alcohol	NS	ND	1.00		ND	0.38	
Bis(2-Chloroethoxy)methane	NS	ND	0.40		ND	0.38	
Bis(2-Chloroethyl)ether	NS	ND	0.40		ND	0.38	
Bis(2-Chloroisopropyl)ether	NS	ND	0.40		ND	0.38	
Bis(2-Ethylhexyl)phthalate	50	ND	0.40		0.98	0.38	
Butylbenzylphthalate	50	ND	0.40		ND	0.38	
Carbazole	NS	ND	0.40		ND	0.38	
Chrysene	0.4	ND	0.40		0.28	0.38	J
Dibenzo[a,h]anthracene	0.014	ND	0.40		0.05	0.38	J
Dibenzofuran	6.2	ND	0.40		ND	0.38	
Diethylphthalate	7.1	ND	0.40		ND	0.38	
Dimethylphthalate	2	ND	0.40		ND	0.38	
Di-n-butylphthalate	8.1	ND	0.40		ND	0.38	
Di-n-octylphthalate	50	ND	0.40		ND	0.38	
Fluoranthene	50	ND	0.40		0.29	0.38	J
Fluorene	50	ND	0.40		ND	0.38	
Hexachlorobenzene	0.41	ND	0.40		ND	0.38	
Hexachlorobutadiene	NS	ND	0.40		ND	0.38	
Hexachlorocyclopentadiene	NS	ND	0.40		ND	0.38	
Hexachloroethane	NS	ND	0.40		ND	0.38	
Indeno[1,2,3-cd]pyrene	3.2	ND	0.40		0.15	0.38	J
Isophorone	4.4	ND	0.40		ND	0.38	
Naphthalene	13	ND	0.40		0.11	0.38	J
Nitrobenzene	0.2	ND	0.40		ND	0.38	
N-Nitrosodimethylamine	NS	ND	0.40		ND	0.38	
N-Nitroso-di-n-propylamine	NS	ND	0.40		ND	0.38	
N-Nitrosodiphenylamine	NS	ND	0.40		ND	0.38	
Pentachlorophenol	1	ND	1.00		ND	1.90	
Phenanthrene	50	ND	0.40		0.19	0.38	J
Phenol	0.03	ND	0.40		ND	0.38	
Pyrene	50	ND	0.40		0.40	0.38	
Total SVOC TICs	NS	44.58		J	49.05		J

Notes and Abbreviations

1) Bold concentrations in shaded cells exceed the RSCOs
2) Duplicate samples collected from SH-5D and TE-4D.

mg/Kg = milligrams per kilogram (all units reported in mg/kg).
RSCOs = Recommended Soil Cleanup Objectives from the Technical and Administrative Guidance Memorandum # 4046, dated January 24, 1994.
NA = Not analyzed
NS = No Standard
Conc = Concentration
MDL = Quantitation Limit
Qual = Laboratory Data Qualifier
ND = The compound was not detected
B = The analyte was found in the laboratory blank and the sample. This indicates possible laboratory contamination of the sample.
J = The compound was detected at a concentration below the calibration range. The concentration is estimated.
Feet bgs = Feet below ground surface
TICs = Tentatively identified compounds

TABLE 2C
SUMMARY OF SOIL ANALYTICAL RESULTS-TPHC
HMMT-PORT IVORY FACILITY
SITE 2

Location	New York RSCOs	2ASE-1			2ASE-6			2ASE-7			2ASE-7			2ASE-8		
Sample ID		PI-A2-SE1-091307SO04			PI-A2-SE6-091307SO03			PI-A2-SE7-091307SO04			PI-A2-SE7-091307SO07			PI-A2-SE8-091307SO03		
Lab Sample No.		AC33007-001			AC33007-002			AC33007-003			AC33007-004			AC33007-005		
Sampling Date		9/13/2007			9/13/2007			9/13/2007			9/13/2007			9/13/2007		
Matrix		SOLID			SOLID			SOLID			SOLID			SOLID		
Sample Depth (feet bgs)		6-6.5			4.5-5			4-4.5			6-6.5			4-4.5		
		Conc	MDL	Qual	Conc	MDL	Qual	Conc	MDL	Qual	Conc	MDL	Qual	Conc	MDL	Qual
Total Petroleum Hydrocarbons (418.1)	NS	420	62		270	40		3800	260		45	41		25000	1000	
% Solids		55			85			65			82			81		

Location	New York RSCOs	2ASE-8			2ASE-9			2ASE-9			2ASE-10			2ASE-10		
Sample ID		PI-A2-SE8-091307SO06			PI-A2-SE9-091307SO03			PI-A2-SE9-091307SO09			PI-2ASE10A-091707SO3			PI-2ASE10A-091707SO5		
Lab Sample No.		AC33007-006			AC33007-007			AC33007-008			AC33058-001			AC33058-002		
Sampling Date		9/13/2007			9/13/2007			9/13/2007			9/17/2007			9/17/2007		
Matrix		SOLID			SOLID			SOLID			SOLID			SOLID		
Sample Depth (feet bgs)		6-6.5			3.5-4			6-6.5			3.5-4			5.5-6		
		Conc	MDL	Qual	Conc	MDL	Qual	Conc	MDL	Qual	Conc	MDL	Qual	Conc	MDL	Qual
Total Petroleum Hydrocarbons (418.1)	NS	300	40		11000	1100		42	41		38000	1300		170	42	
% Solids		85			76			82			63			81		

Location	New York RSCOs	2ASE-11			2ASE-11			2ASE-12			2ASE-12			2ASE-13		
Sample ID		PI-A2SE11B-091807SO3			PI-A2SE11B-091807SO6			PI-A2SE-12-091807SO3			PI-A2SE-12-091807SO5			PI-A2SE13A-091407SO3		
Lab Sample No.		AC33103-001			AC33103-002			AC33103-003			AC33103-004			AC33039-001		
Sampling Date		9/18/2007			9/18/2007			9/18/2007			9/18/2007			9/14/2007		
Matrix		SOLID			SOLID			SOLID			SOLID			SOLID		
Sample Depth (feet bgs)		3.5-4			5-5.5			3.3-3.8			4.3-4.8			3.5-4		
		Conc	MDL	Qual	Conc	MDL	Qual	Conc	MDL	Qual	Conc	MDL	Qual	Conc	MDL	Qual
Total Petroleum Hydrocarbons (418.1)	NS	3500	240		410	43		16000	980		85	40		5700	190	
% Solids		71			79			87			85			88		

Location	New York RSCOs	2ASE-13			2ASE-14			2ASE-14			2ASE-15			2ASE-16		
Sample ID		PI-A2SE13A-091407SO5			PI-2ASE14-110507SO03			PI-2ASE14-110507SO04			PI-2ASE15-110507SO02			PI-2ASE16-110507SO03		
Lab Sample No.		AC33039-002			AC34093-001			AC34093-002			AC34093-003			AC34093-004		
Sampling Date		9/14/2007			11/5/2007			11/5/2007			11/5/2007			11/5/2007		
Matrix		SOLID			SOLID			SOLID			SOLID			SOLID		
Sample Depth (feet bgs)		4-4.5			4-4.5			7.5-8			3.5-4			4-4.5		
		Conc	MDL	Qual	Conc	MDL	Qual	Conc	MDL	Qual	Conc	MDL	Qual	Conc	MDL	Qual
Total Petroleum Hydrocarbons (418.1)	NS	95	40		310	41		170	41		1400	40		520	41	
% Solids		85			NA			NA			NA			NA		

Notes and Abbreviations

1) Duplicate samples collected from SH-5D and TE-4D
mg/Kg = milligrams per kilogram (all units reported in mg/Kg).
RSCOs = Recommended Soil Cleanup Objectives from the Technical and Administrative Guidance Memorandum # 4046, dated January 24, 1994.
NA = Not analyzed
NS = No Standard
Conc = Concentration
MDL = Quantitation Limit
Qual = Laboratory Data Qualifier
ND = The compound was not detected
Feet bgs = Feet below ground surface
TPHC = Total Petroleum Hydrocarbons

TABLE 2C
SUMMARY OF SOIL ANALYTICAL RESULTS-TPHC
HMMT-PORT IVORY FACILITY
SITE 2

Location		2ASE-17			2ASE-17			2ASE-18			2ASE- 19			WA-1		
Sample ID	New York	PI-2ASE17-110707SO03			PI-2ASE17-110707SO04			PI-2ASE18-110707SO02			PI-2ASE19-110907SO03			PI-2B-WA1-110507SO03		
Lab Sample No.	RSCOs	AC34160-001			AC34160-002			AC34160-003			AC34274-008			AC34093-005		
Sampling Date		11/7/2007			11/7/2007			11/7/2007			11/9/2007			11/5/2007		
Matrix		SOLID			SOLID			SOLID			SOLID			SOLID		
Sample Depth (feet bgs)		4-4.5			6.5-7			3-3.5			2.5-3			4-4.5		
		Conc	MDL	Qual	Conc	MDL	Qual	Conc	MDL	Qual	Conc	MDL	Qual	Conc	MDL	Qual
Total Petroleum Hydrocarbons (418.1)	NS	310	42		110	40		110	39		3300	200		120	41	
% Solids		81			84			87			NA			NA		

Location		WA-2			WA-3			WA-4			WA-5			WA-5		
Sample ID	New York	AOCWA-2 (3.5-4)			AOCWA-3 (3-3.5)			AOCWA-4 (3-3.5)			PI-2BWA05-110807SO03			PI-2BWA05-110807SO04		
Lab Sample No.	RSCOs	AC25567-001			AC25567-002			AC25567-003			AC34275-001			AC34275-002		
Sampling Date		9/11/2006			9/11/2006			9/11/2006			11/8/2007			11/8/2007		
Matrix		SOLID			SOLID			SOLID			SOLID			SOLID		
Sample Depth (feet bgs)		3.5-4			3-3.5			3-3.5			4-4.5			6.5-7		
		Conc	MDL	Qual	Conc	MDL	Qual	Conc	MDL	Qual	Conc	MDL	Qual	Conc	MDL	Qual
Total Petroleum Hydrocarbons (418.1)	NS	160	NA	J	100	NA	J	570	NA	J	1700	43		230	40	
% Solids		81			82			79			NA			NA		

Location		WA-6			WA-7			WA-8			WA-9			WA-10		
Sample ID	New York	AOCWA-6 (3.5-4)			AOCWA-7 (4-4.5)			AOCWA-8 (3-3.5)			AOCWA-9 (3-3.5)			AOCWA-10 (3-3.5)		
Lab Sample No.	RSCOs	AC25567-004			AC25567-005			AC25567-006			AC25567-007			AC25567-008		
Sampling Date		9/11/2006			9/11/2006			9/11/2006			9/11/2006			9/11/2006		
Matrix		SOLID			SOLID			SOLID			SOILD			SOILD		
Sample Depth (feet bgs)		3.5-4			4-4.5			3-3.5			3-3.5			3-3.5		
		Conc	MDL	Qual	Conc	MDL	Qual	Conc	MDL	Qual	Conc	MDL	Qual	Conc	MDL	Qual
Total Petroleum Hydrocarbons (418.1)	NS	120	NA	J	250	NA	J	260	NA	J	340	NA	J	100	NA	J
% Solids		80			83			79			84			79		

Location		WA-11			WA-12			WA-13			WA-14			WA-15		
Sample ID	New York	AOCWA-11 (3-3.5)			PI-2BWA12-110907SO04			PI-2BWA13-110807SO02			PI-2BWA14-110807SO02			PI-2BWA15-110707SO04		
Lab Sample No.	RSCOs	AC25567-009			AC34274-006			AC34275-003			AC34275-004			AC34160-004		
Sampling Date		9/11/2006			11/9/2007			11/8/2007			11/8/2007			11/7/2007		
Matrix		SOLIDS			SOLID			SOLID			SOLID			SOLID		
Sample Depth (feet bgs)		3-3.5			4.5-5			3-3.5			3-3.5			6-6.5		
		Conc	MDL	Qual	Conc	MDL	Qual	Conc	MDL	Qual	Conc	MDL	Qual	Conc	MDL	Qual
Total Petroleum Hydrocarbons (418.1)	NS	620	NA	J	80	41		1100	41		780	39		90	43	
% Solids		79			NA			NA			NA			80		

Notes and Abbreviations

1) Duplicate samples collected from SH-5D and TE-4D

mg/Kg = milligrams per kilogram (all units reported in mg/Kg).

RSCOs = Recommended Soil Cleanup Objectives from the Technical and Administrative Guidance Memorandum # 4046, dated January 24, 1994.

NA = Not analyzed

NS = No Standard

Conc = Concentration

MDL = Quantitation Limit

Qual = Laboratory Data Qualifier

ND = The compound was not detected

Feet bgs = Feet below ground surface

TPHC = Total Petroleum Hydrocarbons

TABLE 2C
SUMMARY OF SOIL ANALYTICAL RESULTS-TPHC
HMMT-PORT IVORY FACILITY
SITE 2

Location	New York RSCOs	WA-16			WA-17			SH-1			SH-2			SH-3		
Sample ID		PI-2BWA16-110807SO03			PI-2BWA17-110907SO01			PI-2BSH01-110907SO03			PI-2BSH-2-112007SO02			PI-2BSH-3-112007SO04		
Lab Sample No.		AC34275-005			AC34274-007			AC34274-001			AC34438-002			AC34438-003		
Sampling Date		11/8/2007			11/9/2007			11/9/2007			11/20/2007			11/20/2007		
Matrix		SOLID			SOLID			SOLID			SOLID			SOLID		
Sample Depth (feet bgs)		4.5-5			1.5-2			4-4.5			3.5-4			5.5-6		
		Conc	MDL	Qual	Conc	MDL	Qual	Conc	MDL	Qual	Conc	MDL	Qual	Conc	MDL	Qual
Total Petroleum Hydrocarbons (418.1)	NS	18000	1500		2600	210		190	41		340	44		ND	40	
% Solids		NA			NA			NA			NA			NA		

Location	New York RSCOs	SH-4			SH-5			SH-5D			SH-6			SH-7		
Sample ID		PI-2BSH04-110907SO03			PI-2BSH05-110907SO03			PI-2BSH5D-112107SO02			PI-2BSH06-110907SO04			PI-2BSH07-110907SO02		
Lab Sample No.		AC34274-002			AC34274-003			AC34483-002			AC34274-004			AC34274-005		
Sampling Date		11/9/2007			11/9/2007			11/21/2007			11/9/2007			11/9/2007		
Matrix		SOLID			SOLID			SOLID			SOLID			SOLID		
Sample Depth (feet bgs)		4.5-5			3.5-4						5-5.5			3.5-4		
		Conc	MDL	Qual	Conc	MDL	Qual	Conc	MDL	Qual	Conc	MDL	Qual	Conc	MDL	Qual
Total Petroleum Hydrocarbons (418.1)	NS	650	40		490	39		1400	40		270	40		1000	40	
% Solids		NA			NA			NA			NA			NA		

Location	New York RSCOs	SH-8			SH-9			SH-10			SH-11			SH-12		
Sample ID		PI-2BSH-8-111507SO03			PI-2BSH09-111207SO03			PI-2BSH10-111407SO04			PI-2BSH11-111307SO03			PI-2BSH12-111207SO03		
Lab Sample No.		AC34394-007			AC34274-009			AC34355-002			AC34289-001			AC34394-004		
Sampling Date		11/15/2007			11/12/2007			11/14/2007			11/13/2007			11/12/2007		
Matrix		SOLID			SOLID			SOLID			SOLID			SOLID		
Sample Depth (feet bgs)		4.5-5			5-5.5			6-6.5			4-4.5			4.5-5		
		Conc	MDL	Qual	Conc	MDL	Qual	Conc	MDL	Qual	Conc	MDL	Qual	Conc	MDL	Qual
Total Petroleum Hydrocarbons (418.1)	NS	210	40		73	41		120	40		130	41		77	40	
% Solids		NA			NA			84			NA			NA		

Location	New York RSCOs	TE-2			TE-3			TE-4			TE-4D			TE-5		
Sample ID		PI-2BTE-2-110907O03			PI-2BTE-3-111407SO03			PI-2BTE-4-111207SO05			PI-2BTE-4D-111407SO05			PI-2BTE-5-111507SO05		
Lab Sample No.		AC34394-002			AC34394-005			AC34394-008			AC34394-009			AC34394-010		
Sampling Date		11/9/2007			11/14/2007			11/16/2007			11/16/2007			11/16/2007		
Matrix		SOLID			SOLID			SOLID			SOLID			SOLID		
Sample Depth (feet bgs)		4.5-5			4.5-5			6-6.5			6-6.5			6.5-7		
		Conc	MDL	Qual	Conc	MDL	Qual	Conc	MDL	Qual	Conc	MDL	Qual	Conc	MDL	Qual
Total Petroleum Hydrocarbons (418.1)	NS	500	40		170	40		74	40		88	40		99	39	
% Solids		NA			NA			NA			NA			NA		

Notes and Abbreviations

1) Duplicate samples collected from SH-5D and TE-4D

mg/Kg = milligrams per kilogram (all units reported in mg/Kg).

RSCOs = Recommended Soil Cleanup Objectives from the Technical and Administrative Guidance Memorandum # 4046, dated January 24, 1994.

NA = Not analyzed

NS = No Standard

Conc = Concentration

MDL = Quantitation Limit

Qual = Laboratory Data Qualifier

ND = The compound was not detected

Feet bgs = Feet below ground surface

TPHC = Total Petroleum Hydrocarbons

TABLE 2C
SUMMARY OF SOIL ANALYTICAL RESULTS-TPHC
HMMT-PORT IVORY FACILITY
SITE 2

Location	New York RSCOs	TE-6			TE-7		
Sample ID		PI-2BTE-6-111507SO03			PI-2BTE07-110907SO03		
Lab Sample No.		AC34394-006			AC34355-001		
Sampling Date		11/15/2007			11/9/2007		
Matrix		SOLID			SOLID		
Sample Depth (feet bgs)		4.5-5			5.5-6		
		Conc	MDL	Qual	Conc	MDL	Qual
Total Petroleum Hydrocarbons (418.1)	NS	280	40		110	38	
% Solids		NA			89		

Location	New York RSCOs	TE-8		
Sample ID		PI-2BTE-8-112007SO03		
Lab Sample No.		AC34438-001		
Sampling Date		11/20/2007		
Matrix		SOLID		
Sample Depth (feet bgs)		5.5-6		
		Conc	MDL	Qual
Total Petroleum Hydrocarbons (418.1)	NS	54	34	
% Solids		NA		

Location	New York RSCOs	TE-9		
Sample ID		PI-2BTE09-111207SO03		
Lab Sample No.		AC34274-010		
Sampling Date		11/12/2007		
Matrix		SOLID		
Sample Depth (feet bgs)		5.5-6		
		Conc	MDL	Qual
Total Petroleum Hydrocarbons (418.1)	NS	72	41	
% Solids		NA		

Location	New York RSCOs	TE-10		
Sample ID		PI-2BTE10-112107SO04		
Lab Sample No.		AC34483-001		
Sampling Date		11/21/2007		
Matrix		SOLID		
Sample Depth (feet bgs)		6.5-7		
		Conc	MDL	Qual
Total Petroleum Hydrocarbons (418.1)	NS	68	39	
% Solids		NA		

Notes and Abbreviations

1) Duplicate samples collected from SH-5D and TE-4D

mg/Kg = milligrams per kilogram (all units reported in mg/Kg).

RSCOs = Recommended Soil Cleanup Objectives from the Technical and Administrative Guidance Memorandum # 4046, dated January 24, 1994.

NA = Not analyzed

NS = No Standard

Conc = Concentration

MDL = Quantitation Limit

Qual = Laboratory Data Qualifier

ND = The compound was not detected

Feet bgs = Feet below ground surface

TPHC = Total Petroleum Hydrocarbons

TPHC concentrations ranged from 80 mg/kg at WA-12 to 18,000 mg/kg at WA-16. No RSCO has been established for TPHC. A site-specific concentration of 5,000 mg/kg has been established for the HHMT-Port Ivory Facility. The presence or absence of mobile LNAPL should be investigated where this concentration is exceeded. At AOC-Western Area, TPHC exceeded 5,000 mg/kg at only AOCWA-16.

AOC-Area 2A Southeast Soil Sampling Analytical Results

One confirmatory soil sample was collected from sample 2ASE-2 and analyzed for PAH compounds. The sample was collected as close as possible to the original sampling location and depth at WAW-2S. The analytical results indicate that benzo(a)pyrene and dibenzo(a,h)anthracene were the only PAH compounds detected at concentrations above their respective RSCOs. However, these compounds were detected at similar concentrations at other portions of the HHMT-Port Ivory Facility. Total SVOCs were detected at a concentration of 2.17 mg/kg, well below the RSCO of 500 mg/kg. SVOCs TICs were detected at a concentration of 80.6 mg/kg. As the magnitude of the soil impacts at 2ASE (WAW-2S) is similar to that throughout the site-wide historic fill, soil samples were not analyzed from step-out locations A2ASE-3, A2ASE-4, and A2ASE-5.

An additional 15 soil borings were drilled to delineate LNAPL-impacted soil encountered in AOC-Area 2A Southeast. The NYSDEC has not established an RSCO for TPHC; however, a site-specific TPHC concentration of 5,000 mg/kg has been established by the NYSDEC and The Port Authority as a trigger to investigate the presence or absence of mobile LNAPL. TPHC concentrations at AOC-Area 2A Southeast ranged from 42 mg/kg in the deeper sample collected at 2ASE-7 to 38,000 mg/kg in the shallow sample collected at 2ASE-12. TPHC concentrations exceeded 5,000 mg/kg in the shallow soil samples collected at adjacent locations 2ASE-8, 2ASE-9, 2ASE-10A, 2ASE-12, and 2ASE-13A.

AOC-TE Pipeline Soil Sampling Analytical Results

The sampling program for AOC-TE Pipeline included the collection of 22 soil samples from 22 soil borings drilled along the inactive Texas Eastern pipeline and the active IMTT pipeline. The samples were analyzed for VOC+10, SVOC+20, and TPHC.

With the exception of acetone and methylene chloride, no VOCs were detected at concentrations greater than their respective RSCOs in any of the soil samples collected from AOC-TE Pipeline. Acetone was detected at a concentration of 0.31 mg/kg, slightly above its RSCO of 0.2 mg/kg, at SH-7. Methylene chloride was detected at concentrations of 0.14 and 0.12 mg/kg, slightly above its RSCO of 0.1 mg/kg at

SH-4 and SH-7, respectively. Methylene chloride was detected in the method blanks associated with the samples. Therefore, the concentration of methylene chloride in the soil samples is likely attributable to laboratory contamination. The concentrations of VOC TICs were below 1 mg/kg in all samples.

The following SVOCs were detected at concentrations that exceeded their respective RSCOs in at least one of the soil samples collected in AOC-Western Area: benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene, and dibenzo(a,h)anthracene. All these compounds are PAH compounds, a subset of SVOCs that have been detected at similar concentrations at other portions of the HHMT-Port Ivory Facility. The concentration of estimated SVOC TICs ranged from 36.02 at TE-7 to 279.40 mg/kg at SH-4.

The concentrations of TPHC detected at AOC-TE Pipeline ranged from non-detect at SH-3 to 1,400 mg/kg in the duplicate sample collected from SH-5. No RSCO has been established for TPHC in soil. TPHC concentrations did not exceed 5,000 mg/kg, the site-specific threshold concentration that triggers an investigation for mobile LNAPL, and the detected concentrations were similar to those detected at other portions of the HHMT-Port Ivory Facility.

Quality Assurance/Quality Control

To monitor the effectiveness of field decontamination procedures, field blanks were collected. The Port Authority prepared three field blanks for analysis of VOCs. Chloroform and methyl tertiary butyl ether (MTBE) were the only compounds detected above the laboratory's reporting limits in the field blank samples. MTBE was detected in the method blank and is considered to be a laboratory artifact. Neither chloroform nor MTBE was detected in any of the samples collected from the site. As such, the presence of chloroform and MTBE in the field blanks does not appear to have affected data usability. Duplicate samples were collected at SH-5 and TE-4. A comparison of the analytical data reported for the sample and that for the corresponding duplicate shows good agreement. These results show good data reproducibility and analytical data for field samples are usable.

5.3.2 Groundwater Sampling Results

In addition to installing monitoring wells for the specific purpose of investigating the presence or absence of mobile LNAPL in AOC-Area 2A Southeast, the three monitoring wells were sampled to determine whether the presence of LNAPL-impacted soil in AOC-Area 2A Southeast has impacted groundwater. One groundwater sample was collected from each of the three wells, identified as MW-1 2ASE, MW-2

2ASE, and MW-3 2ASE. To investigate the environmental quality of groundwater at AOC-Western Area, a groundwater sample was collected from monitoring well MW-16WA, installed at soil boring location WA-16. No groundwater sampling was warranted at AOC-TE Pipeline, nor was mobile LNAPL suspected at this AOC. Therefore, no monitoring well was installed at AOC-TE Pipeline.

All groundwater samples were analyzed for VOC+10 and SVOC+20. Groundwater sampling results are summarized in Tables 3A and 3B and on Figure 5.

For the purposes of this summary of analytical results, the results have been compared to current NYSDEC AWQSGVs for Class GA groundwater. Groundwater classified as GA is considered to be a potential drinking water source. Given the location of the site and the potential for the groundwater to be saline, the published AWQSGVs are not appropriate for use at this site. However, at this time, these represent the only guidance available for ambient groundwater. Please note, the reference of these cleanup objectives in this report does not represent any agreement or concurrence that same are appropriate for usage at this site. A discussion of the analytical results from the groundwater component of the investigation is provided below.

AOC-Western Area Analytical Results

No targeted VOCs or VOC TICs were detected in the groundwater samples collected from MW-16WA. The following PAH compounds, a subset of SVOCs, were detected at concentrations above their respective AWQSGVs at MW-16 WA: benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene, and indeno(1,2,3-cd)pyrene. SVOC TICs were detected at a concentration of 272.2 micrograms per liter (ug/L).

AOC-Area 2A Southeast Groundwater Analytical Results

No targeted VOCs were detected in the three groundwater samples collected from AOC-Area 2A Southeast. The total concentrations of VOC TICs detected in the groundwater samples collected at locations MW-2 2ASE and MW-3 2ASE were 3.6 and 11.9 ug/L, respectively. No VOC TICs were detected in the groundwater sample collected at location MW-1 2ASE.

The following PAH compounds, a subset of SVOCs, were detected at concentrations above their respective AWQSGV at MW-2 2ASE: benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene and chrysene. No targeted SVOCs or SVOC TICs were detected above their respective AWQSGV in the

TABLE 3A
SUMMARY OF GROUNDWATER ANALYTICAL RESULTS-VOCS
HMMT-PORT IVORY FACILITY
SITE 2

Location		MW-1 2ASE			MW-2 2ASE			MW-3 2ASE			MW-16WA		
Sample ID	New York	PI2AMW1-2ASE121907WW1			PI2AMW2-2ASE121907WW1			PI2AMW3-2ASE121907WW1			PI-2B-MW16WA-122007WG1		
Lab Sample No.	AWQSGVs	AC34902-005			AC34902-006			AC34902-007			AC34923-002		
Sampling Date		12/19/2007			12/19/2007			12/19/2007			12/20/2007		
Matrix		WATER			WATER			WATER			WATER		
Units		ug/L			ug/L			ug/L			ug/L		
VOLATILE ORGANIC COMPOUNDS (VOCs)		Conc	MDL	Qual	Conc	MDL	Qual	Conc	MDL	Qual	Conc	MDL	Qual
1,1,1-Trichloroethane	5	ND	1		ND	1		ND	1		ND	1	
1,1,2,2-Tetrachloroethane	5	ND	1		ND	1		ND	1		ND	1	
1,1,2-trichloro-1,2,2-trifluoroethane	5	ND	5		ND	5		ND	5		ND	5	
1,1,2-Trichloroethane	1	ND	1		ND	1		ND	1		ND	1	
1,1-Dichloroethane	5	ND	1		ND	1		ND	1		ND	1	
1,1-Dichloroethene	5	ND	1		ND	1		ND	1		ND	1	
1,2,3-Trichloropropane	0.04	ND	1		ND	1		ND	1		ND	1	
1,2,4-Trimethylbenzene	5	ND	1		ND	1		ND	1		ND	1	
1,2-Dichlorobenzene	4.7	ND	1		ND	1		ND	1		ND	1	
1,2-Dichloroethane	5	ND	0.6		ND	0.6		ND	0.6		ND	0.6	
1,2-Dichloropropane	1	ND	1		ND	1		ND	1		ND	1	
1,3,5-Trimethylbenzene	5	ND	1		ND	1		ND	1		ND	1	
1,3-Dichlorobenzene	5	ND	1		ND	1		ND	1		ND	1	
1,3-Dichloropropane	5	ND	1		ND	1		ND	1		ND	1	
1,4-Dichlorobenzene	5	ND	1		ND	1		ND	1		ND	1	
1,4-Dioxane	NS	ND	200		ND	200		ND	200		ND	200	
2-Butanone	50	ND	2		ND	2		ND	2		ND	2	
2-Chloroethylvinylether	NS	ND	2		ND	2		ND	2		ND	2	
2-Hexanone	50	ND	2		ND	2		ND	2		ND	2	
4-Isopropyltoluene	5	ND	1		ND	1		ND	1		ND	1	
4-Methyl-2-Pentanone	50	ND	1		ND	1		ND	1		ND	1	
Acetone	50	ND	10		ND	10		ND	10		ND	10	
Acrolein	5	ND	5		ND	5		ND	5		ND	5	
Acrylonitrile	5	ND	2		ND	2		ND	2		ND	2	
Benzene	1	ND	0.5		ND	0.5		ND	0.5		ND	0.5	
Bromodichloromethane	50	ND	1		ND	1		ND	1		ND	1	
Bromoform	50	ND	1		ND	1		ND	1		ND	1	
Bromomethane	5	ND	2		ND	2		ND	2		ND	2	
Carbon disulfide	50	ND	1		ND	1		ND	1		ND	1	
Carbon tetrachloride	5	ND	1		ND	1		ND	1		ND	1	
Chlorobenzene	5	ND	1		ND	1		ND	1		ND	1	
Chloroethane	50	ND	1		ND	1		ND	1		ND	1	
Chloroform	7	ND	1		ND	1		ND	1		ND	1	
Chloromethane	NS	ND	2		ND	2		ND	2		ND	2	
Cis-1,2-Dichloroethene	5	ND	1		ND	1		ND	1		ND	1	
Cis-1,3-Dichloropropene	NS	ND	1		ND	1		ND	1		ND	1	
Dibromochloromethane	50	ND	1		ND	1		ND	1		ND	1	
Dichlorodifluoromethane	NS	ND	2		ND	2		ND	2		ND	2	
Ethylbenzene	5	ND	1		ND	1		ND	1		ND	1	
Isopropylbenzene	5	ND	1		ND	1		ND	1		ND	1	
M&p-Xylenes	5	ND	1.5		ND	1.5		ND	1.5		ND	1.5	
Methylene chloride	5	ND	2.5		ND	2.5		ND	2.5		ND	2.5	
Methyl-t-butyl ether	NS	ND	1		ND	1		ND	1		ND	1	
n-Butylbenzene	5	ND	1		ND	1		ND	1		ND	1	
n-Propylbenzene	5	ND	1		ND	1		ND	1		ND	1	
O-Xylene	5	ND	1		ND	1		ND	1		ND	1	
sec-Butylbenzene	50	ND	1		ND	1		ND	1		ND	1	
Styrene	NS	ND	1		ND	1		ND	1		ND	1	
t-Butyl Alcohol	5	ND	10		ND	10		ND	10		ND	10	
t-Butylbenzene	NS	ND	1		ND	1		ND	1		ND	1	
Tetrachloroethene	5	ND	1		ND	1		ND	1		ND	1	
Toluene	5	ND	1		ND	1		ND	1		ND	1	
Trans-1,2-dichloroethene	5	ND	1		ND	1		ND	1		ND	1	
Trans-1,3-dichloropropene	NS	ND	1		ND	1		ND	1		ND	1	
Trichloroethene	5	ND	1		ND	1		ND	1		ND	1	
Trichlorofluoromethane	5	ND	1		ND	1		ND	1		ND	1	
Vinyl chloride	2	ND	1		ND	1		ND	1		ND	1	
Total VOC TICs	NS	ND		J	11.9		J	3.6		J	ND		

Notes and Abbreviations:
AWQSGVs= New York Ambient Water Quality Standards and Guidance Values.
NA= Not analyzed
ND= Not detected
NS= No standard or guidance value
TICs= Tenatively Identified Compounds
J= estimated value
Conc.= Concentration
MDL= Method detection limit
ug/L= micrograms per liter
FB= Field Blank
TB= Trip Blank
B= Found in laboratory blank; a suspected laboratory artifact.

TABLE 3A
SUMMARY OF GROUNDWATER ANALYTICAL RESULTS-VOCS
HMMT-PORT IVORY FACILITY
SITE 2

Location	New York	FB			FB			FB			FB		
Sample ID	AWQSGVs	PI-2B-FB1-110707WQ01			PI-2BFBO1-111207WQ02			PI-2BFB-1-111507WQ01			PI-3B-FB01-121907WQ1		
Lab Sample No.		AC34274-011			AC34274-012			AC34394-011			AC34902-008		
Sampling Date		11/7/2007			11/12/2007			11/16/2007			12/19/2007		
Matrix		WATER			WATER			WATER			WATER		
Units		UG/L			UG/L			UG/L			UG/L		
VOLATILE ORGANIC COMPOUNDS (VOCs)		Conc	MDL	Qual	Conc	MDL	Qual	Conc	MDL	Qual	Conc	MDL	Qual
1,1,1-Trichloroethane	5	ND	NA		ND	N/A		ND	5		ND	1	
1,1,2,2-Tetrachloroethane	5	ND	5		ND	N/A		ND	5		ND	1	
1,1,2-trichloro-1,2,2-trifluoroethane	5	ND	5		ND	N/A		ND	5		ND	5	
1,1,2-Trichloroethane	1	ND	5		ND	N/A		ND	5		ND	1	
1,1-Dichloroethane	5	ND	5		ND	N/A		ND	5		ND	1	
1,1-Dichloroethene	5	ND	5		ND	N/A		ND	5		ND	1	
1,2,3-Trichloropropane	0.04	ND	5		ND	N/A		ND	5		ND	1	
1,2,4-Trimethylbenzene	5	ND	5		ND	N/A		ND	1		ND	1	
1,2-Dichlorobenzene	4.7	ND	1		ND	N/A		ND	5		ND	1	
1,2-Dichloroethane	5	ND	5		ND	N/A		ND	5		ND	0.6	
1,2-Dichloropropane	1	ND	5		ND	N/A		ND	5		ND	1	
1,3,5-Trimethylbenzene	5	ND	5		ND	N/A		ND	1		ND	1	
1,3-Dichlorobenzene	5	ND	1		ND	N/A		ND	5		ND	1	
1,3-Dichloropropane	5	ND	5		ND	N/A		ND	5		ND	1	
1,4-Dichlorobenzene	5	ND	5		ND	N/A		ND	5		ND	1	
1,4-Dioxane	NS	ND	5		ND	N/A		ND	250		ND	200	
2-Butanone	50	ND	250		ND	N/A		ND	5		ND	2	
2-Chloroethylvinylether	NS	ND	5		ND	N/A		ND	5		ND	2	
2-Hexanone	50	ND	5		ND	N/A		ND	5		ND	2	
4-Isopropyltoluene	5	ND	5		ND	N/A		ND	1		ND	1	
4-Methyl-2-Pentanone	50	ND	1		ND	N/A		ND	5		ND	1	
Acetone	50	ND	5		ND	N/A		ND	25		ND	10	
Acrolein	5	ND	25		ND	N/A		ND	25		ND	5	
Acrylonitrile	5	ND	25		ND	N/A		ND	5		ND	2	
Benzene	1	ND	5		ND	N/A		ND	1		ND	0.5	
Bromodichloromethane	50	ND	1		ND	N/A		ND	5		ND	1	
Bromoform	50	ND	5		ND	N/A		ND	5		ND	1	
Bromomethane	5	ND	5		ND	N/A		ND	5		ND	2	
Carbon disulfide	50	ND	5		ND	N/A		ND	5		ND	1	
Carbon tetrachloride	5	ND	5		ND	N/A		ND	5		ND	1	
Chlorobenzene	5	ND	5		ND	N/A		ND	5		ND	1	
Chloroethane	50	ND	5		ND	N/A		ND	5		ND	1	
Chloroform	7	ND	5		6.7	N/A		3.8	5	J	ND	1	
Chloromethane	NS	ND	5		ND	N/A		ND	5		ND	2	
Cis-1,2-Dichloroethene	5	ND	5		ND	N/A		ND	5		ND	1	
Cis-1,3-Dichloropropene	NS	ND	5		ND	N/A		ND	5		ND	1	
Dibromochloromethane	50	ND	5		ND	N/A		ND	5		ND	1	
Dichlorodifluoromethane	NS	ND	5		ND	N/A		ND	5		ND	2	
Ethylbenzene	5	ND	5		ND	N/A		ND	1		ND	1	
Isopropylbenzene	5	ND	1		ND	N/A		ND	1		ND	1	
M&p-Xylenes	5	ND	1		ND	N/A		ND	2		ND	1.5	
Methylene chloride	5	ND	2		ND	N/A		ND	5		ND	2.5	
Methyl-t-butyl ether	NS	2.1	5	JB	ND	N/A		ND	1		ND	1	
n-Butylbenzene	5	ND	1		ND	N/A		ND	1		ND	1	
n-Propylbenzene	5	ND	1		ND	N/A		ND	1		ND	1	
O-Xylene	5	ND	1		ND	N/A		ND	1		ND	1	
sec-Butylbenzene	50	ND	1		ND	N/A		ND	1		ND	1	
Styrene	NS	ND	1		ND	N/A		ND	5		ND	1	
t-Butyl Alcohol	5	ND	5		ND	N/A		ND	25		ND	10	
t-Butylbenzene	NS	ND	25		ND	N/A		ND	1		ND	1	
Tetrachloroethene	5	ND	1		ND	N/A		ND	5		ND	1	
Toluene	5	ND	5		ND	N/A		ND	1		ND	1	
Trans-1,2-dichloroethene	5	ND	1		ND	N/A		ND	5		ND	1	
Trans-1,3-dichloropropene	NS	ND	5		ND	N/A		ND	5		ND	1	
Trichloroethene	5	ND	5		ND	N/A		ND	5		ND	1	
Trichlorofluoromethane	5	ND	5		ND	N/A		ND	5		ND	1	
Vinyl chloride	2	ND	5		ND	N/A		ND	5		ND	1	
Total VOC TICs	NS	ND	5		ND			ND			ND		

Notes and Abbreviations:
AWQSGVs= New York Ambient Water Quality Standards and Guidance Values.
NA= Not analyzed
ND= Not detected
NS= No standard or guidance value
TICs= Tenatively Identified Compounds
J= estimated value
Conc.= Concentration
MDL= Method detection limit
ug/L= micrograms per liter
FB= Field Blank
TB= Trip Blank
B= Found in laboratory blank; a suspected laboratory artifact.

TABLE 3A
SUMMARY OF GROUNDWATER ANALYTICAL RESULTS-VOCS
HMMT-PORT IVORY FACILITY
SITE 2

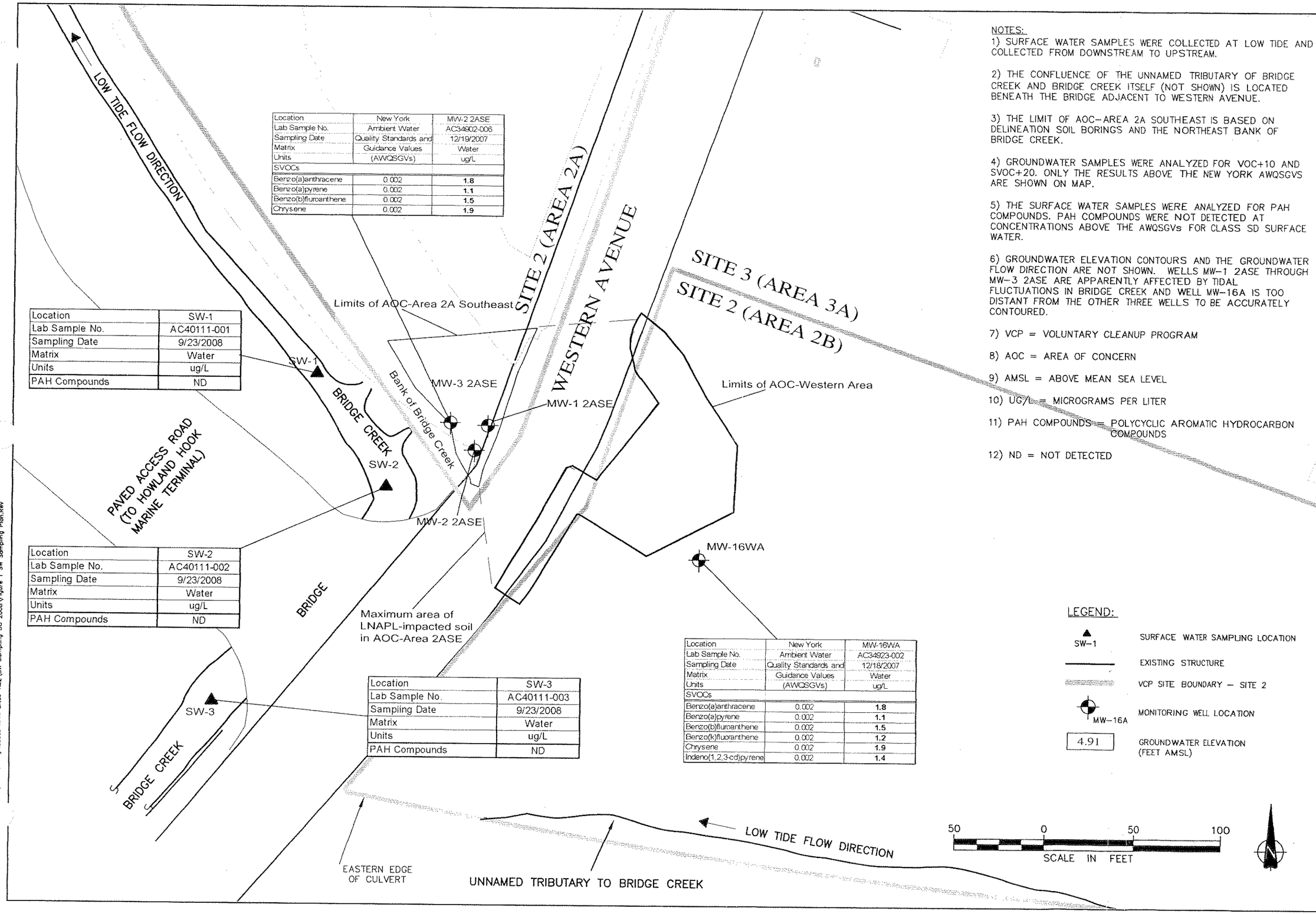
Location	New York	TB			FB			TB		
Sample ID	AWQSGVs	PI-3B-TB01-121907WQ1			PI-3A-FB01-122007WQ1			PI-3A-TB01-122007WQ1		
Lab Sample No.		AC34902-009			AC34923-008			AC34923-009		
Sampling Date		12/19/2007			12/20/2007			12/20/2007		
Matrix		WATER			WATER			WATER		
Units		UG/L			UG/L			UG/L		
VOLATILE ORGANIC COMPOUNDS (VOCs)		Conc	MDL	Qual	Conc	MDL	Qual	Conc	MDL	Qual
1,1,1-Trichloroethane	5	ND	1		ND	1		ND	1	
1,1,2,2-Tetrachloroethane	5	ND	1		ND	1		ND	1	
1,1,2-trichloro-1,2,2-trifluoroethane	5	ND	5		ND	5		ND	5	
1,1,2-Trichloroethane	1	ND	1		ND	1		ND	1	
1,1-Dichloroethane	5	ND	1		ND	1		ND	1	
1,1-Dichloroethene	5	ND	1		ND	1		ND	1	
1,2,3-Trichloropropane	0.04	ND	1		ND	1		ND	1	
1,2,4-Trimethylbenzene	5	ND	1		ND	1		ND	1	
1,2-Dichlorobenzene	4.7	ND	1		ND	1		ND	1	
1,2-Dichloroethane	5	ND	0.6		ND	0.6		ND	0.6	
1,2-Dichloropropane	1	ND	1		ND	1		ND	1	
1,3,5-Trimethylbenzene	5	ND	1		ND	1		ND	1	
1,3-Dichlorobenzene	5	ND	1		ND	1		ND	1	
1,3-Dichloropropane	5	ND	1		ND	1		ND	1	
1,4-Dichlorobenzene	5	ND	1		ND	1		ND	1	
1,4-Dioxane	NS	ND	200		ND	200		ND	200	
2-Butanone	50	ND	2		ND	2		ND	2	
2-Chloroethylvinylether	NS	ND	2		ND	2		ND	2	
2-Hexanone	50	ND	2		ND	2		ND	2	
4-Isopropyltoluene	5	ND	1		ND	1		ND	1	
4-Methyl-2-Pentanone	50	ND	1		ND	1		ND	1	
Acetone	50	ND	10		ND	10		ND	10	
Acrolein	5	ND	5		ND	5		ND	5	
Acrylonitrile	5	ND	2		ND	2		ND	2	
Benzene	1	ND	0.5		ND	0.5		ND	0.5	
Bromodichloromethane	50	ND	1		ND	1		ND	1	
Bromoform	50	ND	1		ND	1		ND	1	
Bromomethane	5	ND	2		ND	2		ND	2	
Carbon disulfide	50	ND	1		ND	1		ND	1	
Carbon tetrachloride	5	ND	1		ND	1		ND	1	
Chlorobenzene	5	ND	1		ND	1		ND	1	
Chloroethane	50	ND	1		ND	1		ND	1	
Chloroform	7	ND	1		4.3	1		ND	1	
Chloromethane	NS	ND	2		ND	2		ND	2	
Cis-1,2-Dichloroethene	5	ND	1		ND	1		ND	1	
Cis-1,3-Dichloropropene	NS	ND	1		ND	1		ND	1	
Dibromochloromethane	50	ND	1		ND	1		ND	1	
Dichlorodifluoromethane	NS	ND	2		ND	2		ND	2	
Ethylbenzene	5	ND	1		ND	1		ND	1	
Isopropylbenzene	5	ND	1		ND	1		ND	1	
M&p-Xylenes	5	ND	1.5		ND	1.5		ND	1.5	
Methylene chloride	5	ND	2.5		ND	2.5		ND	2.5	
Methyl-t-butyl ether	NS	ND	1		ND	1		ND	1	
n-Butylbenzene	5	ND	1		ND	1		ND	1	
n-Propylbenzene	5	ND	1		ND	1		ND	1	
O-Xylene	5	ND	1		ND	1		ND	1	
sec-Butylbenzene	50	ND	1		ND	1		ND	1	
Styrene	NS	ND	1		ND	1		ND	1	
t-Butyl Alcohol	5	ND	10		ND	10		ND	10	
t-Butylbenzene	NS	ND	1		ND	1		ND	1	
Tetrachloroethene	5	ND	1		ND	1		ND	1	
Toluene	5	ND	1		ND	1		2.5	1	
Trans-1,2-dichloroethene	5	ND	1		ND	1		ND	1	
Trans-1,3-dichloropropene	NS	ND	1		ND	1		ND	1	
Trichloroethene	5	ND	1		ND	1		ND	1	
Trichlorofluoromethane	5	ND	1		ND	1		ND	1	
Vinyl chloride	2	ND	1		ND	1		ND	1	
Total VOC TICs	NS	ND			ND			ND		

Notes and Abbreviations:
AWQSGVs= New York Ambient Water Quality Standards and Guidance Values.
NA= Not analyzed
ND= Not detected
NS= No standard or guidance value
TICs= Tenatively Identified Compounds
J= estimated value
Conc.= Concentration
MDL= Method detection limit
ug/L= micrograms per liter
FB= Field Blank
TB= Trip Blank
B= Found in laboratory blank; a suspected laboratory artifact.

TABLE 3B
SUMMARY OF GROUNDWATER ANALYTICAL RESULTS-SVOCS
HHMT-PORT IVORY FACILITY
SITE 2

Location		MW-1 2ASE			MW-2 2ASE			MW-3 2ASE			MW-16WA			FB			FB		
Sample ID	New York	PI2AMW1-2ASE121907WW1			PI2AMW2-2ASE121907WW1			PI2AMW3-2ASE121907WW1			PI-2B-MW16WA-122007WG1			PI-3B-FB01-121907WQ1			PI-3A-FB01-122007WQ1		
Lab Sample No.	AWQSGVs	AC34902-005			AC34902-006			AC34902-007			AC34923-002			AC34902-008			AC34923-008		
Sampling Date		12/19/2007			12/19/2007			12/19/2007			12/18/2007			12/19/2007			12/20/2007		
Matrix		WATER			WATER			WATER			WATER			WATER			WATER		
Units		ug/L			ug/L			ug/L			ug/L			ug/L			ug/L		
Semivolatile Organic Compounds (SVOCs)		Conc	MDL	Qual	Conc	MDL	Qual	Conc	MDL	Qual	Conc	MDL	Qual	Conc	MDL	Qual	Conc	MDL	Qual
1,2,4-Trichlorobenzene	5	ND	2		ND	2		ND	2		ND	2		ND	2		ND	2	
1,2-Diphenylhydrazine	NA	ND	0.5		ND	0.51		ND	0.5		ND	0.51		ND	0.51		ND	0.5	
2,4,5-Trichlorophenol	1	ND	5		ND	5.1		ND	5		ND	5.1		ND	5.1		ND	5	
2,4,6-Trichlorophenol	NA	ND	5		ND	5.1		ND	5		ND	5.1		ND	5.1		ND	5	
2,4-Dichlorophenol	1	ND	5		ND	5.1		ND	5		ND	5.1		ND	5.1		ND	5	
2,4-Dimethylphenol	1	ND	5		ND	5.1		ND	5		ND	5.1		ND	5.1		ND	5	
2,4-Dinitrophenol	5	ND	10		ND	10		ND	10		ND	10		ND	10		ND	10	
2,4-Dinitrotoluene	5	ND	1		ND	1		ND	1		ND	1		ND	1		ND	1	
2,6-Dinitrotoluene	5	ND	1		ND	1		ND	1		ND	1		ND	1		ND	1	
2-Chloronaphthalene	10	ND	1		ND	1		ND	1		ND	1		ND	1		ND	1	
2-Chlorophenol	50	ND	5		ND	5.1		ND	5		ND	5.1		ND	5.1		ND	5	
2-Methylnaphthalene	50	ND	10		ND	10		ND	10		ND	10		ND	10		ND	10	
2-Methylphenol	5	ND	10		ND	10		ND	10		ND	10		ND	10		ND	10	
2-Nitroaniline	5	ND	5		ND	5.1		ND	5		ND	5.1		ND	5.1		ND	5	
2-Nitrophenol	5	ND	5		ND	5.1		ND	5		ND	5.1		ND	5.1		ND	5	
3&4-Methylphenol	50	ND	10		ND	10		ND	10		ND	10		ND	10		ND	10	
3,3'-Dichlorobenzidine	NA	ND	5		ND	5.1		ND	5		ND	5.1		ND	5.1		ND	5	
3-Nitroaniline	5	ND	5		ND	5.1		ND	5		ND	5.1		ND	5.1		ND	5	
4,6-Dinitro-2-methylphenol	NA	ND	5		ND	5.1		ND	5		ND	5.1		ND	5.1		ND	5	
4-Bromophenyl-phenylether	NA	ND	1		ND	1		ND	1		ND	1		ND	1		ND	1	
4-Chloro-3-methylphenol	5	ND	5		ND	5.1		ND	5		ND	5.1		ND	5.1		ND	5	
4-Chloroaniline	5	ND	5		ND	5.1		ND	5		ND	5.1		ND	5.1		ND	5	
4-Chlorophenyl-phenylether	NA	ND	1		ND	1		ND	1		ND	1		ND	1		ND	1	
4-Nitroaniline	5	ND	5		ND	5.1		ND	5		ND	5.1		ND	5.1		ND	5	
4-Nitrophenol	5	ND	5		ND	5.1		ND	5		ND	5.1		ND	5.1		ND	5	
Acenaphthene	20	1.8	1		1.3	1		1.1	1		1.7	1		ND	1		ND	1	
Acenaphthylene	20	ND	1		ND	1		ND	1		ND	1		ND	1		ND	1	
Aniline	5	ND	5		ND	5.1		ND	5		ND	5.1		ND	5.1		ND	5	
Anthracene	50	ND	1		ND	1		ND	1		1.6	1		ND	1		ND	1	
Benzidine	5	ND	20		ND	20		ND	20		ND	20		ND	20		ND	20	
Benzo[a]Anthracene	0.002	ND	1		**1.8**	1		ND	1		**2.3**	1		ND	1		ND	1	
Benzo[a]Pyrene	0.002	ND	1		**1.1**	1		ND	1		**2.1**	1		ND	1		ND	1	
Benzo[b]Fluoranthene	0.002	ND	1		**1.5**	1		ND	1		**3**	1		ND	1		ND	1	
Benzo[g,h,i]Perylene	5	ND	1		ND	1		ND	1		1.5	1		ND	1		ND	1	
Benzo[k]Fluoranthene	0.002	ND	1		ND	1		ND	1		**1.2**	1		ND	1		ND	1	
Benzoic acid	50	ND	20		ND	20		ND	20		ND	20		ND	20		ND	20	
bis(2-Chloroethoxy)methane	5	ND	1		ND	1		ND	1		ND	1		ND	1		ND	1	
bis(2-Chloroethyl)ether	1	ND	5		ND	5.1		ND	5		ND	5.1		ND	5.1		ND	5	
bis(2-Chloroisopropyl)ether	NA	ND	1		ND	1		ND	1		ND	1		ND	1		ND	1	
bis(2-Ethylhexyl)phthalate	50	ND	1		4.1	1		ND	1		25	1		ND	1		ND	1	
Butylbenzylphthalate	50	ND	1		ND	1		ND	1		ND	1		ND	1		ND	1	
Carbazole	NA	ND	1		ND	1		ND	1		ND	1		ND	1		ND	1	
Chrysene	0.002	ND	1		**1.9**	1		ND	1		**3.1**	1		ND	1		ND	1	
Dibenzo[a,h]Anthracene	50	ND	1		ND	1		ND	1		ND	1		ND	1		ND	1	
Dibenzofuran	5	ND	5		ND	5.1		ND	5		ND	5.1		ND	5.1		ND	5	
Diethylphthalate	50	ND	1		ND	1		ND	1		ND	1		ND	1		ND	1	
Dimethylphthalate	50	ND	1		ND	1		ND	1		ND	1		ND	1		ND	1	
Di-n-Butylphthalate	50	ND	1		ND	1		ND	1		ND	1		ND	1		ND	1	
Di-n-octylphthalate	50	ND	1		ND	1		ND	1		ND	1		ND	1		ND	1	
Fluoranthene	50	ND	1		1.6	1		ND	1		4.9	1		ND	1		ND	1	
Fluorene	50	ND	1		2.9	1		ND	1		1.1	1		ND	1		ND	1	
Hexachlorobenzene	0.35	ND	1		ND	1		ND	1		ND	1		ND	1		ND	1	
Hexachlorobutadiene	0.5	ND	0.5		ND	0.51		ND	0.5		ND	0.51		ND	0.51		ND	0.5	
Hexachlorocyclopentadiene	5	ND	15		ND	15		ND	15		ND	15		ND	15		ND	15	
Hexachloroethane	5	ND	2		ND	2		ND	2		ND	2		ND	2		ND	2	
Indeno[1,2,3-cd]Pyrene	0.002	ND	1		ND	1		ND	1		**1.4**	1		ND	1		ND	1	
Isophorone	50	ND	1		ND	1		ND	1		ND	1		ND	1		ND	1	
Naphthalene	10	ND	1		ND	1		ND	1		ND	1		ND	1		ND	1	
Nitrobenzene	NA	ND	20		ND	20		ND	20		ND	20		ND	20		ND	20	
N-Nitroso-Di-n-propylamine	NA	ND	1		ND	1		ND	1		ND	1		ND	1		ND	1	
N-Nitrosodiphenylamine	50	ND	1		ND	1		ND	1		ND	1		ND	1		ND	1	
Pentachlorophenol	1	ND	5		ND	5.1		ND	5		ND	5.1		ND	5.1		ND	5	
Phenanthrene	50	ND	1		2.5	1		ND	1		3.8	1		ND	1		ND	1	
Phenol	1	ND	5		ND	5.1		ND	5		ND	5.1		ND	5.1		ND	5	
Pyrene	50	ND	1		1.9	1		ND	1		5.2	1		ND	1		ND	1	
Total SVOC TICs	NS	4.4		J	323.5		J	ND			272.2		J	ND			ND		

Notes & Abbreviations:
AWQSGVs= New York Ambient Water Quality Standards and Guidance Values.
NA= Not analyzed
ND= Not detected
NS= No standard or guidance value
TICs= Tenatively Identified Compounds
J= estimated value
Conc.= Concentration
MDL= Method detection limit
ug/L= micrograms per liter
FB= Field Blank
TB= Trip Blank
Note 1) Concentrations in bold and shaded cells exceed the AWQSGVs.



Location	New York	MW-2 2ASE
Lab Sample No.	Ambient Water	AC34902-006
Sampling Date	Quality Standards and	12/19/2007
Matrix	Guidance Values	Water
Units	(AWQSGVs)	ug/L
SVOCs		
Benzo(a)anthracene	0.002	**1.8**
Benzo(a)pyrene	0.002	**1.1**
Benzo(b)fluoranthene	0.002	**1.5**
Chrysene	0.002	**1.9**

Location	SW-1
Lab Sample No.	AC40111-001
Sampling Date	9/23/2008
Matrix	Water
Units	ug/L
PAH Compounds	ND

Location	SW-2
Lab Sample No.	AC40111-002
Sampling Date	9/23/2008
Matrix	Water
Units	ug/L
PAH Compounds	ND

Location	SW-3
Lab Sample No.	AC40111-003
Sampling Date	9/23/2008
Matrix	Water
Units	ug/L
PAH Compounds	ND

Location	New York	MW-16WA
Lab Sample No.	Ambient Water	AC34923-002
Sampling Date	Quality Standards and	12/18/2007
Matrix	Guidance Values	Water
Units	(AWQSGVs)	ug/L
SVOCs		
Benzo(a)anthracene	0.002	**1.8**
Benzo(a)pyrene	0.002	**1.1**
Benzo(b)fluoranthene	0.002	**1.5**
Benzo(k)fluoranthene	0.002	**1.2**
Chrysene	0.002	**1.9**
Indeno(1,2,3-cd)pyrene	0.002	**1.4**

NOTES:

1) SURFACE WATER SAMPLES WERE COLLECTED AT LOW TIDE AND COLLECTED FROM DOWNSTREAM TO UPSTREAM.

2) THE CONFLUENCE OF THE UNNAMED TRIBUTARY OF BRIDGE CREEK AND BRIDGE CREEK ITSELF (NOT SHOWN) IS LOCATED BENEATH THE BRIDGE ADJACENT TO WESTERN AVENUE.

3) THE LIMIT OF AOC-AREA 2A SOUTHEAST IS BASED ON DELINEATION SOIL BORINGS AND THE NORTHEAST BANK OF BRIDGE CREEK.

4) GROUNDWATER SAMPLES WERE ANALYZED FOR VOC+10 AND SVOC+20. ONLY THE RESULTS ABOVE THE NEW YORK AWQSGVS ARE SHOWN ON MAP.

5) THE SURFACE WATER SAMPLES WERE ANALYZED FOR PAH COMPOUNDS. PAH COMPOUNDS WERE NOT DETECTED AT CONCENTRATIONS ABOVE THE AWQSGVs FOR CLASS SD SURFACE WATER.

6) GROUNDWATER ELEVATION CONTOURS AND THE GROUNDWATER FLOW DIRECTION ARE NOT SHOWN. WELLS MW-1 2ASE THROUGH MW-3 2ASE ARE APPARENTLY AFFECTED BY TIDAL FLUCTUATIONS IN BRIDGE CREEK AND WELL MW-16A IS TOO DISTANT FROM THE OTHER THREE WELLS TO BE ACCURATELY CONTOURED.

7) VCP = VOLUNTARY CLEANUP PROGRAM

8) AOC = AREA OF CONCERN

9) AMSL = ABOVE MEAN SEA LEVEL

10) UG/L = MICROGRAMS PER LITER

11) PAH COMPOUNDS = POLYCYCLIC AROMATIC HYDROCARBON COMPOUNDS

12) ND = NOT DETECTED

LEGEND:

- SW-1 — SURFACE WATER SAMPLING LOCATION
- EXISTING STRUCTURE
- VCP SITE BOUNDARY – SITE 2
- MW-16A — MONITORING WELL LOCATION
- 4.91 — GROUNDWATER ELEVATION (FEET AMSL)

Sheet 1 of 1

THE PORT AUTHORITY OF NY & NJ

ENGINEERING PROGRAM MANAGER

No.	Date	Revision	Approved

HOWLAND HOOK MARINE TERMINAL – PORT IVORY FACILITY SITE 2

Title

GROUNDWATER AND SURFACE WATER ANALYTICAL RESULTS MAP – AOC-AREA 2A SOUTHEAST AND AOC-WESTERN AREA

Designed by	Drawn by	Checked by
	RMT	GKC

Date 8/29/2008

Contract Number 053

Drawing Number 5

P:\232952\mxd\Remedial Actions\Outstanding Issues RAW Sites 1&2\SW Sampling BC 2008\Figure 1 SW Sampling Plan.Rev

groundwater samples collected at locations MW-1 2ASE and MW-3 2ASE. SVOC TICs were detected at a concentration of 323.5 ug/L at MW-2-2ASE.

Quality Assurance/Quality Control – Groundwater Samples

To monitor the effectiveness of the field decontamination procedures and the degree to which the laboratory may have contaminated the groundwater samples, QA/QC samples were collected. The Port Authority collected two field blanks and two trip blanks. The field blank was prepared by running laboratory-grade DI water over the sampling equipment. The trip blank was prepared by the analytical laboratory and was shipped with the groundwater sampling jars from the laboratory and transported to the laboratory with the groundwater samples. The field blanks were analyzed for TCL VOC+10 and TCL SVOC+20, while the trip blanks were analyzed for only VOC+10. Please note, the purpose of collecting a field blank on December 19, 2007 was to document the effectiveness of field decontamination procedures at Site 2 and other sample fractions associated with samples collected at Site 3. The samples collected at Site 3 were analyzed for Priority Pollutants with a 40-compound library search (PP+40). The field blanks were analyzed for the same parameters. However, since the sampling program at Site 2 included only the VOC and SVOC fractions analyzed, the field blank data reported herein include only VOCs and SVOCs. No targeted VOCs or SVOCs were detected in the field blanks prepared on December 19, 2007.

Chloroform was the only targeted VOC or SVOC detected in the field blank sample collected on December 20, 2007. However, chloroform was not detected in any of the water samples collected from the site. Therefore, the presence of chloroform in the field blank does not appear to have affected data usability. Neither VOC TICs, nor SVOC TICs were detected in the field blank samples (see Tables 3A and 3B for a summary of the QA/QC results).

Except for toluene, no targeted VOCs or VOC TICs were detected in either trip blank. Toluene was detected above the laboratory's reporting limits, but below its AWQSGV in one of the trip blank samples. Toluene was not detected in any of the groundwater samples. Therefore, the presence of toluene in one of the trip blanks does not appear to affect data usability.

5.3.3 Surface Water Sampling Results

The surface water sampling component of the FSRI included collecting surface water samples from three locations in Bridge Creek adjacent to AOC-Area 2A Southeast. The surface water samples were analyzed for PAH compounds because PAH compounds were the only contaminant of concern detected in

groundwater adjacent to Bridge Creek. PAH compounds were not detected in the surface water samples, indicating that groundwater has not impacted surface water. The surface water sampling locations are shown on Figure 5. Surface water sampling results are summarized in Table 4.

6.0 DISCUSSION OF FSRI RESULTS

The overall goal of the FSRI was to determine whether further investigative and/or remedial efforts are warranted at the three open AOCs (AOC-Area 2A Southeast, AOC-Western Area, and AOC-TE Pipeline). To meet the previously stated objectives, the FSRI included the collection of soil, groundwater and surface water samples at AOC-Area 2A Southeast, the collection of soil and groundwater samples at AOC-Western Area and the collection of soil samples at AOC-TE Pipeline. The presence or absence of mobile LNAPL was also investigated at three monitoring wells at AOC-Area 2A Southeast.

In general, the concentrations of PAH compounds detected in soil at Site 2 were similar to those detected throughout the HHMT-Port Ivory Facility and are attributable to the former placement of fill by P&G.

LNAPL-impacted soil was only encountered at one AOC (AOC-Area 2A Southeast) and was subsequently delineated during the FSRI (See Figure 3). Mobile LNAPL was not encountered at any location in AOC-Area 2A Southeast. Groundwater is impacted by PAH compounds. However, these groundwater impacts have not impacted surface water in Bridge Creek or the tributary to Bridge Creek.

Soil sampling analytical results and field observations confirmed the success of the soil removal effort at AOC-Western Area. Soil and groundwater analytical results and field observations confirm the absence of any significant environmental impacts at AOC-TE Pipeline.

The FSRI results at AOC-Western Area, AOC-Area 2A Southeast, and AOC-TE Pipeline are discussed in Sections 6.1, 6.2, and 6.3, respectively.

6.1 FSRI Results AOC-Western Area

The overall goal of the FSRI at AOC-Western Area was to confirm the success of soil removal activities previously completed by The Port Authority (Objective 1) and to confirm that no additional investigation or remedial action is warranted in this AOC.

TABLE 4
SUMMARY OF SURFACE WATER ANALYTICAL RESULTS- PAHs
HHMT-PORT IVORY FACILITY
SITE 2

Location		SW-1			SW-2			SW-3			FB		
Sample ID	New York	PI-BC-SW-1-092308SW1			PI-BC-SW-2-092308SW1			PI-BC-SW-3-092308SW1			PI-BC-SWFB-092308SW1		
Lab ID	State	AC40111-001			AC40111-002			AC40111-003			AC40111-005		
Date Collected	AWQSGV	9/23/2008			9/23/2008			9/23/2008			9/23/2008		
Material	(Surface Water*)	Water			Water			Water			Water		
Units	ug/L	ug/L			ug/L			ug/L			ug/L		
Polycyclic Aromatic Hydrocarbons (PAHs)		Conc	Qual	MDL	Conc	Qual	MDL	Conc	Qual	MDL	Conc	Qual	MDL
Acenaphthene	60	ND		2.1	ND		2.1	ND		2	ND		2
Acenaphthylene	20	ND		2.1	ND		2.1	ND		2	ND		2
Anthracene	50	ND		2.1	ND		2.1	ND		2	ND		2
Benzo[a]anthracene	0.002	ND		2.1	ND		2.1	ND		2	ND		2
Benzo[a]pyrene	Detection Limit	ND		2.1	ND		2.1	ND		2	ND		2
Benzo[b]fluoranthene	0.002	ND		2.1	ND		2.1	ND		2	ND		2
Benzo[g,h,i]perylene	5	ND		2.1	ND		2.1	ND		2	ND		2
Benzo[k]fluoranthene	0.002	ND		2.1	ND		2.1	ND		2	ND		2
Chrysene	NS	ND		2.1	ND		2.1	ND		2	ND		2
Dibenzo[a,h]Anthracene	NS	ND		2.1	ND		2.1	ND		2	ND		2
Fluoranthene	NS	ND		2.1	ND		2.1	ND		2	ND		2
Fluorene	23	ND		2.1	ND		2.1	ND		2	ND		2
Indeno[1,2,3-cd]pyrene	NS	ND		2.1	ND		2.1	ND		2	ND		2
Naphthalene	140	ND		2.1	ND		2.1	ND		2	ND		2
Phenanthrene	14	ND		2.1	ND		2.1	ND		2	ND		2
Pyrene	NS	ND		2.1	ND		2.1	ND		2	ND		2

Notes and Abbreviations:

AWQSGV = Ambient Water Quality Standards and Guidance Values as published in the Division of Water Technical and Operational Guidance Series (1.1.1), dated June 1998.

* Using SD water classification with protection for human consumption of fish (saline water).

UG/L = Micrograms per Liter

ND = Not Detected

NS=No Standard

Qual = Laboratory Qualifier

Conc = Concentration

MDL = Method Detection Limit

FB = Field Blank

Soil samples were collected from 18 locations along the perimeter of the excavation of AOC-Western Area. As a portion of the excavation had been backfilled, soil samples collected from 8 locations were sampled below the backfill material by drilling soil borings. Field observations indicated the absence LNAPL and LNAPL-impacted soil along the excavation perimeter at all soil boring locations. Elevated concentrations of volatile organic vapors were not detected using a PID, except for WA-5, which was deemed unrelated to LNAPL impacts..

The soil analytical results indicate minor impacts to soil. These impacts consisted primarily of PAH compounds detected at similar concentrations to those in soil at other portions of the HHMT-Port Ivory Facility. These minor soil impacts are attributable to fill materials placed at the site by P&G.

TPHC concentrations were below 5,000 mg/kg, the site-specific threshold for investigating for the presence of mobile LNAPL in all except one sample. The concentration detected at WA-16 was 18,000 mg/kg. Even though LNAPL-impacted soil was not encountered at WA-16, to be consistent with the investigation of soil at other areas of the HMM Facility where TPHC concentrations in soil exceeded 5,000 mg/kg, The Port Authority installed a monitoring well (MW-16WA) to confirm the presence or absence of mobile LNAPL at location WA-16. LNAPL was not encountered in the well during gauging and prior to sampling. Therefore, mobile LNAPL is not present at this location. The analytical results of a groundwater sample collected from well MW-16WA indicated only minor impacts of PAH compounds.

The anticipated direction of groundwater flow is to the south toward the unnamed tributary of Bridge Creek. Surface water sampling of the unnamed tributary of Bridge Creek completed in 2007 did not detect VOCs or SVOCs at concentrations above the AWQSGVs for Class SD surface water.

Based on the results of the FSRI, mobile LNAPL is not present in AOC-Western Area. Minor impacts to soil and groundwater are present, which are believed to be related to fill material used to raise the site grade by P&G. However, these impacts have not affected surface water quality in the unnamed tributary of Bridge Creek, which is located to the south of Area 2B. The soil removal effort at this AOC was successful. Based on the results of the FSRI, no further investigation is warranted at AOC-Western Area.

6.2 FSRI Results AOC-Area 2A Southeast

This section summarizes the results of the FSRI at AOC-Area 2A Southeast. The FSRI at AOC-Area 2A Southeast included the drilling of 19 soil borings, the installation of three monitoring wells, the collection

of 28 soil samples, the collection of three groundwater samples, and the collection of three surface water samples. The objectives of the FSRI at AOC-Area 2A Southeast were to confirm the presence or absence of elevated concentrations of PAH compounds and total SVOCs at location 2ASE2 (WAW-2S) Objective 2, to complete the delineation of LNAPL-impacted soil (Objective 3) to confirm the presence or absence of mobile LNAPL (Objective 4), and to evaluate whether the presence of LNAPL-impacted soil has impacted groundwater or surface water (Objective 5). Since PAH compounds were detected in groundwater, surface water sampling was performed to confirm whether or not surface water in Bridge Creek has been affected by the groundwater impacts. The objectives of AOC-Area 2A Southeast have been met as discussed below.

Prior to the FSRI, elevated concentrations of PAH compounds and total SVOCs were detected in a soil sample previously detected at WAW-2S at a depth of 3.5-4 feet bgs. This impact was potentially attributable to cinders/slag included in the sample. Confirmatory sampling conducted at this location during the FSRI indicated concentrations of PAH compounds in soil similar to those throughout the HHMT-Port Ivory Facility. Therefore no further investigative or remedial efforts are warranted for soil at AOC-Area 2A Southeast.

Prior to the FSRI, LNAPL-impacted soil was encountered in an excavation for modification to the facility storm water infrastructure in AOC-Area 2A Southeast. The inactive Tidewater pipelines extend through the excavation, and these pipelines are considered to be the potential source area for the LNAPL-impacted soil. During the FSRI, LNAPL-impacted soil was encountered at 2ASE-1, 2ASE-5, 2ASE-7 through 2ASE 14, and 2ASE-17. LNAPL impacts were determined based on field observations and analytical results of TPHC. The LNAPL-impacted soil was vertically delineated to a depth of 6 feet bgs. The thickness of LNAPL-impacted soil ranged from 1 to 4 feet bgs with an average thickness of approximately 2 feet. During the FSRI, LNAPL-impacted soil was horizontally delineated to the north at soil boring locations 2ASE-15, 2ASE-18, and 2ASE-19 and to the south at locations 2ASE-2 and 2ASE-3. Horizontal delineation could not be completed to the east due to the proximity of Western Avenue. Although soil borings could not be drilled in Western Avenue to complete the eastern delineation of AOC-Area 2A Southeast, delineation was completed at the eastern side of Western Avenue by the western limit of AOC-Western Area. Therefore, LNAPL-impacted soil present in AOC-Area 2A Southeast does not extend beyond Western Avenue. No further delineation to the east is necessary.

Further delineation along the western edge of and to the west of AOC-Area 2A Southeast is also unnecessary. Soil borings drilled at the western edge of AOC-Area 2A Southeast were located on or near the bank of Bridge Creek. Soil borings could not be drilled further to the west due to the steep slope along Bridge Creek. However, LNAPL-impacted soil does not appear to extend into Bridge Creek, as indications of LNAPL impacts (sheen, stained soil, LNAPL, etc.) were not present on soils on the surface of the bank of Bridge Creek. Further, LNAPL was not encountered in a well (MW-3 2ASE) installed near the bank of Bridge Creek, nor were any VOCs or SVOCS detected at concentrations above their respective AWQSGVs in a groundwater sample collected from this well. LNAPL has not been encountered in Bridge Creek itself and PAH compounds were not detected in surface water samples collected from Bridge Creek during the RI. Relatively low concentrations of TPHC were detected in sediment samples collected from Bridge Creek. Therefore, horizontal delineation of LNAPL-impacted soil has been completed to the extent possible to the west of AOC-Area 2A Southeast.

Based on the results of the FSRI, LNAPL-impacted soil is known to be present in AOC-Area 2A Southeast within a minimum area that of 4,000 square feet. Approximately 300 cubic yards of LNAPL-impacted soil is believed to be present at AOC-Area 2A Southeast.

To evaluate whether LNAPL-impacted soil has impacted groundwater, The Port Authority initiated a groundwater investigation at AOC-Area 2A Southeast. Groundwater sampling at AOC-Area 2A Southeast (from wells MW-1-2ASE, MW-2 2ASE, and MW-3 2ASE) revealed that groundwater is impacted with benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene and chrysene. These PAH compounds were not detected in surface water. Therefore, the presence of LNAPL has resulted in minor impacts to groundwater, but has not impacted surface water.

To evaluate whether mobile LNAPL is present in AOC-Area 2A Southeast, The Port Authority used field observations and the concentrations of TPHC in soil to determine where mobile LNAPL would most likely be present. The NYSDEC and The Port Authority have established a site-specific threshold of 5,000 mg/kg for investigating the presence of mobile LNAPL. TPHC concentrations in soil were above 5,000 mg/kg at 5 locations in AOC-Area 2A Southeast. Location 2ASE-8 (25,000 mg/kg), 2ASE-10A (38,000 mg/kg) and 2ASE-12 (16,000 mg/kg) had the highest concentrations of TPHC in soil. Field screening results and field observations indicated these locations had the greatest LNAPL impacts. Monitoring wells were installed at these locations. LNAPL was not present in any of the wells, even seven days after the wells were installed. Therefore, mobile LNAPL is not present in the vicinity of these

wells. As these locations exhibit the greatest LNAPL impacts at AOC-Area 2A Southeast, mobile LNAPL is not present at this AOC.

6.3 FSRI Results AOC-TE Pipeline

The FSRI at AOC-TE Pipeline included a geophysical survey to locate the active IMTT and inactive Texas Eastern pipelines, the drilling of 22 soil borings, and the collection of 21 soil samples for analysis. The soil borings were drilled at a rate of one per 50 linear feet of pipeline, a rate that is consistent with investigations at other areas of the HHMT-Port Ivory Facility. The overall goal of the FSRI at AOC-TE Pipeline was to determine whether LNAPL was present along these pipelines.

The geophysical surveys were successful in locating 480 feet of the active IMTT pipeline and 475 feet of the inactive Texas Eastern pipeline. Therefore Objective 6, to determine the locations of the IMTT and Texas Eastern pipelines has been met. Based on field observations, LNAPL-impacted soil was not encountered at any of the soil borings drilled along either pipeline. Therefore, Objective 7, to confirm the presence or absence of LNAPL-impacted soil along these pipelines, has been met. Analytical results reveal that soil is impacted by PAH compounds, a subset of SVOCs. As the total concentrations of PAH compounds detected in AOC-TE Pipeline are similar to those in soil samples collected from historic fill materials at locations throughout the facility, The Port Authority believes these impacts to be attributable to fill materials placed by P&G to raise the site grade.

During the SI, soil impacted by benzene was detected at well MW-10D, located north of AOC-TE Pipeline at Area 2B. A soil sample collected from the 8-10 foot bgs depth interval at MW-10D prior to the FSRI contained benzene at a concentration of 0.32 milligrams per kilogram (mg/kg), slightly above its RSCO, but almost two orders of magnitude below its direct contact health-based criterion (24 mg/kg). The benzene impact was successfully delineated in all directions, except to the south, during the RI.

Delineation to the south of MW-10D was completed during the FSRI while investigating AOC-TE Pipeline. Soil boring SH-3 was drilled approximately 26 feet to the south of MW-10D and the IMTT pipeline. Benzene was not detected in the soil sample collected from the groundwater interface at a depth interval of 5.5 to 6 feet at SH-3. As indicated in the *Site 2 CRIR*, benzene in soil in the vicinity of MW-10D has been delineated to an area of 4,800 square feet. The soil impacts have not impacted groundwater and are of no concern relative to human health as the concentration of benzene is well below its direct

contact criterion and the benzene-impacted soil is situated eight feet bgs. No further action is warranted with respect to benzene impacted soil in the vicinity of MW-10D.

7.0 CONCLUSIONS

Based on the data generated during the FSRI, The Port Authority has drawn the following conclusions:

- LNAPL-impacted soil was not encountered at any soil sampling location in AOC-Western Area. Soil is impacted with PAH compounds at similar concentrations detected at other portions of the HHMT-Port Ivory Facility. Mobile LNAPL was not encountered on groundwater. Although minor groundwater impacts were detected with respect to PAH compounds, these impacts have not affected surface water quality in the adjacent stream. No further investigative or remedial actions are warranted in AOC-Western Area.

- FSRI soil sampling data confirmed the absence of elevated (i.e., above concentrations detected throughout the facility) concentrations of PAH compounds in soil at 2ASE-2 (WAW-2S). Therefore, no additional investigation or remedial actions are warranted for PAH compounds in soil at AOC-Area 2A Southeast.

- During the FSRI, LNAPL-impacted soil was delineated in AOC-Area 2A Southeast to a minimum area of approximately 4,000 square feet. Based on field observations, the LNAPL-impacted soil did not appear to extend below 6 feet below grade and its average thickness was 2 feet. Therefore, approximately 300 cubic yards of LNAPL-impacted soil is present in this AOC. Delineation of LNAPL-impacted soil to the east of AOC-Area 2A Southeast was completed at AOC-Western Area. To the west, sediment sampling in Bridge Creek and field observations of soil quality along the bank of Bridge Creek, demonstrate delineation of LNAPL impacts. The north and south limits of LNAPL-impacted soil were defined at soil borings. LNAPL impacts have been successfully delineated at AOC-Area 2A Southeast. Therefore, no additional investigation or remedial actions are warranted for LNAPL-impacted soil in AOC-Area 2A Southeast.

- Groundwater monitoring wells were installed at three locations which exhibited the greatest impacts based on field observations and TPHC concentrations. LNAPL was not encountered in

any of the three wells installed in AOC-Area 2A Southeast. Therefore mobile LNAPL is not located in AOC-Area 2A Southeast.

- Groundwater at AOC-Area 2A Southeast is impacted by PAH compounds. However, these impacts have not been detected in surface water samples collected from Bridge Creek located adjacent to this AOC. No further investigative or remedial actions are warranted in AOC-Area 2A Southeast.

- LNAPL-impacted soil was not encountered in any soil boring drilled along the active IMTT pipeline and the inactive Texas Eastern pipeline in AOC-TE Pipeline. Soil impacts are limited to PAH compounds, and these impacts are attributable to the former placement of fill materials by P&G. No further investigative or remedial actions are warranted at AOC-TE Pipeline.

8.0 RECOMMENDATIONS

Based on the results and conclusions of the FSRI, The Port Authority recommends the following:

- No further investigative or remedial actions are warranted for any environmental medium at AOC-Area 2A Southeast, AOC-Western Area, and AOC-TE Pipeline; and

- No further remedial actions are warranted for Site 2 beyond those specified in the approved Remedial Action Work Plan. An impervious cap will be constructed throughout approximately 50-90% of Site 2. Any areas at the site that will remain uncapped following redevelopment will be covered with a minimum of one foot of clean cover material with a demarcation barrier (i.e., geo-textile, plastic liner, or equivalent) between the original land surface and the cover.

APPENDIX A

SOIL BORING AND WATER SAMPLING LOGS

THE PORT AUTHORITY OF NY & NJ

Engineering Department
Materials Engineering

Boring Report

Project	Port-Ivory Voluntary Clean up			**Contractor**	Craig	**Boring No.** TE-1	**Date:** 11/9/07
Location	As Laid out by H.M.Mc.Donald.			**Contract No.**	426-06-008	**Surface Elev.**	
Spoon	3" O.D. 2.875" I.D.	**Hammer/ Fall (in.)**	140 lbs./30"	**Ground Water Level**			
Hammer Type	Auto	**Hole Type**	1	Date	Time	Depth (ft)	Remarks
Inspector	J.Zarks			11/9/07	11:30AM	4.0	In sample # 02
Driller	R.Dollar.						
site_code							

Sample No.	Start Depth (ft)	End Depth (ft)	Method	Spoon Blows/6"	Re-cov'd	PID Reading	Sample Description and Remarks
01	0.0	2.0	HA	Hand Auger	Full	0.0	Fill Brown C-F Sand & Gravel,tr Silt
02	2.0	4.0	HA	Hand Auger	Full	0.0	Same
03	4.0	6.0	HA	Hand Auger	Full	0.0	Same
	6.0						Bottom of Boring
							Note: All samples were screened with PID-Meter & discarded,sample # 02 (3.5'-4.0')was saved.

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Boring Report

Project	Port-Ivory Voluntary Clean up			**Contractor**	Craig	**Boring No.**	TE-2	**Date:**	11/9/07
Location	As Laid out by H.M.Mc.Donald.			**Contract No.**	426-06-008	**Surface Elev.**			
Spoon	3" O.D. 2.875" I.D.	**Hammer/ Fall (in.)**	140 lbs./30"	**Ground Water Level**					
Hammer Type	Auto	**Hole Type**	1	Date	Time	Depth (ft)	Remarks		
Inspector	J.Zarks			11/9/07	1:35PM	5.0	In sample # 03		
Driller	R.Dollar								
site_code									

Sample No.	Start Depth (ft)	End Depth (ft)	Method	Spoon Blows/6"	Re-cov'd	PID Reading	Sample Description and Remarks
01	0.0	2.0	HA	Hand Auger	Full	0.0	Fill Reddish-brown C - F Sand & Gravel,tr.Silt
02	2.0	4.0	HA	Hand Auger	Full	0.0	Fill Dark Gray C-F Sand & Gravel,tr.Silt
03	4.0	6.0	HA	Hand Auger	Full	0.0	Fill Brown C-F Sand,tr.Gravel,tr.Silt.
04	6.0	8.0	HA	Hand Auger	Full	0.0	Fill Brown M-F Sand,tr.Silt.
	8.0						Bottom of Boring.
							Note:All samples were screened with PID-Meter & discarded,sample # 03(4.5'-5.0')was saved.

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Boring Report

Project	Port-Ivory Voluntary Clean up		**Contractor**	Craig	**Boring No.**	TE-3	**Date** 11/9-14/07
Location	As Laid out by H.M.Mc.Donald.				**Contract No.**	426-06-008	**Surface Elev.**
Spoon	3" O.D. 2.875" I.D.	**Hammer/ Fall (in.)**	140 lbs./30"	**Ground Water Level**			
Hammer Type	Auto	**Hole Type**	1	Date	Time	Depth (ft)	Remarks
Inspector	J.Zarks			11/14/07	8:20AM	5.0	In sample # 03
Driller	C.Cohen						
site_code							

Sample No.	Start Depth (ft)	End Depth (ft)	Method	Spoon Blows/6"	Re-cov'd	PID Reading	Sample Description and Remarks
01	0.0	2.0	HA	Hand Auger	Full	0.0	Fill Reddish-brown C-F Sand & Gravel,tr.Silt.
02	2.0	4.0	HA	Hand Auger	Full	0.0	Grayish-brown C-F Sand,Little Gravel,tr.Silt
03	4.0	6.0	HA	Hand Auger	Full	0.0	Same
04	6.0	8.0	SS	12-14-10-15	18"	0.0	Same with Cobbles
05A	8.0	9.5	SS	8-11-8	16"	0.0	Same
	9.5						Change in Strata
05B	9.5	10.0	SS	4	4"	0.0	Brown Peat.
	10.0						Bottom of Boring
							Note:All samples wer screened with PID-Meter & discarded,sample # 03(4.5'-5.0') was saved.

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Boring Report

Project: Port-Ivory Voluntary Clean up		Contractor: Craig	Boring No.: TE -4	Date: 11/16/07	
Location: As Laid out by H.M.Mc.Donald.			Contract No.: 426-06-008	Surface Elev.:	
Spoon:	Hammer/ Fall (in.):	Ground Water Level			
Hammer Type:	Hole Type:	Date	Time	Depth (ft)	Remarks
Inspector: J.Zarks.		11/16/07	2:30PM	6.5	In sample # 05
Driller: C.Cohen.					
site_code:					

Sample No.	Start Depth (ft)	End Depth (ft)	Method	Spoon Blows/6"	Re-cov'd	PID Reading	Sample Description and Remarks
01	0.0	0.5	RC	Roller-bit	Full	0.0	Asphalt Layer
	0.5						Change in Strata
02	0.5	2.0	HA	Hand Auger	Full	0.0	Fill Brown C -F Sand & Gravel,some Cobbles & Crushed Rock.
03	2.0	4.0	HA	Hand Auger	Full	0.0	Same
4	4.0	6.0	HA	Hand Auger	Full	0.0	Same
05A	6.0	7.5	SS	4-4-3	14"	0.0	Fill Brown M-F Sand,tr white Silty Sludge.
	7.5						Change in Strata
05B	7.5	8.0	SS	1	5"	0.0	Grayish-white Silty Sludge.
	8.0						Bottom of boring.
							Note:All samples screened with PID-Meter & discarded,sample # 05 (6.0'-6.5') was saved.
							2 -16 oz. Samples & 1 -2 oz sample was submitted.

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Boring Report

Project	Port-Ivory Voluntary Clean up			**Contractor**	Craig	**Boring No.**	TE-5	**Date**	11/16/07
Location	As Laid out by H.M.Mc.Donald.					**Contract No.**	426-06-008	**Surface Elev.**	
Spoon	2.875" I.D.	**Hammer/ Fall (in.)**	140 lbs./30"	**Ground Water Level**					
Hammer Type	Auto	**Hole Type**	1	Date		Time		Depth (ft)	Remarks
Inspector	J.Zarks.			11/16/07		11:30AM		7.0	In sample # 05
Driller	C.Cohen.								
site_code									

Sample No.	Start Depth (ft)	End Depth (ft)	Method	Spoon Blows/6"	Re-cov'd	PID Reading	Sample Description and Remarks
01	0.0	0.3	RC	Roller-bit	Full	0.0	Aspalt Layer
	0.3						Change in Strata
02	0.3	2.0	HA	Hand Auger	Full	0.0	Fill C-F Sand & Gravel,tr.Silt.
03	2.0	4.0	HA	Hand Auger	Full	0.0	Same
04	4.0	6.0	HA	Hand Auger	Full	0.0	Same
05	6.0	8.0	SS	12-16-18-9	20"	0.0	Fiff Brown M-F Sand & Silt,some Crushed Rock & Cobbles
06A	8.0	8.5	SS	9	6"	0.0	Same
	8.5						Change in Strata
06B	8.5	10.0	SS	2-1-1	18"	0.0	Brown Peat
							Bottom of boring
							Note:All samples were screened with PID-Meter & discarded,sample # 05(6.5'-7.0')was saved.

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Boring Report

Project	Port-Ivory Voluntary Clean up	Contractor	Craig	Boring No.	TE-6	Date	11/14-15/07
Location	As Laid out by H.M.Mc.Donald.	Contract No.	426-06-008	Surface Elev.			
Spoon	Hammer/ Fall (in.)	Ground Water Level					
Hammer Type	Hole Type	Date	Time	Depth (ft)	Remarks		
Inspector	J.Zarks	11/14/07	2:45PM	5.0	In sample # 03		
Driller	C.Cohen						
site_code							

Sample No.	Start Depth (ft)	End Depth (ft)	Method	Spoon Blows/6"	Re-cov'd	PID Reading	Sample Description and Remarks
01	0.0	2.0	HA	Hand Auger	Full	0.0	Fill Reddish-brown C-F Sand & Gravel,Cobbles, Boulders.
02	2.0	4.0	HA	Hand Auger	Full	0.0	Same
03	4.0	6.0	HA	Hand Auger	Full	0.0	Same
04A	6.0	7.0	SS	6-6	10"	0.0	Same
	7.0						Change in Strata
04B	7.0	8.0	SS	8-2	12"	0.0	Brown Peat.
	8.0						Bottom of Boring.
							Note:All samples were screened with PID-Meter & discarded,sample # 03(4.5'-5.0') was saved.

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Boring Report

Project: Port-Ivory Voluntary Clean up		Contractor: Craig	Boring No.: BH-TE 6B	Date: 11/14/07	
Location: As Laid out by H.M.Mc.Donald.			Contract No.: 426-06-008	Surface Elev.	
Spoon	Hammer/ Fall (in.)	Ground Water Level			
Hammer Type	Hole Type	Date	Time	Depth (ft)	Remarks
Inspector: J.Zarks					
Driller: C. Cohen					
site_code					

Sample No.	Start Depth (ft)	End Depth (ft)	Method	Spoon Blows/6"	Re-cov'd	PID Reading	Sample Description and Remarks
01	0.0	2.0	HA	Hand Auger	Full	0.0	Fill Brown C -F Sand & Gravel,tr. Silt
02	2.0	4.0	HA	Hand Auger	Full	0.0	Fill Grayish-brown C- F Sand & Gravel
03	4.0	6.0	HA	Hand Auger	Full	0.0	Same
	6.0						Obstruction, bottom of boring.
							Note: All samples were screened with PID-Meter & discarded.

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Materials Engineering

Boring Report

Project	Port-Ivory Voluntary Clean up	Contractor	Craig	Boring No.	BH-TE 6C	Date	11/14/07
Location	As Laid out by H.M.Mc.Donald.	Contract No.	426-06-008	Surface Elev.			
Spoon	Hammer/ Fall (in.)	Ground Water Level					
Hammer Type	Hole Type	Date	Time	Depth (ft)	Remarks		
Inspector	J.Zarks						
Driller	C. Cohen						
site_code							

Sample No.	Start Depth (ft)	End Depth (ft)	Method	Spoon Blows/6"	Re-cov'd	PID Reading	Sample Description and Remarks
01	0.0	2.0	HA	Hand Auger	Full	0.0	Fill Brown C -F Sand & Gravel
02	2.0	4.0	HA	Hand Auger	Full	0.0	Same
03	4.0	5.0	HA	Hand Auger	Full	0.0	Same
	5.0						Obstruction,bottom of boring.
							Note: All samples were screened with PID-Meter & discarded.

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Boring Report

Project	Port-Ivory Voluntary Clean up		**Contractor**	Craig	**Boring No.**	BH-TE 6D	**Date** 11/14/07
Location	As Laid out by H.M.Mc.Donald.				**Contract No.**	426-06-008	**Surface Elev.**
Spoon		**Hammer/ Fall (in.)**	**Ground Water Level**				
Hammer Type		**Hole Type**	Date	Time	Depth (ft)	Remarks	
Inspector	J.Zarks						
Driller	C. Cohen						
site_code							

Sample No.	Start Depth (ft)	End Depth (ft)	Method	Spoon Blows/6"	Re-cov'd	PID Reading	Sample Description and Remarks
01	0.0	2.0	HA	Hand Auger	Full	0.0	Fill Brown C -F Sand & Gravel
02	2.0	4.0	HA	Hand Auger	Full	0.0	Same
03	4.0	5.0	HA	Hand Auger	Full	0.0	Same
	5.0						Obstruction,bottom of boring
							Note: All samples were screened with PID-Meter & discarded

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Boring Report

Project	Port-Ivory Voluntary Clean up	Contractor	Craig	Boring No.	TE-7	Date	11/9/07
Location	As Laid out by H.M.Mc.Donald.	Contract No.	426-06-008	Surface Elev.			
Spoon		Hammer/ Fall (in.)		Ground Water Level			
Hammer Type		Hole Type		Date	Time	Depth (ft)	Remarks
Inspector	J.Zarks			11/9/07	8:30AM	6.0	In sample # 04
Driller	C. Cohen						
site_code							

Sample No.	Start Depth (ft)	End Depth (ft)	Method	Spoon Blows/6"	Re-cov'd	PID Reading	Sample Description and Remarks
01	1.0	2.0	HA	Hand Auger	Full	0.0	Fill Brown C-F Sand & Gravel.
02	2.0	4.0	HA	Hand Auger	Full	0.0	Same
03	4.0	6.0	HA	Hand Auger	Full	0.0	Same
04	6.0	7.0	HA	Hand Auger	Full	0.0	Same
	7.0						Change in Strata
05	7.0	8.0	SS	0-1	12"	0.0	Brown Peat
	8.0						Bottom Of Boring.
							Note:All samples were screened with PID-Meter & discarded,sample # 03 (5.5'-6.0') was saved.

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Boring Report

Project	Port-Ivory Voluntary Clean up	**Contractor**	Craig	**Boring No.**	TE-8	**Date:** 11/21/07
Location	As Laid out by H.M.Mc.Donald.	**Contract No.**	426-06-008	**Surface Elev.**		
Spoon	3" O.D. 2.875" I.D.	**Hammer/ Fall (in.)**	140 lbs./30"	**Ground Water Level**		
Hammer Type	Auto	**Hole Type**	1	Date	Time	Depth (ft) / Remarks
Inspector	J.Zarks			11/21/07	11:05AM	7.0 / In sample # 04
Driller	J.Finch					
site_code						

Sample No.	Start Depth (ft)	End Depth (ft)	Method	Spoon Blows/6"	Re-cov'd	PID Reading	Sample Description and Remarks
01	0.0	2.0	HA	Hand Auger	Full	0.0	Fill Brown C - F Sand & Gravel,some Cobbles,boulders,tr Silt.
02	2.0	4.0	HA	Hand Auger	Full	0.0	Same
03	4.0	6.0	HA	Hand Auger	Full	0.0	Fill Reddish-brown M-F Sand,some Silt.
04	6.0	8.0	HA	Hand Auger	Full	0.0	Fill Reddish-brown M-F Sand,some Silt.
	8.0						Change in Strata
05	8.0	9.0	HA	Hand Auger	Full	0.0	Brown Peat.
	9.0						Bottom of Boring
							Note:All samples were screened with PID-Meter & discarded,no samples saved.

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Boring Report

Project	Port-Ivory Voluntary Clean up			**Contractor**	Craig	**Boring No.** BH-TE 8A	**Date:** 11/12/07
Location	As Laid out by H.M.Mc.Donald.				**Contract No.** 426-06-008	**Surface Elev.**	
Spoon	3" O.D. 2.875" I.D.	**Hammer/ Fall (in.)**	140 lbs./30"	**Ground Water Level**			
Hammer Type	Auto	**Hole Type**	1	Date	Time	Depth (ft)	Remarks
Inspector	J.Zarks			11/12/07	12:00PM	6.0	In sample # 03
Driller	R.Dollar.						
site_code							

Sample No.	Start Depth (ft)	End Depth (ft)	Method	Spoon Blows/6"	Re-cov'd	PID Reading	Sample Description and Remarks
01	0.0	2.0	HA	Hand Auger	Full	0.0	Fill Grayish-brown C-F Sand & Gravel,tr.Silt
02	2.0	4.0	HA	Hand Auger	Full	0.0	Same
03	4.0	6.0	HA	Hand Auger	Full	0.0	Same
04	6.0	8.0	HA	Hand Auger	Full	0.0	Same
	8.0						Bottom of Boring.
							NoteObstruction,all samples were screened with PID-Meter & discarded,sample #03(5.5'-6.0')was saved.

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Boring Report

Project	Port-Ivory Voluntary Clean up			Contractor	Craig	Boring No. TE-9	Date: 11/12/07
Location	As Laid out by H.M.Mc.Donald.			Contract No.	426-06-008	Surface Elev.	
Spoon	3" O.D. 2.875" I.D.	Hammer/ Fall (in.)	140 lbs./30"	Ground Water Level			
Hammer Type	Auto	Hole Type	1	Date	Time	Depth (ft)	Remarks
Inspector	J.Zarks			11/12/07	2:30PM	6.2	In sample # 03
Driller	R.Dollar.						
site_code							

Sample No.	Start Depth (ft)	End Depth (ft)	Method	Spoon Blows/6"	Re-cov'd	PID Reading	Sample Description and Remarks
01	0.0	1.0	HA	Hand Auger	Full	0.0	Top Soil
	1.0						Change in Strata
02	1.0	2.0	HA	Hand Auger	Full	0.0	Fill Grayish-brown C -F Sand & Gravel,tr.Silt.
03	2.0	4.0	HA	Hand Auger	Full	0.0	Same with some Cinders & Slag
04	4.0	6.0	HA	Hand Auger	Full	0.0	Brown C-F Sand & Gravel
05	6.0	8.0	HA	Hand Auger	Full	0.0	Same with some Fibers.
06	8.0	9.0	HA	Hand Auger	Full	0.0	Same
	9.0						Bottom of Boring.
							Note:All samples were screened with PID-Meter & dsicarded,sample #04(5.5'-6.0')was

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Boring Report

Project	Port-Ivory Voluntary Clean up			**Contractor**	Craig	**Boring No.** TE-10	**Date:** 11/21/07
Location	As Laid out by H.M.Mc.Donald.			**Contract No.**	426-06-008	**Surface Elev.**	
Spoon	3" O.D. 2.875" I.D.	**Hammer/ Fall (in.)**	140 lbs./30"	**Ground Water Level**			
Hammer Type	Auto	**Hole Type**	1	Date	Time	Depth (ft)	Remarks
Inspector	J.Zarks			11/21/07	1:10PM	7.0	In sample # 04
Driller	J.Finch						
site_code							

Sample No.	Start Depth (ft)	End Depth (ft)	Method	Spoon Blows/6"	Re-cov'd	PID Reading	Sample Description and Remarks
01	0.0	2.0	HA	Hand Auger	Full	0.0	Fill dark Gray C-F Sand & Gravel,some Cobbles,little Silt,Brick,Cinders & Slag.
02	2.0	4.0	HA	Hand Auger	Full	0.0	Same
03	4.0	6.0	HA	Hand Auger	Full	0.0	Same
04	6.0	7.0	HA	Hand Auger	Full	0.0	Same
	7.0						B0ttom of Boring
							Note:All samples were screened with PID-Meter & discarded,sample #04(6.5'-7.0') was saved.

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Boring Report

Project Port-Ivory Voluntary Clean up		Contractor Craig	Boring No. BH-TE 10A	Date 10/13/07	
Location As Laid out by H.M.Mc.Donald.			Contract No. 426-06-008	Surface Elev.	
Spoon	Hammer/ Fall (in.)	Ground Water Level			
Hammer Type	Hole Type	Date	Time	Depth (ft)	Remarks
Inspector J.Zarks					
Driller C. Cohen					
site_code					

Sample No.	Start Depth (ft)	End Depth (ft)	Method	Spoon Blows/6"	Re-cov'd	PID Reading	Sample Description and Remarks
01	0.0	1.0	HA	Hand Auger	Full	0.0	Top Soil
	1.0						Change in Strata
02	1.0	2.0	HA	Hand Auger	Full	0.0	Fill Grayish-brown C-F Sand & Gravel.
03	2.0	4.0	HA	Hand Auger	Full	0.0	Same with brick ,cinders,slag.
04	4.0	5.2	HA	Hand Auger	Full	0.0	Same
	5.2						Obstruction, bottom of boring.
							Note:All samples were screened with PID-Meter & discarded ,no samples saved.

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Boring Report

Project	Port- Ivory Voluntary clean up	**Contractor**	Craig	**Boring No.** AOC-WA-1	**Date** 11/5/2007
Location	As laid out by Hatch Mott Mc.Donald	**Contract No.**	426-06-008	**Surface Elev.**	
Spoon	2" O.D. 1.375" I.D.	**Hammer/ Fall (in.)**	140 lbs./30"	**Ground Water Level**	
Hammer Type	Safety	**Hole Type**	1	Date / Time / Depth (ft) / Remarks	
Inspector	J.Zarks			11/5/07 / 9:30AM / 5.0	In sample # 03
Driller	C.Cohen				
site_code					

Sample No.	Start Depth (ft)	End Depth (ft)	Method	Spoon Blows/6"	Re-cov'd	PID Reading	Sample Description and Remarks
01	0.0	2.0	HA	Hand Auger	Full	0.0	Fill brown C-F Sand & Gravel,tr.Silt.
02	2.0	4.0	HA	Hand Auger	Full	0.0	Black C-F Sand &Gravel,little silty Clay
03	4.0	5.0	HA	Hand Auger	Full	0.0	Same
	5.0						Change in strata
04	5.0	6.0	HA	Hand Auger	Full	0.0	Brown Peat
	6.0						Bottom of boring.
							Note:All samples screened with PID-meter & discarded,sample #03(4.0' - 4.5') was saved.

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Boring Report

Project Port-Ivory Voluntary-clean up		**Contractor** Craig	**Boring No.** AOC-WA-5	**Date** 11/8/2007	
Location As laid out by Hatch Mott Mc.Donald			**Contract No.** 426-06-008	**Surface Elev.**	
Spoon 2" O.D. 1.375" I.D.	**Hammer/ Fall (in.)** 140 lbs./30"	**Ground Water Level**			
Hammer Type Safety	**Hole Type** 1	Date	Time	Depth (ft)	Remarks
Inspector J.Zarks		11/8/07	11:00AM	5.0	In sample # 03
Driller R.Dollar					
site_code					

Sample No.	Start Depth (ft)	End Depth (ft)	Method	Spoon Blows/6"	Re-cov'd	PID Reading	Sample Description and Remarks
01	0.0	2.0	HA	Hand Auger	Full	0.0	Fill Reddish-brown C-F Sand & Gravel
02	2.0	4.0	HA	Hand Auger	Full	0.0	Fill Grayish-black C-F Sand & Gravel
03	4.0	6.0	HA	Hand Auger	Full	32.6	Same
04	6.0	7.5	HA	Hand Auger	Full	0.0	Brown Sand
	7.5						Change in Strata
05	7.5	8.0	HA	Hand Auger	Full	0.0	Brown Peat.
	8.0						Bottom Of Boring.
							Note:All samples screened with PID-Meter & discarded,samples #03(4.0'-4.5') & #04(6.5'-7.0') were saved.

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Boring Report

Project: Port-Ivory Voluntary Clean up		Contractor: Craig		Boring No.: 2B-WA12	Date: 11/9/07
Location: As Laid out by H.M.Mc.Donald.			Contract No.: 426-06-008		Surface Elev.:
Spoon:	Hammer/ Fall (in.):	Ground Water Level			
Hammer Type:	Hole Type:	Date	Time	Depth (ft)	Remarks
Inspector: J.Zarks		11/9/07	9:05AM	5.0	In sample # 04
Driller: R.Dollar					
site_code:					

Sample No.	Start Depth (ft)	End Depth (ft)	Method	Spoon Blows/6"	Re-cov'd	PID Reading	Sample Description and Remarks
01	0.0	1.0	HA	Hand Auger	Full	0.0	Fill Brown C -F Sand & Gravel,some Metal,some wood.
02	1.0	2.0	HA	Hand Auger	Full	0.0	Same
	2.0						Change in Strata
03	2.0	4.0	HA	Hand Auger	Full	0.0	Grayish-black C-F Granular size Cinders.
	4.0						Change in Strata
04	4.0	5.5	HA	Hand Auger	Full	0.0	Brown M-F Sand.
	5.5						Change in Strata
05	5.5	6.0	HA	Hand Auger	Full	0.0	Brrown Peat.
	6.0						B0ttom of Boring.
							Note:All samples were screened with PID-Meter & discarded,sample # 04(4.5'-5.0') was saved.

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Boring Report

Project Port-Ivory Voluntary Clean up		**Contractor** Craig	**Boring No.** 2B-WA13	**Date** 11/8/07	
Location As Laid out by H.M.Mc.Donald.		**Contract No.** 426-06-008	**Surface Elev.**		
Spoon	**Hammer/ Fall (in.)**	**Ground Water Level**			
Hammer Type	**Hole Type**	Date	Time	Depth (ft)	Remarks
Inspector J.Zarks		11/8/07	11:15AM	3.5	In sample # 03
Driller C. Cohen					
site_code					

Sample No.	Start Depth (ft)	End Depth (ft)	Method	Spoon Blows/6"	Re-cov'd	PID Reading	Sample Description and Remarks
01	0.0	2.0	HA	Hand Auger	Full	0.0	Fill Reddish-brown C-F Sand & Gravel,Crushed Rock.
02	2.0	3.0	HA	Hand Auger	Full	0.0	Same
03	3.0	4.0	HA	Hand Auger	Full	0.0	Grayish-black C-F Sand,Cinders & Slag.
04	4.0	5.5	HA	Hand Auger	Full	0.0	Same
	5.5						
05	5.5	6.0	HA	Hand Auger	Full	0.0	Brown Peat
	6.0						Bottom Of Boring
							Note:All samples were screened with PID-Meter & discarded,sample # 03 (3.0'-3.5')was saved.

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Boring Report

Project	Port-Ivory Voluntary-clean up	**Contractor**	Craig	**Boring No.** AOC-WA14	**Date** 11/8/2007
Location	As laid out by Hatch Mott Mc.Donald	**Contract No.**	426-06-008	**Surface Elev.**	
Spoon	2" O.D. 1.375" I.D.	**Hammer/ Fall (in.)**	140 lbs./30"	**Ground Water Level**	
Hammer Type	Safety	**Hole Type**	1	Date / Time / Depth (ft) / Remarks	
Inspector	J.Zarks			11/8/07 / 10:00AM / 3.7	In sample # 02
Driller	R.Dollar				
site_code					

Sample No.	Start Depth (ft)	End Depth (ft)	Method	Spoon Blows/6"	Re-cov'd	PID Reading	Sample Description and Remarks
01	0.0	2.0	HA	Hand Auger	Full	0.0	Misc.Fill Reddish-brown C-F Sand & Gravel,Metal,,Wood.
	2.0						Change in Strata
02	2.0	4.0	HA	Hand Auger	Full	0.0	Fill Grayish-black C-F granular size Cinders & Slag
03	4.0	5.0	HA	Hand Auger	Full	0.0	Same
	5.0						Bottom Of Boring.
							Note:All samples screened with PID-Meter & discarded,sample #02(3.0'-3.5')was saved.

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Boring Report

Project	Port-Ivory Voluntary Clean up	Contractor	Craig	Boring No. AOC-WA15	Date 11/7/07
Location	As Laid out by H.M.Mc.Donald.	Contract No.	426-06-008	Surface Elev.	
Spoon	Hammer/ Fall (in.)	Ground Water Level			
Hammer Type	Hole Type	Date	Time	Depth (ft)	Remarks
Inspector	J.Zarks	11/17/07	1:30PM	6.5	In sample # 04
Driller	C.Cohen				
site_code					

Sample No.	Start Depth (ft)	End Depth (ft)	Method	Spoon Blows/6"	Re-cov'd	PID Reading	Sample Description and Remarks
01	0.0	2.0	HA	HandAuger	Full	0.0	Misc.Fill C-F Brown Sand & Gravel,Metal,Wood,Crushed Rock etc.
02	2.0	4.0	HA	HandAuger	Full	0.0	Same
03	4.0	6.0	HA	HandAuger	Full	0.0	Fill brown C-F Sand & Gravel ,tr,Silt
04	6.0	8.0	HA	HandAuger	Full	0.0	Same
	8.0						Bottom Of Boring
							Note:All samples were screened with PID-Meter & discarde,sample #04(6.0'-6.5')was saved.

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Boring Report

Project Port-Ivory Voluntary-clean up		**Contractor** Craig	**Boring No.** AOC-WA16	**Date** 11/8/2007	
Location As laid out by Hatch Mott Mc.Donald			**Contract No.** 426-06-008	**Surface Elev.**	
Spoon 2" O.D. 1.375" I.D.	**Hammer/ Fall (in.)** 140 lbs./30"	**Ground Water Level**			
Hammer Type Safety	**Hole Type** 1	Date	Time	Depth (ft)	Remarks
Inspector J.Zarks		11/8/07	9:00AM	5.5	In sample # 03
Driller R.Dollar					
site_code					

Sample No.	Start Depth (ft)	End Depth (ft)	Method	Spoon Blows/6"	Re-cov'd	PID Reading	Sample Description and Remarks
01	0.0	2.0	HA	Hand Auger	Full	0.0	Fill Reddish-brown C-F Sand & Gravel, Crushed Rock.
02	2.0	4.0	HA	Hand Auger	Full	0.0	Same
	4.0						Change in Strata
03	4.0	6.0	HA	Hand Auger	Full	0.0	Grayish-black C-F Sand,Cinders & Slag,Root-fibers.
04	6.0	7.5	HA	Hand Auger	Full	0.0	Same
	7.5						Change in Strata
05	7.5	8.0	HA	Hand Auger	Full	0.0	Brown Peat.
	8.0						Bottom Of Boring.
							Note:All samples screened with PID-Meter & discarded,sample.# 03 (4.5'- 5.0') was saved

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Boring Report

Project	Port-Ivory Voluntary Clean up	Contractor	Craig	Boring No.	MW 16-WA	Date: 12/7/07
Location	As Laid out by H.M.Mc.Donald.			Contract No.	426-06-008	Surface Elev.
Spoon	3" O.D. 2.875" I.D.	Hammer/ Fall (in.)	140 lbs./30"	Ground Water Level		
Hammer Type	Auto	Hole Type	1	Date	Time	Depth (ft) / Remarks
Inspector	J.Zarks					
Driller	C.Cohen					
site_code						

Sample No.	Start Depth (ft)	End Depth (ft)	Method	Spoon Blows/6"	Re-cov'd	PID Reading	Sample Description and Remarks
	0.0	7.0	HA	Hand Auger	Full		Previously driilled as WA-16

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Well Installation Report

PROJECT:	Port Ivory-Voluntary Clean up.			CONTRACT NO. 426-06-008	Date: 12/7/2007
LOCATION:	As Laid out by H.M.Mc Donald.			CONTRACTOR Craig	
WELL NO.	MW 16-WA	WELL TYPE	"A" Monitor	DATE:	12/7/07
DRILLER:	C.Cohen.			INSPECTOR:	J.Zarks

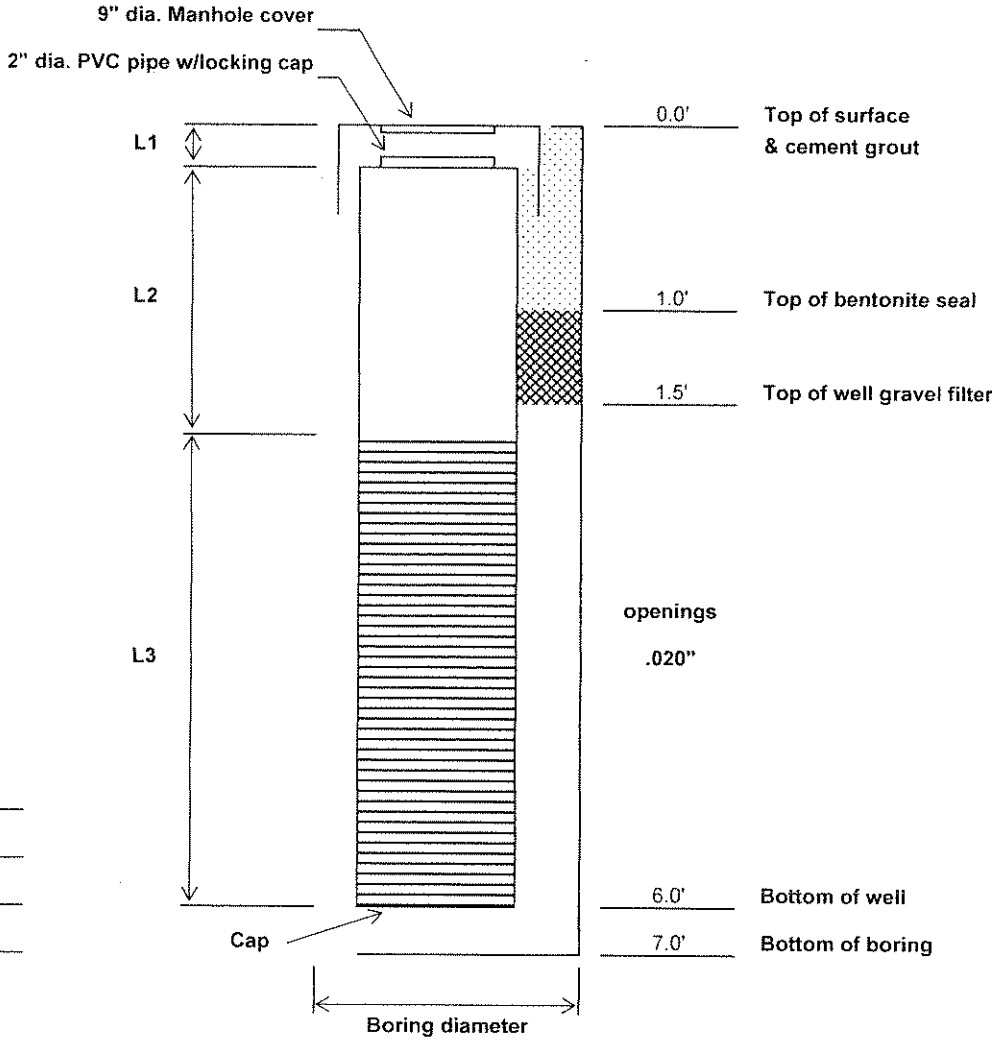
Well Development Report (NOTE: WATER LEVEL READINGS FROM TOP OF PVC)

DATE:	12/10/07	WATER LEVEL BEFORE:	3.6'	WATER LEVEL AFTER:	3.4'
TAKEN	60	MINUTES AFTER DEVELOPMENT			

L1 = 0.3'

L2 = 1.7'

L3 = 5.0'



Remarks:

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Boring Report

Project	Port-Ivory Voluntary-clean up			Contractor	Craig	Boring No. AOC-WA17	Date 11/9/2007
Location	As laid out by Hatch Mott Mc.Donald			Contract No.	426-06-008	Surface Elev.	
Spoon	2" O.D. 1.375" I.D.	Hammer/ Fall (in.)	140 lbs./30"	Ground Water Level			
Hammer Type	Safety	Hole Type	1	Date	Time	Depth (ft)	Remarks
Inspector	J.Zarks			11/9/07	9:35AM	2.1	In sample # 03
Driller	C.Cohen.						
site_code							

Sample No.	Start Depth (ft)	End Depth (ft)	Method	Spoon Blows/6"	Re-cov'd	PID Reading	Sample Description and Remarks
01	0.0	1.0	HA	Hand Auger	Full	0.0	Top Soil
	1.0						Change in Strata
02	1.0	2.0	HA	Hand Auger	Full	0.0	Grayish-brown C-F Sand,little Silt.
03	2.0	4.0	HA	Hand Auger	Full	0.0	Same
04	4.0	6.0	HA	Hand Auger	Full	0.0	Same
	6.0						Bottom Of Boring.
							Note:All samples were screened with PID-Meter & discarded samples # 02(1.5'-2.0') & #04(5.5'-6.0') were saved.

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Boring Report

Project	Port-Ivory Voluntary Clean up			**Contractor**	Craig	**Boring No.** 2B-WA17	**Date:** 11/9/07
Location	As Laid out by H.M.Mc.Donald.					**Contract No.** 426-06-008	**Surface Elev.**
Spoon	3" O.D. 2.875" I.D.	**Hammer/ Fall (in.)**	140 lbs./30"	**Ground Water Level**			
Hammer Type	Auto	**Hole Type**	1	Date	Time	Depth (ft)	Remarks
Inspector	J.Zarks			11/9/07	AM	2.1	In sample # 02
Driller	C.Cohen						
site_code							

Sample No.	Start Depth (ft)	End Depth (ft)	Method	Spoon Blows/6"	Re-cov'd	PID Reading	Sample Description and Remarks
01A	0.0	1.0	HA	HandAuger	Full	0.0	Top Soil
	1.0						Change in Strata
01B	1.0	2.0	HA	HandAuger	Full	0.0	Fill Grayish-Brown C-F Sand & Little Silt.
02	2.0	4.0	HA	HandAuger	Full	0.0	Fill Grayish-Black C-F Sand & Gravel.
03	4.0	6.0	HA	HandAuger	Full	0.0	Same
	6.0						Bottom Of Boring
							Note:All samples were screened with PID-meter & discarded,samples # 01B(1.5'-2.0') & #03(5.5'-6.0') were saved.

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Boring Report

Project	Port-Ivory Voluntary Clean up			Contractor	Craig	Boring No. SH-1	Date: 11/8/07
Location	As Laid out by H.M.Mc.Donald.			Contract No.	426-06-008	Surface Elev.	
Spoon	3" O.D. 2.875" I.D.	Hammer/ Fall (in.)	140 lbs./30"	Ground Water Level			
Hammer Type	Auto	Hole Type	1	Date	Time	Depth (ft)	Remarks
Inspector	J.Zarks			11/8/07	1:30PM	4.5	In sample # 03
Driller	C.Cohen.						
site_code							

Sample No.	Start Depth (ft)	End Depth (ft)	Method	Spoon Blows/6"	Re-cov'd	PID Reading	Sample Description and Remarks
01	0.0	2.0	HA	Hand Auger	Full	0.0	Top Soil
	2.0						Change in Strata
02	2.0	4.0	HA	Hand Auger	Full	0.0	Fill Dark Gray C-F Sand & Gravel,tr.Silt.
03	4.0	5.5	HA	Hand Auger	Full	0.0	Same
	5.5						Change in Strata
04	5.5	6.0					Brown Peat.
	6.0						Bottom of Boring
							Note:All samples were screened with PID-Meter & discarded,sample # 03(4.0'-4.5') was saved.

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Boring Report

Project	Port-Ivory Voluntary Clean up			**Contractor**	Craig	**Boring No.** SH-2	**Date:** 11/20/07
Location	As Laid out by H.M.Mc.Donald.			**Contract No.**	426-06-008	**Surface Elev.**	
Spoon	3" O.D. 2.875" I.D.	**Hammer/ Fall (in.)**	140 lbs./30"	**Ground Water Level**			
Hammer Type	Auto	**Hole Type**	1	Date	Time	Depth (ft)	Remarks
Inspector	J.Zarks			11/20/07	1:55PM	4.0	In sample # 03
Driller	C.Cohen						
site_code							

Sample No.	Start Depth (ft)	End Depth (ft)	Method	Spoon Blows/6"	Re-cov'd	PID Reading	Sample Description and Remarks
01	0.0	0.5	HA	Roller-bit	Full	0.0	Asphalt Layer
	0.5						Change in Strata
02	0.5	2.0	HA	Hand-Auger	Full	0.0	Fill Grayish-brown C-F Sand & Gravel,tr.Silt,tr Cobbles.
03	2.0	4.0	HA	Hand-Auger	Full	0.0	Brown C-F Sand,tr.Silt
04	4.0	6.0	HA	Hand-Auger	Full	0.0	Same
05A	6.0	7.0	HA	Hand-Auger	Full	0.0	Same
	7.0						Change in Strata
05B	7.0	8.0	HA	Hand-Auger	Full	0.0	Wood
	8.0						Bottom of Boring
							Note:All samples were screened with PID-Meter & discarded,sample #03(3.5'-$.0) was saved.

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Boring Report

Project	Port-Ivory Voluntary Clean up	Contractor	Craig	Boring No. BH-SH2A	Date: 11/20/07
Location	As Laid out by H.M.Mc.Donald.	Contract No.	426-06-008	Surface Elev.	
Spoon	3" O.D. 2.875" I.D.	Hammer/ Fall (in.)	140 lbs./30"	Ground Water Level	
Hammer Type	Auto	Hole Type	1	Date / Time / Depth (ft) / Remarks	
Inspector	J.Zarks				
Driller	C.Cohen				
site_code					

Sample No.	Start Depth (ft)	End Depth (ft)	Method	Spoon Blows/6"	Re-cov'd	PID Reading	Sample Description and Remarks
01	0.0	0.5	RC	Roller-bit	Full	0.0	Asphalt Layer
	0.5						Change in Strata
02	5.0	1.5	HA	HandAuger	Full	0.0	Fill Grayish-brown C-F Sand,tr Silt,tr.Cobbles.
	1.5						Obstruction,Concrete Slab .Bottom of boring.

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Boring Report

Project	Port-Ivory Voluntary Clean up	Contractor	Craig	Boring No. SH-3	Date: 11/20/07
Location	As Laid out by H.M.Mc.Donald.	Contract No.	426-06-008	Surface Elev.	
Spoon	3" O.D. 2.875" I.D.	Hammer/ Fall (in.)	140 lbs./30"	Ground Water Level	
Hammer Type	Auto	Hole Type	1	Date / Time / Depth (ft) / Remarks	
Inspector	J.Zarks			11/20/07 / 9:15AM / 6.0	In sample # 05
Driller	C.Cohen				
site_code					

Sample No.	Start Depth (ft)	End Depth (ft)	Method	Spoon Blows/6"	Re-cov'd	PID Reading	Sample Description and Remarks
01	0.0	0.4	RC	Roller-bit	Full	0.0	Asphalt Layer
	0.4						Change in Strata
02	0.4	2.0	HA	Hand-Auger	Full	0.0	Fill Grayish-black C-F Sand & Gravel,some Cobbles.
03	2.0	4.0	HA	Hand-Auger	Full	0.0	Fill Grayish-brown C-F Sand & Gravel,tr.Clayey Silt.
	4.0						Change in Strata
04	4.0	6.0	HA	Hand-Auger	Full	0.0	Reddish-brown Clayey Silt,little F Sand.
	6.0						Change in Strata
05	6.0	8..0	HA	Hand-Auger	Full	0.0	Brown Silty Clay,tr F Sand.
06	8.0	9.0	HA	Hand-Auger	Full	0.0	Same
07A	9.0	9.5	SS	12	6"	0.0	Same
	9.5						Change in Strata
07B	9.5	11.0	SS	W-O-H	18"	0.0	Brown Peat.
	11.0						Bottom of Boring.
							Note:All samples were screened with PID-Meter & discarded,sample # 04(5.5'-6.0')was saved.

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Boring Report

Project: Port-Ivory Voluntary Clean up		Contractor: Craig		Boring No.: SH-4	Date: 11/8/07
Location: As Laid out by H.M.Mc.Donald.			Contract No.: 426-06-008		Surface Elev.:
Spoon:	Hammer/ Fall (in.):	Ground Water Level			
Hammer Type:	Hole Type:	Date	Time	Depth (ft)	Remarks
Inspector: J.Zarks		11/8/07	1:00PM	4.9	in sample # 03
Driller: R.Dollar					
site_code:					

Sample No.	Start Depth (ft)	End Depth (ft)	Method	Spoon Blows/6"	Re-cov'd	PID Reading	Sample Description and Remarks
01	0.0	2.0	HA	Hand Auger	Full	0.0	Top Soil
	2.0						Change in Strata
02	2.0	4.0	HA	Hand Auger	Full	0.0	Grayish-black C-F Granular Size Cinders & Slag.
03	4.0	5.5	HA	Hand Auger	Full	0.0	Same
	5.5						Change in Strata
04	5.5	6.0	HA	Hand Auger	Full	0.0	Brown Peat
05	6.0	8.0	HA	Hand Auger	Full	0.0	Same
	8.0						Bottom of boring
							Note:All samples were screened with PID-Meter & discarded ,sample # 03(4.5'-5.0') was saved.

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Boring Report

Project	Port-Ivory Voluntary Clean up	Contractor	Craig	Boring No. SH-5	Date: 11/21/07
Location	As laid out by H.M.Mc.Donald,3.5'South of BH -SH5 A	Contract No.	426-06-008	Surface Elev.	
Spoon	3" O.D. 2.875" I.D.	Hammer/ Fall (in.)	140 lbs./30"	Ground Water Level	
Hammer Type	Auto	Hole Type	1	Date / Time / Depth (ft) / Remarks	
Inspector	J.Zarks			11/21/07	9:00AM	4.0	In sample # 02
Driller	J.Finch						
site_code							

Sample No.	Start Depth (ft)	End Depth (ft)	Method	Spoon Blows/6"	Re-cov'd	PID Reading	Sample Description and Remarks
01	0.0	2.0	HA	Hand Auger	Full	0.0	Fill Brown C - F Sand & Gravel,some Cobbles,boulders,tr Silt.
02	2.0	4.0	HA	Hand Auger	Full	0.0	Same
03	4.0	6.0	HA	Hand Auger	Full	0.0	Same
04A	6.0	7.5	HA	Hand Auger	Full	0.0	Same
	7.5						Change in Strata
04B	7.5	8.0	HA	Hand Auger	Full	0.0	Brown Peat.
	8.0						Bottom of Boring
							Note:All samples were screened with PID-Meter & discarded,sample #02(3.5'-4.0')was saved.

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Project	Port-Ivory Voluntary Clean up			Contractor	Craig	Boring No. BH-SH5A	Date: 11/8/07
Location	As Laid out by H.M.Mc.Donald.			Contract No.	426-06-008	Surface Elev.	
Spoon	3" O.D. 2.875" I.D.	Hammer/ Fall (in.)	140 lbs./30"	Ground Water Level			
Hammer Type	Auto	Hole Type	1	Date	Time	Depth (ft)	Remarks
Inspector	J.Zarks			11/8/07	2:30PM	3.5	In sample # 02
Driller	R.Dollar.						
site_code							

Sample No.	Start Depth (ft)	End Depth (ft)	Method	Spoon Blows/6"	Re-cov'd	PID Reading	Sample Description and Remarks
01	0.0	2.0	HA	Hand Auger	Full	0.0	Top soil
	2.0						Change in Strata.
02	2.0	4.0	HA	Hand Auger	Full	0.0	Dark Gray C - F granular size Cinders
03	4.0	6.0	HA	Hand Auger	Full	0.0	Same
	6.0						Bottom of Boring
							Note:Obstruction,on top of pipe-line.All samples were screened with PID-Meter & discarded,# 02(3.0'-3.5')was saved.

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Boring Report

Project: Port-Ivory Voluntary Clean up		Contractor: Craig	Boring No.: SH-6	Date: 11/8/07	
Location: As Laid out by H.M.Mc.Donald.			Contract No.: 426-06-008	Surface Elev.:	
Spoon:	Hammer/ Fall (in.):	Ground Water Level			
Hammer Type:	Hole Type:	Date	Time	Depth (ft)	Remarks
Inspector: J.Zarks		11/8/07	AM	5.5	In sample # 04
Driller: C. Cohen					
site_code:					

Sample No.	Start Depth (ft)	End Depth (ft)	Method	Spoon Blows/6"	Re-cov'd	PID Reading	Sample Description and Remarks
01	0.0	1.0	HA	Hand Auger	Full	0.0	Top Soil
	1.0						Change in Strata
02	1.0	2.0	HA	Hand Auger	Full	0.0	Fill Grayish-brown C-F Sand & Gravel,Little Silt.
	2.0						Change in Strata
03	2.0	4.0	HA	Hand Auger	Full	0.0	Grayish-black C -F granular size Cinders & Slag.
04	4.0	5.5	HA	Hand Auger	Full	0.0	Same
	5.5						Change in Strata
05	5.5	6.0	HA	Hand Auger	Full	0.0	Brown Peat
	6.0						Change in Strata
06	6.0	8.0	HA	Hand Auger	Full	0.0	Black Organic Silt with brown Peat.
	8.0						Bottom of Boring.
							Note: All samples were screened with PID-Meter & discarded,sample # 04(5.0'-5.5')was saved.

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Boring Report

Project	Port-Ivory Voluntary-clean up		Contractor	Craig	Boring No.	AOC-SH 7	Date 11/9/2007
Location	As laid out by Hatch Mott Mc.Donald			Contract No.	426-06-008	Surface Elev.	
Spoon	2" O.D. 1.375" I.D.	Hammer/ Fall (in.)	140 lbs./30"	Ground Water Level			
Hammer Type	Safety	Hole Type	1	Date	Time	Depth (ft)	Remarks
Inspector	J.Zarks			11/9/07	8:25AM	4.0	In sample # 03
Driller	C.Cohen.						
site_code							

Sample No.	Start Depth (ft)	End Depth (ft)	Method	Spoon Blows/6"	Re-cov'd	PID Reading	Sample Description and Remarks
01	0.0	2.0	HA	Hand Auger	Full	0.0	Fill Brown C - F Sand & Gravel,some boulders,tr.Silt.
	2.0						Change in Strata
02	2.0	4.0	HA	Hand Auger	Full	0.0	Grayish-black C-F Granular size Cinders & Slag.
03	4.0	6.0	HA	Hand Auger	Full	0.0	Same
04	4.0	6.0	HA	Hand Auger	Full	0.0	Same
	6.0						Change in Strata
05	6.0	6.5	HA	Hand Auger	Full	0.0	Brown Peat
	6.5						Bottom Of Boring.
							Note:All samples were screened with PID-Meter & discarded samples # 02(3.5'-4.0') & #04(4.5'-5.0') were saved.

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Project Port-Ivory Voluntary Clean up		**Contractor** Craig	**Boring No.** SH-8	**Date:** 11/20/07	
Location As Laid out by H.M.Mc.Donald.		**Contract No.** 426-06-008	**Surface Elev.**		
Spoon 3" O.D. 2.875" I.D.	**Hammer/ Fall (in.)** 140 lbs./30"	**Ground Water Level**			
Hammer Type Auto	**Hole Type** 1	Date	Time	Depth (ft)	Remarks
Inspector J.Zarks		11/15/07	8:15AM	5.0	In sample # 03
Driller R.Dollar					
site_code					

Sample No.	Start Depth (ft)	End Depth (ft)	Method	Spoon Blows/6"	Re-cov'd	PID Reading	Sample Description and Remarks
01	0.0	2.0	HA	Hand Auger	Full	0.0	Fill Dark Gray C-F Sand,little Gravel,tr,Silt.
02	2.0	4.0	HA	Hand Auger	Full	0.0	Same
03	4.0	6.0	HA	Hand Auger	Full	0.0	Brown C-F Sand ,some Gravel,tr. Silt.
04	6.0	7.0	HA	Hand Auger	Full	0.0	Same
	7.0						Change in Strata
05	7.0	8.0	HA	Hand Auger	Full	0.0	Brown Peat
	8.0						Bottom of Boring
							Note:All samples were screened with PID-Meter & discarded ,#03(4.5'-5.0')was saved.

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Boring Report

Project: Port-Ivory Voluntary Clean up		Contractor: Craig	Boring No.: SH-9	Date: 11/12/07	
Location: As Laid out by H.M.Mc.Donald.			Contract No.: 426-06-008	Surface Elev.:	
Spoon:	Hammer/ Fall (in.):	Ground Water Level			
Hammer Type:	Hole Type:	Date	Time	Depth (ft)	Remarks
Inspector: J.Zarks		11/12/07	1:45PM	5.5	In sample # 03
Driller: C.Cohen.					
site_code:					

Sample No.	Start Depth (ft)	End Depth (ft)	Method	Spoon Blows/6"	Re-cov'd	PID Reading	Sample Description and Remarks
01	0.0	2.0	HA	Hand Auger	Full	0.0	Fill Gray C - F Sand & Gravel,some Brick & Wood.
02	2.0	4.0	HA	Hand Auger	Full	0.0	Same
03	4.0	6.0	HA	Hand Auger	Full	0.0	Same
04	6.0	7.0	HA	Hand Auger	Full	0.0	Same
	7.0						Change in Strata
05	7.0	8.0	HA	Hand Auger	Full	0.0	Brown Peat with Fibers.
	8.0						Bottom of boring
							Note:All samples were screened with PID-Meter & discarded,sample # 03 (5.0'-5.5') was saved.

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Project Port-Ivory Voluntary Clean up		Contractor Craig	Boring No. BH-SH-9A	Date 1112/07	
Location As Laid out by H.M.Mc.Donald.		Contract No. 426-06-008	Surface Elev.		
Spoon	Hammer/ Fall (in.)	Ground Water Level			
Hammer Type	Hole Type	Date	Time	Depth (ft)	Remarks
Inspector J.Zarks					
Driller R.Dollar					
site_code					

Sample No.	Start Depth (ft)	End Depth (ft)	Method	Spoon Blows/6"	Re-cov'd	PID Reading	Sample Description and Remarks
01	0.0	2.0	HA	Hand Auger	Full	0.0	Fill Black C-F Sand & Gravel,Little Silt.
02	2.0	4.0	HA	Hand Auger	Full	0.0	Fill Grayish-brown C-F Sand & Gravel ,tr.Silt
03	4.0	5.0	HA	Hand Auger	Full	0.0	Same
	5.0						Obstruction,Concrete Slab. Bottom of Boring

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Project Port-Ivory Voluntary Clean up		Contractor Craig	Boring No. SH-10	Date 11/14/07	
Location As Laid out by H.M.Mc.Donald.			Contract No. 426-06-008	Surface Elev.	
Spoon	Hammer/ Fall (in.)	Ground Water Level			
Hammer Type	Hole Type	Date	Time	Depth (ft)	Remarks
Inspector J.Zarks		11/14/07	2:30PM	6.5	In samples # 04
Driller C. Cohen					
site_code					

Sample No.	Start Depth (ft)	End Depth (ft)	Method	Spoon Blows/6"	Re-cov'd	PID Reading	Sample Description and Remarks
01	0.0	2.0	HA	Hand Auger	Full	0.0	Fill Brown C F Sand & Gravel,tr. Silt.
02	2.0	4.0	HA	Hand Auger	Full	0.0	Same
	4.0						Change in Strata
03	4.0	6.0	HA	Hand Auger	Full	0.0	Reddish-brown Clayey Silt tr. F. Sand.
	6.0						Change in Strata
04	6.0	8.0	HA	Hand Auger	Full	0.0	Brown M-F Sand & Silt
05A	8.0	8.5	HA	Hand Auger	Full	0.0	Same
	8.5						Change in Strata
05B	8.5	9.0	HA	Hand Auger	Full	0.0	Brown Peat.
	9.0						Bottom of Boring.
							Note: All samples were screened with PID-Meter & discarded ,sample # 04(6.0'-6.5')was saved.

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Project Port-Ivory Voluntary Clean up		**Contractor** Craig	**Boring No.** BH-SH 10 A	**Date** 11/12/07	
Location As Laid out by H.M.Mc.Donald.			**Contract No.** 426-06-008	**Surface Elev.**	
Spoon	**Hammer/ Fall (in.)**	**Ground Water Level**			
Hammer Type	**Hole Type**	Date	Time	Depth (ft)	Remarks
Inspector J.Zarks					
Driller R.Dollar					
site_code					

Sample No.	Start Depth (ft)	End Depth (ft)	Method	Spoon Blows/6"	Re-cov'd	PID Reading	Sample Description and Remarks
01	0.0	1.0	HA	Hand Auger	Full	0.0	Fill Brown C-F Sand & Gravev,Crushed Rock.
	1.0						Obstruction ,Conrete Slab.Bottom of Boring.

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Project	Port-Ivory Voluntary Clean up	Contractor	Craig	Boring No.	SH-11	Date	11/13/07
Location	As Laid out by H.M.Mc.Donald.	Contract No.	426-06-008	Surface Elev.			
Spoon	Hammer/ Fall (in.)	Ground Water Level					
Hammer Type	Hole Type	Date	Time	Depth (ft)	Remarks		
Inspector	J.Zarks	11/13/07	1:30PM	4.5	In sample # 03		
Driller	C. Cohen						
site_code							

Sample No.	Start Depth (ft)	End Depth (ft)	Method	Spoon Blows/6"	Re-cov'd	PID Reading	Sample Description and Remarks
01	0.0	2.0	HA	Hand Auger	Full	0.0	Fill Crushed Rock (D G A B C)
	2.0						Change in Strata
02	2.0	4.0	HA	Hand Auger	Full	0.0	Fill Brown M- F Sand,tr. Silt
03	4.0	6.0	HA	Hand Auger	Full	0.0	Fill Grayish-brown M - F Sand,tr. Silt.
04	6.0	8.0	HA	Hand Auger	Full	0.0	Same
05	8.0	9.0	HA	Hand Auger	Full	0.0	Same
	9.0						Bottom Of Boring
							Note:All samples were screened with PID-Meter & discarded,sample # 03(4.0'-4.5') was saved.

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Boring Report

Project: Port-Ivory Voluntary Clean up		Contractor: Craig	Boring No.: SH12	Date: 11/12/07	
Location: As Laid out by H.M.Mc.Donald.		Contract No.: 426-06-008	Surface Elev.		
Spoon	Hammer/ Fall (in.)	Ground Water Level			
Hammer Type	Hole Type	Date	Time	Depth (ft)	Remarks
Inspector: J.Zarks		11/12/07	10:00AM	5.0	In sample # 03
Driller: R Dollar.					
site_code					

Sample No.	Start Depth (ft)	End Depth (ft)	Method	Spoon Blows/6"	Re-cov'd	PID Reading	Sample Description and Remarks
01	0.0	2.0	HA	Hand Auger	Full	0.0	Top Soil
	2.0						Change in Strata
02	2.0	4.0	HA	Hand Auger	Full	0.0	Fill Brown C-F Sand,tr,Clayey Silt
03	4.0	6.0	HA	Hand Auger	Full	0.0	Same
	6.0						Change in Strata
04	6.0	8.0	HA	Hand Auger	Full	0.0	Black Organic Silt.
	8.0						Change in Strata
05	8.0	8.5	HA	Hand Auger	Full	0.0	Brown Peat
	8.5						Bottom of boring
							Note:All samples were screened with PID-Meter & discarded,sample #03 (4.5'-5.0') was saved.

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Project	Port Ivory-Voluntary Cleanup		Contractor	Craig	Boring No.	AOC-A2SE1	Date 9/13/07
Location	As Laid out by Hatch Mott Mac Donald			Contract No.	426-06-008	Surface Elev.	
Spoon	N/A 1.375" I.D.	Hammer/ Fall (in.)	140 lbs./30"	Ground Water Level			
Hammer Type	Safety	Hole Type	1	Date	Time	Depth (ft)	Remarks
Inspector	J.Zarks			9/13/07	AM	5.0'	In Sample # 03.
Driller	A. Tricanico						
site_code							

Sample No.	Start Depth (ft)	End Depth (ft)	Method	Spoon Blows/6"	Re-cov'd	PID Reading	Sample Description and Remarks
	0.0	0.2	HA.	Hand Auger	Full	0.0	Crushed Rock.
	0.2						Change in Strata.
01	0.2	2.0	HA	Hand Auger	Full	1.1	fill brown C-F Sand & Gravel,tr.Silt.
02	2.0	4.0	HA	Hand Auger	Full	13.0	Same.
03	4.0	6.0	HA	Hand Auger	Full	1.8	Same.
	6.0						Change in Strata.
04	6.0	6.5	HA	Hand Auger	Full	2.1	Brown Peat.
	6.5						Bottom of Boring.
							Note:Samples # 02 (3.5'- 4.0') & # 04 (6.0-6.5') were saved ,all other samples were screened with PID and then
							Sample# 02 on hold by H.M. Mc Donald Engineering.

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Project	Port Ivory-Voluntary Cleanup		**Contractor**	Craig	**Boring No.**	AOC-A2SE 3	**Date** 9/12/07
Location	As Laid out by Hatch Mott Mac Donald			**Contract No.**	426-06-008	**Surface Elev.**	
Spoon	N/A 1.375" I.D.	**Hammer/ Fall (in.)**	140 lbs./30"	**Ground Water Level**			
Hammer Type	Safety	**Hole Type**	1	Date	Time	Depth (ft)	Remarks
Inspector	J.Zarks			9/12/07	AM	4.0'	Sample # 4 moist.
Driller	A. Tricanico						
site_code							

Sample No.	Start Depth (ft)	End Depth (ft)	Method	Spoon Blows/6"	Re-cov'd	PID Reading	Sample Description and Remarks
	0.0	0.2	HA.	Hand Auger	Full	0.0	Crushed Rock.
	0.2						Change in Strata.
01	0.2	1.0	HA	Hand Auger	Full	0.0	fill brown C-F Sand & Gravel,tr.Silt.
02	1.0	2.0	HA	Hand Auger	Full	0.0	Same.
03	2.0	3.0	HA	Hand Auger	Full	0.0	Same.
04	3.0	4.0	HA	Hand Auger	Full	0.0	Same.
	4.0						**Bottom of Boring.**
							Note: All samples wer screened with PID-Meter & discarded,sample # 04 saved.

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Project	Port Ivory-Voluntary Cleanup	Contractor	Craig	Boring No.	AOC-A2SE4	Date 9/13/07
Location	As Laid out by Hatch Mott Mac Donald			Contract No.	426-06-008	Surface Elev.
Spoon	N/A 1.375" I.D.	Hammer/ Fall (in.)	140 lbs./30"	Ground Water Level		
Hammer Type	Safety	Hole Type	1	Date	Time	Depth (ft) / Remarks
Inspector	J.Zarks					
Driller	A. Tricanico					
site_code						

Sample No.	Start Depth (ft)	End Depth (ft)	Method	Spoon Blows/6"	Re-cov'd	PID Reading	Sample Description and Remarks
	0.0	0.2	HA.	Hand Auger	Full	0.0	Crushed Rock.
	0.2						Change in Strata.
01	0.2	2.0	HA	Hand Auger	Full	0.0	fill brown C-F Sand & Gravel,tr.Silt.
02	2.0	4.0	HA	Hand Auger	Full	0.0	Same.
	4.0						Bottom of Boring
							Note:Sample # 02 (3.0'-3.5") was saved ,all other samples were screened with PID and then discarded.

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Boring Report

Project	Port Ivory-Voluntary Cleanup		**Contractor**	Craig	**Boring No.**	AOC-A2SE 5	**Date** 9/12/07
Location	As Laid out by Hatch Mott Mac Donald			**Contract No.**	426-06-008	**Surface Elev.**	
Spoon	N/A 1.375" I.D.	**Hammer/ Fall (in.)**	140 lbs./30"	**Ground Water Level**			
Hammer Type	Safety	**Hole Type**	1	Date	Time	Depth (ft)	Remarks
Inspector	J.Zarks						
Driller	A. Tricanico						
site_code							

Sample No.	Start Depth (ft)	End Depth (ft)	Method	Spoon Blows/6"	Re-cov'd	PID Reading	Sample Description and Remarks
	0.0	0.2	HA.	Hand Auger	Full	0.0	Crushed Rock.
	0.2						Change in Strata.
01	0.2	1.0	HA	Hand Auger	Full	0.0	fill brown C-F Sand & Gravel,tr.Silt.
02	1.0	2.0	HA	Hand Auger	Full	0.0	Same.
	2.0						Bottom of boring.
							Note: Terminate boring due to obstruction.Electrical line,we move+ 2' NW.
							Note:Samples # 4 (3.0' - 3.5')& # 6 (5.0' -5.5')were saved ,all other samples were screened with PID and then discarded.
							Samples # 04 & 06 on hold as per H.M.MacDonald

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Engineering Department
Materials Engineering

Boring Report

Project	Port Ivory-Voluntary Cleanup	Contractor	Craig	Boring No.	AOC-A2SE 5A	Date 9/12/07
Location	As Laid out by Hatch Mott Mac Donald	Contract No.	426-06-008	Surface Elev.		
Spoon	N/A 1.375" I.D.	Hammer/ Fall (in.)	140 lbs./30"	Ground Water Level		
Hammer Type	Safety	Hole Type	1	Date	Time	Depth (ft) / Remarks
Inspector	J.Zarks			9/12/07	PM	5 / In sample # 04
Driller	A. Tricanico					
site_code						

Sample No.	Start Depth (ft)	End Depth (ft)	Method	Spoon Blows/6"	Re-cov'd	PID Reading	Sample Description and Remarks
01	0.0	2.0	HA.	Hand Auger	Full	0.0	fill brown C-F Sand & Gravel,tr.Silt.
02	0.2	4.0	HA	Hand Auger	Full	0.0	Fill grayish-brown C-F Sand & Gravel ,little Silt.
03	4.0	5.0	HA	Hand Auger	Full	102.0	Same.
04	5.0	6.0	HA	Hand Auger	Full	1.3	Same.
	6.0						Bottom of boring.
							Note:All samples were screened with PID-Meter & discarded, samples # 2(3.0'-3.5') &#4(5.0'-5.5')were saved.
							saved and set on hold by Hatch Mott Mac Donald.

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Materials Engineering

Boring Report

Project	Port Ivory-Voluntary Cleanup		Contractor	Craig	Boring No.	AOC-2ASE6	Date 9/13/07
Location	As Laid out by Hatch Mott Mac Donald			Contract No.	426-06-008	Surface Elev.	
Spoon	N/A 1.375" I.D.	Hammer/ Fall (in.)	140 lbs./30"	Ground Water Level			
Hammer Type	Safety	Hole Type	1	Date	Time	Depth (ft)	Remarks
Inspector	J.Zarks			9/13/07	AM	5.0'	In sample # 3
Driller	A. Tricanico						
site_code							

Sample No.	Start Depth (ft)	End Depth (ft)	Method	Spoon Blows/6"	Re-cov'd	PID Reading	Sample Description and Remarks
	0.0	0.2	HA.	Hand Auger	Full	0.0	Crushed Rock.
	0.2						Change in Strata.
01	0.2	2.0	HA	Hand Auger	Full	0.0	fill brown C-F Sand & Gravel,tr.Silt.
02	2.0	4.0	HA	Hand Auger	Full	0.0	Same.
03	4.0	6.0	HA	Hand Auger	Full	0.0	Same.
04	6.0	7.0	HA	Hand Auger	Full	0.0	Same.
	7.0						**Bottom of Boring.**
							Note:Sample # 03 (4.5' -5.0') was saved ,all other samples were screened with PID and then discarded.
							Sample # 03 on hold by H.M. Mc Donald Engineering.

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Engineering Department
Materials Engineering

Boring Report

Project	Port Ivory-Voluntary Cleanup	**Contractor**	Craig	**Boring No.**	AOC-A2SE7	**Date**	9/13/07
Location	As Laid out by Hatch Mott Mac Donald			**Contract No.**	426-06-008	**Surface Elev.**	
Spoon	N/A 1.375" I.D.	**Hammer/ Fall (in.)**	140 lbs./30"	**Ground Water Level**			
Hammer Type	Safety	**Hole Type**	1	Date	Time	Depth (ft)	Remarks
Inspector	J.Zarks			9/13/07	AM	5.0'	In sample # 05
Driller	A. Tricanico						
site_code							

Sample No.	Start Depth (ft)	End Depth (ft)	Method	Spoon Blows/6"	Re-cov'd	PID Reading	Sample Description and Remarks
	0.0	0.2	HA.	Hand Auger	Full	0.0	Crushed Rock.
	0.2						Change in Strata.
01	0.2	2.0	HA	Hand Auger	Full	0.0	fill brown C-F Sand & Gravel,tr.Silt.
02	2.0	3.0	HA	Hand Auger	Full	0.0	Same.
03	3.0	4.0	HA	Hand Auger	Full	68.0	Same.
04	4.0	5.0	HA	Hand Auger	Full	79.0	Same.
	5.0						Change in Strata.
05	5.0	5.5	HA	Hand Auger	Full	38.0	
	5.5						Change in Strata.
06	5.5	6.0	HA	Hand Auger	Full	24.0	Brown M-F Sand tr.Silt,tr.Gravel.
07	6.0	6.5	HA	Hand Auger	Full	4.5	Brown M-F Sand tr.Silt,tr.Gravel.
	6.5						Bottom Of Boring
							Note:All samples screened with PID-Meter & discarded,samples # 04(4.0' -4.5') & #07 (6.0' -6.5) saved.

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Materials Engineering

Boring Report

Project	Port Ivory-Voluntary Cleanup	**Contractor**	Craig	**Boring No.**	AOC-A2SE8	**Date**	9/13/07
Location	As Laid out by Hatch Mott Mac Donald			**Contract No.**	426-06-008	**Surface Elev.**	
Spoon	N/A 1.375" I.D.	**Hammer/ Fall (in.)**	140 lbs./30"	**Ground Water Level**			
Hammer Type	Safety	**Hole Type**	1	Date	Time	Depth (ft)	Remarks
Inspector	J.Zarks			9/13/07	AM	5.0'	In sample # 05
Driller	A. Tricanico						
site_code							

Sample No.	Start Depth (ft)	End Depth (ft)	Method	Spoon Blows/6"	Re-cov'd	PID Reading	Sample Description and Remarks
	0.0	0.2	HA.	Hand Auger	Full	0.0	Crushed Rock.
	0.2						Change in Strata.
01	0.2	2.0	HA	Hand Auger	Full	0.0	fill brown C-F Sand & Gravel,tr.Silt.
02	2.0	3.0	HA	Hand Auger	Full	17.5	Same.
03	3.0	4.0	HA	Hand Auger	Full	145.0	Same.
04	4.0	5.0	HA	Hand Auger	Full	79.0	Same.
	5.0						Change in Strata.
05	5.0	5.5	HA	Hand Auger	Full	38.0	
	5.5						Change in Strata.
06	5.5	6.0	HA	Hand Auger	Full	24.0	Brown M-F Sand tr.Silt,tr.Gravel.
07	6.0	6.5	HA	Hand Auger	Full	4.5	Brown M-F Sand tr.Silt,tr.Gravel.
	6.5						Bottom Of Boring
							Note:All samples screened with PID-Meter & discarded,samples # 04(4.0' -4.5') & #07 (6.0' -6.5) saved.

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Boring Report

Project	Port Ivory-Voluntary Cleanup	Contractor	Craig	Boring No.	AOC-2ASE9	Date 913/07
Location	As Laid out by Hatch Mott Mac Donald	Contract No.	426-06-008	Surface Elev.		
Spoon	N/A 1.375" I.D.	Hammer/ Fall (in.)	140 lbs./30"	Ground Water Level		
Hammer Type	Safety	Hole Type	1	Date	Time	Depth (ft) / Remarks
Inspector	J.Zarks			9/13/07	PM	5 / In Sample # 5.
Driller	A. Tricanico					
site_code						

Sample No.	Start Depth (ft)	End Depth (ft)	Method	Spoon Blows/6"	Re-cov'd	PID Reading	Sample Description and Remarks
01	0.0	2.0	HA.	Hand Auger	Full	0.0	Fill Gray C-F Sand,little Silty Clay,tr.Gravel
02	2.0	3.0	HA.	Hand Auger	Full	18.6	Same.
03	3.0	4.0	HA	Hand Auger	Full	88.7	Same.
	4.0						Change in Strata.
04	4.0	5.0	HA	Hand Auger	Full	24.2	Brown Peat.
	5.0						Change in Strata.
05	5.0	6.0	HA	Hand Auger	Full	13.8	**Fill Gray C-F Sand,little Silty Clay,tr.Gravel**
06	6.0	6.5	HA	Hand Auger	Full	11.2	Same.
07	6.5	7.0	HA	Hand Auger	Full	0.0	
	7.0						Bottom Of Boring.
							Note:All Samples were screened with PID-Meter & discarded.Samples # 03(3.5-4.0') & #07 (6.5'-7.0')saved.
							Sample #I on hold as per H.M.MacDonald

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Boring Report

Project	Port Ivory-Voluntary Cleanup	Contractor	Craig	Boring No. AOC-2ASE10	Date 9/14/07
Location	As Laid out by Hatch Mott Mac Donald			Contract No. 426-06-008	Surface Elev.
Spoon	2" O.D. 1.375" I.D.	Hammer/ Fall (in.)	140 lbs./30"	Ground Water Level	
Hammer Type	Safety	Hole Type	1	Date / Time / Depth (ft) / Remarks	
Inspector	J.Zarks				
Driller	A. Tricanico				
site_code					

Sample No.	Start Depth (ft)	End Depth (ft)	Method	Spoon Blows/6"	Re-cov'd	PID Reading	Sample Description and Remarks
01	0.0	1.0	HA.	Hand Auger	Full	0.0	Fill Brown C-F Sand & Gravel,Boulders,tr.Silty Clay.
02	1.0	2.0	HA.	Hand Auger	Full	0.0	same.
03	2.0	2.4	HA	Hand Auger	Full	0.0	same.
	2.4						Bottom Of Boring.
							Note:Obstruction.Terminate boring.

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Materials Engineering

Boring Report

Project	Port Ivory-Voluntary Cleanup		**Contractor**	Craig	**Boring No.**	A2SE10A	**Date** 9/17/07
Location	2.5'North of AOC-A2SE10,as laidout by H.M.Mc Donald.		**Contract No.**	426-06-008	**Surface Elev.**		
Spoon	2" O.D. 1.375" I.D.	**Hammer/ Fall (in.)** 140 lbs./30"	**Ground Water Level**				
Hammer Type	Safety	**Hole Type** 1	Date	Time	Depth (ft)	Remarks	
Inspector	J.Zarks		9/17/07	10:30AM	4.0'	In sample # 04	
Driller	A. Tricanico						
site_code							

Sample No.	Start Depth (ft)	End Depth (ft)	Method	Spoon Blows/6"	Re-cov'd	PID Reading	Sample Description and Remarks
01	0.0	1.0	HA.	Hand Auger	Full	0.0	Fill Brown C-F Sand & Gravel,Boulders,tr.Silty Clay.
02	1.0	2.0	HA.	Hand Auger	Full	4.5	Fill Greyish-black C- F Sand, little Gravel.tr. Silt.,Coal,Cinders & Slag..
03	2.0	4.0	HA	Hand Auger	Full	133.8	Same, w/wood(Petroleum odor & tr.Product).
04	4.0	5.0	HA	Hand Auger	Full	74.3	Same.
5	5.0	6.0	HA	Hand Auger	Full	0.0	Fill Brown C-F Sand.
	6.0						Bottom of Boring.
							Note: All samples were screened with PID-Meter & discarded,samples # 3(3.5'-4.0') & # 5 (5.5' -6.0')were

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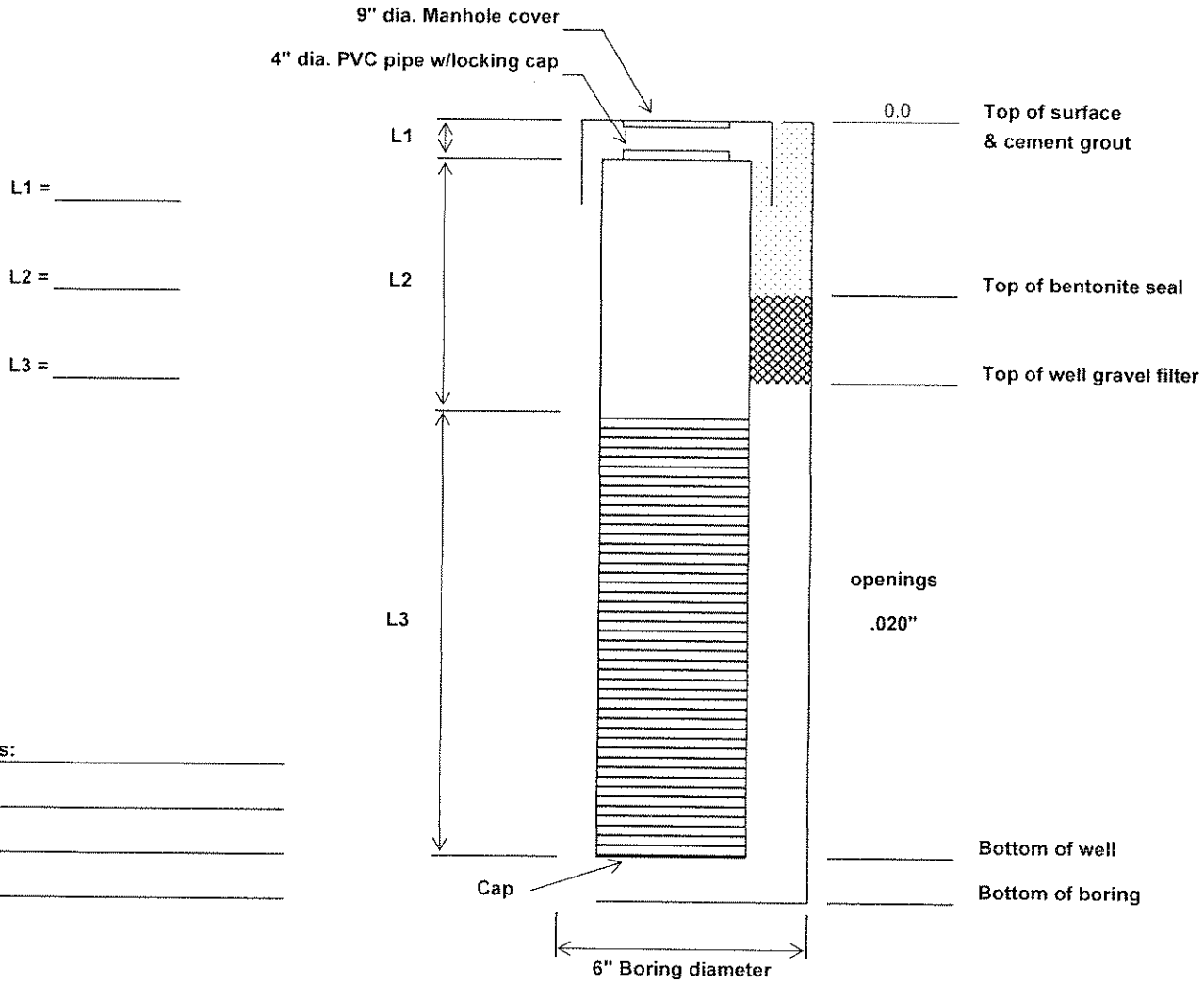
Materials Engineering

Well Installation Report

PROJECT: Port Ivory-Voluntary Cleanup		**CONTRACT NO.** 426-06-008	
LOCATION: 2.5'North of AOC-A2SE10,as laidout by H.M.Mc Donald.		**CONTRACTOR** Craig	
WELL NO. A2SE10A	**WELL TYPE**	**DATE:**	
DRILLER:	**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**	



L1 = _____

L2 = _____

L3 = _____

Remarks: _____

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Engineering Department
Materials Engineering

Boring Report

Project	Port Ivory-Voluntary Cleanup	**Contractor**	Craig	**Boring No.** AOC-2ASE11	**Date** 9/17/07
Location	As Laid out by Hatch Mott Mac Donald		**Contract No.** 426-06-008	**Surface Elev.**	
Spoon	2" O.D. 1.375" I.D.	**Hammer/ Fall (in.)**	140 lbs./30"	**Ground Water Level**	
Hammer Type	Safety	**Hole Type**	1	Date / Time / Depth (ft) / Remarks	
Inspector	J.Zarks				
Driller	A. Tricanico				
site_code					

Sample No.	Start Depth (ft)	End Depth (ft)	Method	Spoon Blows/6"	Re-cov'd	PID Reading	Sample Description and Remarks
01	0.0	1.0	HA.	Hand Auger	Full	1.7	Fill Brown C-F Sand & Gravel,Boulders,tr.Silty Clay..
02	1.0	2.0	HA.	Hand Auger	Full	4.8	Same
03	2.0	3.0	HA	Hand Auger	Full	72.4	Fill Grayish-black C-F Sand,Little Gravel,tr.Silt,Caol,Cinders,Slag & wood.(Petro odor)
04	3.0	3.9	HA	Hand Auger	Full	76.5	Same
	3.9						Bottom Of Boring.
							Note: Boring terminated because of obstruction.All samples screened w/Pid-Meter & discarded.

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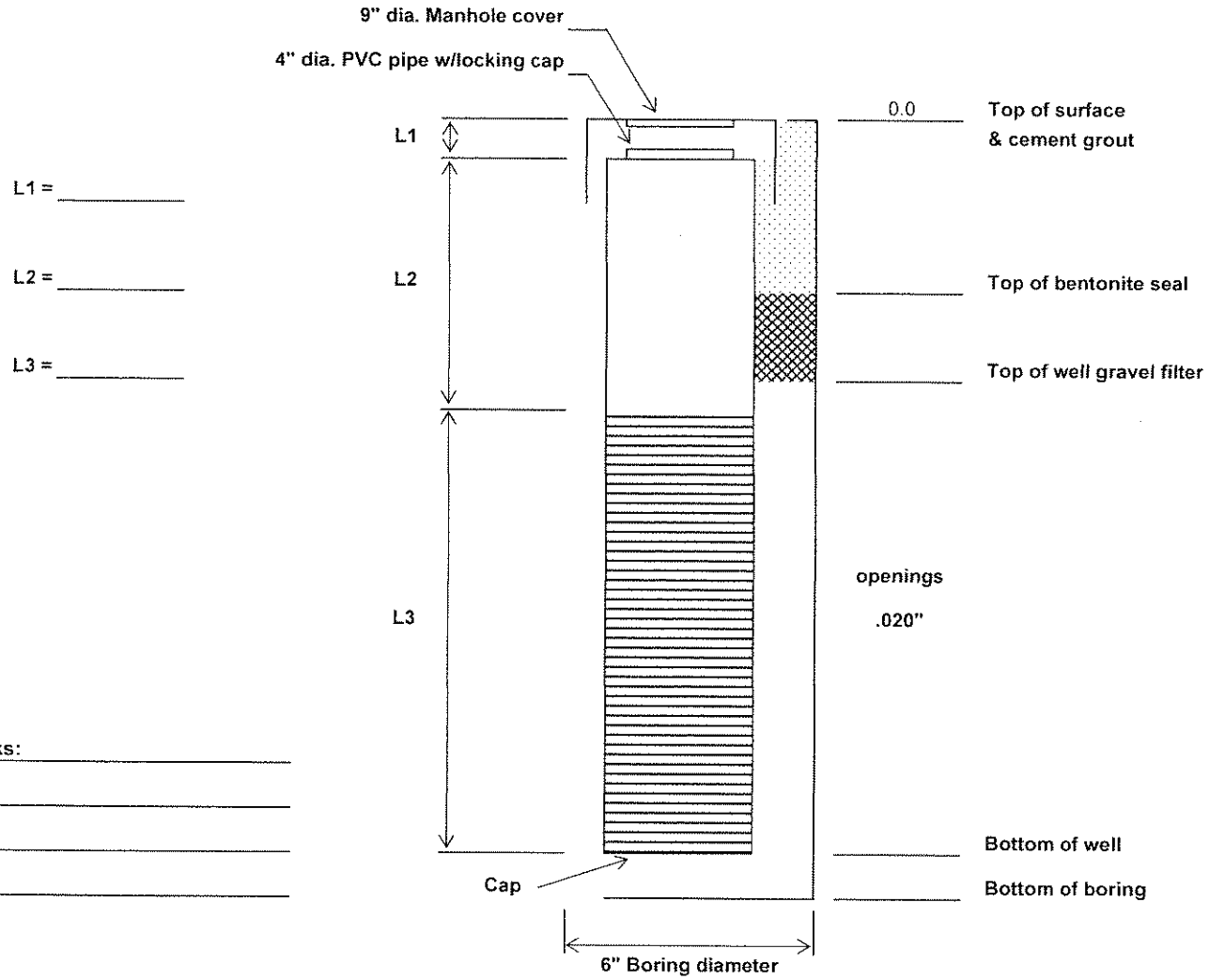
Materials Engineering

Well Installation Report

PROJECT: Port Ivory-Voluntary Cleanup		**CONTRACT NO.** 426-06-008	
LOCATION: As Laid out by Hatch Mott Mac Donald		**CONTRACTOR** Craig	
WELL NO. AOC-2ASE11	**WELL TYPE**	**DATE:**	
DRILLER:	**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**	



L1 = _____

L2 = _____

L3 = _____

Remarks: _____

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Materials Engineering

Boring Report

Project	Port Ivory-Voluntary Cleanup	Contractor	Craig	Boring No.	A2SE11A	Date 9/17/07
Location	7'North of AOC-A2SE 11,Laid out by H.M.Mc.Donald.	Contract No.	426-06-008	Surface Elev.		
Spoon	2" O.D. 1.375" I.D.	Hammer/ Fall (in.)	140 lbs./30"	Ground Water Level		
Hammer Type	Safety	Hole Type	1	Date	Time	Depth (ft) / Remarks
Inspector	J.Zarks					
Driller	A. Tricanico					
site_code						

Sample No.	Start Depth (ft)	End Depth (ft)	Method	Spoon Blows/6"	Re-cov'd	PID Reading	Sample Description and Remarks
01	0.0	1.0	HA.	Hand Auger	Full	0.0	Fill Brown C-F Sand & Gravel,Boulders,tr.Silty Clay.
02	1.0	1.5	HA.	Hand Auger	Full	4.4	Same
	1.5'						Bottom Of Boring.
							Note: Obstruction,concrete slab.No samples saved.

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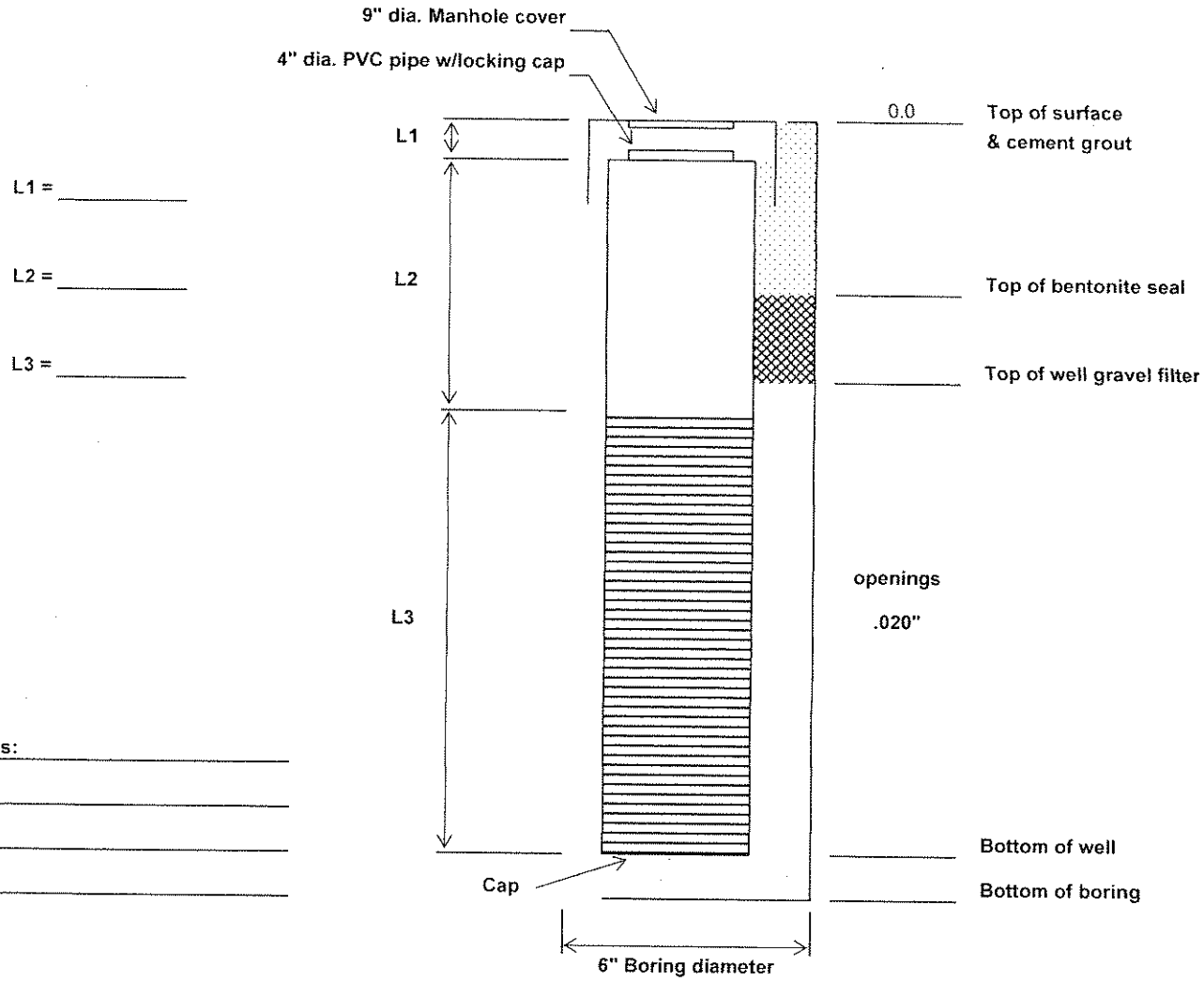
Well Installation Report

PROJECT: Port Ivory-Voluntary Cleanup		CONTRACT NO. 426-06-008	
LOCATION: 7'North of AOC-A2SE 11,Laid out by H.M.Mc.Donald.		CONTRACTOR Craig	
WELL NO. A2SE11A	WELL TYPE	DATE:	
DRILLER:	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	



L1 = _____

L2 = _____

L3 = _____

Remarks: _____

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Materials Engineering

Boring Report

Project	Port Ivory-Voluntary Cleanup		Contractor	Craig	Boring No. A2SE11B	Date	9/18/07
Location	12'North of AOC-A2SE11,as laidout by H.M.Mc Donald.				Contract No. 426-06-008	Surface Elev.	
Spoon	2" O.D. 1.375" I.D.	Hammer/ Fall (in.) 140 lbs./30"	Ground Water Level				
Hammer Type	Safety	Hole Type 1	Date	Time	Depth (ft)	Remarks	
Inspector	J.Zarks		9/18/07	9:00AM	4.2'	In sample # 04	
Driller	A. Tricanico						
site_code							

Sample No.	Start Depth (ft)	End Depth (ft)	Method	Spoon Blows/6"	Re-cov'd	PID Reading	Sample Description and Remarks
01	0.0	2.0	HA.	Hand Auger	Full	0.0	Fill Brown C-F Sand & Gravel,Boulders,tr.Silty Clay.
02	2.0	3.5	HA.	Hand Auger	Full	10.7	Fill Greyish-black C- F Sand, little Gravel.tr. Silt.,Coal,Cinders & Slag..
03	3.5	4.0	HA	Hand Auger	Full	15.6	Same, w/wood(Petroleum odor & tr.Product).
04	4.0	4.5	HA	Hand Auger	Full	3.2	Same.
05	4.5	5.0	HA	Hand Auger	Full	0.8	Fill Brown C-F Sand.
06	5.0	5.5	HA	Hand Auger	Full	0.0	
	5.5						Bottom of Boring
							Note: All samples were screened with PID-Meter & discarded,samples # 3(3.5'-4.0') & # 6 (5.0' -5.5')were
							saved.

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Well Installation Report

PROJECT: Port Ivory-Voluntary Cleanup		**CONTRACT NO.** 426-06-008	
LOCATION: 12'North of AOC-A2SE11,as laidout by H.M.Mc Donald.		**CONTRACTOR** Craig	
WELL NO. A2SE11B	**WELL TYPE**	**DATE:**	
DRILLER:	**INSPECTOR:** J.Zarks		

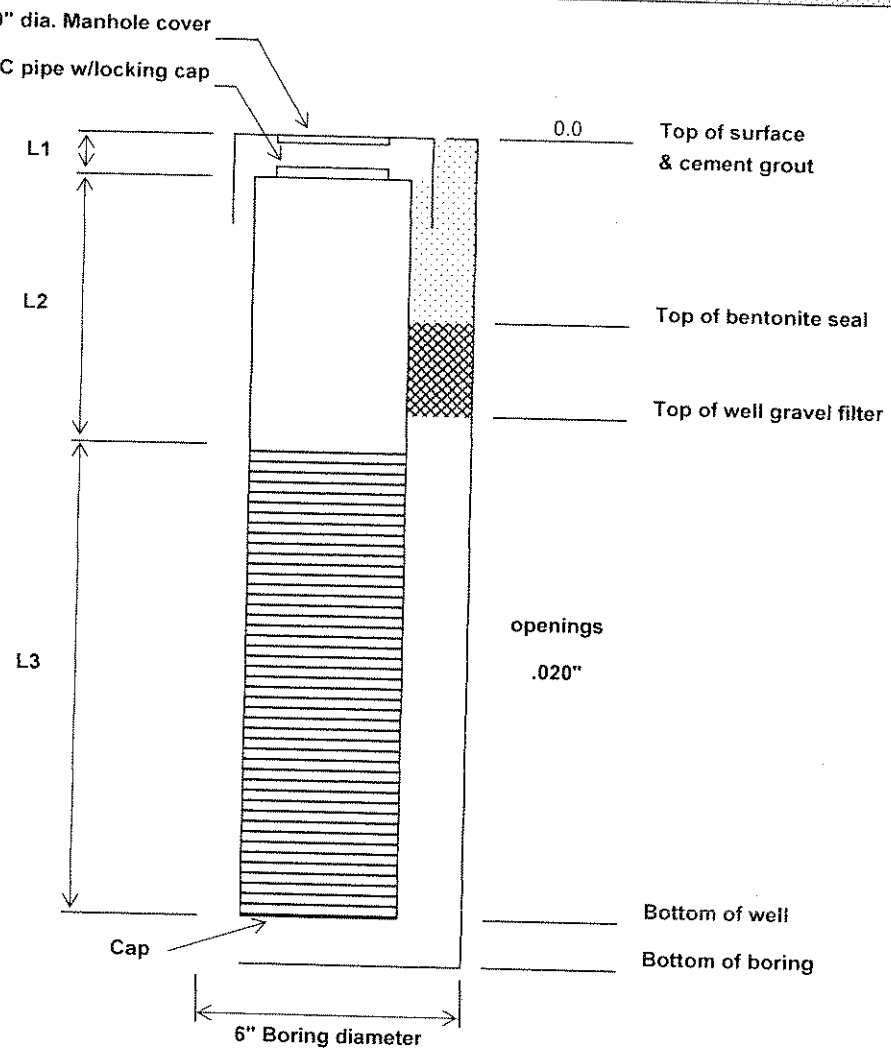
Well Development Report (NOTE: WATER LEVEL READINGS FROM TOP OF PVC)

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

L1 = _____

L2 = _____

L3 = _____



Remarks: _____

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Boring Report

Project	Port Ivory-Voluntary Cleanup	Contractor	Craig	Boring No.	A2SE12	Date 9/18/07
Location	As laidout by H.M.Mc Donald.	Contract No.	426-06-008	Surface Elev.		
Spoon	2" O.D. 1.375" I.D.	Hammer/ Fall (in.)	140 lbs./30"	Ground Water Level		
Hammer Type	Safety	Hole Type	1	Date	Time	Depth (ft) / Remarks
Inspector	J.Zarks			9/18/07	12:15PM	3.8' In sample # 04
Driller	A. Tricanico					
site_code						

Sample No.	Start Depth (ft)	End Depth (ft)	Method	Spoon Blows/6"	Re-cov'd	PID Reading	Sample Description and Remarks
01	0.0	2.0	HA.	Hand Auger	Full	0.0	Fill Brown C-F Sand & Gravel,Boulders,tr.Silty Clay.
02	2.0	3.3	HA.	Hand Auger	Full	10.2	Fill Greyish-black C- F Sand, little Gravel.tr. Silt.,Coal,Cinders & Slag..
03	3.3	3.8	HA	Hand Auger	Full	23.7	Same, w/wood(Petroleum odor & tr.Product).
04	3.8	4.3	HA	Hand Auger	Full	14.2	Same.
05	4.3	4.8	HA	Hand Auger	Full	0.6	Fill Brown C-F Sand.
	4.8						Bottom of Boring.
							Note: All samples were screened with PID-Meter & discarded,samples # 3(3.3-3.8") & # 5 (4.3'-4.8)were saved.
							saved.

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Well Installation Report

PROJECT: Port Ivory-Voluntary Cleanup		CONTRACT NO. 426-06-008	
LOCATION: As laidout by H.M.Mc Donald.		CONTRACTOR Craig	
WELL NO. A2SE12	WELL TYPE	DATE:	
DRILLER:	INSPECTOR: J.Zarks		

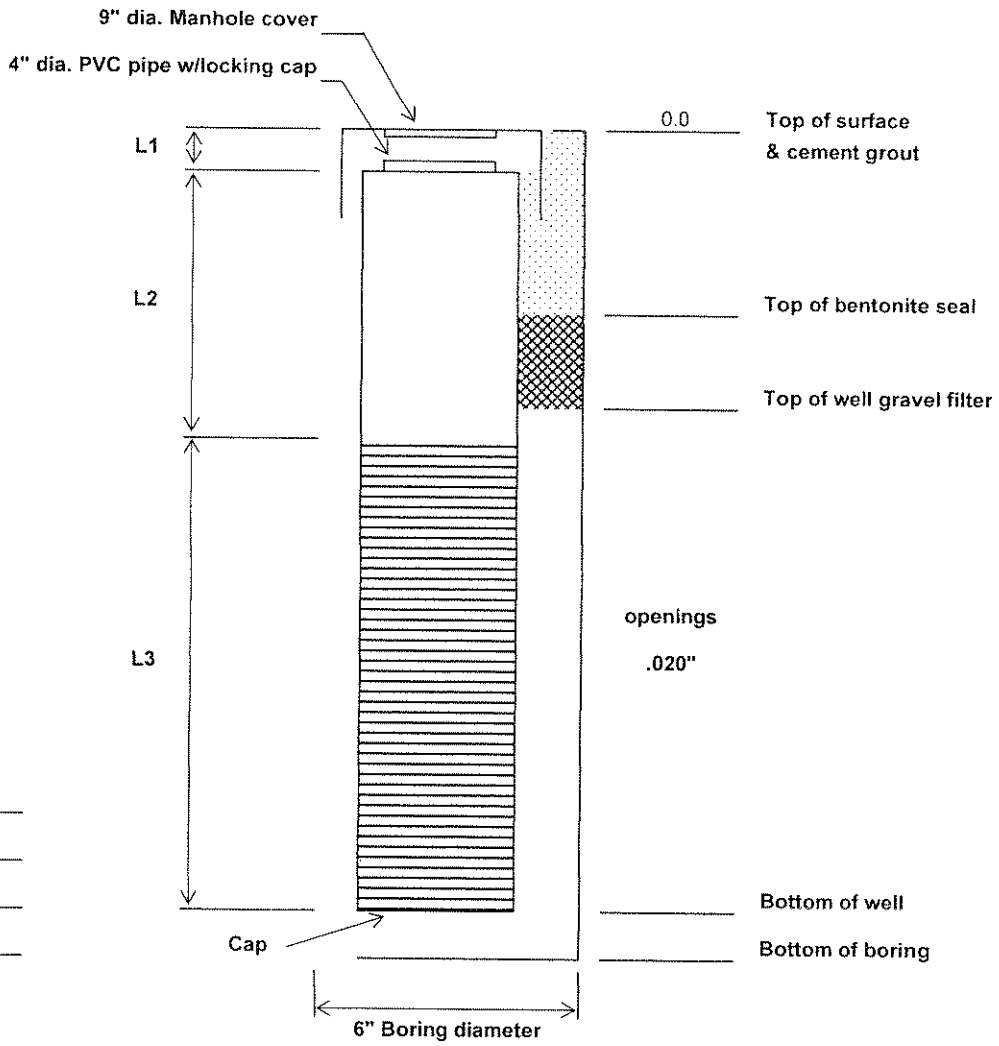
Well Development Report (NOTE: WATER LEVEL READINGS FROM TOP OF PVC)

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

L1 = _____

L2 = _____

L3 = _____



Remarks: _____

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Engineering Department
Materials Engineering

Boring Report

Project	Port Ivory-Voluntary Cleanup		Contractor	Craig	Boring No.	AOCA2SE13	Date 9/14/07
Location	As laid out by H.M.Mac Donald.		Contract No.	426-06-008	Surface Elev.		
Spoon	2" O.D. 1.375" I.D.	Hammer/ Fall (in.) 140 lbs./30"	Ground Water Level				
Hammer Type	Safety	Hole Type 1	Date	Time	Depth (ft)	Remarks	
Inspector	J.Zarks		9/14/07	8:00AM	5.0'	In Sample # 05.	
Driller	A. Tricanico						
site_code							

Sample No.	Start Depth (ft)	End Depth (ft)	Method	Spoon Blows/6"	Re-cov'd	PID Reading	Sample Description and Remarks
01	0.0	1.0	HA.	Hand Auger	Full	0.0	Fill Crushed Rock-DGABC.
02	1.0	2.0	HA.	Hand Auger	Full	55.7	Fill Grayish-Brown C-F Sand & Gravel,tr.Silt.
03	2.0	4.0	HA	Hand Auger	Full	41.4	Same.
04	4.0	5.0	HA	Hand Auger	Full	28.6	Same.
5	5.0	6.0	HA	Hand Auger	Full	16.8	Same.
06	6.0	6.5	HA	Hand Auger	Full	14.3	Same.
	6.5						Bottom of Boring.
							Note:Obstruction at 6.5",concrete slab,All samples screened w/ PID-Meter & discarded.

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Well Installation Report

PROJECT: Port Ivory-Voluntary Cleanup		CONTRACT NO. 426-06-008	
LOCATION: As laid out by H.M.Mac Donald.		CONTRACTOR Craig	
WELL NO. AOCA2SE13	WELL TYPE	DATE:	
DRILLER:	INSPECTOR: J.Zarks		

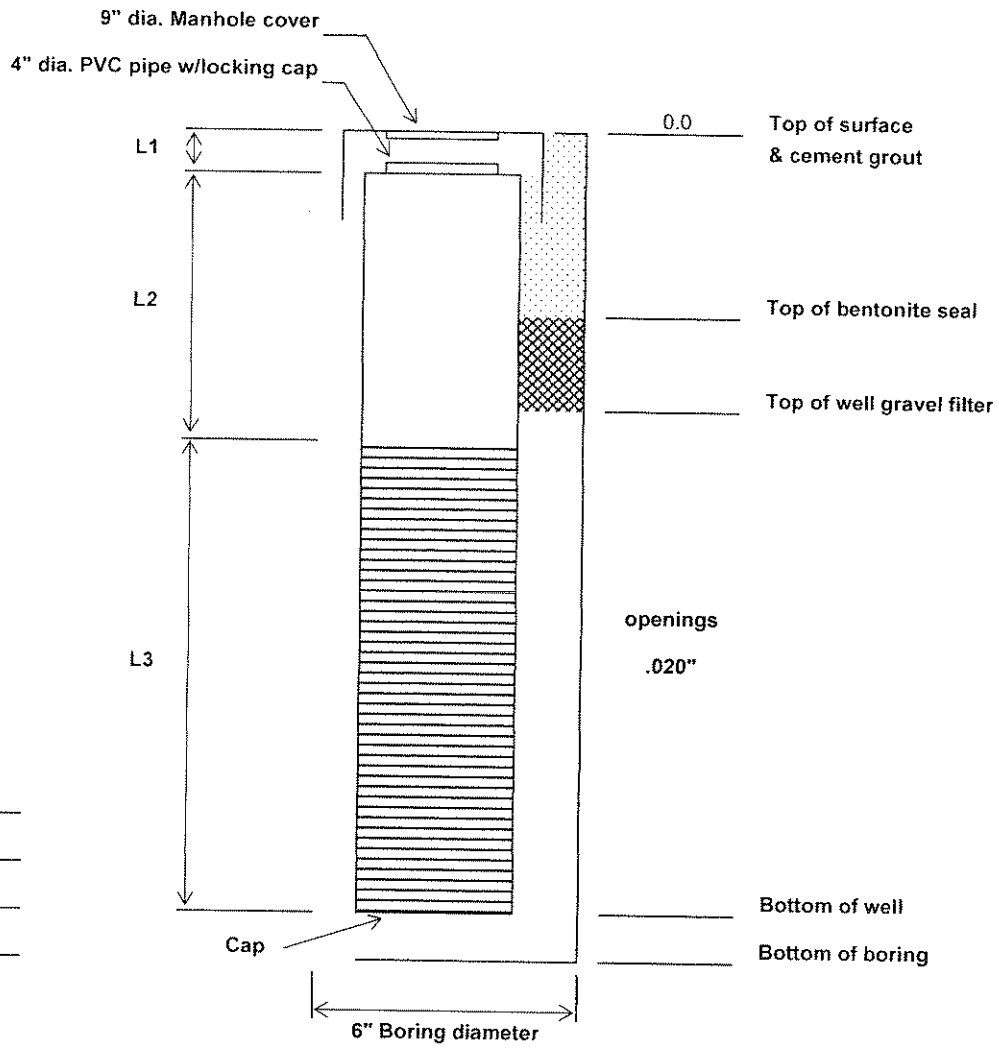
Well Development Report (NOTE: WATER LEVEL READINGS FROM TOP OF PVC)

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

L1 = _____

L2 = _____

L3 = _____



Remarks: _____

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Engineering Department
Materials Engineering

Boring Report

Project	Port Ivory-Voluntary Cleanup	Contractor	Craig	Boring No. A2SE13A	Date 9/14/07
Location	As Laid out by Hatch Mott Mac Donald, 3' North-East o fAOC-A2SE 13.	Contract No.	426-06-008	Surface Elev.	
Spoon	2" O.D. 1.375" I.D.	Hammer/ Fall (in.)	140 lbs./30"	Ground Water Level	
Hammer Type	Safety	Hole Type	1	Date / Time / Depth (ft) / Remarks	
Inspector	J.Zarks			9/14/07 / 11:30AM / 5.0' / In Sample # 05.	
Driller	A. Tricanico				
site_code					

Sample No.	Start Depth (ft)	End Depth (ft)	Method	Spoon Blows/6"	Re-cov'd	PID Reading	Sample Description and Remarks
01	0.0	1.0	HA.	Hand Auger	Full	0.0	Fill Crushed Rock-DGABC.
02	1.0	2.0	HA.	Hand Auger	Full	66.3	Fill Grayish-Brown C-F Sand & Gravel,tr.Silt.
03	2.0	4.0	HA	Hand Auger	Full	45.6	Same.
04	4.0	5.0	HA	Hand Auger	Full	26.6	Same.
05	5.0	6.0	HA	Hand Auger	Full	17.6	Same.
06	6.0	6.5	HA	Hand Auger	Full	15.0	Same.
	6.5						Bottom of Boring.
							Note:Obstruction at 6.5",concrete slab,All samples screened w/ PID-Meter & discarded, samples # 03(3.5 -4.0') & #05(5.5'-
							4.0) & 05 (5.5' 6.0') were saved.

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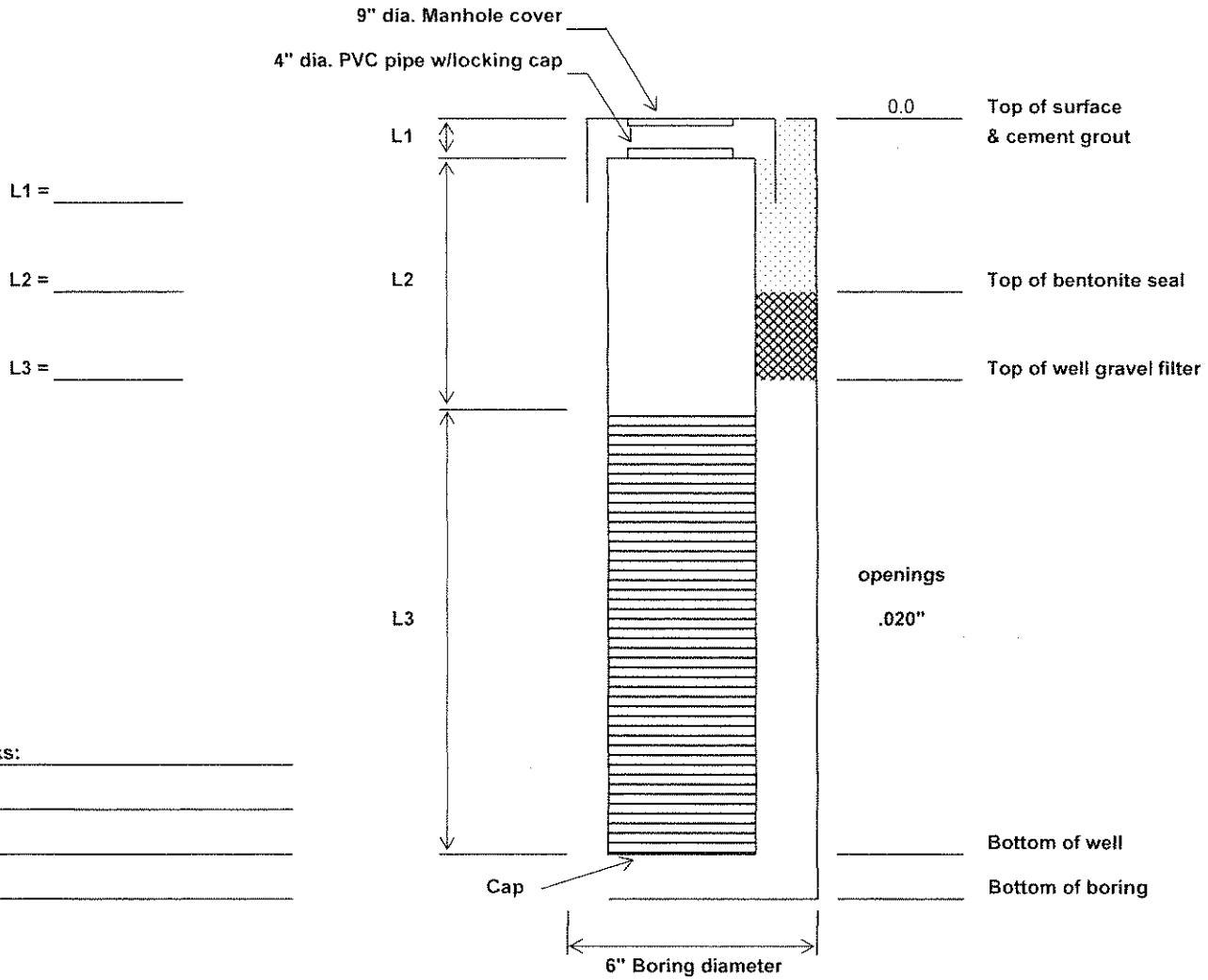
Well Installation Report

PROJECT: Port Ivory-Voluntary Cleanup		**CONTRACT NO.** 426-06-008	
LOCATION: As Laid out by Hatch Mott Mac Donald, 3' North-East o fAOC-A2SE 13.		**CONTRACTOR** Craig	
WELL NO. A2SE13A	**WELL TYPE**		**DATE:**
DRILLER:		**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**	



L1 = _____

L2 = _____

L3 = _____

Remarks: _____

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Boring Report

Project	Port- Ivory Voluntary clean up	Contractor	Craig	Boring No. AOC-2ASE14	Date 11/5/2007
Location	As laid out by Hatch Mott Mc.Donald	Contract No.	426-06-008	Surface Elev.	
Spoon	2" O.D. 1.375" I.D.	Hammer/ Fall (in.)	140 lbs./30"	Ground Water Level	
Hammer Type	Safety	Hole Type	1	Date / Time / Depth (ft) / Remarks	
Inspector	J.Zarks			11/5/07 / 11:40AM / 4.5	In sample # 03
Driller	C.Cohen				
site_code					

Sample No.	Start Depth (ft)	End Depth (ft)	Method	Spoon Blows/6"	Re-cov'd	PID Reading	Sample Description and Remarks
	0.0	0.5					Asphalt -Layer.
01	5.0	2.0	HA	Hand Auger	Full	0.0	Reddish-brown C-F Sand & Gravel tr. Silt
02	2.0	4.0	HA	Hand Auger	Full	0.0	Grayish-brown C-F Sand & Gravel tr. Silt
3	4.0	6.0	HA	Hand Auger	Full	14.8	Same /with wood
04	6.0	8.0	SS	6-5-5-3	18"	0.0	Same
	8.0						Bottom of boring.
							Note:All samples screened with PID-meter & discarded,samples #03(4.0' - 4.5')& #04(7.5'-8.0')were saved.

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Boring Report

Project	Port- Ivory Voluntary clean up	Contractor	Craig	Boring No. AOC-2ASE15	Date 11/5/2007
Location	As laid out by Hatch Mott Mc.Donald			Contract No. 426-06-008	Surface Elev.
Spoon	2" O.D. 1.375" I.D.	Hammer/ Fall (in.)	140 lbs./30"	Ground Water Level	
Hammer Type	Safety	Hole Type	1	Date / Time / Depth (ft) / Remarks	
Inspector	J.Zarks			11/5/07 / 1:30PM / 4.0	In sample # 03
Driller	C.Cohen				
site_code					

Sample No.	Start Depth (ft)	End Depth (ft)	Method	Spoon Blows/6"	Re-cov'd	PID Reading	Sample Description and Remarks
01	0.0	2.0	HA	Hand Auger	Full	0.0	Reddish-brown C-F Sand & Gravel tr. Silt
02	2.0	4.0	HA	Hand Auger	Full	0.0	Same
03	4.0	6.0	HA	Hand Auger	Full	0.0	Same
04	6.0	6.5	HA	Hand Auger	Full	0.0	Same
	6.5						Bottom of boring.
							Note:All samples screened with PID-meter & discarded,sample #02(3.5'-4.0') was saved.

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Boring Report

Project	Port- Ivory Voluntary clean up	Contractor	Craig	Boring No.	AOC-2ASE16
Location	As laid out by Hatch Mott Mc.Donald	Contract No.	426-06-008	Surface Elev.	
Spoon	2" O.D. 1.375" I.D.	Hammer/ Fall (in.)	140 lbs./30"	Date	11/5/2007
Hammer Type	Safety	Hole Type	1		
Inspector	J.Zarks				
Driller	C.Cohen				
site_code					

Ground Water Level

Date	Time	Depth (ft)	Remarks
11/5/07	2:30PM	4.5	In sample # 03

Sample No.	Start Depth (ft)	End Depth (ft)	Method	Spoon Blows/6"	Re-cov'd	PID Reading	Sample Description and Remarks
01	0.0	2.0	HA	Hand Auger	Full	0.0	Brown C - F Sand,tr.Gravel,tr.Silt.
02	2.0	4.0	HA	Hand Auger	Full	0.0	Same
03	4.0	6.0	HA	Hand Auger	Full	0.0	Same
4	6.0	7.0	HA	Hand Auger	Full	0.0	Same
	7.0						Bottom of boring.
							Note:All samples screened with PID-meter & discarded,sample #03(4.0' - 4.5') was saved.

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Boring Report

Project	Port-Ivory Voluntary Clean up	Contractor	Craig	Boring No. AOC-2ASE17	Date 11/7/07
Location	As Laid out by H.M.Mc.Donald.	Contract No.	426-06-008	Surface Elev.	
Spoon	Hammer/ Fall (in.)	Ground Water Level			
Hammer Type	Hole Type	Date	Time	Depth (ft)	Remarks
Inspector	J.Zarks	11/17/07	8:30AM	4.9	In sample # 03
Driller	C.Cohen				
site_code					

Sample No.	Start Depth (ft)	End Depth (ft)	Method	Spoon Blows/6"	Re-cov'd	PID Reading	Sample Description and Remarks
01	0.0	2.0	HA	HandAuger	Full	0.0	Fill Brown C- F Sand & Gravel ,tr . Silt
02	2.0	4.0	HA	HandAuger	Full	0.0	Same
03	4.0	6.0	HA	HandAuger	Full	0.0	Same
04	6.0	7.0	HA	HandAuger	Full	0.0	Same
	7.0						Bottom Of Boring
							Note:All samples were screened with PID-Meter & discarded,samples #03(4.0'-4.5') &#04(6.5"-7.0') were saved.

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Boring Report

Project	Port-Ivory Voluntary Clean up	Contractor	Craig	Boring No. AOC-2ASE18	Date 11/7/07
Location	As Laid out by H.M.Mc.Donald.	Contract No.	426-06-008	Surface Elev.	
Spoon	Hammer/ Fall (in.)	Ground Water Level			
Hammer Type	Hole Type	Date	Time	Depth (ft)	Remarks
Inspector	J.Zarks	11/17/07	10.00AM	3.9	In sample # 02
Driller	C.Cohen				
site_code					

Sample No.	Start Depth (ft)	End Depth (ft)	Method	Spoon Blows/6"	Re-cov'd	PID Reading	Sample Description and Remarks
	0.0	0.7	RC	Cutter Head	Full	0.0	Asphalt Layer
01	0.7	2.0	HA	HandAuger	Full	0.0	Fill Brown C- F Sand & Gravel ,tr . Silt
02	2.0	4.0	HA	HandAuger	Full	0.0	Same
03	4.0	6.0	HA	HandAuger	Full	0.0	Same
04	6.0	8.0	HA	HandAuger	Full	0.0	Same
	8.0						Bottom Of Boring
							Note:All samples were screened with PID-Meter & discarded,Sample #02 (3.0'-3.5')was saved.

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Boring Report

Project	Port-Ivory Voluntary Clean up	Contractor	Craig	Boring No. 2A-SE18	Date 11/7/07
Location	As Laid out by H.M.Mc.Donald.			Contract No. 426-06-008	Surface Elev.
Spoon		Hammer/ Fall (in.)		Ground Water Level	
Hammer Type		Hole Type	Date	Time	Depth (ft) / Remarks
Inspector	J.Zarks		11/7/07	10:00AM	3.9 / In sample # 03
Driller	C. Cohen				
site_code					

Sample No.	Start Depth (ft)	End Depth (ft)	Method	Spoon Blows/6"	Re-cov'd	PID Reading	Sample Description and Remarks
0.1	0.0	0.7	HA	Cutter Head	Full	0.0	Asphalt Layer.
	0.7						Change in Strata
02	0.7	2.0	HA	Hand Auger	Full	0.0	Fill Brown C-F Sand & Gravel,tr Sil
03	2.0	4.0	HA	Hand Auger	Full	0.0	Same
04	4.0	6.0	HA	Hand Auger	Full	0.0	Same
05	6.0	8.0	HA	Hand Auger	Full	0.0	Same
	8.0						Bottom of Boring
							Note:All samples were screened with PID-Meter & discarded,sample #03(3.0'-3.5')was saved.

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Boring Report

Project	Port-Ivory Voluntary Clean up		Contractor	Craig	Boring No. 2ASE19	Date: 11/9/07
Location	As Laid out by H.M.Mc.Donald.			Contract No. 426-06-008	Surface Elev.	
Spoon	3" O.D. 2.875" I.D.	Hammer/ Fall (in.) 140 lbs./30"	Ground Water Level			
Hammer Type	Auto	Hole Type 1	Date	Time	Depth (ft)	Remarks
Inspector	J.Zarks		11/9/07	11:15AM	4.5	In sampl # 03
Driller	C.Cohen					
site_code						

Sample No.	Start Depth (ft)	End Depth (ft)	Method	Spoon Blows/6"	Re-cov'd	PID Reading	Sample Description and Remarks
01	0.0	2.0	HA	Hand Auger	Full	0.0	Fill Brown C-F Sand & Gravel,Crushed Rock,Little Silt.
02	2.0	4.0	HA	Hand Auger	Full	0.0	Fill Black C-F Sand & Gravel
03	4.0	6.0	HA	Hand Auger	Full	0.0	Same
	6.0						Bottom Of Boring.
							Note: All samples were screened with PID-meter & discarded,sample # 03(4.0'-4.5') was saved.

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Boring Report

Project	Port-Ivory Voluntary-clean up	Contractor	Craig	Boring No. A2SE BH20A	Date 11/8/2007
Location	As laid out by Hatch Mott Mc.Donald			Contract No. 426-06-008	Surface Elev.
Spoon	2" O.D. 1.375" I.D.	Hammer/ Fall (in.)	140 lbs./30"	Ground Water Level	
Hammer Type	Safety	Hole Type	1	Date / Time / Depth (ft) / Remarks	
Inspector	J.Zarks				
Driller	C.Cohen.				
site_code					

Sample No.	Start Depth (ft)	End Depth (ft)	Method	Spoon Blows/6"	Re-cov'd	PID Reading	Sample Description and Remarks
01	0.0	2.0	HA	Hand Auger	Full	0.0	Fill Reddish-brown C-F Sand & Gravel, Crushed Rock.
02	2.0	3.0	HA	Hand Auger	Full	0.0	
02	2.0	4.0	HA	Hand Auger	Full	0.0	Grayish-black C-F Sand,Cinders & Slag
03	4.0	5.5	HA	Hand Auger	Full	0.0	Same
	5.5						Change in Strata
04	5.5	6.0	HA	Hand Auger	Full	0.0	Brown Peat.
	6.0						Bottom Of Boring.
							Note:All samples screened with PID-Meter & discarded,sample.# 02(3.0'-3.5') was saved

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Boring Report

Project	Port-Ivory Voluntary-clean up		**Contractor**	Craig	**Boring No.**	BH-2ASE19B	**Date** 11/7/2007
Location	As laid out by Hatch Mott Mc.Donald,15'N of BH 19 A		**Contract No.**	426-06-008	**Surface Elev.**		
Spoon	2" O.D. 1.375" I.D.	**Hammer/ Fall (in.)** 140 lbs./30"	**Ground Water Level**				
Hammer Type	Safety	**Hole Type** 1	Date	Time	Depth (ft)	Remarks	
Inspector	J.Zarks		11/17/07	11:55AM	3.0'	In sample # 03	
Driller	C.Cohen						
site_code							

Sample No.	Start Depth (ft)	End Depth (ft)	Method	Spoon Blows/6"	Re-cov'd	PID Reading	Sample Description and Remarks
01	0.0	0.5	HA	Hand Auger	Full	0.0	Fill Crushed Rock.
	0.5						Change in Strata
02	0.5	2.0	HA	Hand Auger	Full	0.0	Fill Reddish-brown Gravel,Little C-F Sand,some Silty Clay.
03	2.0	3.0	HA	Hand Auger	Full	0.0	Same
	3.0						Bottom Of Boring.
							Note:All samples screened with PID-Meter & discarded.
							Obstruction at 3.0',concrete slab.

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Boring Report

Project	Port-Ivory Voluntary-clean up			Contractor	Craig	Boring No. BH-2ASE19A	Date 11/7/2007
Location	As laid out by Hatch Mott Mc.Donald			Contract No.	426-06-008	Surface Elev.	
Spoon	2" O.D. 1.375" I.D.	Hammer/ Fall (in.)	140 lbs./30"	Ground Water Level			
Hammer Type	Safety	Hole Type	1	Date	Time	Depth (ft)	Remarks
Inspector	J.Zarks			11/17/07	11:30AM	3.0'	In sample # 03
Driller	C.Cohen						
site_code							

Sample No.	Start Depth (ft)	End Depth (ft)	Method	Spoon Blows/6"	Re-cov'd	PID Reading	Sample Description and Remarks
01	0.0	0.5	HA	Hand Auger	Full	0.0	Fill Crushed Rock.
	0.5						Change in Strata
02	0.5	2.0	HA	Hand Auger	Full	0.0	Fill Reddish-brown Gravel,Little C-F Sand,some Silty Clay.
03	2.0	3.0	HA	Hand Auger	Full	0.0	Same
04	3.0	3.5	HA	Hand Auger	Full	0.0	Same
	3.5						Bottom Of Boring.
							Note:All samples screened with PID-Meter & discarded,sample # 03(2.5'-3.0')was saved.
							Obstruction at 3.5',concrete slab.

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Boring Report

Project	Port-Ivory Voluntary Clean up	Contractor	Craig	Boring No.	MW1-2ASE	Date:	12/5/07
Location	As Laid out by H.M.Mc.Donald.			Contract No.	426-06-008	Surface Elev.	
Spoon	3" O.D. 2.875" I.D.	Hammer/ Fall (in.)	140 lbs./30"	Ground Water Level			
Hammer Type	Auto	Hole Type	1	Date	Time	Depth (ft)	Remarks
Inspector	J.Zarks						
Driller	C.Cohen						
site_code							

Sample No.	Start Depth (ft)	End Depth (ft)	Method	Spoon Blows/6"	Re-cov'd	PID Reading	Sample Description and Remarks
	0.0	6.0	HA	Hand Auger	Full		Previously driilled as 2ASE 12 on 9/18/07

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Well Installation Report

PROJECT: Port Ivory-Voluntary Clean up.		**CONTRACT NO.** 426-06-008	
LOCATION: As Laid out by H.M.Mc.Donald.		**CONTRACTOR** Craig	
WELL NO. MW1-2ASE	**WELL TYPE** "A" Monitor	**DATE:** 12/5/07	
DRILLER: C.Cohen.	**INSPECTOR:** J.Zarks		

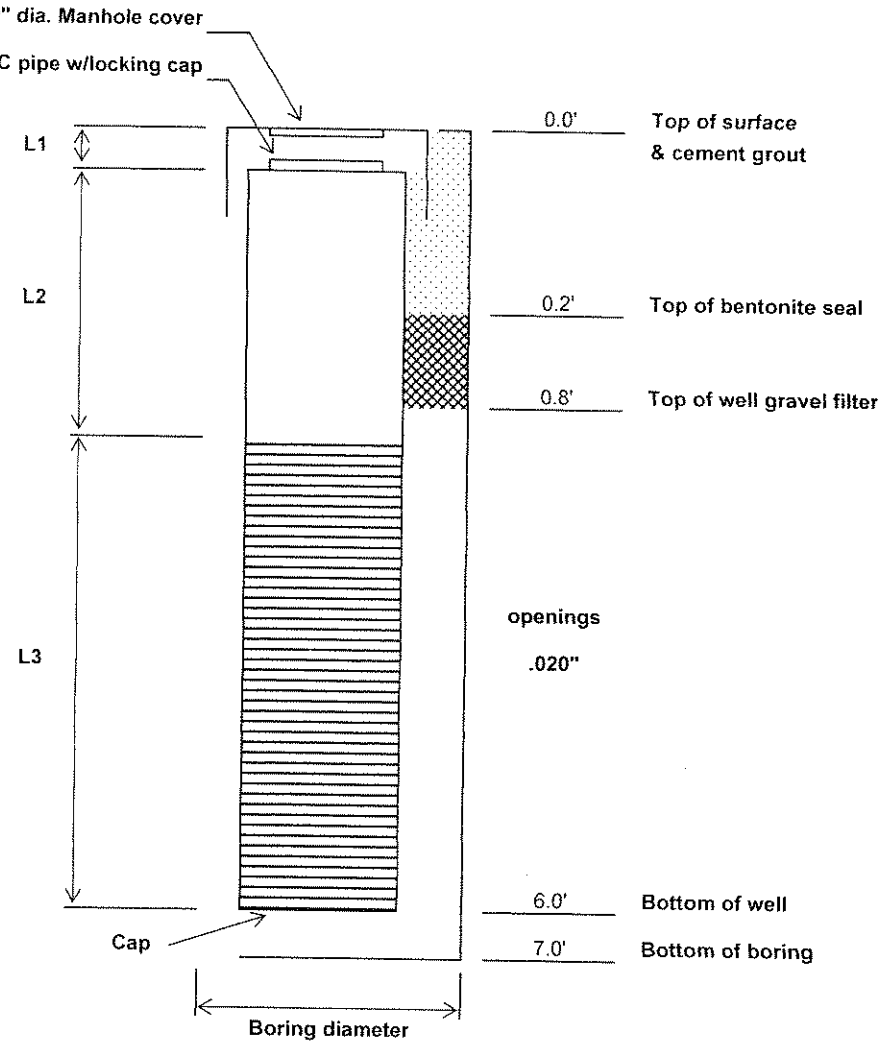
Well Development Report (NOTE: WATER LEVEL READINGS FROM TOP OF PVC)

DATE: 12/6/07	**WATER LEVEL BEFORE:**	**WATER LEVEL AFTER:**
TAKEN	**MINUTES AFTER DEVELOPMENT**	

L1 = 0.3'

L2 = 0.7'

L3 = 5.0'



Remarks:

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Engineering Department
Materials Engineering

Boring Report

Project	Port-Ivory Voluntary Clean up	Contractor	Craig	Boring No. MW2-2ASE	Date: 12/10/07
Location	As Laid out by H.M.Mc.Donald.	Contract No.	426-06-008	Surface Elev.	
Spoon	3" O.D. 2.875" I.D.	Hammer/ Fall (in.)	140 lbs./30"	Ground Water Level	
Hammer Type	Auto	Hole Type	1	Date / Time / Depth (ft) / Remarks	
Inspector	J.Zarks				
Driller	C.Cohen				
site_code					

Sample No.	Start Depth (ft)	End Depth (ft)	Method	Spoon Blows/6"	Re-cov'd	PID Reading	Sample Description and Remarks
	0.0	6.0	HA	Hand Auger	Full		Previously driilled as 2ASE8

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Well Installation Report

PROJECT: Port Ivory-Voluntary Clean up.		**CONTRACT NO.** 426-06-008	
LOCATION: As Laid out by H.M.Mc.Donald.		**CONTRACTOR** Craig	
WELL NO. MW2-2ASE	**WELL TYPE** "A" Monitor	**DATE:** 12/10/07	
DRILLER: C.Cohen.		**INSPECTOR:** J.Zarks	

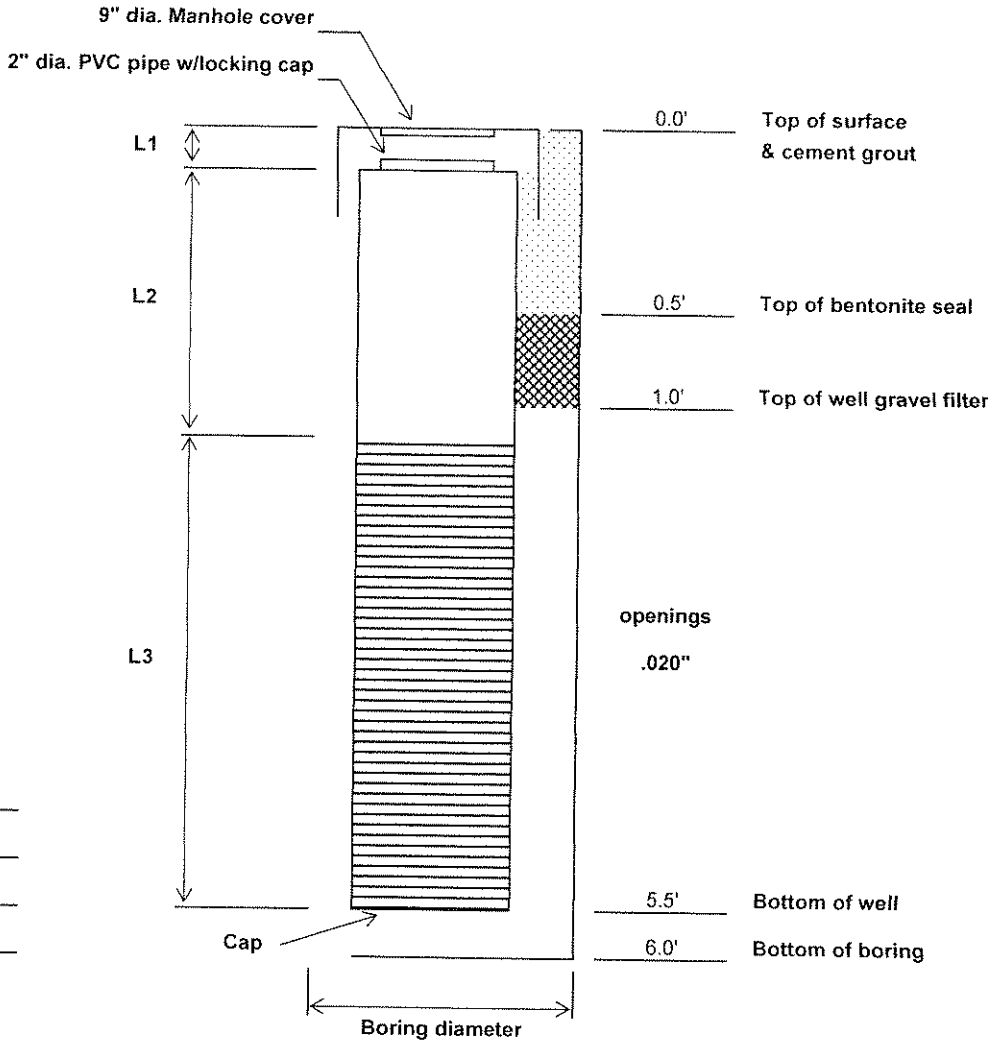
Well Development Report (NOTE: WATER LEVEL READINGS FROM TOP OF PVC)

DATE: 12/10/07	**WATER LEVEL BEFORE:** 3.5'	**WATER LEVEL AFTER:** 3.4'	
TAKEN 60	**MINUTES AFTER DEVELOPMENT**		

L1 = 0.3'

L2 = 0.7'

L3 = 4.5'



Remarks:

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Engineering Department
Materials Engineering

Boring Report

Project	Port-Ivory Voluntary Clean up	Contractor	Craig	Boring No. MW3-2ASE	Date: 12/10/07
Location	As Laid out by H.M.Mc.Donald.			Contract No. 426-06-008	Surface Elev.
Spoon	3" O.D. 2.875" I.D.	Hammer/ Fall (in.)	140 lbs./30"	Ground Water Level	
Hammer Type	Auto	Hole Type	1	Date / Time / Depth (ft) / Remarks	
Inspector	J.Zarks				
Driller	C.Cohen				
site_code					

Sample No.	Start Depth (ft)	End Depth (ft)	Method	Spoon Blows/6"	Re-cov'd	PID Reading	Sample Description and Remarks
	0.0	7.0	HA	Hand Auger	Full		Previously driilled as 2ASE10

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Materials Engineering

Well Installation Report

PROJECT: Port Ivory-Voluntary Clean up.		**CONTRACT NO.** 426-06-008	
LOCATION: As Laid out by H.M.Mc.Donald.		**CONTRACTOR** Craig	
WELL NO. MW3-2ASE	**WELL TYPE** "A" Monitor	**DATE:** 12/10/07	
DRILLER: C.Cohen.	**INSPECTOR:** J.Zarks		

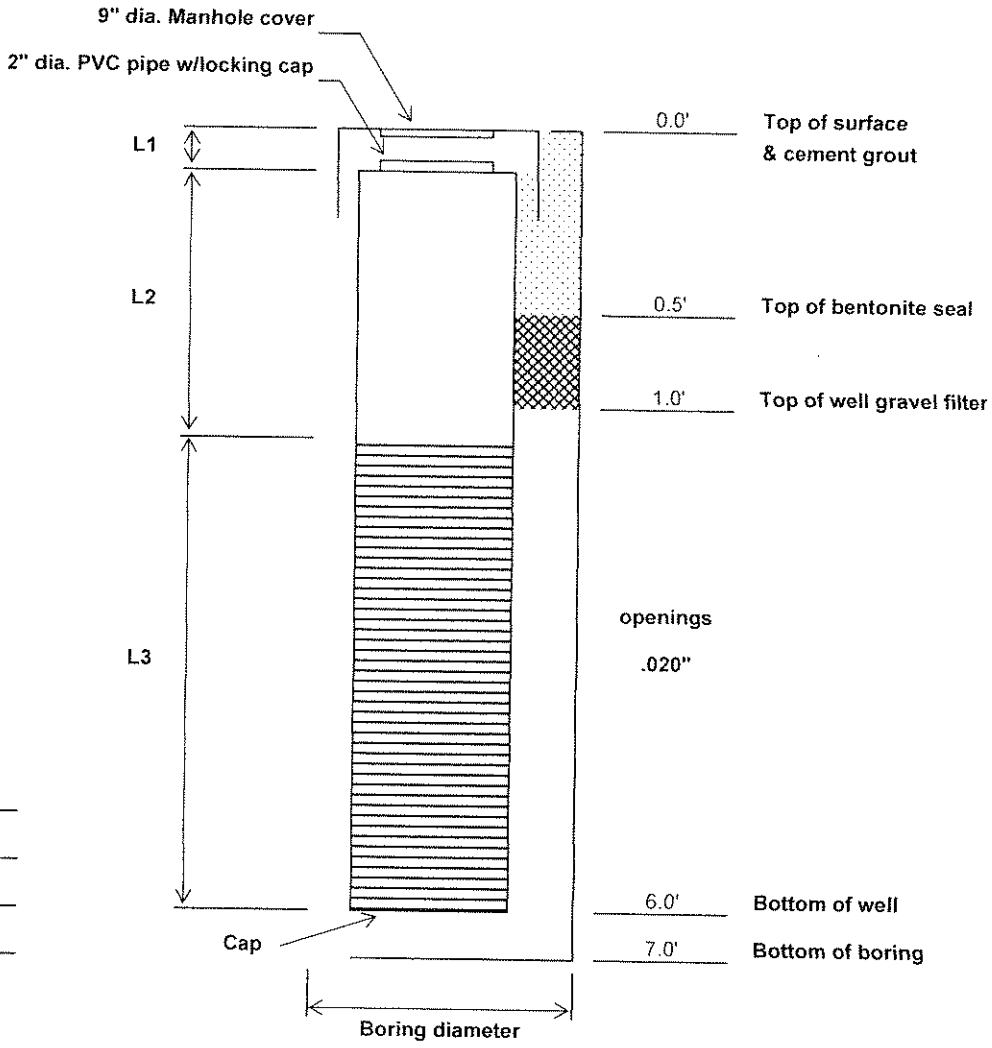
Well Development Report (NOTE: WATER LEVEL READINGS FROM TOP OF PVC)

DATE: 12/10/07	**WATER LEVEL BEFORE:** 3.3'	**WATER LEVEL AFTER:** 3.2'	
TAKEN 60	**MINUTES AFTER DEVELOPMENT**		

L1 = 0.3'

L2 = 0.7'

L3 = 5.0'



Remarks:

THE PORT AUTHORITY OF NY & NJ

MATERIALS ENGINEERING DIVISION
WELL MONITORING DATA SHEET

PROJECT: HHMT - Port Ivory	CHARGE CODE:
WELL DESIGNATION: MW-1-2ASE	DATE: 12/19/07
LOW FLOW? NO	CASING DIAMETER: 2 (In)
WEATHER CONDITIONS: 40° Clear	STICK-UP DISTANCE: Flushed

	TIME	DISTANCE FROM TOP OF PIPE TO: WATER (FEET)	PRODUCT (FEET)
PRE-PURGE:	11:58	3.22	
POST PURGE:	12:35	4.07	

PID (ppm): 20.7

DEPTH OF WELL:	6.03	(FEET)
DEPTH TO WATER	3.22	(FEET)
LENGTH OF WATER COLUMN	2.81	(FEET)
FACTOR*	0.618	
VOLUME TO BE REMOVED	1.74 per volume x 3 volumes (min) = 5.22	(LITERS)

* FACTOR = 0.618 FOR 2 INCH DIAMETER WELL CASING
FACTOR = 2.471 FOR 4 INCH DIAMETER WELL CASING

TIME	pH (SU)	COND ( )	TURB (NTU)	DO (mg/L)	TEMP (°C)	SALINITY (%)	TDS (g/L)	ORP (mV)	Purge Vol (L)	DTW/P (ft)	Flow Rate (ml / min)
Low Flow #'s	± 0.1	± 3%	± 10%	± 10%	± 3%			± 10mv		< 0.3 ft	100-500ml
12:05	10.38	0.293	283.0	11.49	9.72	0.11	1.67	-153	start	3.22	
12:07	10.49	0.201	157.0	3.41	8.23	0.09	1.29	-121	2.00		
12:11	10.50	0.203	135.0	2.73	8.47	0.10	1.31	-131	4.00		
12:16	9.97	0.210	805.0	5.32	8.65	0.10	1.35	-83	6.00	4.07	
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SAMPLED BY: N.G & S.B.

SAMPLE TIME: 1225

DUPLICATE TAKEN? No

COMMENTS:

THE PORT AUTHORITY OF NY & NJ

MATERIALS ENGINEERING DIVISION
WELL MONITORING DATA SHEET

PROJECT: HHMT - Port Ivory	CHARGE CODE:
WELL DESIGNATION: MW-2-ZASE	DATE: 12/19/07
LOW FLOW? NO	CASING DIAMETER: 2 (In)
WEATHER CONDITIONS: 40° Clear	STICK-UP DISTANCE: Flushed

	TIME	DISTANCE FROM TOP OF PIPE TO: WATER (FEET)	PRODUCT (FEET)
PRE-PURGE:	11:20	3.13	———
POST PURGE:	12:21	5.24	———

PID (ppm): 18

DEPTH OF WELL:	5.52	(FEET)
DEPTH TO WATER	3.13	(FEET)
LENGTH OF WATER COLUMN	2.39	(FEET)
FACTOR*	0.618	
VOLUME TO BE REMOVED	1.48 per volume x 3 volumes (min.) = 4.44	(LITERS)

* FACTOR = 0.618 FOR 2 INCH DIAMETER WELL CASING
FACTOR = 2.471 FOR 4 INCH DIAMETER WELL CASING

Low Flow #'s	± 0.1	± 3%	± 10%	± 10%	± 3%			± 10mv		< 0.3 ft	100-500ml
TIME	pH (SU)	COND ( )	TURB (NTU)	DO (mg/L)	TEMP (°C)	SALINITY (%)	TDS (g/L)	ORP (mV)	Purge Vol. (L)	DTW/P (ft)	Flow Rate (ml / min)
11:22	10.37	1.62	408.0	11.38	9.28	0.51	5.9	-112	Start	3.13	
11:25	10.31	0.424	-5.0F	7.49	9.28	0.23	2.91	-108	1.50		
11:27	10.16	0.431	925.0	4.86	9.43	0.22	2.79	-93	3.00		
11:31	9.91	0.430	553.0	7.19	9.35	0.21	2.69	-82	4.50	5.24	
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SAMPLED BY: N.C. & S.B.

SAMPLE TIME 1135
DUPLICATE TAKEN? No

COMMENTS:

THE PORT AUTHORITY OF NY & NJ

MATERIALS ENGINEERING DIVISION

WELL MONITORING DATA SHEET

PROJECT: HHMT - Port Ivory	CHARGE CODE:
WELL DESIGNATION: MW-3-2ASE	DATE: 12/19/2007
LOW FLOW? NO	CASING DIAMETER: 2 (In)
WEATHER CONDITIONS: 40° cloudy	STICK-UP DISTANCE: Flushed

	TIME	DISTANCE FROM TOP OF PIPE TO WATER (FEET)	DISTANCE FROM TOP OF PIPE TO PRODUCT (FEET)
PRE-PURGE:	10:33	2.54	
POST PURGE:	11:15	5.08	

PID (ppm)
7.4

DEPTH OF WELL:	6.03	(FEET)
DEPTH TO WATER	2.54	(FEET)
LENGTH OF WATER COLUMN	3.49	(FEET)
FACTOR *	0.618	
VOLUME TO BE REMOVED	2.16 per volume x 3 volumes (min.) = 6.48	(LITERS)

* FACTOR = 0.618 FOR 2 INCH DIAMETER WELL CASING
FACTOR = 2.471 FOR 4 INCH DIAMETER WELL CASING

Low Flow #'s	± 0.1	± 3%	± 10%	± 10%	± 3%			± 10mv		< 0.3 ft	100-500ml
TIME	pH (SU)	COND ( )	TURB (NTU)	DO (mg/L)	TEMP (°C)	SALINITY (%)	TDS (g/L)	ORP (mV)	Purge Vol. (L)	DTW/P (ft)	Flow Rate (ml / min)
10 34	11.53	62.3	-5.0 F	11.14	8.04	0.03	0.395	-149	Start	2.54	
10 43	10.95	61.4	-5.0F	7.95	8.10	0.03	0.392	-137	2.50		
10 49	10.89	57.8	-5.0F	4.50	11.04	0.02	0.368	-145	5.00		
10 55	10.49	58.7	411.0	4.07	13.42	0.02	0.377	-138	7.50	5.08	

SAMPLED BY: N.G. & S.B.

SAMPLE TIME: 1100

DUPLICATE TAKEN? NO

COMMENTS:

THE PORT AUTHORITY OF NY & NJ

MATERIALS ENGINEERING DIVISION
WELL MONITORING DATA SHEET

PROJECT: HHMT - Port Ivory	CHARGE CODE:
WELL DESIGNATION: MW-16WA	DATE: 12/20/07
LOW FLOW? NO	CASING DIAMETER: 2 (In)
WEATHER CONDITIONS: 40° Clear	STICK-UP DISTANCE: Flushed

	TIME	DISTANCE FROM TOP OF PIPE TO: WATER (FEET)	PRODUCT (FEET)
PRE-PURGE:	11:45	2.06	—
POST PURGE:	12:45	5.71	—

PID (ppm): 6.8

DEPTH OF WELL:	6.18	(FEET)
DEPTH TO WATER	2.06	(FEET)
LENGTH OF WATER COLUMN	4.12	(FEET)
FACTOR*	0.618	
VOLUME TO BE REMOVED	2.55 per volume x 3 volumes (min.) = 7.65	(LITERS)

* FACTOR = 0.618 FOR 2 INCH DIAMETER WELL CASING
~~FACTOR = 2.471 FOR 4 INCH DIAMETER WELL CASING~~

TIME (Low Flow #'s)	pH (SU) ± 0.1	COND ( ) ± 3%	TURB (NTU) ± 10%	DO (mg/L) ± 10%	TEMP (°C) ± 3%	SALINITY (%)	TDS (g/L)	ORP (mV) ± 10mv	Purge Vol. (L)	DTW/P (ft) < 0.3 ft	Flow Rate (ml / min) 100-500ml
12:10	6.51	69.5	-5.0F	10.26	8.63	0.0	0.001	-33	Start	2.06	
12:15	7.05	63.2	-5.0F	10.11	8.33	0.0	0.001	-41	3.00		
WENT DRY									6.00		
:									9.00	5.71	
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SAMPLED BY: N.L. A.S.B. E.J.K.
SAMPLE TIME: 1225
DUPLICATE TAKEN? NO
COMMENTS: Went dry @ 1219. So sampled after it re-charged.

THE PORT AUTHORITY OF NY & NJ

MATERIALS ENGINEERING DIVISION
WATER QUALITY DATA SHEET

PROJECT: **HHMT - PORT IVORY Facility Site 2**	CHARGE CODE: **CP11233295**
	DATE: **09 / 23 / 2008**
WEATHER CONDITIONS:	

SAMPLE ID	SAMPLE TIME	ANALYSIS TIME	pH (SU)	COND (ms/m)	DO (mg/L)	TEMP (°C)	ORP (mV)	TURB (NTU)
BC-SW-1	9:57	9:59	6.78	28.4	5.17	17.73	-15.8	8.07
BC-SW-2	10:04	10:06	7.02	27.4	6.75	17.36	-23.3	10.84
BC-SW-3	0.43	10:17	7.21	31.6	8.43	17.22	-14.8	9.02
BC-SW-4	0.42	10:12	7.13	1.5	4.95	22.17	-113.3	16.70
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SAMPLED BY: T. Gard / S. Byrne

COMMENTS:

Low tide at 09:49

BC-SW-4 taken directly from discharge point east of SW-2 (shark tail).